# The University Record

*of the*

# University of Florida

## *Bulletin of Information*

*for*

## *the Upper Division*

*1940-41*

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The Record comprises:

> The Reports of the President to the Board of Control, the bulletins of information, announcements of special courses of instruction, and reports of the University Officers.

These bulletins will be sent gratuitously to all persons who apply for them. The applicant should specifically state which bulletin or what information is desired. Address

THE REGISTRAR, University of Florida
Gainesville, Florida

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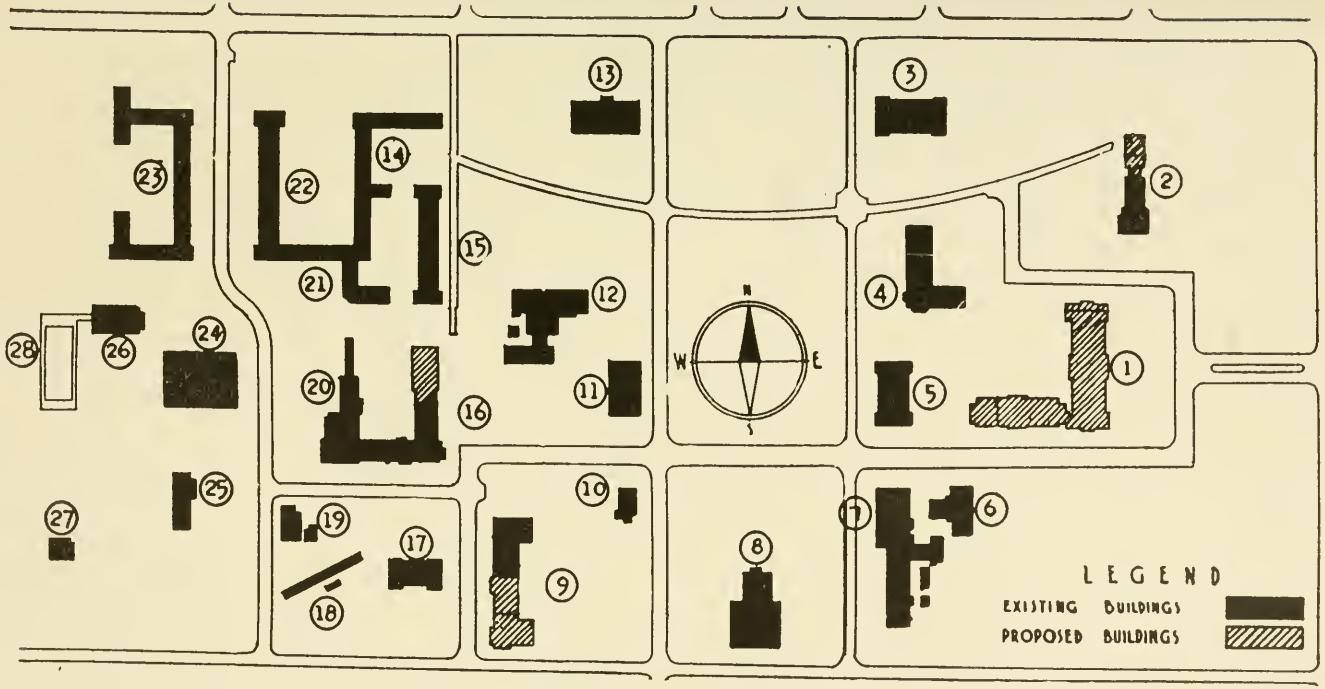


| No. | BUILDING |
|---|---|
| 1 | Administration Building |
| 2 | Law Building |
| 3 | Language Hall |
| 4 | Library |
| 5 | Peabody Hall |
| 6 | Engineering Building |
| 7 | Benton Hall and Shops |

| No. | BUILDING |
|---|---|
| 8 | Auditorium |
| 9 | Horticultural Building |
| 10 | Campus Post Office |
| 11 | Agricultural Building |
| 12 | Chemistry Building |
| 13 | Science Hall |
| 14 | Fletcher Hall |

| No. | BUILDING |
|---|---|
| 15 | Buckman Hall |
| 16 | Florida Union |
| 17 | Experiment Station |
| 18 | Storage Building |
| 19 | Barracks |
| 20 | Cafeteria |
| 21 | Sledd Hall |

| No. | BUILDING |
|---|---|
| 22 | Thomas Hall |
| 23 | Murphree Hall |
| 24 | Basketball Court |
| 25 | Infirmary |
| 26 | Gymnasium |
| 27 | "F" Club |
| 28 | Swimming Pool |

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# UNIVERSITY CALENDAR

## REGULAR SESSION, 1940-41

FIRST SEMESTER

August 31, Saturday ..... Last day for making application for admission for first semester.

September 4-11 ..... Preliminary registration for all students who have previously attended the University of Florida.

September 11, Wednesday ..... 1940-41 Session begins officially.

September 11-14, Wednesday-Saturday.. Registration period.

September 16, Monday, 8 A. M. ..... Classes for 1940-41 Session begin; late registration fee of $5 for all students registering on or after this date.

September 21, Saturday, 12 NOON ..... Last day for registration for the first semester, for adding courses, and for changing sections in all courses except year comprehensive courses.

September 28, Saturday, 12 NOON ..... Last day for submitting resignation and receiving any refund of fees.

October 12, Saturday, 12 NOON ..... Last day for making application for a degree at the end of the first semester. Last day for changing sections in year comprehensive courses.

October 15, Tuesday, 5 P. M. ..... Last day for students to apply to the Dean to be designated as Honor Students.

October 19, Saturday ..... Homecoming. Classes suspended.

November 9, Saturday ..... Georgia-Florida football game in Jacksonville. Classes suspended.

Thanksgiving Day ..... Classes suspended.

December 3, Tuesday ..... Last day for removing grades of I or X received in the preceding semester of attendance.

December 4, Wednesday, 5 P. M. ..... Last day for dropping courses without receiving grade of E and being assessed failure fee.

December 5, Thursday, 5 P. M. ..... Progress Reports for General College students due in the Office of the Registrar.

December 21, Saturday, 8 A. M. ..... Christmas Recess begins.

### 1941

January 6, Monday, 8 A. M. ..... Christmas Recess ends.

January 6, Monday, 5 P. M. ..... Last day for graduate students graduating at the end of the first semester to submit theses to the Dean.

January 9, Thursday ..... Second semester registration begins for General College students who have previously registered in the University. Late registration fee of $5 for not registering according to the announcements in the Orange and Blue Bulletin.

January 15, Wednesday ..... Last day for candidates for degrees to complete correspondence courses.

January 18, Saturday, 1:30 P. M. ..... Final Examinations begin for Upper Division students.

January 20, Monday ..... Second semester registration begins for Upper Division students. Late registration fee of $5 for not registering according to the announcements in the Orange and Blue Bulletin.

January 28, Tuesday, 4 P. M. ..... All grades for candidates for degrees are due in the Office of the Registrar.

January 29, Wednesday ..... Faculty meetings to pass upon candidates for degrees.

January 29, Wednesday, 4 P. M. ..... Classes for first semester for General College end.

January 29, Wednesday, NOON ..... Final Examinations for Upper Division students end.
January 29, Wednesday, 4 P. M. ..... First semester ends; all grades are due in the Office of the Registrar.
January 30-31, Thursday-Friday ..... Inter-Semester days.
January 31, Friday, 10 A. M. ..... Conferring of degrees.

SECOND SEMESTER

February 1, Saturday, 8 A. M. to 5 P. M... Registration for second semester for new students only. Placement Tests, Room 208, Science Hall. Grades with failure fee assessments available for students registered first semester.
February 1, Saturday, 5 P. M. ..... Last day for all students to pay registration fees for second semester without being assessed $5 late registration fee.
February 3, Monday, 8 A. M. ..... Classes begin. Late registration fee, $5.
February 8, Saturday, 12 NOON ..... Last day for registration for second semester, for adding courses, and for changing sections.
February 10, Monday, 4 P. M. ..... Last day for paying failure fees.
February 15, Saturday, 12 NOON ..... Last day for making application for a degree at end of second semester. Last day for submitting resignation and receiving any refund of fees.
March 19, Wednesday ..... Last day for students to apply to the Dean to be designated as Honor Students.
March 31, Monday, 5 P. M. ..... Progress Reports for General College students due in the Office of the Registrar.
April 2, Wednesday ..... Last day for removing grades of I or X received in preceding semester of attendance.
April 3, Thursday, 8 A. M. ..... Spring Recess begins.
April 7, Monday, 8 A. M. ..... Spring Recess ends.
April 23, Wednesday, 5 P. M. ..... Last day for dropping courses without receiving grade of E and being assessed failure fee.
April 30, Wednesday, 5 P. M. ..... Last day for graduate students graduating at the end of the semester to submit theses to the Dean.
May 13, Tuesday ..... Last day for candidates for degrees to complete correspondence courses.
May 17, Saturday, 1:30 P. M. ..... Final Examinations begin.
May 28, Wednesday, 4 P. M. ..... All grades for candidates for degrees are due in the Office of the Registrar.
May 29, Thursday ..... Faculty meetings to pass upon candidates for degrees.
May 31-June 2, Saturday-Monday ..... Commencement Exercises.
June 1, Sunday ..... Baccalaureate Sermon.
June 2, Monday ..... Commencement Convocation.
June 2, Monday, 12 NOON ..... Second semester ends; all grades are due in the Office of the Registrar.
June 9, Monday ..... Boys' Club Week begins.

## SUMMER SESSION, 1941

June 16, Monday ..... First Summer Term begins.
July 25, Friday ..... First Summer Term ends.
July 28, Monday ..... Second Summer Term begins.
August 29, Friday ..... Second Summer Term ends.

## FIRST SEMESTER, 1941-42

September 15, Monday ..... 1941-42 Session begins (date provisional).

# ADMINISTRATIVE OFFICERS
# UNIVERSITY OF FLORIDA
1940-41

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## ADMINISTRATIVE OFFICERS

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Richard DeWitt Brown.....Director of Music
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Arthur Percival Spencer, M.S.....Vice-Director of the Agricultural Extension Service
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# ORGANIZATION OF THE UNIVERSITY

## DIVISIONS, COLLEGES, SCHOOLS

### LOWER DIVISION

THE GENERAL COLLEGE

---

### UPPER DIVISION

THE COLLEGE OF ARTS AND SCIENCES, including
- THE SCHOOL OF PHARMACY

THE COLLEGE OF AGRICULTURE, including
- THE COLLEGE PROPER
- THE SCHOOL OF FORESTRY
- THE AGRICULTURAL EXPERIMENT STATIONS
- THE AGRICULTURAL EXTENSION SERVICE

THE COLLEGE OF ENGINEERING, including
- THE ENGINEERING EXPERIMENT STATION

THE COLLEGE OF EDUCATION, including
- THE LABORATORY SCHOOL
- THE HIGH SCHOOL VISITATION

THE COLLEGE OF BUSINESS ADMINISTRATION

THE SCHOOL OF ARCHITECTURE AND ALLIED ARTS

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THE COLLEGE OF LAW

THE GRADUATE SCHOOL

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THE GENERAL EXTENSION DIVISION

THE SUMMER SESSION

THE DIVISION OF ATHLETICS AND PHYSICAL EDUCATION

THE DIVISION OF MILITARY SCIENCE AND TACTICS

THE DIVISION OF MUSIC

THE FLORIDA STATE MUSEUM

THE UNIVERSITY LIBRARY

THE STUDENT HEALTH SERVICE

THE BUREAU OF VOCATIONAL GUIDANCE AND MENTAL HYGIENE

# ADMISSION

## FROM THE GENERAL COLLEGE

After the student has completed the work of the General College and received a certificate of graduation, he may enter one of the colleges or professional schools of the Upper Division by meeting the specific admission requirements of that college or school.

The Board of University Examiners administers the admission requirements of the Upper Division. Besides the certificate of graduation from the General College, the student must be certified by the Board as qualified to pursue the work of the college or school he wishes to enter.

In addition to the general requirements stated above, the various colleges and schools of the Upper Division have specific requirements for entrance. These requirements are listed under the curricula of the several colleges and schools. Students in the General College may prepare to meet these requirements by taking as electives the courses indicated under the various curricula presented.

The comprehensive examinations of the General College will cover the content of the courses required for admission to any specific curriculum of the Upper Division selected by the individual student.

## TRANSFER STUDENTS

All students admitted to the colleges and professional schools of the Upper Division will be required to meet the requirements for admission to those colleges. Other students will be admitted to the General College, provided they meet the standards for admission.

The manner in which students transferring from other colleges to the University may meet the requirements for admission to the colleges of the Upper Division will be determined by the Board of University Examiners on the basis of the training of the student before application for admission to the University of Florida. In general, the policy of the Board of University Examiners will be as follows:

1. The Board of University Examiners will always bear in mind the aims of the curriculum of the General College. All students must present training equivalent to the work of the General College and must pass the prescribed comprehensive examinations.
2. Students with average records from other institutions will be required to meet in toto the requirements for admission to the Upper Division.
3. The Board of University Examiners, in the case of transfer students with high or superior records, may vary the requirements for admission to the colleges and professional schools of the Upper Division, to the best interest of the student.

Students attending other institutions who contemplate entering the University of Florida should communicate with the Registrar for information concerning the method of admission. Such students should, at the end of their last term or semester in another institution, request the registrar of that institution to send directly to the Registrar of the University of Florida a complete official transcript of their work, and should also have such transcripts sent from any other institutions previously attended.

*Students who, for any reason, are not allowed to return to the institution they last attended, or have not made a satisfactory record in the work carried at other institutions, will be denied admission to the University of Florida. Students with an average below C need not apply for admission. Students with an average of C or higher are not guaranteed admission.*

## SPECIAL STUDENTS

Only by the approval of the Board of University Examiners may special students be admitted either to the General College or to the various colleges of the University. Special students are never admitted to the College of Law. Applications for admission of these students must include:

1. The filing of satisfactory preliminary credentials.
2. A statement as to the type of studies to be pursued.
3. Reason for desiring to take special courses.
4. Satisfactory evidence of ability to pursue these studies.

## WOMEN STUDENTS

The University of Florida is not a coeducational institution. It is an institution of higher learning for men. The State institution of higher learning for women is the Florida State College for Women located at Tallahassee.

Women students are admitted to the University of Florida in the regular session under the laws of the State provided they meet either set of the following conditions:

1. Women students who are at least twenty-one years of age and who have received credit from a reputable educational institution in at least sixty semester hours of academic college work shall be eligible to enroll as students in the University of Florida in such subjects and courses as they are unable to obtain in any other institution under the supervision of the Board of Control, provided they are able in every way, regardless of sex, to meet the admission and eligibility requirements of said University.
2. Women students who present at least 32 semester hours of acceptable college credits may be permitted to enroll in the University of Florida as sophomores to study Pharmacy. To meet this requirement credits in English, botany, biology, mathematics, physical sciences, and psychology are preferable. Such students must be able in every way, regardless of sex, to meet the admission and eligibility requirements of the University.

# EXPENSES

## GENERAL FEES REQUIRED BEFORE REGISTRATION

| | 1st Sem. | 2nd Sem. |
|---|---|---|
| General College, Freshmen | $34.85 | $31.80 |
| General College, Sophomores | 34.85 | 31.80 |
| Upper Division Students | 33.35 | 31.80 |
| Law College Students | 43.35 | 41.80 |
| Graduate School | 17.50 | 17.50 |
| All Non-Florida Students Pay Additional | 50.00 | 50.00 |

### DESCRIPTION OF GENERAL FEES

General Fees listed in the above table include the following:

*Registration and Contingent Fee:* A fee of $15 per semester is charged every student. Students in the College of Law pay $5 each semester.

*Special Fee:* A fee of $2.50 per semester is required of each student for the construction and rehabilitation of buildings.

*Infirmary Fee:* All students are charged an infirmary fee of $3.75 per semester which secures for the student in case of illness the privilege of a bed in the infirmary and the services of the University Physician and professionally trained nurses, except in cases involving a major operation. A student requiring an emergency operation which is not covered by the fee assessed may employ the services of any accredited physician whom he may select, and utilize the facilities of the infirmary for the operation. To secure this medical service the student must report to the physician in charge of the infirmary. When the operating room is used a fee of $5 is charged.

*Student Activity Fee:* This fee is assessed to maintain and foster athletic sports, student publications, and other student activities. Student fees are passed by a vote of the student body and approved by the Board of Control before they are adopted.

*Swimming Pool Fee:* A fee of 50 cents per semester is charged all students for use of the lockers and supplies at the swimming pool.

*Military Fee:* A fee of $1.50 is charged all students registered for basic Military Science.

## TUITION

No tuition, except in the College of Law, is charged Florida students.

Non-Florida students, including those pursuing graduate work, pay tuition of $50 per semester in addition to the fees charged Florida students.

*Classification of Students.*—For the purpose of assessing tuition, students are classified as Florida and non-Florida students.

A Florida student, if under twenty-one years of age, is one: (1) whose parents have been residents of Florida for at least twelve consecutive months next preceding his registration; or (2) whose parents were residents of Florida at the time of their death, and who has not acquired residence in another state; or (3) whose parents were not residents of Florida at the time of their death but whose successor natural guardian has been a resident of Florida for at least twelve consecutive months next preceding the student's registration.

A Florida student, if over twenty-one years of age, is one: (1) whose parents are residents of Florida (or were at the time of their death) and who has not acquired residence

in another state; or (2) who, while an adult, has been a resident of Florida for at least twelve consecutive months next preceding his registration, provided such residence has not been acquired while attending any school or college in Florida; or (3) who is the wife of a man who has been a resident of Florida for at least twelve consecutive months next preceding her registration; or (4) who is an alien who has taken out his first citizenship papers and who has been a resident of Florida for at least twelve consecutive months next preceding his registration.

All students not able to qualify as Florida students are classified as non-Florida students.

The status of the classification of a student is determined at the time of his first registration in the University, and may not thereafter be changed by him unless, in the case of a minor, his parents move to and become legal residents of this State, by maintaining such residence for twelve consecutive months. If the status of a student changes from a non-Florida student to a Florida student, his classification may be changed at the next registration thereafter.

A fee of $10 will be charged all students registering incorrectly. In the case of non-Florida students, this fee will be assessed in addition to the tuition. In the case of Florida students who give an out of state address at the time of registration or any other time, this fee will be charged unless the student files a written explanation acceptable to the Registrar stating why the out of state address was given and giving proof that his legal residence is Florida.

## SPECIAL FEES

Fees which apply in special cases only are listed below:

### BREAKAGE FEE

Any student registering for a course requiring locker and laboratory apparatus in one or more of the following departments is required to buy a breakage book: Chemistry, Pharmacy, Biology, and Soils. This book costs $5. A refund will be allowed on any unused portion at the end of the year, when the student has checked in his apparatus to the satisfaction of the departments concerned.

### ROOM RESERVATION FEE

Students wishing to reserve rooms in the dormitories must pay a room reservation fee of $10 at the time such reservation is made.

### SPECIAL EXAMINATION FEE

A fee of $5 is charged for each examination taken at a time other than that regularly scheduled.

### LIBRARY FINES

A fine of 2 cents a day is charged for each book in general circulation which is not returned within the limit of two weeks. "Reserve" books may be checked out overnight, and if they are not returned on time the fine is 25 cents for the first hour and 5 cents an hour or fraction of an hour thereafter until they are returned. No student may check out a book if he owes the Library more than 50 cents in fines.

### PENALTY FEE FOR INCORRECT REGISTRATION

A fee of $10 will be charged all students registering incorrectly. In the case of non-Florida students, this fee will be assessed in addition to the tuition. In the case of Florida students who give an out of state address at the time of registration or any other time, this fee will be charged unless the student files a written explanation acceptable to the

Registrar stating why the out of state address was given and giving proof that his legal residence is Florida.

#### FAILURE FEES

A fee of $2.50 a semester hour is charged for courses in which the student does not receive a passing grade. Once the student has failed a course, this fee must be paid before he will be permitted to register again in the University. For variations in this fee for General College students see *Bulletin of Information for the General College.*

#### PART-TIME STUDENTS

Students who carry nine hours or less will be charged the registration and contingent fee of $17.50 a semester. Such students must pay any tuition which their classification specifies. Such students are not entitled to any of the privileges attached to any other University fee.

## SUMMARY OF EXPENSES FOR THE YEAR

| | Minimum | Maximum |
|---|---|---|
| General Fees and Course Expenses | $ 65.15* | $ 66.65* |
| Books and Training Supplies for the Year | 30.00 | 50.00 |
| Laundry and Cleaning | 25.00 | 35.00 |
| Room and Board | 204.50 | 300.00 |
| Estimated Total Expenses | $324.65* | $451.65* |

*Non-Florida students are charged $100 tuition per year in addition.

## REFUNDS

Students resigning before the dates specified in the University Calendar are entitled to a refund of all fees except $5 of the registration and contingent fee. This $5 is the cost of service in registering the student and is never refunded.

## UNIVERSITY DORMITORIES

#### DIRECTOR OF RESIDENCE

All correspondence concerning dormitory reservations, as well as all reservation fees, should be sent to the Director of Residence, University of Florida, Gainesville. The room reservation fee is $10 per student and should accompany the application for a room; the check or money order should be made payable to the University of Florida.

The Office of the Director of Residence is located in Section F of Fletcher Hall, adjoining Fletcher Lounge.

#### UNIVERSITY OF FLORIDA DORMITORY SYSTEM

*Administration.*—The dormitories are administered by the Director of Residence, his staff, a student monitor for each of the sections into which the halls are divided, a head monitor, and an advisory Committee on Residence composed of three members of the University faculty. The purpose of the administration is to create in the dormitories an environment in which each student may obtain the best results from his college life. Every effort is made to provide adequate hot water, heat, light, and janitorial service and to maintain comfortable, useful equipment. With a capacity of 1100 students, the dormitories house approximately one-third of the student body at present.

*Rooms and Facilities.*—In the five halls which compose the dormitory system, there are three types of student rooms: "single"—one room equipped for one student; "double"—one room equipped for two students; "two-room suite"—separate study-room and bedroom equipped for two or three students.

A bathroom with hot and cold showers and lavatories is located on each floor of each dormitory section. Room furnishings consist of single beds and mattresses, dressers, individual study tables, chairs, and wastebaskets. In Sledd, Fletcher, and Murphree Halls the dressers and closets are built-in units, and each room or suite is equipped with a lavatory.

Students must furnish linen, towels, toilet articles, pillows, study lamps, and what other things they may require for their own special convenience. Easy chairs may be secured for a rental charge of $1 per semester; and electrical appliances, such as radios, irons, fans, etc., may be used for a fee of 50 cents each per semester. Each student is allowed one individual study lamp in addition to the lights furnished with the room.

*Buckman Hall.*—Constructed in 1906; not remodeled. Rooms arranged in suites of study-room and bedroom, accommodating three students per suite. Three floors; sections B, C, D, and E.

*Thomas Hall.*—Constructed in 1905; sections A, C, D, E, and F remodeled and modernized in recent years; section B same as Buckman Hall. Remodeled sections have single and double rooms, equipped with lavatories (except for double rooms in section D). Three floors.

*Sledd Hall.*—Constructed in 1929; fireproof brick and tile. Rooms arranged in suites, with a few singles. Four floors; sections A, B, C, J, H, and G.

*Fletcher Hall.*—P.W.A. dormitory, constructed in 1939; fireproof brick and tile. Rooms arranged in suites, with a few singles and some doubles. Lounge room and offices located on first floor of section F. Four floors; sections D, E, F, K, L, M, N, O, and P.

*Murphree Hall.*—P.W.A. dormitory, constructed in 1939; fireproof brick and tile. Rooms arranged in suites, with a few doubles on fourth floor. Large lounge room adjoining section H. Four floors; sections A, B, C, D, E, F, G, H, J, K, L, and M.

DORMITORY ROOM RATES PER STUDENT PER SEMESTER

| HALL | Fletcher | Murphree | Sledd | Thomas (A,C,E,F) | Thomas D | Buckman Thomas B |
|---|---|---|---|---|---|---|
| TYPE OF ROOM<br>2-Room Suites<br>for 3 Students | ——— | ——— | $36.00 | ——— | ——— | $24.50 |
| 2-Room Suites<br>for 2 Students | $41.00<br>and<br>$40 00 | $41.00<br>and<br>$40.00 | $40.00<br>and<br>$34.00 | ——— | ——— | ——— |
| Double Rooms<br>for 2 Students | $40.00<br>and<br>$37.50 | $37.50 | ——— | $32.00 | $30.00 | ——— |
| Single Rooms<br>for 1 Student | $45.00<br>and<br>$40 00 | ——— | $42.00<br>and<br>$40.00 | $38.00 | $38.00 | ——— |
| Large Rooms<br>for 3 Students | ——— | ——— | ——— | $30.00 | ——— | $24.50 |

In all cases where two prices are stated for a given type of room, the lower price is for rooms on the fourth floor. All room rent is payable by the semester in advance at the Office of the Business Manager. Check or money order should be made payable to the University of Florida.

REGULATIONS GOVERNING STUDENT RESIDENCE

*Freshman Residence.*—All male students with less than one year of college work shall be required to room in the dormitories on the University campus so long as rooms are available for allotment to them.* Male students with more than one year of college work may be allotted such rooms in the dormitories as the Committee on Residence may deem proper for allotment to them.

*Room Reservation.*—Each dormitory resident or applicant for a dormitory room must post a room reservation fee of $10. This reservation fee is not a payment on room rent, but is a deposit which is necessary to obtain a room assignment and which is retained until the student has completed his lease agreement, when it is refunded less any charges, losses, or damages incurred to the room during his residence. If a student withdraws from the dormitories or the University before the completion of the lease period he shall not be entitled to a refund of the reservation fee, unless he withdraws at the request of the University.

*Assignments.*—The Office of the Director of Residence must have an application for room reservation and the room reservation fee must be posted before an assignment can be made; successful applicants must acknowledge acceptance of assignment by signing and returning lease agreement within two weeks after date assignment is made. Assignment of rooms to freshmen will not be completed until the applicant has been accepted by the Office of the Registrar for admission to the University.

*Payment of Rent.*—All rent is due and payable in advance at the beginning of each semester and should be paid at the Office of the Business Manager. Arrangements for payment by other methods must be made individually with the Director of Residence, and such arrangements will be subject to a carrying charge of $2 per semester. University registration may be cancelled because of failure to pay rent as required.

*Leases and Withdrawals.*—Room leases are for the scholastic year. No student may move from a room in the dormitories to other quarters off campus without the consent of the Committee on Residence and without paying the rent for the period covered by the lease or supplying another occupant who is acceptable to the Committee on Residence and who is not living in the dormitories.

*Refunds.*—Students signing leases and having been assigned rooms will not be granted a refund if they withdraw from the dormitories during the period stipulated in the lease, except under the conditions noted immediately above. If a room has been assigned, no refund will be granted unless notice of cancellation is received at least two weeks before the beginning of the semester for which the assignment is made or unless approved by Committee on Residence. Students not assigned a room will be given a refund on request.

*Transfers.*—While a student may not transfer his residence from one dormitory room to another without permission from the Director of Residence, he may be required to take another room after notification by the Director.

*Student Discipline.*—Student conduct is supervised by the student monitor in each section and the head monitor, all of whom are responsible to the Director of Residence. A copy of the "Dormitory Policy" is posted in each room; and all students are responsible for knowing and observing the principles of conduct outlined in this statement of policy as well as in "Student Regulations, Parts I and II."

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*No student whose parents are residents of the City of Gainesville or the adjacent territory to the University within daily walking or driving distance from the University shall be subject to the foregoing regulation.

*Opening and Closing Dates.*—All dormitories will be available for occupancy by students on September 8 and will remain open through Commencement Day. Students must check in with the Office of the Director of Residence before occupying their rooms and check out at the same office before vacating their rooms.

Upperclassmen who have made room reservations must give notice of late arrival before the end of the second day after the opening of the dormitories on September 8; otherwise assignment will be cancelled and room re-assigned.

Baggage marked with the student's name and the hall to which he has been assigned will be received and stored in the trunk room in the proper hall.

Special permission must be obtained from the Office of the Director of Residence to remain in the dormitories during the period of Christmas Holidays; residence during this period may involve an extra charge.

### CAFETERIA

The University operates a cafeteria offering a wide selection of wholesome foods. All students living on the campus are encouraged to take their meals there. The Cafeteria renders a great service to students who live off the campus, because it has the tendency to hold down prices for meals to a minimum in the majority of off-campus boarding houses. Meal tickets in denominations of $5 and $15 may be purchased at the Business Manager's office or at the Cafeteria Cigar Counter at a 5% discount.

### ROOMING HOUSES

The administration of the University provides an inspection service and publishes a list of approved rooming houses for students. Rental in these houses ranges from $5 to $15 per month per student. In a number of instances, room and board may be secured in the same house at rates from $25 to $40 per month. In case a student plans to live off the campus, he is urged to secure information from the Office of the Dean of Students to avoid embarrassment in dealing with landlords other than those of approved rooming houses.

### COOPERATIVE LIVING ORGANIZATION

The Cooperative Living Organization, organized and operated by students to furnish economical living accommodations for its membership, is located at 133 N. Washington Street. The qualifications for membership are maximum income $25 per month, scholastic ability, and references of good character. In order to secure membership in the CLO students should apply to the CLO manager at the above address.

## SELF-HELP

In view of the fact that there are comparatively few positions on the campus and in the City of Gainesville, it is strongly urged that no freshman come to the University with the expectation of depending very largely upon his earnings during his first college year.

The Committee on Self-Help, of which the Dean of Students is chairman, undertakes to award positions on the campus to deserving *upperclassmen.*

A few students are employed as laboratory assistants, office workers, waiters, and in other capacities. Application for employment should be made to the Dean of Students.

REQUIREMENTS AND QUALIFICATIONS FOR STUDENT EMPLOYMENT

A. The student must be making an average of C or its equivalent.

B. The student must give evidence of need for the job.

C. Possession of a car will be evidence of lack of need unless explained on the basis of necessity for the student's livelihood.

D. Preference will be given to those having experience.

E. No graduate students will be used except as graduate assistants in positions requiring the training which the student has secured in college.

F. No student on probation of any kind will be given a position. If, while holding one, he is placed on probation, he will be required to resign the position.

G. Due to scarcity of jobs, it is contrary to the policy of the University for students to hold two University jobs whose aggregate salaries exceed $200 per year.

CLASSIFICATION OF WORK AND RATE OF PAY

A. Laboratory Assistance:
   1. Technical—Requiring skill and training in a particular field ..... 40c-45c per hour
   2. General—Requiring some skill above common labor ..... 30c per hour
   3. Unskilled Labor ..... 25c per hour

B. Clerical:
   1. Highly skilled in a certain field, expert stenographer and typist.... 40c-45c per hour
   2. Typing, filing, bookkeeping, and limited amount of stenographic work ..... 35c per hour
   3. General office work ..... 30c per hour

C. Mechanical:
   1. Skilled ..... 35c per hour
   2. Unskilled ..... 25c per hour

## SCHOLARSHIPS AND LOAN FUNDS

The University of Florida is unfortunate in the paucity of the scholarships and loans which are open to students. Generally, the scholarships and loans which are available are administered directly by the donors. However, the Committee on Scholarships, of which the Dean of Students is chairman, collects all information relative to vacancies, basis of award, value, and other pertinent facts, and supplies this information to interested students. The Committee also collects information on applicants and supplies this information to the donors. In some instances, the Committee has been given authority to make the awards without consulting the donors.

While scholarship, as evidenced by academic attainment, is an important feature in making awards, it is by no means the only consideration. The student's potential capacity to profit by college training and to make reasonable returns to society are important considerations in making all awards.

Unless otherwise specified, applications for the scholarships and loans listed below should be addressed to the Chairman of the Committee on Scholarships and Loan Funds, University of Florida.

### SCHOLARSHIPS

*County Agricultural Scholarships.*—Provision has been made by a legislative act for a scholarship from each county—to be offered and provided for at the discretion of the Board of County Commissioners of each county. The recipient is to be selected by competitive examination. The value of each scholarship is a sum sufficient to pay for board in the dining hall and room in the dormitory. Whether such a scholarship has been provided for by any county may be learned from the Clerk of the Board of County Commissioners, or the County Agent of the county in question. If it is desired, questions for the examination will be provided and papers graded by the University.

*Vocational Rehabilitation Scholarships.*—The Rehabilitation Section of the State Department of Public Instruction provides limited assistance to persons who are physically handicapped. Requirements for eligibility for this assistance are as follows: the applicant must have a permanent major physical disability, he must be sixteen years old, he must have a good scholastic record and must take courses that will prepare him for some vocation at which he can earn a living. Applications for this assistance should be made prior to July 1 for the following school year. Students who wish to apply should write to the State Supervisor of Vocational Rehabilitation, Department of Public Instruction, Tallahassee, Florida.

*United Daughters of the Confederacy Scholarships.*—Scholarships have been established by various chapters of the Florida Division, United Daughters of the Confederacy. Applications should be made to Mrs. David D. Bradford, Chairman of Education, 2109 Watrous Ave., Tampa, Florida.

*Loring Memorial Scholarship.*—A scholarship maintained by Mrs. William Loring Spencer in memory of her distinguished uncle, General Loring.

*Arthur Ellis Ham Memorial Scholarship.*—Established in 1919 by Mrs. Elizabeth C. Ham, in accordance with the last will and in memory of her husband, Captain Arthur Ellis Ham, a former student of the University, who fell in battle at St. Mihiel, France, on September 14, 1918. Value: income from a fund of $5,000.

*Albert W. Gilchrist Memorial Scholarship.*—This scholarship is open to students of the junior and senior classes. Scholastic achievement is the principal basis of this award.

*David Levy Yulee Memorial Scholarship.*—This scholarship is awarded annually on the basis of scholarship, and is open to the members of the junior and senior classes.

*Duval High Memorial Scholarship.*—An act creating the Memorial Duval High School Scholarship and authorizing and appropriating annually $275 of the Duval County funds as financial assistance for one worthy high school graduate is covered by House Bill No. 823, and was approved May 20, 1927.

This scholarship, created to memorialize and assist in preserving the high standards and traditions of the Duval High School, where many of Florida's worthy citizens were educated, was established by the Board of County Commissioners of Duval County, Florida. Application should be made to the Chairman of the Board of County Commissioners, Jacksonville, Florida.

*Jacksonville Rotary Club Scholarship.*—The Jacksonville Rotary Club maintains a scholarship of $250, which is given, at its discretion, to a student meeting such requirements as it may make pertaining to the scholarship. Application should be made to the President of the Jacksonville Rotary Club.

*Children of Deceased World War Veterans Scholarship.*—Any student whose father was a veteran of the World War and who died in service between the sixth day of April, 1917, and the second day of July, 1921, is eligible to apply for this scholarship. The maximum amount to be received by any one student within a period of twelve months cannot exceed $300. Applications should be made to C. Howard Rowton, State Adjutant, American Legion, Palatka, Florida.

*C.M.T.C. Scholarships.*—The University of Florida offers a maximum of four scholarships of $75 each to students who are residents of Florida. Applicants must be graduates of an accredited Florida high school, present a proper admission certificate and certificates of good character, and they must be recommended by the Corps Area Commander. These scholarships are awarded for a period of four years provided the holder maintains a satisfactory scholastic average.

*Florida Bankers Association Scholarship.*—The Florida Bankers Association awards three scholarships annually: one for North and West Florida, one for Central Florida, and one for South Florida. These scholarships are awarded on an examination given at the Annual Boys' Short Course. The examination is given and the award is made by the State Boys' Club Agent. Applications for these scholarships should be made to the Dean of the College of Agriculture.

*The Colonial Dames of America Scholarships.*—Betty Wollman Scholarship, $250; Eleanora Hopkins Scholarship, $250; Crawford Livingston Scholarship, $250; and the Mrs. John D. Rockefeller, Jr., Scholarship, $250. Applications for these scholarships should be made to Mrs. Walter W. Price, 1 West 72nd Street, New York City.

*Lake Worth Woman's Club Scholarship.*—The Lake Worth Woman's Club, of Lake Worth, Florida, maintains a scholarship of $100 a year. Application should be made to the Chairman of the Scholarship Committee, Lake Worth Woman's Club, Lake Worth, Florida.

*Fairchild Scholarship National.*—Mrs. Samuel W. Fairchild, of New York City, offers annually a scholarship amounting to $500. The award is made, by competitive examination, to a graduate in pharmacy who will do post-graduate work in the year immediately following his graduation. Examinations are held in June at the various colleges of pharmacy which are members of the American Association of Colleges of Pharmacy. Further information may be obtained from the Director of the School of Pharmacy.

*Jacksonville Kiwanis Club Scholarships.*—The Jacksonville Kiwanis Club maintains two scholarships for Jacksonville boys. Application should be made by letter to Mr. W. S. Paulk, Supervisor, Boys' and Girls' Work Committee, Jacksonville Kiwanis Club, Chamber of Commerce Building, Jacksonville, Florida.

*Duncan U. Fletcher Agricultural Scholarship.*—Awarded by the United States Sugar Corporation in the memory of the outstanding character of our late Senator, a scholarship of $500 annually for a period of four years to students particularly interested in agricultural activities. Details governing the award of this scholarship together with application blank may be obtained from the Office of the Dean of Students. This scholarship will not be open in 1940-41.

*Sears, Roebuck Scholarships.*—Sears, Roebuck and Company has given funds to the University of Florida for the establishment of a number of scholarships in the amount of $90 annually, payable in nine monthly installments, to students particularly interested in agricultural activities. Details governing the award of these scholarships, together with application blank, may be obtained from the Office of the Dean of Students.

At the end of each year the Sears, Roebuck Company awards a scholarship in the amount of $200 to the outstanding sophomore in the Sears, Roebuck Scholarship group.

*James D. Westcott, Jr., Agricultural Scholarship.*—Awarded by the United States Sugar Corporation in memory of the first United States Senator from Florida, a scholarship of $500 annually for a period of four years to students particularly interested in agricultural activities. Details governing the award of this scholarship, together with application blank, may be obtained from the Office of the Dean of Students. This scholarship will not be open in 1940-41.

## LOAN FUNDS

*Rotary Loan Fund.*—The Rotarians of Florida have set aside a considerable sum of money to be used in making loans to worthy boys who would not otherwise be able to attend college. The maximum loan is $150 per year. These loans are not available to freshmen. Applications for these loans should be made to the President of the Rotary Club of the city from which the student registers, or to Mr. K. H. Graham, Secretary-Treasurer, Rotary Educational Loan Fund, Inc., Language Hall, University of Florida, Gainesville, Florida.

*Knights Templar Scholarship Loans.*—The Grand Lodge of Knights Templar in the State of Florida has arranged a number of loans, in amount of $200 to each student, for students pursuing a course at the University of Florida. These loans are made available through application to the Knights Templar Lodge in the various cities in the state, and are handled by the Grand Lodge officers. Approximately thirty students receive aid from these scholarships each year.

*Knights of Pythias Scholarship Loans.*—Several scholarship loans have been established by the Grand Lodge of the Knights of Pythias. Application for these loans should be made to Mr. Frank Kellow, Secretary-Treasurer, Student Aid Department, Grand Lodge of Florida Knights of Pythias, Fort Myers, Florida.

*William Wilson Finley Foundation.*—As a memorial to the late President Finley, and in recognition of his interest in agricultural education, the Southern Railway Company has donated to the University of Florida the sum of $1,000, to be used as a loan fund. No loan from this fund to an individual is to exceed $150 per year. Recipients are selected by the Dean of the College of Agriculture, to whom applications should be sent.

*The American Bankers Association Foundation.*—One loan scholarship is made to a student at the University of Florida whose major course is in banking, economics, or related

subjects in classes of junior grade or above—value, $250. Application for loan should be made to the Chairman of the Committee on Scholarships and Loan Funds, University of Florida.

*Murphree Engineering Loan Fund.*—On September 16, 1929, a friend of our late President, Dr. A. A. Murphree, gave to the Engineering College $500, to be used as a revolving loan fund. This fund was to be used in cases of emergency when, on account of financial difficulties, worthy students would be kept from graduating unless they could receive some assistance. Only in special cases are these loans made to members of the junior class. Applications for loans from this fund should be made to the Dean of the College of Engineering.

*Florida Association of Architects Loan Fund.*—The Florida Association of Architects has created a revolving loan fund of $500 for the purpose of aiding needy students in Architecture who have proved themselves worthy. Applications should be made to the Director of the School of Architecture and Allied Arts.

*The National Society of the Colonial Dames of America in the State of Florida Loan Fund.*—The National Society of The Colonial Dames of America in the State of Florida has established a loan scholarship for deserving students. This scholarship is administered by the Directors of the Florida Educational Loan Association. Application should be made to the Chairman of the Florida Educational Loan Association, University of Florida.

*The Ladies' Auxiliary Fund.*—The Ladies' Auxiliary of the Florida State Pharmaceutical Association has established a loan fund for deserving students of pharmacy in need of assistance. Further information may be obtained from the Director of the School of Pharmacy.

*Tolbert Memorial Student Loan Fund.*—Through the efforts of various student organizations approximately $4,000 has been accumulated for making short time loans to students to meet financial emergencies. These loans are made in amounts not exceeding $50 and for a period not exceeding 90 days. The fund is administered by a committee of students in cooperation with the Office of the Dean of Students to whose office application for a loan should be made.

*Phi Kappa Phi Loan Fund.*—The Florida chapter of Phi Kappa Phi, national honorary scholastic society, has established a $250 annual loan fund for Phi Kappa Phi members. Loans will be made principally to students intending to pursue graduate work. Application should be made to Mr. B. J. Otte, Chairman, Phi Kappa Phi Loan Fund, University of Florida.

*The Henry Hohauser Loan Fund.*—This loan fund is confined to students in the School of Architecture and Allied Arts. Applications should be made to Director Rudolph Weaver, School of Architecture and Allied Arts, University of Florida.

*The Lions Club Agricultural Loan Fund.*—The Lions Clubs of the State of Florida have set aside a fund to be used in making loans to worthy Florida students who plan to specialize in agriculture. In special cases these loans are made to graduate students, but they are not available for freshmen. Applications for loans from this fund should be made to the Dean of Students at the University of Florida. Mr. Harry Schad is Chairman of the local committee which passes on all loans.

*Senior Law Loan Fund.*—A loan fund available to needy seniors in the College of Law was established by the Law class of 1938 and has been increased by subsequent gifts. Applications should be made to the Dean of the College of Law.

*Benton Engineering Loan Fund.*—On May 20, 1938, a friend of the late Dean Benton gave to the Engineering College $500, to be used as a revolving loan fund. This fund is to be used in cases of emergency when, on account of financial difficulties, worthy students would be kept from graduating unless they could receive some assistance. Only in special cases are these loans made to members of the junior class. Applications for loans from this fund should be made to the Dean of the College of Engineering.

*The Woman's Auxiliary to the Florida Medical Association Loan Fund.*—The Woman's Auxiliary to the Florida Medical Association has created a loan fund to assist worthy students who are the sons of medical doctors who have been members of the Florida Medical Association for at least ten years. Loans are made in amounts not exceeding $150 for the school year. Application should be made to the Office of the Dean of Students, 105 Language Hall, University of Florida.

## PRIZES AND MEDALS

*Board of Control Awards.*—The Board of Control annually awards the following medals:

1. The General College Declamation Medals, to the two best declaimers of the General College.
2. Junior Oratorical Contest Medals, to the two best orators of the junior class.
3. Senior Oratorical Contest Medals, to the two best orators of the senior class.

*Harrison Company Award.*—A set of the Florida Reports, Volumes 1-22, Reprint Edition, is offered by the Harrison Company to the senior law student doing all his work in this institution, and making the highest record during his law course.

*Harrison Company First Year Award.—Redfearn on Wills and Administration of Estates in Florida* is offered by the Harrison Company to the first year law student making the highest average in twenty-eight hours of law taken in this institution.

*Redfearn Prize.*—For the past five years Hon. D. H. Redfearn of Miami has offered a prize of $50 for the best essay by a law student on some topic of legal reform. This prize will be continued in 1940-41.

*Groover-Stewart Drug Company Cup.*—Mr. F. C. Groover, president of the Groover-Stewart Drug Company, has given a large silver loving cup which is awarded to the graduating class in the School of Pharmacy attaining the highest general average in scholarship and is held by that class until this average is exceeded by a subsequent graduating class.

*David W. Ramsaur Medal.*—Mrs. D. W. Ramsaur of Jacksonville offers a gold medal to that graduate of the School of Pharmacy making the highest average in scholarship and evincing leadership in student activities.

*Haisley Lynch Medal.*—The University is grateful to Mrs. L. C. Lynch of Gainesville for her gift of the Haisley Lynch Medal for the best essay in American history. This medal is awarded annually by her in loving memory of her son, Haisley Lynch, a former student of the University, who was killed in action in France during the World War.

*Gargoyle Key.*—Gargoyle Society awards a gold key each year to the graduate of the General College, who, in the opinion of the members, was outstanding in scholarship, leadership, initiative, and general ability. To be eligible for the award the student must have completed the fundamental course in Architecture or that in Painting.

*The David Levy Yulee Lectureship and Speech Contest.*—Under the provisions of the will of Nannie Yulee Noble, a sum of money was bequeathed to the University of Florida, the income of which was to be used to bring outstanding speakers to the University to deliver lectures to the student body and faculty on the general topic "The Ideal of Honor and Service in Politics."

In addition there is held annually a David Levy Yulee Speech Contest, the purpose of which is to stimulate student thought and encourage the creation and presentation of orations on a general idealistic theme. The contest is open to all students in the University and the winners of first and second place receive cash awards of $40 and $25, respectively.

*The James Miller Leake Medal.*—This is a medal awarded annually for an essay in American History. The medal is given by the Gainesville Chapter of the Daughters of the American Revolution and named for the Head of the Department of History and Political Science of the University of Florida.

*Fine Arts Society Award.*—The Fine Arts Society annually offers a gold medal and citation to the outstanding student receiving the baccalaureate degree in the School of Architecture and Allied Arts in recognition of his scholastic standing and leadership. The award is offered only when there are five or more students graduating.

*Phi Sigma Society Scholarship Award.*—The Phi Sigma Society, national honorary biological society, awards each year a medal to the undergraduate or graduate student who is considered to have done the most outstanding research in one of the fields of the biological sciences.

*Sigma Tau Award.*—The Upsilon Chapter of Sigma Tau awards annually a medal for scholastic ability to the sophomore in the College of Engineering who, during his freshman year, made the highest average in his scholastic work.

*Sigma Delta Chi Scholarship Key Award.*—Sigma Delta Chi, professional journalistic fraternity, awards annually a key to ten percent of the students graduating in journalism who have the highest scholastic average for the three years' academic work immediately preceding the year in which the nominees are candidates for degrees.

*Dillon Achievement Cup.*—Mr. Ralph M. Dillon, Tampa, has given a large silver loving cup on which is engraved each year the name of that student graduating in journalism who, in the opinion of the Dean of the College of Arts and Sciences and the faculty of the Department of Journalism, possesses the highest qualifications for service to the press of Florida.

*Delta Sigma Pi Scholarship Key.*—Each year the Florida chapter of the international fraternity of Delta Sigma Pi, professional business administration fraternity, awards a gold key to that male senior in the College of Business Administration who upon graduation ranks highest in scholarship for the entire course in Business Administration.

*Beta Gamma Sigma Scroll.*—Each year the Florida chapter of Beta Gamma Sigma, national honorary business administration fraternity, awards a scroll to the junior in the College of Business Administration who, during his preparatory work in the General College, made the highest scholastic average of all students who entered the College of Business Administration.

*The Chapter Scholarship Award.*—A Certificate of Merit, signed by the President of the American Institute of Chemical Engineers and the Chairman of the Committee on Student Chapters, and a student membership badge are given to the junior in Chemical Engineering who is a member of the Student Chapter and who has attained the highest scholarship standing during his freshman and sophomore years.

*Alpha Kappa Psi Scholarship Medallion.*—Each year Alpha Kappa Psi, international professional fraternity in commerce, awards a white gold-bronze medallion to the Senior in the College of Business Administration who for his first three years at the University of Florida has been most outstanding in scholarship and campus activities and has shown the most likely qualifications for a successful business career in the future.

# GENERAL INFORMATION

## DEGREES

The Board of Control will confer the degree appropriate to the course pursued under the following conditions:

1. *Curriculum requirements.*—Certification by the Registrar that all requirements of the course of study as outlined in the college announcement, or its equivalent as determined by the faculty of the college offering the course, have been completed.

2. *Recommendation of the faculty.*

3. *Residence requirements.*—(a) The minimum residence requirements for the baccalaureate degree is two regular semesters, or one regular semester and three summer terms, or five summer terms. New students offering advanced standing must meet this requirement after entrance to the University. Students who break their residence at the University by attending another institution for credit toward the degree must meet this requirement after re-entering the University. (b) For the master's degree two regular semesters or six summer terms are necessary to satisfy the residence requirements. (c) Students are required to complete the last thirty credit hours (twenty-eight in the College of Law) applied towards the baccalaureate degree during regular residence in the college from which the student is to be graduated. Exception to this regulation may be made only upon written petition approved by the faculty of the college concerned.

4. *Attendance at commencement.*—All candidates for degrees are required to be present at commencement exercises (Baccalaureate Sermon and Commencement Convocation). A student who fails to attend shall not receive his diploma until he complies with this requirement.

## HONOR POINTS AND AVERAGES

Averages are determined by computing the ratio of honor points to semester hours carried. The student receives honor points according to the following scale: A equals 4 honor points per semester hour; B equals 3 honor points per semester hour; C equals 2 honor points per semester hour; D equals 1 honor point per semester hour; E equals 0 honor point per semester hour; Ew equals 0 honor point per semester hour; H equals 0 honor point per semester hour; I equals 0 honor point per semester hour; X equals 0 honor point per semester hour.

## STUDENT REGULATIONS

For information relative to graduation, failure in studies, conduct, social activities, etc., the student should consult the *Bulletin of Student Regulations.* Each student is held responsible for observance of the rules and regulations of the University insofar as they affect him.

# GENERAL EXTENSION DIVISION

The General Extension Division of the University of Florida offers educational opportunities and numerous services to persons who are removed from the campus.

The Division represents the Colleges of Arts and Sciences, Education, Law, Business Administration, and the School of Pharmacy of the University, and the College of Arts and Sciences and the Schools of Education and Music of the State College for Women.

The work is carried on through departments. Formal courses for college credit and some high school work are offered through the Department of Correspondence Study. Wherever a sufficient number of students may be enrolled, university classes are offered by the Department of Extension Classes.

Short courses of informal instruction are offered to professional, business, trade and civic groups and organizations in an effort to give them the latest information in their respective fields of interest. The Department of Women's Activities offers information and instruction on subjects of particular interest to groups of Florida women.

The Department of Auditory Instruction offers cultural and informational programs through lectures and discussion for the benefit of schools and special groups. Training for naturalization, citizenship schools and cooperation with the War Department in enrolling young men for the Citizens' Military Training Camps, because of their educational value, are some phases of the work of the Department of Citizenship Training.

Through the Departments of Visual Instruction and General Information and Service, the world of letters and arts and music is carried to thousands in more isolated communities by means of plays, books, package libraries and art exhibits. A picture of the world and its work is circulated in stereopticon slides and films furnished for instruction and entertainment. The best in recorded music is provided for work in music appreciation and culture.

These and the various service functions of the Division establish contacts which enable the University to aid individuals, organizations and communities, and to contribute to adult education.

## SUMMER SESSION

The University Summer Session is an integral part of the University. During the summer, the General College, the College of Education, the College of Arts and Sciences, the College of Law, the College of Business Administration, the College of Agriculture, and the Graduate School operate, and the College of Engineering conducts certain field work.

Since women are admitted to the Summer Session, many professional courses for primary and elementary school teachers are offered in addition to those usually given in the winter session.

## DIVISION OF ATHLETICS AND PHYSICAL EDUCATION

In September, 1933, the University of Florida joined twelve other southern institutions in forming the Southeastern Conference. This conference represents colleges and universities in the states of Louisiana, Mississippi, Alabama, Georgia, Florida, Tennessee, and Kentucky.

The type of athletic program undertaken by the Department of Physical Education at the University of Florida compares with that in leading universities. A two-year course of required Physical Education is included in the curriculum of the Lower Division. Students who are exempt from Military Science are required to take this work, which is designed to present participation, training, and instructional opportunities in sports included in the intramural program. This course may also be taken as an elective.

The second major sub-division of this Department is that in which are included intercollegiate athletics. These sports are divided into two groups, generally known as major and as minor sports. In the major group are football, basketball, boxing, baseball, swim-

ming, and track; and in the minor group, tennis, golf, and cross country. The equipment includes two baseball diamonds, four athletic fields, six handball courts, two indoor basketball courts, eight tennis courts, a large outdoor swimming pool, a concrete stadium with a seating capacity of 23,000, and two quarter-mile running tracks, one providing permanent seats for approximately 1,500.

The function of the Intramural Department is to encourage the entire student body to participate in organized athletic sports and wholesome recreation. The Department provides facilities for such competition and recreation; organizes and promotes competition between students, groups, and individuals; and fosters a spirit of fair play and sportsmanship among participants and spectators.

The program of intramural activities includes the following sports: golf, swimming, horseshoes, touch football, basketball, boxing, wrestling, diamondball, tennis, handball, water basketball, track, shuffle board, foul shooting, ping pong, badminton, cross country, and Sigma Delta Psi (national athletic fraternity) events.

The proper utilization of leisure time through recreation and play is splendidly expressed in this program. It is estimated that more than 2,500 students (about seventy per cent of the student body) take part in some sport sponsored by the Department. There is a decided trend toward the expansion of recreational facilities for a large group of students as opposed to intense competition for a few.

The rules of the Southeastern Conference do not permit member institutions to employ athletes or to pay students for their services on athletic teams. However, this does not mean that a student is ineligible to receive aid from his institution in the form of scholarships, loan funds, or compensation for student labor merely because he may be proficient in athletics. Athletes in the University of Florida are eligible to all forms of assistance that may be available to other students. As a rule, awards are made only to those who are unable financially to attend the University without assistance and whose standards of conduct and scholarship are worthy of consideration. Awards are usually made in the form of board, rent, books, and similar items rather than in the form of cash, and may be continued from year to year throughout the college course to those students whose records prove satisfactory. Administration of these funds is in the hands of the Committee on Scholarships. Further information may be secured by writing to the Dean of Students, who is chairman of that Committee.

## DIVISION OF MILITARY SCIENCE AND TACTICS

The course in Military Science is required of all physically qualified General College students except adult special students and students transferring from other universities or colleges.

Students who complete the basic course and are selected by the Professor of Military Science and Tactics and the President of the University may elect the advanced courses. Students electing these courses must carry them to completion as a prerequisite to graduation. Upon the completion of these courses, those students recommended by the Professor of Military Science and Tactics and the President of the University will, upon their own application, be offered a commission in the Officers Reserve Corps, United States Army. Students electing to do advanced work in Military Science and Tactics must attend a summer camp, normally between their junior and senior years, established for this purpose by the United States Government. The War Department pays all expenses for the camp including mileage, rations, medical attendance, clothing, and laundry service, and in addition the pay of the seventh grade, United States Army.

The War Department provides a monetary allowance for uniforms and subsistence for advanced course students.

Students who enroll in the band are encouraged to enroll also in Military Science and Tactics, in which case the student is allowed the necessary time from military drill to participate in band practice and band activities.

## UNIVERSITY OF FLORIDA BAND

Students may enroll in the band under either of the two following plans:

A. A student may elect to substitute Band practice and drill for Military Science, in which case he will register for Bd. 111-112 the first year and Bd. 211-212 the second. Completion of these two courses will satisfy the University requirement for basic Military Science but will not qualify the student for advanced Military Science.

B. A student may elect to combine Band practice and drill with the study of Military Science and Tactics, in which case he will register for proper basic course in Military Science and attend theory classes in Military Science, combining Military drill with band drill in accordance with the regulations of the Division of Military Science and Tactics. Completion of the Basic course in Military Science in this manner will qualify the student for advanced Military Science, as well as satisfy the University requirements for Basic Military Science.

Students will not be permitted to earn more than eight hours (two years work) in Band, nor more than a total of eight hours in Military Science and Band. Positively no credit will be allowed for Band unless the student registers in the regular manner even though he participates in band work.

## DIVISION OF MUSIC

The Division of Music offers opportunity for membership in three musical organizations: the University Band, the Glee Club, and the Symphony Orchestra.

All University of Florida students who qualify are eligible for membership in any of these organizations.

The Band performs at all football games within the State and makes at least one out of state trip each season. The Band plays at military parades on the campus, gives a number of concerts and broadcasts during the second semester, and performs at such public functions as the Gasparilla Celebration, the Governor's Inauguration, etc.

The University of Florida Glee Club is composed of men enrolled in the University who are interested in choral singing. The Glee Club makes several trips through the State, particularly during the second semester. Members of the Glee Club are heard regularly each week over the radio in a broadcast period known as the University Hour.

The University of Florida Symphony Orchestra affords an opportunity for the study and performance of symphonic and classical music, makes a number of trips through the State each season and gives a number of concerts and broadcasts on the campus.

Private lessons are offered by the members of the faculty of the Division of Music. These lessons are arranged as follows:

1. Orchestra and Band instruments, Mr. Brown.
2. Voice, including radio broadcasting, Mr. DeBruyn.
3. Piano, Organ, Harmony and Counterpoint, Mr. Murphree.

Lesson periods are arranged at the convenience of the instructor and pupil. Instructors may be consulted concerning lesson periods and rates.

## UNIVERSITY OF FLORIDA LIBRARIES

The libraries of the University are the General Library, the Experiment Station Library, the General Extension Division Library, the Law Library, and the P. K. Yonge Laboratory School Library. The libraries contain approximately 150,000 books.

The General Library provides facilities for library work in the various courses offered by the University and for research work in the different fields. It has two large reading rooms which contain the Reserve Books, the General College Books, and the Reference Collection. Its stacks are accessible to graduate students and faculty members.

The library has files of the principal American and foreign periodicals of general interest, as well as periodicals of special interest in connection with the work of various schools and colleges. About 1,300 periodicals are received. Being a depository of the United States documents, it receives all the publications of the Government.

Among the resources of the library is a special collection of cataloged books and pamphlets which concern Florida and are written by Florida authors, and a large collection of state journals received through the courtesy of Florida newspaper editors.

The Library is open from 7:45 A. M. to 10:30 P. M. every week day except Saturday, when it closes at 1:30 P. M. During the regular session it is open on Sundays from 2:00 P. M. to 6:00 P. M. The Reserve Room is open on Sunday nights from 8:30 to 10:30.

## THE FLORIDA STATE MUSEUM

The Florida State Museum was created by an act of the legislature in 1917 as a department of the University of Florida.

The main objective of the Florida State Museum is to collect, preserve and interpret data concerning the history of Florida, both natural and civil. In the natural history of the state the endeavor is to collect the minerals and exhibit them in connection with their manufactured products of economics and commerce; to collect the fossils of vegetable and animal life showing the evolution of life through the geologic ages; to collect specimens of recent vegetable and animal life illustrating the flora and fauna of the state in connection with their economic and commercial enterprises. In the civil history of the state the endeavor is to collect material and data of the works of mankind from the early aborigines on up through the beginning of civilization to the present time; to maintain exhibits of artifacts of early man, and exhibits of articles in the economic, industrial and social life showing the advancement of civilization.

To maintain a department of archives for the preservation of the records of the state; to maintain a library of publications pertinent to the general and diversified activities of the museum; to maintain a gallery of art for the preservation and exhibit of portraits of persons who have been responsible for making Florida a better place to live, and for the exploitations of works of art for the edification of and as a social center for our citizens;

to maintain a department of museum extension among the schools and communities of the state; to publish reports, bulletins, and monographs of the progress of the work, are some of the activities for which the Florida State Museum strives, and for which the law provides.

In carrying on the general activities as above outlined the Florida State Museum now has a total of 337,414 specimens catalogued at an inventoried value of $347,792.08. the majority of which has been presented or provided by will. The museum is free to the public every day in the year.

## HEALTH SERVICE

Through the Student Health Service the University makes available to any student physical examinations, health consultations, and medical attention. General service is provided free of charge, but special fees are charged for services which are individual in character, such as dentistry, X-rays, laundry in the Infirmary, special drugs and serums, major surgery, special nurses, etc. No student, however, will be denied service because of inability to pay these fees.

The University Infirmary and the offices of the Health Service are on the campus. The Infirmary is open day and night for the admission of patients. The Resident Physician lives at the Infirmary and his services are available at all hours in case of emergency. The Dispensary in the Infirmary building is open from 7:30 to 9 A.M., from 12 noon to 1 P.M. and from 4 to 7 P.M., during which time physicians are in attendance and may be consulted. A nurse is constantly on duty from 7 A.M. to 9 P.M. for emergency treatment.

It is the aim of the Health Service not only to function as a Health Service and render preventive measures, but to provide full hospital care in cases of illness. The Infirmary is rated as a Fully Approved Hospital by the Examining Board of the American College of Surgeons.

The facilities of the Dispensary are such that any number of students can be given attention in a day. The Dispensary is maintained to offer conferences with physicians, examinations, diagnosis, and treatment of minor injuries and illnesses which a student may suffer. The student is encouraged to use this service freely in order that he may avoid more serious illnesses by the lack of treatment or from improper treatment. In the Dispensary, a modern, well equipped drug room furnishes drugs to the student without charge. A laboratory in connection with the Infirmary and Dispensary is in charge of a trained nurse-technician, rendering efficient service in prompt diagnosis. The normal capacity of the Infirmary, 45 beds, can be increased in emergencies. Ample provisions are made for the isolation of communicable diseases. A completely equipped operating room is maintained to provide facilities for major surgical operations. The Infirmary is equipped with a mobile unit X-ray, which is used for the examination of fractures, but the equipment does not provide sufficient service for an extensive diagnostic X-ray study of the intestinal tract, etc. This service is made available to students at actual cost of the materials used.

Students enrolling in the University for the first time are furnished by the Registrar's Office a physical examination form which is to be completed by the family physician and attached to Registration papers. On admission, the student is given a careful physical examination by the University Physician. It is necessary that this physical examination by the home physician be completed in order that parents may be aware of defects which should be corrected prior to the student's entrance in the University. The correction of these defects is necessary in order that he may be in proper physical condition to begin his college work.

There are three principal phases of the activities of the University Health Service: (1) personal attention, (2) sanitation, and (3) education.

1. *Personal Attention.*—This division is concerned with the physical examination of students. A complete record of the physical condition of each student is made and filed when he is admitted to the University. From this record can be determined, in large measure, what procedure is essential to keep the student in the best physical condition during his academic life. The following are some of the phases of the work in the personal division:

a. Provision for maintaining the health of normal, physically sound students; cooperation with the Department of Physical Education regarding physical exercise; education concerning right living; safeguarding of environment.

b. Protection of the physically sound students from communicable diseases; early detection, isolation, and treatment of all cases of communicable diseases—tuberculosis, diphtheria, scarlet fever, measles, typhoid fever, smallpox, mumps, etc.

c. Treatment and professional care of all students who are ill or in need of medical advice or treatment. For extended care by the Health Service it is necessary that the student enter the Infirmary. Any student may be admitted to the Infirmary upon the recommendation of the University Physician. To all patients in the Infirmary the staff will furnish medical and nursing services.

d. Reconstruction and reclamation: correction of defects, advice, and treatment of all abnormalities.

2. *Sanitation.*—The student's environment should be made as hygienic as possible. Hence, this division concerns itself with the sanitary conditions both on and off the campus.

3. *Education.*—Every student in the University is made familiar with the fundamentals of both personal and public hygiene. Through personal conferences education in hygiene and right living is conducted.

### VACCINATION

Prospective students are advised to be vaccinated against smallpox and to be inoculated against typhoid fever. Unless a certificate is presented showing successful vaccination within five years, students will be vaccinated against smallpox at the time of registration.

## BUREAU OF VOCATIONAL GUIDANCE AND MENTAL HYGIENE

A program of vocational guidance is carried on for the students through a series of tests, interviews, and the application of scientific occupational information. The Bureau offers a service to those encountering mental difficulties which interfere with their scholastic work. Further information concerning these services may be obtained from the *Bulletin of the Bureau of Vocational Guidance and Mental Hygiene.*

## FLORIDA UNION

Florida Union serves a three-fold purpose. It is the official center of student activities and presents a broad program of recreation and entertainment for the student body; it is the campus home of faculty, students, alumni, and friends of the University; it aids in establishing a cultural pattern which will distinguish Florida men. The building is open daily from 8:00 A.M. until 11:00 P.M. The game room, reading room, lounge rooms, and

various meeting rooms are available to the student body. The offices of the Student Body, the Y.M.C.A., Alumni Association, and the Publicity Department of the University are located in the Florida Union. A soda-fountain and the bookstore in the annex offer attractive service at the most economical prices. A cordial welcome always awaits every student at the Florida Union.

## STUDENT ORGANIZATIONS AND PUBLICATIONS

*Student Government.*—Student government in the University of Florida is a cooperative organization based on mutual confidence between the student body and the faculty. Considerable authority has been granted the Student Body for the regulation and conduct of student affairs. The criterion in granting authority to the Student Body has been the disposition of the students to accept responsibility commensurate with the authority granted them. Generally speaking, the fields of student activity include regulation of extra-curricular affairs and the administration of the Honor System.

Every enrolled student, having paid his activity fee, is a member of the Student Body and has an equal vote in its government.

The University authorities feel that training in acceptance of responsibility for the conduct of student affairs at the University is a valuable part of the educational growth of the individual student. The Student Body is practically a body politic, occupying its franchise under grant from the Board of Control and subject to its continued approval.

Student government is patterned on the state and national form of government, but adapted to the local needs of the Student Body. Powers are distributed into the three branches: (1) legislative, which is embodied in the Executive Council; (2) judicial, which is embodied in the Honor Court with penal and civil jurisdiction of all judicial matters; (3) executive, embodied in the President and shared with the Vice-President and the Secretary-Treasurer of the Student Body. Members of all three branches are elected directly by the Student Body once a year.

Student government enacts and enforces suitable laws, and promotes athletics, debating, publications of the Student Body, entertainments of a general educational value, and such other activities as the Student Body may adopt. The officers of the Student Body are the President, Vice-President, Secretary-Treasurer, members of the Honor Court, Athletic Council, Executive Council, Lyceum Council, editors and business managers of student publications, and student members of the Board of Student Publications.

*Debating.*—Practice in debating is open to all students through the programs of the varsity and General College debate squads. This work, which is sponsored by the Debate Club, is under the direction of the Department of Speech, and culminates in an extensive schedule of intercollegiate debates.

*Dramatics.*—Any student has an opportunity to participate in several plays which are presented each year by the *Florida Players*, a dramatic group under direction of the Department of Speech.

*Executive Council.*—The Executive Council is composed of representatives elected from the colleges on the campus and in general acts as administrator of Student Body affairs. The Athletic Council and the Lyceum Council have jurisdiction over their respective fields.

*Publications.*—The Student Body publishes *The Seminole*, the year book; *The Florida Alligator*, the student newspaper; *The "F" Book*, the student's guide; and *The Florida Review*, the campus literary magazine.

*Y. M. C. A.*—The purpose of the Young Men's Christian Association is to provide a medium through which the highest ideals of education and religion may be expressed in terms of service. The program of the Association is planned to meet definite needs as they become apparent. There is no membership fee. Any student may become a member by subscribing to its purpose and contributing to its support. A secretary having extensive experience with the problems of students is available for counsel and help.

*Social Fraternities.*—Twenty-one national social fraternities have established chapters at the University; most of them have already built chapter houses and the others have leased homes. The general work of the fraternities is controlled by the Interfraternity Conference, composed of two delegates from each of the national fraternities. The national fraternities at Florida are Alpha Gamma Rho, Alpha Tau Omega, Beta Theta Pi, Chi Phi, Delta Chi, Delta Tau Delta, Delta Sigma Phi, Kappa Alpha, Kappa Sigma, Lambda Chi Alpha, Phi Beta Delta, Phi Delta Theta, Phi Kappa Tau, Pi Kappa Alpha, Pi Kappa Phi, Sigma Alpha Epsilon, Sigma Chi, Sigma Nu, Sigma Phi Epsilon, Tau Epsilon Phi, and Theta Chi. There is one state-organized fraternity on the campus, Pi Delta Sigma.

*Professional and Honorary Fraternities.*—Alpha Epsilon Delta, pre-medical; Alpha Kappa Psi, business; Alpha Phi Omega, service; Alpha Tau Alpha, agricultural education; Alpha Zeta, agricultural; Beta Alpha Psi, accounting; Beta Gamma Sigma, commerce; Delta Sigma Pi, commerce; Florida Blue Key, leadership; Gamma Sigma Epsilon, chemical; Gargoyle Club, architectural; Kappa Delta Pi, teachers; Kappa Epsilon, women's pharmaceutical; Kappa Gamma Delta, aeronautical; Kappa Kappa Psi, band; Kappa Phi Kappa, teachers; Los Picaros, Spanish; Phi Alpha Delta, law; Phi Beta Kappa, scholastic; Phi Delta Phi, law; Phi Eta Sigma, freshman scholastic; Phi Kappa Phi, scholastic; Phi Sigma, biological; Pi Delta Epsilon, journalistic; Pi Gamma Mu, social science; Rho Chi, pharmaceutical; Sabres, military; Sigma Delta Chi, journalistic; Sigma Delta Psi, athletic; Sigma Tau, engineering; Sigma Xi, scientific research; Tau Alpha Nu, forestry; Tau Kappa Alpha, debating; Thyrsus, horticultural.

*Clubs and Societies.*—Agricultural Club; American Institute of Chemical Engineers, Student Branch; American Institute of Electrical Engineers, Student Branch; American Pharmaceutical Association, Student Branch; American Society of Civil Engineers, Student Branch; American Society of Mechanical Engineers, Student Branch; American Student Union, local; Astronomy Club; Bacchus, freshman social; Baptist Student Union; Benton Engineering Society; Block and Bridle Club; Cavaliers, social; Colonels, social; Commerce Club; Debate Club; English Club; Episcopal Club, Student Branch; "F" Club, athletic; F. F. F. Club (Y.M.C.A.); Fine Arts Club; Florida Fourth Estate Club, journalistic; Florida Players; Florida Rifles, rifle and pistol club; Forestry Club; Gator Pep Club; Glee Club; International Relations Club; John Marshall Debating Society; L'Apache, social; Leigh Chemical Society; Mathematics Colloquium; Mortar and Pestle, pharmacy club; Newell Entomological Society; Newman Club, Catholic Student Branch; Pirates, social; Propeller Club, merchant marine society; Society for Advancement of Management, Student Branch; University Radio Guild; Wesley Foundation, Methodist Student Branch; White Friars, social; Y.M.C.A.

# HONOR SYSTEM

*The Honor System.*—One of the finest tributes to the character of the students at the University of Florida is the fact that the Student Body is a self-governing group. The details of the system by which this result is reached will be explained to all freshmen during the first week of their enrollment in the University. However, each parent, as well as each prospective student, is urged to read the following discussion of the Honor System, as this phase of student government forms the keystone of the entire system.

In addition to permitting student legislation on questions of interest to the members of the Student Body, execution of the laws passed, and the expenditure of student funds, the governing system at the University gives to the students the privilege of disciplining themselves through the means of the Honor System. Inaugurated by some of our greatest educators, in higher institutions of the nation, and early adopted in some departments of the University of Florida, the Honor System was finally established in the entire University in 1914, as the result of student initiative. This plan, having met with the approval of all officials of the University, was given the sanction of the Board of Control, and student representatives were selected by the students to administer the system.

Among the basic principles of an Honor System are the convictions that self-discipline is the greatest builder of character, that responsibility is a prerequisite of self-respect, and that these are essential to the highest type of education. Officials of the University and the Board of Control feel that students in the University of Florida should be assumed to be honest and worthy of trust, and they display this confidence by means of an Honor System.

The success of the System is dependent upon the honor of each individual member of the student body in that: (1) he is duty-bound to abide by the principles of the Honor Code, and (2) he is further pledged to report to the Honor Court such violations of the Code as he may observe.

Many men coming to the University for the first time may feel hesitant about assuming this responsibility, inasmuch as early school training has created feelings of antipathy toward one who "tattle-tales" on a fellow-student. The theory of an Honor System adequately overcomes this natural reaction, however, when it is realized that this system is a student institution itself, and not a faculty measure for student discipline, and that to be worthy of the advantages of the Honor System each student must be strong enough to do his duty in this regard. In this way the responsibility for each man's conduct is placed where it must eventually rest—on himself.

The Honor Code of the Student Body is striking in its simplicity; yet it embodies the fundamentals of sound character. Each man is pledged to refrain from:

(a) cheating, (b) stealing, (c) obtaining money or credit for worthless checks.

On the basis of this Code, students are extended all privileges conceived to be the basic rights of men of Honor. There are no proctors or spies in the examination rooms, each student feeling free to do his work, or to leave the room as occasion arises. Secondly, fruits and supplies are placed openly on the campus, with the confidence that each man will pay for any he may take. This system makes each man the keeper of his own conscience until he has proven to his fellow-students that he no longer deserves the trust placed in him.

A breach of the System may be flagrant and serious, or it may be extenuated by circumstances. It may need only mild corrective measures to help the violator obtain a finer conception of right and wrong; it may need strong measures. To enforce the System equitably the students have established the Honor Court. The Court is composed of twelve

students and a chancellor all of whom are elected annually from the upper classes of the various colleges on the campus. Any student convicted by this Court has the right of appeal from its ruling to the Faculty Discipline Committee. A tribute to the efficiency of the Honor Court in its existence on the Florida campus is realized in the fact that, since its establishment, a surprisingly insignificant number of the Court's decisions have been altered upon appeal.

The penal purpose of the Honor Court should receive less stress, perhaps, than its educational purpose, which is its most important function. The responsibility of acquainting every member of the Student Body with the purpose, advantages, and principles of the Honor System is placed upon members of the Court. In line with this work, members of the Honor Court participate in the orientation program each year during Freshman Week. In addition to a series of explanatory talks at that time, special chapel programs are conducted by the Honor Court during the school year. Honor System talks are delivered in the high schools of the State upon request and at regularly scheduled times each spring, and radio programs are broadcast especially for the high schools from Station WRUF in Gainesville. In this way the Honor Court has endeavored to fulfill its responsibility to the men who undertake the problem of self-government and self-discipline at the University of Florida.

The parent of every prospective student should feel that it is his responsibility to stress the paramount importance of honorable conduct on the part of his son while the latter is in attendance at the University of Florida. Dishonest action brings sorrow both to parent and to student.

Because University students have proved worthy of the trust and responsibility involved in administering an Honor System, this feature of student government has become the greatest tradition of the University of Florida. It must be remembered that inasmuch as it is primarily a student responsibility, the future of the system rests with each new class of students entering the University. The University faculty and authorities pledge their support to the Honor System. Each student must support it, or, in failing to support it, contribute to the loss of this tradition.

# COLLEGE OF AGRICULTURE

### ADMINISTRATIVE OFFICERS

JOHN JAMES TIGERT, M.A. (Oxon.), Ed.D., D.C.L., LL.D., D.Litt., L.H.D., President
TOWNES RANDOLPH LEIGH, Ph.D. (Chicago), Acting Vice-President
WILMON NEWELL, D.Sc., Provost for Agriculture
WILBUR LEONIDAS FLOYD, M.S., Assistant Dean and Head Professor of Horticulture, Emeritus
H. HAROLD HUME, M.S.A., D.Sc. (Clemson), Dean
MARY ELLEN KEOWN, M.S., State Home Demonstration Agent
HAROLD MOWRY, M.S.A., Assistant Director, Research, Experiment Station
ARTHUR PERCIVAL SPENCER, M.S., Vice-Director and County Agent Leader, Agricultural Extension Service
RICHARD SADLER JOHNSON, B.S.P., Registrar
JOHN FRANCIS COOPER, M.S.A., Editor
CLYDE BEALE, B.A.J., Assistant Editor
EDWIN F. STANTON, Supervisor, Egg-Laying Contest, Chipley
IDA KEELING CRESAP, Librarian, Experiment Station

### AGRICULTURAL CHEMISTRY

ALVIN PERCY BLACK, Ph.D. (Iowa), Professor of Agricultural Chemistry

### AGRICULTURAL ECONOMICS

CLARENCE VERNON NOBLE, Ph.D. (Cornell), Head Professor of Agricultural Economics
HENRY GLENN HAMILTON, Ph.D. (Cornell), Professor of Marketing
JULIUS WAYNE REITZ, M.S., Professor of Agricultural Economics (On Leave of Absence 1939-40)
JOHN R. GREENMAN, B.S.A., Acting Associate Professor of Agricultural Economics

### AGRICULTURAL EDUCATION

EDWARD WALTER GARRIS, Ph.D. (Peabody), Professor of Agricultural Education

### AGRICULTURAL ENGINEERING

FRAZIER ROGERS, M.S.A., Head Professor of Agricultural Engineering

### AGRONOMY

PETTUS HOLMES SENN, Ph.D. (Wisconsin), Head Professor of Agronomy

### ANIMAL INDUSTRY

ARTHUR LISTON SHEALY, D.V.M. (McKillip), Head Professor of Animal Husbandry
CLAUDE HOUSTON WILLOUGHBY, M.A., Professor of Animal Husbandry
RAYMOND BROWN BECKER, Ph.D. (Minnesota), Professor of Dairy Husbandry and Animal Nutrition
NORMAN RIPLEY MEHRHOF, M.S., Professor of Poultry Husbandry
NATHAN WILLARD SANBORN, M.D. (City of New York), Professor of Poultry Husbandry (Special Status)
MARK WIRTH EMMEL, D.V.M. (Iowa State College), Professor of Veterinary Science
*LLOYD MASSENA THURSTON, Ph.D. (Minnesota), Professor of Dairy Manufactures
WAYNE MILLER NEAL, Ph.D. (Minnesota), Associate Professor of Animal Nutrition

*Deceased.

COLLEGE OF AGRICULTURE

WILLIAM GORDON KIRK, Ph.D. (Iowa State College), Assistant Professor of Animal Husbandry

P. T. DIX ARNOLD, M.S., Assistant Professor of Dairy Husbandry

OLIVER WENDELL ANDERSON, M.S., Instructor in Poultry Husbandry (On Leave of Absence 1939-40)

LOUIS LEON RUSOFF, M.S., Assistant Professor of Animal Nutrition

RAYMOND MERCHANT CROWN, M.S.A., Assistant Professor of Animal Husbandry

BOTANY

WILLIAM B. TISDALE, Ph.D. (Wisconsin), Head Professor of Botany

MADISON DERRELL CODY, M.A., Professor of Botany

WILLIAM RICHARD CARROLL, Ph.D. (Minnesota), Associate Professor of Bacteriology

GEO. F. WEBER, Ph.D. (Wisconsin), Professor of Plant Pathology

ENTOMOLOGY

JOHN THOMAS CREIGHTON, Ph.D. (Ohio State), Head Professor of Entomology

HOMER HIXSON, Ph.D. (Iowa), Instructor in Entomology

HORTICULTURE

HERBERT SNOW WOLFE, Ph.D. (Chicago), Head Professor of Horticulture

CHARLES ELLIOTT ABBOTT, M.S., Professor of Fruits and Vegetables

JOHN VERTREES WATKINS, M.S.A., Assistant Horticulturist

SOILS

ROBERT VERRIL ALLISON, Ph.D. (New Jersey), Head Professor of Soils

FREDRICK BUREAN SMITH, Ph.D. (Iowa State College), Professor of Soils

J. RUSSELL HENDERSON, M.S.A., Assistant Professor of Soils

## ORGANIZATION

The College of Agriculture is composed of three divisions:

1. Instruction Division (the College proper)
2. Research Division (Experiment Station)
3. Agricultural Extension Service

### THE COLLEGE

The aim of the College is to afford young men the best possible opportunity for gaining technical knowledge and training in the art and science of Agriculture, thus enabling graduates to become effective producing agriculturists, leaders in educational work, research workers, etc.

### LIBRARIES

The University Library contains many works on agriculture and horticulture. Each department has a small collection of well selected volumes which are always accessible. In the Experiment Station Library are bulletins from the United States Department of Agriculture and from the experiment stations of the world, all fully indexed.

## DEGREES AND CURRICULA

To enter the College of Agriculture and register for the curriculum leading to the degree of Bachelor of Science in Agriculture, students are required to present a certificate of

graduation from the General College, and to have completed the following courses as electives in the General College:

Acy. 125-126 Agricultural Chemistry
or
Cy. 101-102 General Chemistry
and
Nine hours electives as outlined in the *Bulletin of Information for the General College.*

The minimum load for students in the College of Agriculture will average 17 hours a semester. A total of 68 semester hours on which the student must earn 136 honor points will be required for graduation, including Military Science, if it is elected.

Students entering the College of Agriculture may take a major in the curriculum in General Agriculture or in any one of the following departments and divisions:

Agricultural Chemistry
Agricultural Economics
Agricultural Education
Agricultural Engineering
Agronomy
Animal Industry, including the departments of
(a) Animal Production
(b) Dairy Husbandry
(c) Dairy Manufacture
(d) Poultry Husbandry
Botany, including the departments of
(a) Bacteriology
(b) Botany
(c) Plant Pathology
Entomology
Horticulture
Soils

A minimum of 20 semester hours is required for a major in any department.

The head of the department in which a student majors (or his appointee) will act as the student's adviser, assist the student in arranging his course of study, and make necessary recommendations to the Dean. The student's courses for each semester are subject to the approval of the Dean and the department head.

If a student anticipates pursuing graduate work, he will find it helpful to elect as many basic courses as possible, such as chemistry, biology, mathematics, botany, physics, economics, and a language. On the other hand, if a student anticipates going into applied agriculture: farming, county agent work, farm superintendency, etc., he will find it profitable to elect as much technical agriculture as possible in departments related to his major work.

To graduate *With Honors* a student must have an honor point average of 3.00 *(B)* for the last two years, and be recommended by the head of the department in which he majors and the Dean.

To graduate *With High Honors* a student must have an honor point average of 3.50 for the last two years, must have done independent work exceptionally well, and must pass a final comprehensive examination with distinction.

### CREDIT FOR PRACTICAL WORK

By previous arrangement with the head of the department and the Dean, students may, during their course of study, do practical work under competent supervision in any recognized agricultural pursuit, and upon returning to the college and rendering a satisfactory written report showing faithful service, will be entitled to one credit for each month of such work. Such credits may not total more than three.

Practical work is especially important for students who have no farm experience.

Even though they cannot procure employment under such competent supervision as will give college credit, they should secure work along the line in which they are majoring. Faculty members will assist as much as possible in securing such vacation employment.

# CURRICULA

## AGRICULTURAL CHEMISTRY

### Junior Year

| Courses | First Semester | Credits | Courses | Second Semester | Credits |
|---|---|---|---|---|---|
| Cy. 201 | —Analytical Chemistry | 4 | Cy. 202 | —Analytical Chemistry | 4 |
| Cy. 301 | —Organic Chemistry | 4 | Cy. 302 | —Organic Chemistry | 4 |
| CMs. 23 | —Basic Mathematics | 4 | CMs. 24 | —Basic Mathematics | 4 |
| Ps. 101 | —Elementary Physics | 3 | Ps. 102 | —Elementary Physics | 3 |
| Ps. 103 | —Laboratory for Physics 101 | 2 | Ps. 104 | —Laboratory for Physics 102 | 2 |
| | | 17 | | | 17 |

### Senior Year

| | | | | | |
|---|---|---|---|---|---|
| Cy. 401 | —Physical Chemistry | 4 | Cy. 402 | —Physical Chemistry | 4 |
| Cy. 431 | —Agricultural Analysis | 4 | Cy. 432 | —Agricultural Analysis | 4 |
| Cy. 481 | —Chemical Literature | ½ | Cy. 482 | —Chemical Literature | ½ |
| Sls. 301 | —Soils | 3 | Bcy. 301 | —General Bacteriology | 4 |
| Sls. 491 | —Soils Seminar | 1 | | Electives | 5 |
| Al. 311 | —Elementary Nutrition | 4 | | | |
| | | 16½ | | | 17½ |

## AGRICULTURAL ECONOMICS

### Junior Year

| | | | | | |
|---|---|---|---|---|---|
| *As. 201 | —Agricultural Economics | 0-3 | **As. 306 | —Farm Management | 3 |
| **As. 303 | —Farm Records | 3 | **As. 308 | —Marketing | 3 |
| | †Options | 3-6 | | †Options | 3-6 |
| | ‡Electives | 5-8 | | ‡Electives | 5-8 |
| | | 17 | | | 17 |

### Senior Year

| | | | | | |
|---|---|---|---|---|---|
| **As. 405 | —Agricultural Prices | 3 | **As. 410 | —Agricultural Statistics | 3 |
| **As. 409 | —Cooperative Marketing | 3 | | †Options | 3- 6 |
| | †Options | 3-6 | | ‡Electives | 8-11 |
| | ‡Electives | 5-8 | | | |
| | | 17 | | | 17 |

## AGRICULTURAL EDUCATION

### Junior Year

| | | | | | |
|---|---|---|---|---|---|
| Ag. 303 | —Farm Shop | 3 | As. 306 | —Farm Management | 3 |
| Sls. 301 | —Soils | 3 | Al. 312 | —Feeds and Feeding | 3 |
| Ay. 321 | —Field Crops | 3 | Al. 314 | —Livestock Judging | 3 |
| He. 315 | —Citrus Culture | 3 | He. 312 | —Vegetable Gardening | 3 |
| En. 306 | —Vocational Education | 3 | En. 303 | —Methods in Vocational Agriculture | 3 |
| A course in Physical Education* | | 2 or 3 | | Electives in Agriculture | 2 or 3 |
| | | 17 or 18 | | | 17 or 18 |

*Required, if not completed in Sophomore year.

**Other courses in agricultural economics may be substituted.

†A minimum of 18 hours of technical agricultural subjects is required from the following courses: Ag. 301, Ag. 303 or Ag. 306; Al. 211 or Al. 309; Ay. 321 or Ay. 324; Ey. 301 or Pt. 321; He. 201, He. 312 or He. 315; Sls. 301.

‡A minimum of 15 hours in other technical agricultural subjects in addition to the options will be required. The remaining electives may be chosen in agricultural or non-agricultural subjects. The non-agricultural subjects especially recommended are mathematics, accounting, economics, and public speaking.

Students who may be interested in preparing themselves for U. S. Civil Service Examinations are advised that in general a minimum of 24 semester hours in agricultural economics are required for eligibility to the examination for Junior Agricultural Economist.

**Senior Year**

| Courses | First Semester | Credits | Courses | Second Semester | Credits |
|---|---|---|---|---|---|
| Dy. 311 | —Principles of Dairying | 3 | As. 308 | —Marketing | 3 |
| He. 429 | —Ornamental Horticulture | 3 | Sls. 302 | —Soil Fertility | 3 |
| Py. 415 | —Poultry Management | 3 | En. 410 | —Supervised Teaching in Vocational Agriculture | 3 |
| Vy. 401 | —Livestock Diseases and Farm Sanitation | 2 | En. 412 | —Special Methods in Vocational Agriculture | 2 |
| En. 409 | —Supervised Teaching in Vocational Agriculture | 3 | Ey. 314 | —Principles of Economic Entomology | 4 |
| En. 411 | —Special Methods in Vocational Agriculture | 2 | A course in Health Education* | | 2 or 3 |
| | | 16 | | | 17 or 18 |

*Required by the State Department of Education for certification.

## AGRICULTURAL ENGINEERING

**Junior Year**

| | | | | | |
|---|---|---|---|---|---|
| Ag. 301 | —Drainage and Irrigation | 3 | Ag. 302 | —Farm Motors | 3 |
| Ag. 303 | —Farm Shop | 3 | Ag. 306 | —Farm Machinery | 3 |
| Sls. 301 | —Soils | 3 | Py. 301 | —Fundamentals in Poultry Production | 3 |
| | Approved Electives | 8 | Al. 211 | —Principles of Animal Husbandry | 3 |
| | | | | Approved Electives | 5 |
| | | 17 | | | 17 |

**Senior Year**

| | | | | | |
|---|---|---|---|---|---|
| Ag. 401 | —Farm Buildings | 2 | As. 306 | —Farm Management | 3 |
| Ag. 403 | —Agricultural Engineering Investigations | 2 | Ag. 404 | —Agricultural Engineering Investigations | 2 |
| Ay. 321 | —Field Crops | 3 | Ag. 408 | —Soil and Water Conservation | 3 |
| Ey. 301 | —Introduction to Entomology | 4 | | Approved Electives | 9 |
| He. 315 | —Citrus Culture | 3 | | | |
| | Approved Electives | 3 | | | |
| | | 17 | | | 17 |

## AGRONOMY

The curriculum in Agronomy is designed to give a broad training in the fundamentals of general agriculture with particular emphasis on field and forage crop production, genetics and plant breeding.

**Junior Year**

| Courses | First Semester | Credits | Courses | Second Semester | Credits |
|---|---|---|---|---|---|
| Ay. 321 | —Field Crops | 3 | Ay. 324 | —Forage and Cover Crops | 3 |
| Ay. 329 | —Principles of Genetics | 3 | As. 306 | —Farm Management | 3 |
| Ay. 331 | —Lab. Probs. in Genetics | 2 | Al. 211 | —Prin. of Animal Husbandry | 3 |
| Bty. 303 | —General Botany | 4 | Bty. 304 | —General Botany | 4 |
| Sls. 301 | —Soils | 3 | Sls. 302 | —Soil Fertility | 3 |
| | Electives in Agronomy | 3 | | | |
| | | 18 | | | 16 |

**Senior Year**

| | | | | | |
|---|---|---|---|---|---|
| Bty. 311 | —Plant Physiology | 4 | Ay. 422 | —Plant Breeding | 3 |
| Ey. 301 | —Introduction to Entomology | 4 | Ag. 306 | —Farm Machinery | 3 |
| He. 201 | —Prin. of Horticulture | 3 | As. 308 | —Marketing | 3 |
| Pt. 321 | —Plant Pathology | 4 | | Electives in Agronomy | 3 |
| | Approved Electives | 3 | | Approved Electives | 4 |
| | | 18 | | | 16 |

## GENERAL AGRICULTURE

The curriculum in general agriculture is designed to give a broad fundamental training in agriculture and is especially recommended for students preparing to go into agricultural extension and similar work.

**Junior Year**

| Courses | First Semester | Credits | Courses | Second Semester | Credits |
|---|---|---|---|---|---|
| Ag. 301 | —Drainage and Irrigation | 3 | Al. 211 | —Principles of Animal Husbandry | 3 |
| Ay. 321 | —Field Crops | 3 | | | |
| He. 315 | —Citrus Culture | 3 | As. 306 | —Farm Management | 3 |
| Py. 301 | —Fundamentals in Poultry Production | 3 | Ay. 324 | —Forage and Cover Crops | 3 |
| | | | He. 312 | —Vegetable Gardening | 3 |
| Sls. 301 | —Soils | 3 | Sls. 302 | —Soil Fertility | 3 |
| | Electives | 3 | | Electives | 1 |
| | | 18 | | | 16 |

**Senior Year**

| | | | | | |
|---|---|---|---|---|---|
| Al. 311 | —Elementary Nutrition | 4 | Ag. 306 | —Farm Machinery | 3 |
| As. 413 | —Agricultural Policy | 3 | As. 308 | —Marketing | 3 |
| Ey. 301 | —Introduction to Entomology | 4 | Al. 312 | —Feeds and Feeding | 3 |
| Fy. 313 | —Farm Forestry | 3 | Ay. 400 | —Agric. Extension Methods | 3 |
| Pt. 321 | —Plant Pathology | 4 | CSc. 33 | —Effective Speaking | 4 |
| | | 18 | | | 16 |

ANIMAL INDUSTRY

## (a) Major in Animal Production

**Junior Year**

| | | | | | |
|---|---|---|---|---|---|
| Al. 309 | —Fundamentals in Animal Husbandry | 3 | As. 306 | —Farm Management | 3 |
| | | | Ay. 324 | —Forage and Cover Crops | 3 |
| Al. 311 | —Elementary Nutrition | 4 | Al. 312 | —Feeds and Feeding | 3 |
| Bcy. 301 | —General Bacteriology | 4 | Al. 314 | —Livestock Judging | 3 |
| Vy. 301 | —Veterinary Anatomy and Physiology | 3 | Al. 322 | —Animal Breeding | 2 |
| | | | | Electives | 2 |
| | Electives | 4 | | | |
| | | 18 | | | 16 |

**Senior Year**

| | | | | | |
|---|---|---|---|---|---|
| Sls. 301 | —Soils | 3 | Al. 420 | —Marketing of Livestock | 3 |
| Ay. 329 | —Principles of Genetics | 3 | Al. 422 | —Seminar | 1 |
| Al. 411 | —Beef Production | 2 | Dy. 412 | —Milk Production | 3 |
| Al. 413 | —Swine Production | 3 | | Electives | 9 |
| Al. 415 | —Meat Products | 3 | | | |
| Al. 421 | —Seminar | 1 | | | |
| | Electives | 3 | | | |
| | | 18 | | | 16 |

## (b) Major in Dairy Husbandry

**Junior Year**

| | | | | | |
|---|---|---|---|---|---|
| Al. 311 | —Elementary Nutrition | 4 | As. 306 | —Farm Management | 3 |
| Bcy. 301 | —General Bacteriology | 4 | Al. 312 | —Feeds and Feeding | 3 |
| Dy. 311 | —Principles of Dairying | 3 | Al. 314 | —Livestock Judging | 3 |
| Vy. 301 | —Veterinary Anatomy and Physiology | 3 | Bcy. 402 | —Dairy Bacteriology | 3 |
| | | | | Electives | 5 |
| | Electives | 4 | | | |
| | | 18 | | | 17 |

**Senior Year**

| | | | | | |
|---|---|---|---|---|---|
| Sls. 301 | —Soils | 3 | Ay. 324 | —Forage and Cover Crops | 3 |
| Ay. 329 | —Principles of Genetics | 3 | Dy. 412 | —Milk Production | 3 |
| Ay. 331 | —Laboratory Problems in Genetics | 2 | Al. 422 | —Seminar | 1 |
| | | | | Electives | 9 |
| Dy. 411 | —Dairy Herd Management | 2 | | | |
| Dy. 413 | —Market Milk and Milk Plant Products | 4 | | | |
| Al. 421 | —Seminar | 1 | | | |
| | Electives | 2 | | | |
| | | 17 | | | 16 |

## (c) Major in Dairy Manufactures

**Junior Year**

| | | | | | |
|---|---|---|---|---|---|
| Acy. 203 | —Analytical Chemistry | 3 | Acy. 204 | —Analytical Chemistry | 3 |
| Al. 311 | —Elementary Nutrition | 4 | Bs. 312 | —Accounting Principles | 3 |
| Bs. 311 | —Accounting Principles | 3 | Dy. 314 | —Theory of Dairy Manufacture | 3 |
| Dy. 311 | —Principles of Dairying | 3 | | Approved Electives | 8 |
| | Approved Electives | 4 | | | |
| | | 17 | | | 17 |

**Senior Year**

| Courses | | First Semester | Credits | Courses | | Second Semester | Credits |
|---|---|---|---|---|---|---|---|
| Bs. | 313 | —Cost Accounting | 3 | Bcy. | 402 | —Dairy Bacteriology | 3 |
| Dy. | 316 | —Condensed Milk and Dry Milk | 3 | Dy. | 414 | —Manufacture of Butter and Cheese | 3 |
| Dy. | 413 | —Market Milk and Milk Plant Products | 4 | Dy. | 416 | —Dairy Technology | 5 |
| Dy. | 415 | —Ice Cream Manufacture | 3 | Al. | 422 | —Seminar | 1 |
| Al. | 421 | —Seminar | 1 | | | Approved Electives | 5 |
| | | Approved Electives | 3 | | | | |
| | | | 17 | | | | 17 |

## (d) Major in Poultry Husbandry

**Junior Year**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| As. | 201 | —Agricultural Economics | 3 | As. | 306 | —Farm Management | 3 |
| Ay. | 329 | —Principles of Genetics | 3 | Py. | 312 | —Advanced Incubation, Brooding and Rearing | 3 |
| Ay. | 331 | —Laboratory Problems in Genetics | 2 | Py. | 314 | —Poultry Feeds and Feeding | 3 |
| Al. | 311 | —Elementary Nutrition | 4 | | | Electives | 8 |
| | | Electives | 5 | | | | |
| | | | 17 | | | | 17 |

**Senior Year**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Ag. | 401 | —Farm Buildings | 2 | Py. | 416 | —Poultry Management | 3 |
| Py. | 415 | —Poultry Management | 3 | Py. | 417 | —Marketing Poultry Products | 3 |
| Al. | 421 | —Seminar | 1 | Al. | 422 | —Seminar | 1 |
| Py. | 427 | —Advanced Poultry Judging and Poultry Breeding | 3 | Vy. | 402 | —Poultry Diseases | 2 |
| | | Electives | 8 | | | Electives | 8 |
| | | | 17 | | | | 17 |

Students majoring in Poultry Husbandry must meet the above requirements. It is suggested that Py. 420-430 be taken in addition to the required courses.

### BOTANY

## (a) Major in Bacteriology

**Junior Year**

| Courses | | First Semester | Credits | Courses | | Second Semester | Credits |
|---|---|---|---|---|---|---|---|
| Bcy. | 301 | —General Bacteriology | 4 | Bcy. | 302 | —Agricultural Bacteriology | 3 |
| Bty. | 311 | —Plant Physiology | 4 | Bcy. | 304 | —Pathogenic Bacteriology | 4 |
| Pt. | 321 | —Plant Pathology | 4 | Acy. | 204 | —Analytical Chemistry | 3 |
| Acy. | 203 | —Analytical Chemistry | 3 | Cgn. | 34 | —Reading of German | 3 |
| Cgn. | 33 | —Reading of German | 3 | Bcy. | 306 | —Bacteriology of Foods | 4 |
| | | | 18 | | | | 17 |

**Senior Year**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Bcy. | 411 | —Principles and Practices of Immunology | 4 | Bcy. | 412 | —Industrial Bacteriology | 4 |
| Cy. | 215 | —Water and Sewage | 3 | Bcy. | 402 | —Dairy Bacteriology | 3 |
| He. | 317 | —Plant Propagation | 3 | Bty. | 308 | —Taxonomy | 4 |
| Sls. | 301 | —Soils | 3 | Vy. | 402 | —Poultry Diseases | 2 |
| Bty. | 555 | —Seminar | 1 | Bty. | 556 | —Seminar | 1 |
| | | Electives | 3 | | | Electives | 2 |
| | | | 17 | | | | 16 |

## (b) Major in Botany

**Junior Year**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Bty. | 311 | —Plant Physiology | 4 | Bty. | 308 | —Taxonomy | 4 |
| Bcy. | 301 | —General Bacteriology | 4 | Bty. | 401 | —Ecology | 4 |
| Pt. | 321 | —Plant Pathology | 4 | | | Electives | 8 |
| Cy. | 262 | —Organic Chemistry | 5 | | | | |
| | | | 17 | | | | 16 |

**Senior Year**

| Courses | First Semester | Credits | Courses | Second Semester | Credits |
|---|---|---|---|---|---|
| Bty. 431 | —Plant Histology | 4 | Bty. 432 | —Plant Anatomy | 4 |
| Ay. 329 | —Principles of Genetics | 3 | Ay. 422 | —Plant Breeding | 3 |
| He. 317 | —Plant Propagation | 3 | Pt. 434 | —Mycology | 3 |
| Sls. 301 | —Soils | 3 | Bty. 556 | —Seminar | 1 |
| Ey. 301 | —Introduction to Entomology | 4 | | Electives | 6 |
| Bty. 555 | —Seminar | 1 | | | |
| | | 18 | | | 17 |

### (c) Major in Plant Pathology

**Junior Year**

| | | | | | |
|---|---|---|---|---|---|
| Pt. 321 | —Plant Pathology | 4 | Pt. 322 | —Vegetable Diseases | 3 |
| Ay. 329 | —Principles of Genetics | 3 | Pt. 334 | —Fungicides | 3 |
| Bcy. 301 | —General Bacteriology | 4 | Bty. 308 | —Taxonomy | 4 |
| Bty. 431 | —Plant Histology | 4 | As. 408 | —Marketing of Fruits and Vegetables | 3 |
| | Electives or Bly. 101 | 3 | | Electives or Bly. 102 | 3 |
| | | 18 | | | 16 |

**Senior Year**

| | | | | | |
|---|---|---|---|---|---|
| Pt. 423 | —Fruit Diseases | 3 | Pt. 424 | —Field Crop Diseases | 3 |
| Sls. 301 | —Soils | 3 | Ay. 422 | —Plant Breeding | 3 |
| Cy. 262 | —Organic Chemistry | 5 | Pt. 434 | —Mycology | 3 |
| Bty. 311 | —Plant Physiology | 4 | Bty. 556 | —Seminar | 1 |
| Bty. 555 | —Seminar | 1 | | Electives | 6 |
| | Electives | 2 | | | |
| | | 18 | | | 16 |

## ENTOMOLOGY

The curriculum for this department is flexible. Students should confer with the head of the department. The proper selection of electives will enable a student to train for one of the following phases of the profession: 1. Insects affecting man and animals, 2. Industrial entomology, 3. Insects affecting fruit, vegetable, and field crops, 4. Legal phase of entomology or plant quarantine and inspection, 5. Forest entomology and conservation, 6. Research phase of entomology and graduate work, 7. Commercial entomology and pest control.

Copies of the suggested special curricula for the aforementioned fields of specialization may be obtained from the head of the Department. Ey. 201 (Man and Insects) or Ey. 301 (Introduction to Entomology) are prerequisites or corequisites for all other entomology courses except Ey. 314.

Electives in non-agricultural subjects must not exceed 15 semester hours.

**Junior Year**

| Courses | First Semester | Credits | Courses | Second Semester | Credits |
|---|---|---|---|---|---|
| Ey. 301 | —Introduction to Entomology | 4 | Ey. 304 | —Advanced Entomology or | 5 |
| Ey. 311 | —Seminar | 1 | Ey. 408 | —Insect Morphology and Physiology | |
| Ey. 405 | —Insect Control | 3 | Ey. 432 | —Florida Fruit and Vegetable Insects | 3 |
| He. 201 | —Principles of Horticulture | 3 | Ey. 312 | —Seminar | 1 |
| | Electives | 6 | Ag. 306 | —Farm Machinery | 3 |
| | | | | Electives | 5 |
| | | 17 | | | 17 |

**Senior Year**

| | | | | | |
|---|---|---|---|---|---|
| Ey. 441 | —Plant Quarantine, Inspection and Control | 3 | As. 306 | —Farm Management | 3 |
| Ey. 420 | —Medical and Veterinary Entomology | 3 | Al. 211 | —Principles of Animal Husbandry | 3 |
| Sls. 301 | —Soils | 3 | | Electives | 10 |
| Ay. 329 | —Principles of Genetics | 3 | | | |
| | Electives | 6 | | | |
| | | 18 | | | 16 |

### HORTICULTURE

The Horticulture curriculum is a broad one, designed to give the student a basic training in the field of horticulture, with ample choice of electives in related fields. Opportunity is afforded in the senior year for specialization in any of the following fields: (1) citrus culture, (2) olericulture, (3) floriculture, (4) ornamental horticulture, (5) tropical horticulture. Students should consult with the head of the department concerning their field of special interest and recommended electives for strengthening it.

**Junior Year**

| Courses | First Semester | Credits | Courses | Second Semester | Credits |
|---|---|---|---|---|---|
| Bty. 311 | —Plant Physiology | 4 | As. 408 | —Marketing Fruits and Vegetables | 3 |
| He. 317 | —Plant Propagation and Pruning | 3 | He. 312 | —Vegetable Gardening | 3 |
| Pt. 321 | —Plant Pathology | 4 | He. 314 | —Fundamentals of Fruit Production | 3 |
| Sls. 301 | —Soils | 3 | Sls. 302 | —Soil Fertility | 3 |
| | Approved Electives | 3 | | Approved Electives | 6 |
| | | 17 | | | 18 |

**Senior Year**

| | | | | | |
|---|---|---|---|---|---|
| Ag. 301 | —Irrigation and Drainage | 3 | Ay. 422 | —Plant Breeding | 3 |
| Ey. 301 | —Introduction to Entomology | 4 | | Approved Courses in Horticulture | 6 |
| | Approved Courses in Horticulture | 6 | | Approved Electives | 6 |
| | Approved Electives | 6 | | | |
| | | 19 | | | 15 |

### SOILS

The curriculum in soils is designed to give the student a broad training in the fundamentals of general agriculture with particular emphasis on crop production and soil management. Sufficient elective hours are provided so that in addition to the training in soils, any student may specialize in some closely allied line of work such as agricultural economics, farm management, animal industry, economic entomology, agricultural chemistry, horticulture or agricultural engineering. Carefully selected groups of courses along these various lines are outlined for individual students so that elective hours may be utilized to the best advantage. Students should consult the head of the department for approval of electives.

**Junior Year**

| Courses | First Semester | Credits | Courses | Second Semester | Credits |
|---|---|---|---|---|---|
| Acy. 203 | —Analytical Chemistry | 3 | Acy. 204 | —Analytical Chemistry | 3 |
| Ag. 301 | —Drainage and Irrigation | 3 | As. 306 | —Farm Management | 3 |
| Ay. 321 | —Field Crops | 3 | Ay. 324 | —Forage and Cover Crops | 3 |
| Sls. 301 | —Soils | 3 | Sls. 302 | —Soil Fertility | 3 |
| | Approved Electives | 5 | | Approved Electives | 5 |
| | | 17 | | | 17 |

**Senior Year**

| | | | | | |
|---|---|---|---|---|---|
| Bcy. 301 | —General Bacteriology | 4 | Acy. 432 | —Agricultural Analysis | 3 |
| Sls. 401 | —Soil Morphology and Classification | 3 | Sls. 402 | —Advanced Soil Fertility | 3 |
| Sls. 405 | —Soil Microbiology | 3 | Sls. 408 | —Soil and Water Conservation | 3 |
| Sls. 491 | —Soils Seminar | 1 | Sls. 492 | —Soils Seminar | 1 |
| | Approved Electives | 6 | | Approved Electives | 7 |
| | | 17 | | | 17 |

# SCHOOL OF FORESTRY

### ADMINISTRATIVE OFFICERS

JOHN JAMES TIGERT, M.A. (Oxon.), Ed.D., D.C.L., LL.D., D.Litt., L.H.D., President
TOWNES RANDOLPH LEIGH, Ph.D. (Chicago), Acting Vice-President
WILMON NEWELL, D.Sc. (Iowa State College), Provost for Agriculture
H. HAROLD HUME, M.S.A., D.Sc. (Clemson), Dean of the College of Agriculture
HAROLD STEPHENSON NEWINS, M.F. (Yale), Director
RICHARD SADLER JOHNSON, B.S.P., Registrar

### FACULTY

HAROLD STEPHENSON NEWINS, M.F. (Yale), Director and Head Professor of Forest Utilization
GEORGE F. WEBER, Ph.D. (Wisconsin), Professor of Forest Pathology (Part Time)
RUTHFORD H. WESTVELD, M.F. (Yale), Professor of Silviculture
EDWIN ALLEN ZIEGLER, Sc.D. (Franklin & Marshall), Professor of Forest Economics and Finance
PERCY WARNER FRAZER, M.F. (Yale), Assistant Professor of Forestry
JAMES W. MILLER, JR., B.S.F. (N. C. State), Assistant Professor of Forestry
WILBUR B. DEVALL, B.S.F. (Syracuse), Teaching Fellow in Forestry
KENNETH B. SWINFORD, B.S.F. (Purdue), Teaching Fellow in Forestry

### GENERAL STATEMENT

The work offered by the School of Forestry consists of two Divisions: the four-year course leading to the degree of Bachelor of Science in Forestry and the special two-year Ranger Course offering a certificate at its completion.

The work leading to the degree of Bachelor of Science in Forestry meets the strictest requirements necessary in order that the student may be eligible for the Civil Service examination required for employment with the United States Forest Service and other agencies.

The curriculum is designed to provide a broad scientific education in the four fields of forestry, namely: Forest Management, Forest Utilization, Silviculture, and Forest Economics and Finance, with electives in Landscape Forestry and Game Management. The students in their senior year may elect advanced subjects in these particular fields.

The Austin Cary Memorial Forest, consisting of 2083 acres, located eight miles northeast of Gainesville on the Waldo highway, is used as an experimental forest where the student gets actual field practice. The School of Forestry has a nursery and a small sawmill with necessary equipment located on this forest for use in instruction. Naval stores operations and experiments are being carried on continuously. A dry kiln and wood preservation laboratory will probably be located on the University Campus in the near future.

The University of Florida has 2500 acres of diversified forest lands in Putnam County, Florida, under long time lease agreement with the United States Department of Agriculture. This tract is known as the University of Florida Conservation Reserve. This area is available for studies in forest management and practices of different kinds. Part of the required summer camp will be held on this unit.

There are several industries at Gainesville, namely: a creosoting plant, pole and tie company, chemical retort company, box and crate factory, excelsior plant, and several small

sawmills located in the city or just outside the city limits. These afford quite a varied field of contact for the student during the time of his studies of these particular courses. Three large lumber mills with cutting capacities of approximately 100,000 board feet per working day are located within a radius of 100 miles of the University. These mills are visited from time to time in connection with the particular courses that have reference to lumber-using industries. The production and manufacture of pulp and paper are studied on cutting sites and in the mills. Two of the four National Forests of the State are less than fifty miles distant. Students visit these forests and do actual field work under the supervision of officers of the U. S. Forest Service. The State Forest and Park Service has developed many recreational areas within easy traveling distances from which students may observe the laying out and planning of recreational sites.

It is the aim of the School to develop young foresters with a broad outlook and a sound basic training in applied forestry, thus equipping them for work in any of the various fields that forestry affords. The special two-year Ranger Curriculum is for the training of young students who have had practical experience in forestry and are particularly interested in the Naval Stores Industry, pulpwood production, and other wood-using industries of the South, while the degree course gives a broader conception of the field of forestry.

### REQUIREMENTS FOR ADMISSION

Graduation from the General College or its equivalent as determined by the Board of Examiners. The student should have completed the following courses:

| | | |
|---|---|---|
| Acy. 125-126 | —Agricultural Chemistry or Cy. 101-102 General Chemistry for C-7 | 8 credits |
| Bty. 303-304 | —General Botany for C-8 | 8 credits |
| Fy. 220 | —Introduction to Fy. for C-9 | 2 credits |

### REQUIREMENTS FOR GRADUATION

The student must complete a total of 70 semester hours as determined by the curriculum including Military Science, if it is elected. The student must have an average of C or higher on all work required for his degree. Also, the student must attend and successfully complete a ten weeks Junior Summer Camp which will be held at the University Conservation Reserve; Austin Cary Memorial Forest; Brunswick, Georgia; and one of the National Forests in the mountains of the eastern United States.

### GRADUATION WITH HONORS

For graduation *With Honors*, the student must have an honor point average of 3.00 *(B)* for his Upper Division work as well as an average of 3.00 *(B)* for the four years.

## SHORT COURSE

### TRAINING FOR FOREST RANGERS

Applicants 18 years of age or over who meet the regular entrance requirements of the University or who, in the discretion of the Director of the School of Forestry and the Board of University Examiners, are otherwise qualified, or who have been employed in some practical forestry work, may apply for admission to the Short Course for Forest Rangers.

The work of the short course is given to increase the practical efficiency of those students who are in training as Forest Rangers. The usual University credits will not be granted, and the work taken will not count toward any University degree.

Much of the laboratory instruction is given in the nearby forests to which classes are transported by bus or automobile.

Upon satisfactory completion of the first year curriculum, students will be given, if requested, a certificate of work accomplished. At the completion of the second year and summer camp, the student may secure a certificate of completion of the Ranger Course. The short course will be offered during the school year 1940-41 only if the number of students is sufficient to justify giving the course.

CURRICULUM FOR FOREST RANGER CERTIFICATE

**First Year**

| Courses | First Semester | Credits | Courses | Second Semester | Credits |
|---|---|---|---|---|---|
| Bty. 303 | —General Botany | 4 | Bty. 304 | —General Botany | 4 |
| Fy. 101 | —Principles of Forestry | 3* | Fy. 107 | —Forest Protection | 3* |
| Fy. 106 | —Forest Improvements | 3* | Fy. 112 | —Forest Measurements | 4* |
| Fy. 110 | —Local Dendrology | 4* | Fy. 114 | —Forest Mapping | 2* |
| Fy. 111 | —Forest Regeneration | 4* | Fy. 116 | —Timber Growing Methods | 4* |
| | | 18 | | | 17 |

**Second Year**

| | | | | | |
|---|---|---|---|---|---|
| As. 311 | —Rural Law | 2 | Fy. 202 | —Wood Identification | 4* |
| Fy. 209 | —Logging and Lumbering | 4* | Fy. 206 | —Grazing and Wild Life | 4* |
| Fy. 211 | —Naval Stores and Forest Products | 3* | Fy. 208 | —Forest Construction | 3* |
| Fy. 213 | —Advanced Forest Measurements | 4* | | Approved Electives | 6 |
| Fy. 215 | —Forest Property Administration | 2* | | | |
| Fy. 217 | —Management Plans | 3* | | | |
| | | 18 | | | 17 |

*Course does not carry college credit.

**Junior Year**

| | | | | | |
|---|---|---|---|---|---|
| Sls. 301 | —Soils | 3 | Cl. 223 | —Surveying | 3 |
| Fy. 301 | —Dendrology | 4 | Fy. 309 | —Wood Technology and Timber Physics | 4 |
| Fy. 302 | —Forest Mensuration | 4 | Fy. 310 | —Reforestation and Nursery Practice | 3 |
| Fy. 306 | —Forest Protection | 2 | Fy. 318 | —Forest Utilization and Products | 3 |
| Fy. 311 | —Foundations of Silviculture | 3 | Fy. 320 | —Silviculture | 3 |
| Ms. 215 | —Plane Trigonometry and Logarithms | 3 | | Approved Electives | 3 |
| | | 19 | | | 19 |

*Junior Summer Camp.*—Ten weeks. To be held on the University Conservation Reserve, Austin Cary Memorial Forest, and some National Forest in the Southern Appalachians. At least 40 hours a week in the forest doing practical work, scientific observations, surveying, forest mensuration, identification, protection, improvements, utilization, and advanced methods of forest topographic mapping, timber appraisal, silvicultural practice, advance mensuration, etc.

**Senior Year**

| Courses | First Semester | Credits | Courses | Second Semester | Credits |
|---|---|---|---|---|---|
| Fy. 400 | —Forest Finance | 2 | Fy. 410 | —Forest History and Policy | 2 |
| Fy. 412 | —Seminar | 1 | Fy. 416 | —Forest Management Working Plans | 3 |
| Fy. 413 | —Regional Silviculture | 3 | Fy. 418 | —Logging and Lumbering | 3 |
| Fy. 419 | —Principles of Forest Management | 3 | Fy. 420 | —Forest Economics and Administration | 3 |
| Pt. 321 | —Plant Pathology | 4 | Fy. 430 | —Seminar | 1 |
| | Approved Electives in Forestry | 3 | | Approved Electives | 4 |
| | | 16 | | | 16 |

# SCHOOL OF ARCHITECTURE AND ALLIED ARTS

### ADMINISTRATIVE OFFICERS

JOHN JAMES TIGERT, M.A. (Oxon.), Ed.D., D.C.L., LL.D., D.Litt., L.H.D., President
TOWNES RANDOLPH LEIGH, Ph.D. (Chicago), Acting Vice-President
RUDOLPH WEAVER, B.S., F.A.I.A., Director of the School of Architecture and Allied Arts
RICHARD SADLER JOHNSON, B.S.P., Registrar

### FACULTY

RUDOLPH WEAVER, B.S., F.A.I.A., Director, Head Professor of Architecture
FREDERICK T. HANNAFORD, B.A., Associate Professor of Architecture (Part Time)
WILLIAM T. ARNETT, M.A.Arch., Assistant Professor of Architecture
JOHN LOUIS ROCHON GRAND, M.A., Assistant Professor of Architecture
HOLLIS HOWARD HOLBROOK, B.F.A., Assistant Professor of Drawing and Painting
ALFRED BROWNING PARKER, B.S.Arch., Instructor in Architecture
DEXTER NEIL WEBB, B.S. Bldg. Con., Graduate Assistant

## GENERAL INFORMATION

The work of the School of Architecture and Allied Arts is organized on the basis of a *Lower Division* and an *Upper Division*. Five professional courses are offered: Architecture, Building Construction, Landscape Architecture, Painting, and Commercial Art.

Each curriculum is devised with the intention of giving thorough training in the fundamentals of the profession chosen. The project method of teaching, in which related material is co-ordinated, is employed in every course in the School of Architecture and Allied Arts, and the projects of the various courses are so integrated that each curriculum, instead of being a series of separate subjects, is a unified and correlated whole.

Individual instruction is given to each student. Because of the individual nature of the work, each student passes from one group of problems to the next in varying lengths of time according to his accomplishment, and irrespective of University time units and the progress of other students.

### ARCHITECTURAL REGISTRATION

The State of Florida, like most of the other states, has prescribed by law the qualifications for architectural practice and requires the passing of examinations given by a state board. Properly qualified persons may be admitted to the examinations of the National Council of Architectural Registration Boards, and many advantages accrue to those who obtain their registration in this way.

### SPECIAL LECTURES

Prominent men from related fields and from the various chapters of the American Institute of Architects and the Florida Association of Architects are invited to give lectures which are intended to acquaint the student with the best professional thought and with the culture of our times.

The semi-annual business meeting of the Florida Association of Architects, which is held in the rooms of the School, is open to the students. An opportunity is thus provided for the students to become acquainted with the problems which confront the practicing architect, particularly in Florida, and to meet potential employers.

### ADMISSION

Requirements for admission to the School of Architecture and Allied Arts are stated under "Admission" in each curriculum. For more detailed information concerning admission, see the *Bulletin of Information for the General College.*

### ADULT REGISTRATION PRIVILEGE

Persons twenty-one or more years of age who are not candidates for a degree may, by special vote of the faculty and the approval of the Board of University Examiners, be permitted to register in subjects for which they are adequately prepared. For information concerning the Admission of Special Students see page 294.

### GRADUATE STUDY

The degree of Master of Arts in Architecture is offered in the Graduate School. For further information, see the *Bulletin of the Graduate School.*

## GENERAL REGULATIONS

### ADVANCEMENT

Advancements in the Departments of Architecture and Painting are made by vote of the faculty. To be advanced from one course to the succeeding one, a student must have completed the projects of the course successfully, and must give evidence of satisfactory accomplishment in all the corequisite courses of his curriculum.

### ACADEMIC CREDIT

The School of Architecture and Allied Arts has dispensed with clock hours, class grades, and semester hours credit as prerequisites to the completion of its work. Understanding and demonstrated proficiency are used as a test for granting a degree, rather than the traditional accumulation of credits.

### STUDENT RESPONSIBILITY

The student must assume full responsibility for registering for the proper courses and for fulfilling all requirements for his degree. The faculty will assist and advise, but the student must take the initiative and assume responsibility for managing his own affairs.

### ELECTIVE COURSES

Any student in the School of Architecture and Allied Arts may by permission enroll in courses in addition to those of his regular program to broaden his general or professional education in any direction he may choose.

### STUDENT'S WORK

All work submitted by students is the property of the School and may be retained for purposes of record, exhibition, or instruction.

### GRADUATION WITH HONORS

Students successfully completing the work of the School shall, according to the character of their work as adjudged by the faculty, receive diplomas of graduation, of graduation *With Honors*, or of graduation *With High Honors.*

## DEGREES AND CURRICULA

### DEPARTMENT OF ARCHITECTURE

The Department of Architecture offers instruction in Architecture, Building Construction, and Landscape Architecture.

*Architecture.*—The work in Architecture is for students who desire to become architects or to enter some related field in which beauty is combined with utility. It is the aim of this course to prepare students to become draftsmen, designers, inspectors and superintendents of construction, specification writers, teachers, etc., or ultimately to become practicing architects or specialists in their chosen fields.

The course in Architecture, while not of fixed duration, will nominally require three years beyond the General College, and leads to the degree of Bachelor of Architecture.

*Building Construction.*—The work in Building Construction is for students who are interested in the construction and erection of buildings rather than in their planning, and who wish to prepare themselves to design the structural parts of buildings, the business of contracting, the manufacture or sale of building materials, or for other branches of building construction.

The course in Building Construction, while not of fixed duration, will nominally require two years beyond the General College, and leads to the degree of Bachelor of Science in Building Construction.

*Landscape Architecture.*—The course in Landscape Architecture is designed to fit students for work in the arrangement and preservation of land areas for use and beauty. The aim is not only to prepare a graduate for immediate usefulness as an assistant to an established practitioner, but also to lay a foundation for his ultimate independent practice of the profession.

The course in Landscape Architecture, while not of fixed duration, will nominally require two years beyond the General College, and leads to the degree of Bachelor of Science in Landscape Architecture.

### CURRICULUM IN ARCHITECTURE

*Admission.*—To enter the School of Architecture and Allied Arts and to register for the curriculum leading to the degree in Architecture, students are required to present a certificate of graduation from the General College, and to have completed the following courses as electives in the General College:

Ae. 11A, Fundamentals of Architecture ..... for C-7 and C-8
CMs. 23-24, Basic Mathematics ..... for C-9

*Requirements for the Degree.*—To qualify for the degree of Bachelor of Architecture a student must complete the following courses to the satisfaction of the faculty and must successfully pass a comprehensive examination in Architecture.

| | Nominal Semester in Which Course Occurs | | | | | |
|---|---|---|---|---|---|---|
| Ae. 21A.—Architectural Design | 1st | 2nd | ..... | ..... | ..... | ..... |
| Ae. 21B.—Architectural Design | ..... | ..... | 3rd | 4th | 5th | ..... |
| Ae. 31A.—Freehand Drawing and Water Color | 1st | 2nd | ..... | ..... | ..... | ..... |
| Ae. 31B.—Freehand Drawing and Water Color | ..... | ..... | 3rd | 4th | 5th | ..... |
| Ae. 41A.—History of Architecture | 1st | 2nd | ..... | ..... | ..... | ..... |
| Ae. 41B.—History of Architecture | ..... | ..... | 3rd | 4th | ..... | ..... |
| Ae. 41C.—Decorative Arts | ..... | ..... | ..... | ..... | 5th | ..... |
| Ae. 51A.—Materials and Methods of Construction | 1st | 2nd | 3rd | ..... | ..... | ..... |
| Ae. 51B.—Mechanical Equipment of Buildings | ..... | ..... | ..... | 4th | ..... | ..... |
| Ae. 51C.—Professional Relations and Methods | ..... | ..... | ..... | ..... | 5th | ..... |
| Ae. 61A.—Structural Design of Buildings | 1st | 2nd | ..... | ..... | ..... | ..... |
| Ae. 61B.—Structural Design of Buildings | ..... | ..... | 3rd | 4th | 5th | ..... |
| Ae. 71A.—Thesis | ..... | ..... | ..... | ..... | ..... | 6th |

### CURRICULUM IN BUILDING CONSTRUCTION

*Admission.*—To enter the School of Architecture and Allied Arts and to register for the curriculum leading to the degree in Building Construction, students are required to present a certificate of graduation from the General College, and to have completed the following courses as electives in the General College:

Ae. 11A, Fundamentals of Architecture ..... for C-7 and C-8
CMs. 23-24, Basic Mathematics ..... for C-9

*Requirements for the Degree.*—To qualify for the degree of Bachelor of Science in Building Construction a student must complete the following courses to the satisfaction of the faculty and must successfully pass a comprehensive examination in Building Construction.

| | Nominal Semester in Which Course Occurs | | | |
|---|---|---|---|---|
| Ae. 22A.—Architectural Design | 1st | 2nd | ..... | ..... |
| Ae. 31A.—Freehand Drawing and Water Color | 1st | 2nd | ..... | ..... |
| Ae. 41A.—History of Architecture | 1st | 2nd | ..... | ..... |
| Ae. 51A.—Materials and Methods of Construction | 1st | 2nd | 3rd | ..... |
| Ae. 51B.—Mechanical Equipment of Buildings | ..... | ..... | 3rd | ..... |
| Ae. 51C.—Professional Relations and Methods | ..... | ..... | ..... | 4th |
| Ae. 61A.—Structural Design of Buildings | 1st | 2nd | ..... | ..... |
| Ae. 61B.—Structural Design of Buildings | ..... | ..... | 3rd | 4th |
| CEs. 13.—Economic Foundations of Modern Life | ..... | ..... | 3rd | ..... |
| CBs. 14.—Elementary Accounting | ..... | ..... | ..... | 4th |

### CURRICULUM IN LANDSCAPE ARCHITECTURE

*Admission.*—To enter the School of Architecture and Allied Arts and to register for the curriculum leading to the degree in Landscape Architecture, students are required to present a certificate of graduation from the General College, and to have completed the following courses as electives in the General College:

Ae. 11A, Fundamentals of Architecture ..... for C-7 and C-8
CMs. 23-24, Basic Mathematics ..... for C-9

*Requirements for the Degree.*—To qualify for the degree of Bachelor of Science in Landscape Architecture a student must complete the following courses to the satisfaction of the faculty and must successfully pass a comprehensive examination in Landscape Architecture.

| | Nominal Semester in Which Course Occurs | | | |
|---|---|---|---|---|
| Ae. 23A. —Landscape Design | 1st | 2nd | ..... | ..... |
| Ae. 23B. —Landscape Design | ..... | ..... | 3rd | 4th |
| Ae. 33A. —Freehand Drawing and Water Color | 1st | 2nd | ..... | ..... |
| Ae. 33B. —Freehand Drawing and Water Color | ..... | ..... | 3rd | 4th |
| Ae. 41B. —History of Architecture and Landscape Architecture | 1st | 2nd | ..... | ..... |
| Ae. 53A. —Materials and Methods of Construction | ..... | 2nd | ..... | 4th |
| Sls. 301. —Soils | ..... | ..... | 3rd | ..... |
| Sls. 408. —Soil and Water Conservation | ..... | ..... | ..... | 4th |
| Bty.303-304.—General Botany | 1st | 2nd | ..... | ..... |
| Ey. 405. —Insect Control | ..... | ..... | 3rd | ..... |
| Fy. 301. —Dendrology | ..... | ..... | 3rd | ..... |
| He. 429. —Ornamental Horticulture | 1st | ..... | ..... | ..... |
| He. 430. —Advanced Ornamental Horticulture | ..... | ..... | ..... | 4th |

### DEPARTMENT OF PAINTING

The Department of Painting offers instruction in Painting and in Commercial Art.

*Painting.*—The purpose of the work in Painting is to develop the student's technical ability in pictorial art. Beginning with the fundamentals of drawing, design, and color, the work expands into a highly specialized study of pictorial art, including mural decoration, figure, landscape, and portrait painting.

The course in Painting, while not of fixed duration, will nominally require three years beyond the General College, and leads to the degree of Bachelor of Fine Arts.

*Commercial Art.*—In all fields of commercial activity the product must possess, to a high degree, the quality of beauty; in bringing the products of industry to the attention of the public the best artistic talent is demanded. To prepare designers for this field of endeavor, the work in Commercial Art is offered. In addition to work in drawing, design, and color, a sound foundation is laid in the fundamentals of business practice.

The course in Commercial Art, while not of fixed duration, will nominally require two years beyond the General College, and leads to the degree of Bachelor of Arts in Commercial Art.

### CURRICULUM IN PAINTING

*Admission.*—To enter the School of Architecture and Allied Arts and to register for the curriculum leading to the degree in Painting, students are required to present a certificate of graduation from the General College, and to have completed the following courses as electives in the General College:

Pg. 11A, Fundamentals of Pictorial Art ..... for C-7 and C-8
An elective ..... for C-9

*Requirements for the Degree.*—To qualify for the degree of Bachelor of Fine Arts a student must complete the following courses to the satisfaction of the faculty and must successfully pass a comprehensive examination in Painting.

| | Nominal Semester in Which Course Occurs | | | | | |
|---|---|---|---|---|---|---|
| Pg. 21A.—Pictorial Composition | 1st | 2nd | 3rd | ..... | ..... | ..... |
| Pg. 21B.—Pictorial Composition | ..... | ..... | ..... | 4th | 5th | ..... |
| Pg. 31A.—Freehand Drawing | 1st | 2nd | 3rd | ..... | ..... | ..... |
| Pg. 31B.—Freehand Drawing | ..... | ..... | ..... | 4th | 5th | ..... |
| Pg. 41A.—History of Painting | 1st | 2nd | ..... | ..... | ..... | ..... |
| Ae. 41B.—History of Architecture | ..... | ..... | 3rd | 4th | ..... | ..... |
| Ae. 41C.—Decorative Arts | ..... | ..... | ..... | ..... | 5th | ..... |
| Pg. 51A.—Oil Painting | 1st | 2nd | ..... | ..... | ..... | ..... |
| Pg. 51B.—Oil Painting | ..... | ..... | 3rd | 4th | 5th | ..... |
| Pg. 61A.—Thesis | ..... | ..... | ..... | ..... | ..... | 6th |

### CURRICULUM IN COMMERCIAL ART

*Admission.*—To enter the School of Architecture and Allied Arts and to register for the curriculum leading to the degree in Commercial Art, students are required to present a certificate of graduation from the General College, and to have completed the following courses as electives in the General College:

Pg. 11A, Fundamentals of Pictorial Art ..... for C-7 and C-8
An elective ..... for C-9

*Requirements for the Degree.*—To qualify for the degree of Bachelor of Arts in Commercial Art a student must complete the following courses to the satisfaction of the faculty and must successfully pass a comprehensive examination in Commercial Art.

| | Nominal Semester in Which Course Occurs | | | | |
|---|---|---|---|---|---|
| Pg. 22A. —Commercial Design | 1st | 2nd | ..... | ..... | |
| Pg. 22B. —Commercial Design | ..... | ..... | 3rd | 4th | |
| Pg. 32A. —Freehand Drawing | 1st | 2nd | ..... | ..... | |
| Pg. 32B. —Freehand Drawing | ..... | ..... | 3rd | 4th | |
| Pg. 52A. —Oil Painting | 1st | 2nd | ..... | ..... | |
| Pg. 52B. —Water Color | ..... | ..... | 3rd | 4th | |
| Bs. 433. —Advertising | ..... | ..... | 3rd | ..... | |
| Es. 446. —The Consumption of Wealth | ..... | ..... | ..... | 4th | |
| CEs. 13. —Economic Foundations of Modern Life | 1st | ..... | ..... | ..... | |
| CBs. 14. —Elementary Accounting | ..... | 2nd | ..... | ..... | |

# COLLEGE OF ARTS AND SCIENCES

### ADMINISTRATIVE OFFICERS

JOHN JAMES TIGERT, M.A. (Oxon.), Ed.D., D.C.L., LL.D., D.Litt., L.H.D., President
TOWNES RANDOLPH LEIGH, Ph.D. (Chicago), Acting Vice-President and Dean
WILLIAM HAROLD WILSON, Ph.D. (Illinois), Assistant Dean
RICHARD SADLER JOHNSON, B.S.P., Registrar

### BIBLE

JOHN EVANDER JOHNSON, B.D., M.A., Head Professor of Bible

### BIOLOGY AND GEOLOGY

JAMES SPEED ROGERS, Ph.D. (Michigan), Head Professor of Biology and Geology
THEODORE HUNTINGTON HUBBELL, Ph.D. (Michigan), Professor of Biology and Geology
HARLEY BAKWEL SHERMAN, Ph.D. (Michigan), Professor of Biology and Geology
CHARLES FRANCIS BYERS, Ph.D. (Michigan), Assistant Professor of Biology and Geology
HOWARD KEEFER WALLACE, Ph.D. (Florida), Instructor in Biology and Geology

### CHEMISTRY

TOWNES RANDOLPH LEIGH, Ph.D. (Chicago), Head Professor of Chemistry
ALVIN PERCY BLACK, Ph.D. (Iowa), Professor of Agricultural Chemistry
FRED HARVEY HEATH, Ph.D. (Yale), Professor of Chemistry
VESTUS TWIGGS JACKSON, Ph.D. (Chicago), Professor of Chemistry
CASH BLAIR POLLARD, Ph.D. (Purdue), Professor of Chemistry
WILLIAM ANTHONY LEUKEL, Ph.D. (Wisconsin), Agronomist, Experiment Station
ROWLAND BARNES FRENCH, Ph.D. (Iowa), Associate Chemist, Experiment Station
BURTON J. H. OTTE, M.S., Associate Professor and Curator of Chemistry and Drake Memorial Laboratory
JOHN ERSKINE HAWKINS, Ph.D. (Pennsylvania), Associate Professor of Chemistry and Associate Director Naval Stores Research

### HISTORY AND POLITICAL SCIENCE

JAMES MILLER LEAKE, Ph.D. (Johns Hopkins), Head Professor of History and Political Science, Professor of Americanism and Southern History
JAMES DAVID GLUNT, Ph.D. (Michigan), Professor of History and Political Science
ANCIL NEWTON PAYNE, Ph.D. (Illinois), Assistant Professor of History and Political Science
MANNING JULIAN DAUER, Ph.D. (Illinois), Assistant Professor of History and Political Science
WILLIAM STANMORE CAWTHON, M.A., Assistant Professor of History and Political Science

### JOURNALISM

ELMER JACOB EMIG, M.A., Head Professor of Journalism
WILLIAM LEONARD LOWRY, B.A., Assistant Professor of Journalism
FRANK SUMNER WRIGHT, B.S.J., Lecturer in Journalism
ROBERT ERWIN HOAG, B.A.J., Lecturer in Journalism

LANGUAGE AND LITERATURE

CLIFFORD PIERSON LYONS, Ph.D. (Johns Hopkins), Chairman of Division of Language and Literature and Professor of English
JAMES NESBIT ANDERSON, Ph.D. (Johns Hopkins), Professor Emeritus of Ancient Languages
CHARLES LANGLEY CROW, Ph.D. (Goettingen), Professor Emeritus of Modern Languages
JAMES MARION FARR, Ph.D. (Johns Hopkins), Professor of English (Special Status)
ERNEST GEORGE ATKIN, Ph.D. (Harvard), Professor of French and Member, Executive Committee, Division of Language and Literature
CHARLES ARCHIBALD ROBERTSON, M.A., Professor of English
NORMAN E. ELIASON, Ph.D. (Johns Hopkins), Professor of English
JOSEPH BRUNET, Ph.D. (Stanford), Associate Professor of French
WILLIAM BYRON HATHAWAY, M.A., Associate Professor of Spanish and German
WILBERT ALVA LITTLE, M.A., Associate Professor of Ancient Languages (Special Status)
LESTER COLLINS FARRIS, M.A., Associate Professor of English
HERMAN EVERETTE SPIVEY, Ph.D. (North Carolina), Associate Professor of English
THOMAS BRADLEY STROUP, Ph.D. (North Carolina), Associate Professor of English
GEORGE GILLESPIE FOX, Ph.D. (Princeton), Assistant Professor of English
OLIVER HOWARD HAUPTMANN, Ph.D. (Wisconsin), Assistant Professor of Spanish and German and Member, Executive Committee, Division of Language and Literature
WILLIAM EDGAR MOORE, M.A., Assistant Professor of English (On Leave of Absence)
ALTON CHESTER MORRIS, M.A., Assistant Professor of English (On Leave of Absence)
CHARLES EUGENE MOUNTS, M.A., Assistant Professor of English
WASHINGTON AUGUSTUS CLARK, JR., M.A., Assistant Professor of English
ALBERT ALEXANDER MURPHREE, B.A. (Oxon.), Instructor in English (On Leave of Absence)
MARCUS GORDON BROWN, M.A., Instructor in French (On Leave of Absence)
FREDERICK WILLIAM CONNER, M.A., Instructor in English
KENNETH GORDON SKAGGS, M.A., Instructor in English
OSCAR FREDERICK JONES, Ph.D. (Stanford), Instructor in Spanish and German (On Leave of Absence)
MALCOLM MACLEOD, Ph.D. (Virginia), Instructor in English
JOHN ELLIS CRAPS, M.A., Instructor in Spanish and German
MAXWELL JOSEPH WALLACE, M.A., Instructor in French
JAMES LARRYMORE WILSON, M.A., Instructor in English
DONALD FREDERICK FOGELQUIST, M.A., Instructor in Spanish and German

MATHEMATICS

THOMAS MARSHALL SIMPSON, Ph.D. (Wisconsin), Head Professor of Mathematics
WILLIAM HAROLD WILSON, Ph.D. (Illinois), Professor of Mathematics
FRANKLIN WESLEY KOKOMOOR, Ph.D. (Michigan), Professor of Mathematics
CECIL GLENN PHIPPS, Ph.D. (Minnesota), Associate Professor of Mathematics
JOSEPH HARRISON KUSNER, Ph.D. (Pennsylvania), Associate Professor of Mathematics
HALLETT HUNT GERMOND, Ph.D. (Wisconsin), Associate Professor of Mathematics
ZAREH MEGUERDITCH PIRENIAN, M.S., Associate Professor of Mathematics
BERNARD FRANCIS DOSTAL, M.A., Assistant Professor of Mathematics
SAM W. MCINNIS, M.A., Assistant Professor of Mathematics
URI PEARL DAVIS, M.A., Instructor in Mathematics
EDWARD SCHAUMBERG QUADE, Ph.D. (Brown), Instructor in Mathematics
ROBERT DICKERSON SPECHT, B.A., Instructor in Mathematics (On Leave of Absence)

THEODORE S. GEORGE, M.A., Instructor in Mathematics
ERNEST CLIFFORD PHILLIPS, M.A., Instructor in Mathematics

PHILOSOPHY

HASSE OCTAVIUS ENWALL, Ph.D. (Boston), Head Professor of Philosophy

PHYSICS

ROBERT CROZIER WILLIAMSON, Ph.D. (Wisconsin), Head Professor of Physics
ARTHUR AARON BLESS, Ph.D. (Cornell), Professor of Physics
WILLIAM SANFORD PERRY, M.S., Associate Professor of Physics
HAROLD LORAINE KNOWLES, Ph.D. (Kansas), Assistant Professor of Physics
DANIEL CRAMER SWANSON, Ph.D. (Cornell), Instructor in Physics
HERBERT B. MESSEC, Curator in Physics

PSYCHOLOGY

ELMER DUMOND HINCKLEY, Ph.D. (Chicago), Head Professor of Psychology and Director of the Bureau of Vocational Guidance and Mental Hygiene
OSBORNE WILLIAMS, Ph.D. (Chicago), Assistant Professor of Psychology
CHARLES ISAAC MOSIER, Ph.D. (Chicago), Assistant Professor of Psychology

SOCIOLOGY

LUCIUS MOODY BRISTOL, Ph.D. (Harvard), Head Professor of Sociology
JOHN MILLER MACLACHLAN, Ph.D. (North Carolina), Assistant Professor of Sociology

SPEECH

HENRY PHILIP CONSTANS, M.A., Head Professor of Speech
ARTHUR ARIEL HOPKINS, M.A., Associate Professor of Speech
LESTER LEONARD HALE, M.A., Instructor in Speech (On Leave of Absence)
PAUL ERNEST GEISENHOF, M.A., Instructor in Speech
ROY EDWARD TEW, B.A.E., Instructor in Speech

## GENERAL INFORMATION

The College of Arts and Sciences embraces the subject-matter fields of

| | | |
|---|---|---|
| Astronomy | German | Physics |
| Bible | Greek | Political Science |
| Biology | History | Psychology |
| Chemistry | Journalism | Sociology |
| English | Latin | Spanish |
| French | Mathematics | Speech |
| Geology | Philosophy | |

Students registered in the College may also select courses in Bacteriology, Botany, Economics and Education.

Curricula are offered which lead to the degrees of Bachelor of Arts, Bachelor of Science, and Bachelor of Arts in Journalism. The College also offers courses in combination with Law, which lead to these same degrees.

### RADIO TRAINING

Students in the College of Arts and Sciences who are interested in the special program for Radio Broadcasting Training should see page 371.

### CHAIR OF AMERICANISM

Through the generosity of the American Legion, Department of Florida, which has provided a fund of $40,000 for this purpose, supplemented by legislative appropriation, there is maintained a Professorship in the University known as the "Chair of Americanism". The holder of this professorship is head of the Department of History and Political Science, offering courses in American History, Government, and Constitutional Law.

### GRADUATION WITH HONORS AND HIGH HONORS

For graduation *With Honors* a student must earn an honor point average of 3.2 or greater in the work of the Upper Division.

The regulations concerning graduation *With High Honors* are administered by a committee of the faculty of the College. This committee invites students of sufficiently meritorious scholastic record to take a high honors examination. Recommendation for graduation *With High Honors* is based upon excellence in the high honors examination, honor point average, distribution and quality of subject-matter studied, and evaluation of the student by his teachers.

### CORRESPONDENCE STUDY

No part of the last thirty credits counted toward a degree may be earned by correspondence or extension study except by special permission.

### STUDENT RESPONSIBILITY

*Each student must assume full responsibility for registering for the proper courses and for fulfilling all requirements for his degree.*

Seniors must file formal application for a degree in the Office of the Registrar and must pay the diploma fee very early in the semester in which they expect to receive the degree; the official calendar shows the latest date on which this can be done.

Each student is responsible for every course for which he registers. *Courses can be dropped or changed without penalty only through the office of the Dean of the College.*

The student's program of studies is subject to the approval of the adviser, the curriculum committee, and the dean or his appointee.

### MAXIMUM LOAD

No student will be permitted to carry more than 16 semester hours in any semester unless his honor point average for the preceding semester is at least 2.5. In no case will a student be permitted to carry more than 19 semester hours in any one semester.

### ELECTIVES

In all curricula administered by the College of Arts and Sciences, registration in elective courses is subject to the approval of the Dean or his appointee.

## DEGREES AND CURRICULA

### ADMISSION

*To enter the College of Arts and Sciences students are required to present a certificate of graduation from the General College and to be certified by the Board of University Examiners as qualified to pursue the work of the College. Transfer students who wish to enter the College of Arts and Sciences are referred to the Board of University Examiners in accordance with the provisions of the section of this bulletin entitled "Transfer Students", page 293.*

### THE DEGREES OF BACHELOR OF ARTS AND BACHELOR OF SCIENCE

The curricula which lead to the degrees of Bachelor of Arts and Bachelor of Science are alike in all basic requirements.

The requirements for graduation from these curricula are as follows:

I. Sixty-four semester hours;
II. a C average, or better, in all credits required for the degree;
III. either a Departmental Major or a Group Major as described below.

The work of the major may require and use all of the credits earned in the College of Arts and Sciences except 12, which the student will elect subject only to the restrictions that they must be earned in departments other than those which contribute to the major, and that they must be approved by the Dean or his appointee.

### BACHELOR OF ARTS

The degree of Bachelor of Arts will be conferred upon those who fulfill the requirements for degrees with majors in one or more of the fields of Bible, Economics, English, French, German, History, Journalism, Philosophy, Political Science, Sociology, Spanish and Speech.

The degree of Bachelor of Arts will also be conferred upon those who fulfill the requirements for degrees with majors in one or both of the fields of Mathematics and Psychology when their remaining courses are selected predominantly from the other fields which lead to this degree.

### BACHELOR OF SCIENCE

The degree of Bachelor of Science will be conferred upon those who fulfill the requirements for degrees with majors in one or more of the fields of Bacteriology, Biology, Botany, Chemistry, and Physics.

The degree of Bachelor of Science will also be conferred upon those who fulfill the requirements for degrees with majors in one or both of the fields of Mathematics and Psychology, provided their remaining courses are selected predominantly from the other fields which lead to this degree.

### THE DEPARTMENTAL MAJOR

Many students desire or find it expedient to specialize in some one subject-matter field. Such students should undertake to earn a departmental major.

A departmental major consists of three parts, as follows:

(1) Concentration consisting of not less than 24 and not more than 32 semester hours in one subject-matter field. This field is called the student's major field. The head of the department in which the major field is administered, or his appointee, will act as the student's registration adviser. Each student expecting to earn a departmental major should consult his adviser regarding choice of courses before

each registration. *No courses in the major field in which the grade earned is below C will be counted toward fulfillment of this requirement.*

(2) A reading knowledge of a foreign language or 6 semester hours in a foreign language course numbered above 100.

(3) Such subsidiary courses from subject-matter fields other than the major field as are essential to thoroughness of concentration and comprehension. The student should also consult his adviser concerning these courses.

### THE GROUP MAJOR

Many students do not need or desire the intensive concentration required in a departmental major. For such students group majors are provided. A group major consists of three parts, as follows:

(1) Courses selected from a group of related subject-matter fields so that at least four semesters of credit (not less than 12 semester hours) lie in one of the fields, and not more than six semesters of credit (at most 24 semester hours) lie in a single field. To illustrate this requirement, suppose that a student preparing for the study of Law selects the fields of History, Political Science and Speech. He must earn credit for at least four semesters of subject matter in History, or four semesters of subject matter in Political Science, or four semesters of subject matter in Speech; and he cannot count credit toward the degree for more than six semesters of subject matter in History, or six semesters of subject matter in Political Science, or six semesters of subject matter in Speech. If the student carries two courses in Speech through one semester and one course in Speech through the other semester of a given year, then he will have earned credit for three semesters of subject matter in Speech even though he earned that credit in two semesters of attendance. In general, it is desirable for a student to earn credit for five or six semesters of subject matter in each of at least two fields.

(2) A reading knowledge of a foreign language or 6 semester hours in a foreign language course numbered above 100.

(3) Such subsidiary courses as may be deemed necessary to a complete program of study. Any student who is interested in this type of major may secure information about his own program in the office of the Dean of the College of Arts and Sciences or from the head of a department in which he expects to earn at least 12 semester credit hours.

### THE DEGREE OF BACHELOR OF ARTS IN JOURNALISM

The field of journalism embraces more than the actual production of a newspaper. It includes radio and motion picture work as well. Present day journalistic education does not mean vocational preparation for newspaper reporting alone, but professional preparation for the various positions in the different journalistic fields.

Instruction in the field is intended to provide training for:

(1) Those who are primarily interested in journalism as a profession, and who seek preparation for careers in such journalistic activities as advertising, free-lance writing, general magazine work, press association and syndicate work, public relations and publicity work, and radio newswriting.

(2) Those interested in newspaper production (small daily, weekly, and metropolitan) and who seek preparation in such journalistic activities as reporting, copyreading, feature writing, editorial writing, advertising copy writing and selling, circulation,

sports writing, special article writing, news photography, departmental editing, and related activities such as columnists, literary critics, political and financial writers and correspondents.

(3) Those interested in the related fields of journalism such as production of trade journals and specialized magazines, advertising agencies, book publishers, commercial printers, radio, motion pictures, public relations and publicity, instructors in schools, colleges and universities.

(4) Those who plan careers in one of the many types of work closely related to journalism, and in which the broad cultural knowledge and training afforded by professional education in journalism will either be a prerequisite or an essential to success.

(5) Those who are interested in journalism as a social science, and as a powerful agency for directing civilization's evolving processes, and who realize that an education in journalism, and the life situations with which journalism concerns itself, constitute a liberal education.

Students who are primarily interested in the cultural and intellectual training which the study of journalism affords, rather than in journalism as a profession, may select journalism as a departmental or group major for the degree of Bachelor of Arts, instead of pursuing the professional curriculum leading to the degree of Bachelor of Arts in Journalism.

Requirements for graduation with the degree of Bachelor of Arts in Journalism are:

I. Sixty-six semester hours, in which the student must include the journalism courses required for either the Editorial Sequence, or the Business Sequence, in addition to Jm. 213. 214, 215, and 216 if these courses have not been completed in the General College. The remainder of the sixty-six semester hours must be earned in approved electives, with not less than six nor more than eighteen credits in any one department, and with at least eighteen credits in courses outside the field of journalism.

II. An average of C or better in all credits required for the degree.

III. The head of the Department of Journalism will be the registration adviser for students in this curriculum. The student's program of studies will be subject to the approval of the head of the Department of Journalism and the Dean or his appointee.

## CURRICULUM LEADING TO THE DEGREE OF BACHELOR OF ARTS IN JOURNALISM

### EDITORIAL SEQUENCE: NEWS, FEATURE, OR MAGAZINE WRITING

**Junior Year**

| Courses | First Semester | Credits | Courses | Second Semester | Credits |
|---|---|---|---|---|---|
| **Jm. 301 | —News Writing and Editing | 4 | Jm. 302 | —News Writing and Editing | 4 |
| *Approved Electives | | 13 | Jm. 314 | —Magazine Writing and Editing | 3 |
| | | | *Approved Electives | | 10 |
| | | 17 or more | | | 17 or more |

**Senior Year**

| | | | | | |
|---|---|---|---|---|---|
| Jm. 407 | —Editorial Writing and Management | 3 | Jm. 408 | —Advanced Public Opinion | 3 |
| Jm. 409 | —Law of the Press | 3 | Jm. 412 | —Contemporary Journalistic Thought | 3 |
| *Approved Electives | | 10 | *Approved Electives | | 10 |
| | | 16 or more | | | 16 or more |

BUSINESS SEQUENCE: PUBLISHING, ADVERTISING, CIRCULATION

**Junior Year**

| Courses | First Semester | Credits | Courses | Second Semester | Credits |
|---|---|---|---|---|---|
| **Jm. 301 | —News Writing and Editing | 4 | Jm. 302 | —News Writing and Editing | 4 |
| Jm. 317 | —Business and Mechanics of Publishing | 3 | Jm. 318 | —Newspaper Management | 3 |
| | *Approved Electives | 10 | | *Approved Electives | 10 |
| | | 17 or more | | | 17 or more |

**Senior Year**

| | | | | | |
|---|---|---|---|---|---|
| Jm. 407 | —Editorial Writing and Management | 3 | Jm. 408 | —Advanced Public Opinion | 3 |
| Jm. 409 | —Law of the Press | 3 | Jm. 412 | —Contemporary Journalistic Thought | 3 |
| Jm. 411 | —Public Relations | 3 | | *Approved Electives | 10 |
| | *Approved Electives | 7 | | | |
| | | 16 or more | | | 16 or more |

*Approved electives must include not less than six nor more than eighteen semester hours of credit in any one department.

**Journalism 213, 214, 215 and 216 should be taken as electives in the General College, but may be taken along with Jm. 301-302 with the consent of the head of the Department.

### THE CURRICULA IN COMBINATION WITH LAW

The College of Arts and Sciences offers three curricula in combination with Law. In these curricula it is often possible for capable, industrious students to complete the requirements for admission to the College of Law by one year of work in the College of Arts and Sciences after graduation from the General College or its equivalent.

The requirements for the degrees of Bachelor of Arts and Bachelor of Science in these curricula are basically the same, and may be described as follows:

I. Thirty-six semester hours and an average of C, or better, in the College of Arts and Sciences,

II. twenty-eight semester hours and an average of C, or better, in the College of Law, and

III. a departmental major or a group major leading to the degree of Bachelor of Arts or Bachelor of Science. (See page 340.)

The requirements for the degree of Bachelor of Arts in Journalism in the combined Journalism-Law curriculum are the same as the requirements for graduation in the curriculum leading to the degree of Bachelor of Arts in Journalism (see page 342), provided, however, that credit must be earned as follows:

I. Thirty-eight semester hours and an average of C, or better, in the College of Arts and Sciences, and

II. twenty-eight semester hours and an average of C, or better, in the College of Law.

### THE PRE-MEDICAL CURRICULUM

The College of Arts and Sciences cooperates with students who wish to secure training which will fit them to enter upon the study of medicine. All such students are advised to consult medical school bulletins carefully and widely. The program in the College of Arts and Sciences will be planned in accordance with the needs of the individual student. It is strongly urged, however, that pre-medical students follow and complete the curriculum leading to the degree of Bachelor of Science.

Students who are interested in medicine are invited to the Office of the Dean of the College of Arts and Sciences for counsel and advice.

# SCHOOL OF PHARMACY

### ADMINISTRATIVE OFFICERS

JOHN JAMES TIGERT, M.A. (Oxon.), Ed.D., D.C.L., LL.D., D.Litt., L.H.D., President
TOWNES RANDOLPH LEIGH, Ph.D. (Chicago), Acting Vice-President; Dean, College of Arts and Sciences
WILLIAM HAROLD WILSON, Ph.D. (Illinois), Assistant Dean
PERRY ALBERT FOOTE, Ph.D. (Wisconsin), Director
RICHARD SADLER JOHNSON, B.S.P., Registrar

### PHARMACOGNOSY AND PHARMACOLOGY

FREDERICK V. LOFGREN, Ph.D. (Washington), Acting Head Professor of Pharmacognosy and Pharmacology
CARL H. JOHNSON, Ph.D. (Washington), Instructor in Pharmacognosy and Pharmacology

### PHARMACY

WILLIAM J. HUSA, Ph.C., Ph.D. (Iowa), Head Professor of Pharmacy
PERRY A. FOOTE, Ph.D. (Wisconsin), Professor of Pharmaceutical Chemistry

## GENERAL STATEMENT

All work offered in the School of Pharmacy meets the highest requirements of pharmaceutical instruction in this country. The school is accredited by the American Council on Pharmaceutical Education and therefore receives recognition for its courses from all state boards requiring attendance in an accredited school of pharmacy as a prerequisite for examination and registration.

All students are enrolled by the Florida State Pharmaceutical Association as associate members, as per resolution adopted by the Executive Committee in January, 1935. Upon graduation and registration as a pharmacist, full membership in the Association is granted free for one year. "Students' Hour" is a feature of the annual convention of the State Pharmaceutical Association.

The curriculum is designed to provide a broad scientific education, to train retail pharmacists, and to provide an opportunity for specialization either in Commercial Pharmacy, in Pharmaceutical Chemistry, or in Pharmacognosy and Pharmacology. Specialization in Commercial Pharmacy should qualify a student for a position as manager in a drug store, prescription clerk, or as a salesman of drugs and chemicals. The work in Pharmaceutical Chemistry is designed to train men for positions in food and drug laboratories, or as manufacturing pharmacists. The completion of the work in pharmacognosy or pharmacology should qualify one to act in the capacity of pharmacognocist or inspector of crude drugs with a manufacturing concern, or with the Federal Customs Service, or as pharmacologist for manufacturing houses or for hospitals. The foregoing are only a few of the many positions open to men who possess training along any of the above lines. The demand for graduates of this school exceeds the supply. This curriculum also provides opportunity, through selection of approved electives or options, for the completion of minimum requirements for entrance into certain medical colleges. However, major emphasis is placed on the training of retail pharmacists.

A ten-acre tract has been allotted to the School of Pharmacy for use as a medicinal plant garden, which is used as a teaching adjunct and as a source of supply of fresh material for study, investigation, and classroom illustration.

The General Edmund Kirby-Smith Memorial Herbarium, consisting of 5,600 specimens, with those collected locally, provides a collection of approximately 6,000 plant specimens. Some of these were collected as early as 1846. Specimens from nearly every state and many foreign countries make up this collection. This herbarium provides actual specimens for study of plant classification and for comparison and identification of new species.

The Chemistry-Pharmacy branch of the main library is housed in the Chemistry-Pharmacy building. The library includes text and reference books and several of the American and foreign periodicals on chemical and pharmaceutical subjects.

### REQUIREMENTS FOR ADMISSION

(a) Graduation from the General College or its equivalent as determined by the Board of University Examiners, and (b) recommendation of the Board of University Examiners.

NOTE: Students planning to study pharmacy are advised to offer General Chemistry for C-7; Pharmacy 223-224 for C-8; and Pharmacognosy 221-222 for C-9. Students of the Superior Group are advised to offer General Chemistry for C-2; Basic Mathematics for C-4; and General Physics for C-7.

### REQUIREMENTS FOR GRADUATION

Students entering from the General College, or having equivalent training as determined by the Board of University Examiners, must meet the requirements of the curriculum as outlined below.

### GRADUATION WITH HONORS

To graduate *With Honors*, a student must earn an honor point average of at least 3.0 in the work of both the General College and the Upper Division or an honor point average of at least 3.2 in the work of the Upper Division.

To graduate *With High Honors*, a student must meet the requirements for graduation *With Honors* and be recommended for graduation *With High Honors* by the faculty.

### BACHELOR OF SCIENCE IN PHARMACY

The Degree of Bachelor of Science in Pharmacy is awarded on completion of the curriculum as outlined below. Opportunity for specialization in Pharmacy, Pharmaceutical Chemistry, Pharmacognosy, or Pharmacology is provided through choice of electives in the senior year. Suggested electives are listed after curriculum.

### MASTER OF SCIENCE IN PHARMACY

Courses are offered leading to the degree of Master of Science in Pharmacy. Candidates for that degree must possess the degree of Bachelor of Science in Pharmacy from an institution of recognized standing.

The student must spend at least one entire academic year in residence at the University as a graduate student, devoting his full time to the pursuit of his studies.

For further requirements for the Master's Degree, see the *Bulletin of the Graduate School.*

### DOCTOR OF PHILOSOPHY

Courses are offered leading to the degree of Doctor of Philosophy with specialization in Pharmaceutical Chemistry, Pharmacy, Pharmacognosy, and Pharmacology. For further information consult the *Bulletin of the Graduate School.*

## CURRICULUM

The curriculum outlined below became effective September, 1937. To be eligible for the degree of Bachelor of Science in Pharmacy all requirements of the curricula for pharmacy students in both the General College and the School of Pharmacy must be completed. For example, if Pharmacy 223-224 or Pharmacognosy 221-222 are not completed in the General College, these courses must be completed after admission to the School of Pharmacy. However, in such cases these courses may be taken in lieu of an equal number of hours of options.

NOTE: An average of C, or higher, is required in the work required for a degree.

CURRICULUM

**Junior Year**

| Courses | First Semester | Credits | Courses | Second Semester | Credits |
|---|---|---|---|---|---|
| Cy. 262 | —Organic Chemistry | 5 | Pgy. 342 | —Microscopy of Drugs | 2 |
| Pgy. 242 | —Drug Plant Histology | 2 | Ply. 362 | —Pharmacological Standardization | 4 |
| Ply. 351 | —Pharmacology | 3 | Phy. 353 | —Organic and Analytical Pharmacy | 5 |
| Phy. 211 | —Inorganic Pharmacy | 5 | Phy. 372 | —Commercial Pharmacy | 4 |
| Cy. 203 | —Analytical Chemistry | 3 | Cy. 204 | —Analytical Chemistry | 3 |
| | | 18 | | | 18 |

**Senior Year**

| | | | | | |
|---|---|---|---|---|---|
| Ply. 451 | —Principles of Biologicals | 3 | Ply. 456 | —New Remedies | 3 |
| Ply. 455 | —New Remedies | 3 | Phy. 362 | —Prescriptions and Dispensing | 4 |
| Phy. 354 | —Organic and Analytical Pharmacy | 5 | Phy. 402 | —Pharmaceutical Arithmetic | 2 |
| Phy. 361 | —Prescriptions and Dispensing | 4 | Phy. 432 | —Advanced Drug Analysis | 3 |
| Phy. 381 | —Pharmaceutical Jurisprudence | 2 | | Approved Electives | 6 |
| | | 17 | | | 18 |

Suggested electives:

| | | |
|---|---|---|
| Ply. 517 | —Clinical Methods | 3 |
| Ply. 452 | —Principles of Biologicals | 3 |
| CBs. 14 | —Elementary Accounting | 5 |
| Pgy. 442 | —Commercial Methods | 3 |

# THE COLLEGE OF BUSINESS ADMINISTRATION

ADMINISTRATIVE OFFICERS

JOHN JAMES TIGERT, M.A. (Oxon.), Ed.D., D.C.L., LL.D., D.Litt., L.H.D., President
TOWNES RANDOLPH LEIGH, Ph.D. (Chicago), Acting Vice-President
WALTER JEFFRIES MATHERLY, M.A., LL.D. (William Jewell), Dean of the College of Business Administration
RICHARD SADLER JOHNSON, B.S.P., Registrar

FACULTY

WALTER JEFFRIES MATHERLY, M.A., LL.D. (William Jewell), Head Professor of Economics
MONTGOMERY DRUMMOND ANDERSON, Ph.D. (Robert Brookings), Professor of Business Statistics and Economics
ROLLIN SALISBURY ATWOOD, Ph.D. (Clark), Professor of Economic Geography, Director of Institute of Inter-American Affairs
DAVID MIERS BEIGHTS, Ph.D. (Illinois), C.P.A. (Florida, West Virginia), Professor of Accounting
TRUMAN C. BIGHAM, Ph.D. (Stanford), Professor of Economics
ROLAND B. EUTSLER, Ph.D. (Pennsylvania), Professor of Economics and Insurance
JOHN GRADY ELDRIDGE, M.A., Professor of Economics
ARCHER STUART CAMPBELL, Ph.D. (Virginia), Associate Professor of Public Finance and Foreign Trade, Director of the Bureau of Economic and Business Research
HARWOOD BURROWS DOLBEARE, B.A., Associate Professor of Finance
HUBER CHRISTIAN HURST, M.A., LL.B., Associate Professor of Business Law and Economics
JAMES EDWARD CHACE, JR., M.B.A., Assistant Professor of Economics and Realty Management
SIGISMOND DER. DIETTRICH, Ph.D. (Clark), D.Sc. (Budapest), Assistant Professor of Economic Geography
FRANK WALDO TUTTLE, Ph.D. (Iowa), Assistant Professor of Economics
BEN COGBURN, M.S., C.P.A. (Florida), Assistant Professor of Accounting (Deceased)
JOHN BERRY MCFERRIN, Ph.D. (North Carolina), Assistant Professor of Economics
OSCAR EDWARD HESKIN, Ph.D. (Minnesota), Assistant Professor of Economics and Marketing
JOHN WESLEY FLY, B.S.B.A., C.P.A. (Florida), Instructor in Accounting
EARL P. POWERS, B.S.B.A., Instructor in Accounting

## GENERAL INFORMATION

The College of Business Administration offers instruction in two different fields: Business Administration; and Public Administration.

Instruction in Business Administration is designed to provide analysis of the basic principles of business. Its purpose is to prepare students (1) to become business executives; (2) to assume the increasing responsibilities of business ownership; and (3) to act in the capacity of business specialists.

Business education involves consideration of the following occupational levels: (1) upper levels composed of proprietors and executives; (2) intermediate levels composed of department heads and minor executives; and (3) lower levels composed of clerical and routine workers. The scope of business education includes preparation for all of these levels. While

the College of Business Administration has organized its curricula in business administration to prepare students primarily to occupy the upper and intermediate levels, it has not entirely ignored the lower levels.

The College of Business Administration does not profess to turn out finished business managers, executives, department heads, or minor executives. Its curricula provide instruction that will help to shorten the period of apprenticeship for those who expect to enter business occupations.

Instruction in Public Administration is designed to provide analysis of the basic principles of government. Its purpose is to prepare students for public service occupations. Government has become increasingly complex and requires personnel thoroughly trained in political science, economics, history, and other related sciences. The program of training offered supplies fundamental courses in these various fields. It does not equip students with specific skills; it is designed to provide them with broad training in the structure and functions of government and to prepare them for readier entry into public life and occupations.

It is hoped that arrangements in the near future may be made to provide students with actual experience and initiation into government service through a limited number of internships in state and local government.

### RADIO TRAINING

Students in the College of Business Administration who are interested in the special program for Radio Broadcasting Training should see page 371.

## SPECIAL INFORMATION

### LECTURES BY BUSINESS EXECUTIVES AND GOVERNMENT OFFICIALS

It is the policy of the College to invite from time to time prominent business executives and public officials both from within and from without the state to address the students in business administration and in public administration.

### BUREAU OF ECONOMIC AND BUSINESS RESEARCH

The College of Business Administration maintains a Bureau of Economic and Business Research which provides faculty members and graduate students with an opportunity to engage in specific types of research work. Its activities are coordinated with the research activities of the College as a whole.

### MEMBERSHIP IN NATIONAL AND REGIONAL ASSOCIATIONS

The College of Business Administration is a member of the American Association of Collegiate Schools of Business and of the Southern Economic Association.

### PLACEMENT OF GRADUATES

While the College of Business Administration does not obligate itself to secure positions for its graduates, it operates a placement service and does everything it can to assist students in securing employment after graduation.

### MAXIMUM CREDIT LOADS OF STUDENTS

The maximum credit load of all students registered for the curriculum in Public Administration as well as for the curriculum in Business Administration proper during each of their first two semesters (first year) shall be 15 academic semester hours (6 in summer session) to which advanced military science may be added. However, these students may increase their credit loads to 18 academic semester hours during their first semester, to which advanced military science may be added, provided they have graduated from the General College with honors; likewise, they may increase their credit loads to 18 academic semester hours (9 in summer session) during their second semester, to which military science may be added, provided they have attained an honor point average of 3 (B) or more in the preceding semester. The maximum credit load of all students after their first two semesters is limited to 18 academic semester hours to which military science may be added. The minimum requirement for graduation from the College of Business Administration is 66 semester hours on which the student must earn 132 honor points. To graduate *With Honors*, a student must have graduated from the General College with honors and completed 66 semester hours on which he has earned 198 honor points, or in lieu of graduation from the General College with honors, have completed 66 semester hours on which he has earned 231 honor points. To graduate *With High Honors*, a student must meet the following requirements:

1. Attain a scholastic average in all academic courses of 3.4 or better.
2. Secure the recommendation of a Faculty Committee.

A copy of detailed regulations governing graduation with high honors may be obtained from the Office of the Dean.

Of the 66 semester credit hours required for graduation, not more than six semester credit hours may be earned by correspondence or extension study. Such credit hours, furthermore, must be approved for each individual student in advance by the Committee on Curricular Adjustments.

### DEGREES AND CURRICULA

The College of Business Administration offers two degrees: The Bachelor of Science in Business Administration and the Bachelor of Science in Public Administration. To secure the first degree students must complete either the Curriculum in Business Administration Proper or the Curriculum in Combination with Law. To secure the second degree they must complete the Curriculum in Public Administration.

### ADMISSION TO CURRICULUM IN BUSINESS ADMINISTRATION PROPER AND TO CURRICULUM IN COMBINATION WITH LAW

To enter the College of Business Administration and to register for the Curriculum in Business Administration Proper, or the Curriculum in Combination with Law, students are required to present a certificate of graduation from the General College and to have completed the following courses:

CEs. 13.—Economic Foundations of Modern Life
CBs. 14.—Elementary Accounting
CEs. 15.—Elementary Statistics
One additional half-year elective course in the General College.

These courses may be taken for C-7, C-8, and C-9 electives in the General College during the second year.

CURRICULUM IN BUSINESS ADMINISTRATION PROPER

**Junior Year**

| Courses | First Semester | Credits | Courses | Second Semester | Credits |
|---|---|---|---|---|---|
| Bs. 311 | —Accounting Principles | 3 | Es. 322 | —Financial Organization of Society | 3 |
| Es. 321 | —Financial Organization of Society | 3 | Es. 335 | —Economics of Marketing | 3 |
| Es. 327 | —Public Finance | 3 | Es. 351 | —Transportation Principles | 3 |
| Bs. 401 | —Business Law | 3 | Bs. 402 | —Business Law | 3 |
| | *Electives | 3 | | *Electives | 3 |
| | | 15 | | | 15 |

**Senior Year**

| | | | | | |
|---|---|---|---|---|---|
| Es. 407 | —Economic Principles and Problems | 3 | Es. 408 | —Economic Principles and Problems | 3 |
| | *Electives | 15 | | *Electives | 15 |
| | | 18 | | | 18 |

*Six semester hours of electives may be taken in advanced military science or in approved free electives. The remaining hours are limited to courses in economics and business administration.

CURRICULUM IN COMBINATION WITH LAW

The College of Business Administration combines with the General College and the College of Law in offering a six-year program of study to students who desire ultimately to enter the College of Law. Students register during the first two years in the General College and the third year in the College of Business Administration. When they have fully satisfied the academic requirements of the College of Business Administration, they are eligible to register in the College of Law and may during their last three years complete the course in the College of Law. When students have, after entering the College of Law, completed one year's work in law (28 semester hours and 56 honor points), they may offer this year's work as a substitute for the fourth year in the College of Business Administration and receive the degree of Bachelor of Science in Business Administration.

The maximum credit load for all students registered for the curriculum in combination with law is 18 academic semester hours, to which may be added advanced military science. To graduate *With Honors*, a student must have graduated from the General College with honors and completed 70 semester hours on which he has earned 210 honor points, or in lieu of graduation from the General College with honors, complete 70 semester hours on which he has earned 245 honor points.

The curriculum in business administration in combination with law consists of 30 semester hours of required courses and 12 hours of elective courses. The requirements are as follows:

| Courses | | Credits |
|---|---|---|
| Bs. 311 | —Accounting Principles | 3 |
| Es. 321–322 | —Financial Organization of Society | 6 |
| Es. 327 | —Public Finance | 3 |
| Es. 335 | —Economics of Marketing | 3 |
| Es. 351 | —Transportation Principles | 3 |
| Es. 404 | —Government Control of Business | 3 |
| Es. 407–408 | —Economic Principles and Problems | 6 |
| Es. 454 | —Principles of Public Utility Economics | 3 |
| | *Electives | 12 |
| | | 42 |

*Electives are limited to courses in business administration and six semester hours in advanced military science.

ADMISSION TO THE CURRICULUM IN PUBLIC ADMINISTRATION

To enter the College of Business Administration and to register for the Curriculum in Public Administration students are required to present a certificate of graduation from the General College and to have completed the following courses:

CPl. 13.—Political Foundations of Modern Life
CEs. 13.—Economic Foundations of Modern Life
CBs. 14.—Elementary Accounting
CEs. 15.—Elementary Statistics.

These courses may be taken for C-7, C-8, and C-9, electives in the General College during the second year.

THE CURRICULUM IN PUBLIC ADMINISTRATION

**Junior Year**

| Courses | First Semester | Credits | Courses | Second Semester | Credits |
|---|---|---|---|---|---|
| Pcl. 313 | —American Government and Politics | 3 | Pcl. 314 | —American Government and Politics | 3 |
| Bs. 311 | —Accounting Principles | 3 | Es. 327 | —Public Finance | 3 |
| Es. 407 | —Economic Principles and Problems | 3 | Es. 408 | —Economic Principles and Problems | 3 |
| Hy. 331 | —Survey of American History | 3 | Hy. 332 | —Survey of American History | 3 |
| | *Electives | 3 | | *Electives | 3 |
| | | 15 | | | 15 |

**Senior Year**

| | | | | | |
|---|---|---|---|---|---|
| Pcl. 411 | —Public Administration | 3 | Pcl. 412 | —Public Administration | 3 |
| Es. 454 | —Principles of Public Utility Economics | 3 | Es. 404 | —Government Control of Business | 3 |
| | *Electives | 12 | | *Electives | 12 |
| | | 18 | | | 18 |

*Six semester hours of electives may be taken in advanced military science or in approved free electives. The remaining hours, subject to the approval of the Dean, are limited primarily to courses in the following Departments: Economics and Business Administration; History and Political Science; and Sociology.

# COLLEGE OF EDUCATION

## ADMINISTRATIVE OFFICERS

JOHN JAMES TIGERT, M.A. (Oxon.), Ed.D., D.C.L., LL.D., D.Litt., L.H.D., President
TOWNES RANDOLPH LEIGH, Ph.D. (Chicago), Acting Vice-President
JAMES WILLIAM NORMAN, Ph.D. (Columbia), Dean
GLENN BALLARD SIMMONS, Ph.D. (Johns Hopkins), Assistant Dean in Charge of Laboratory School
RICHARD SADLER JOHNSON, B.S.P., Registrar

## FACULTY

JAMES WILLIAM NORMAN, Ph.D. (Columbia), Head Professor of Education
ALFRED CRAGO, Ph.D. (Iowa), Professor of Educational Psychology and Measurements
JOSEPH RICHARD FULK, Ph.D. (Nebraska), Professor of Public School Administration (Special Status)
EDWARD WALTER GARRIS, Ph.D. (Peabody), Sc.D. (Clemson), Professor of Agricultural Education
WINSTON WOODARD LITTLE, M.A., Professor of Secondary Education and High School Visitor
ARTHUR RAYMOND MEAD, Ph.D. (Columbia), Professor of Supervised Teaching and Director of Educational Research
ELLIS BENTON SALT, Ed.D. (New York University), Professor of Health and Physical Education
GLENN BALLARD SIMMONS, Ph.D. (Johns Hopkins), Assistant Dean in charge of Laboratory School, and Professor of Education
JACOB HOOPER WISE, Ph.D. (Peabody), Professor of Education
HARRY EVINS WOOD, M.A.E., Professor of Agricultural Education and Itinerant Teacher Trainer
JACK BOHANNON, M.A., Assistant Professor of Industrial Arts Education
JAMES DOUGLAS HAYGOOD, Docteur de l'Universite de Paris, Assistant Professor of Education
WILLIAM TRAVIS LOFTEN, M.A.E., Associate Professor of Agricultural Education and Itinerant Teacher Trainer
ADAM WEBSTER TENNEY, M.A., Professor of Agricultural Education

## THE P. K. YONGE LABORATORY SCHOOL

MARION STEARNS BARCLAY, A.B., M.A., Instructor in Home Economics Education
MARGARET WHITE BOUTELLE, M.A., Assistant Professor of English Education
CLEVA JOSEPHINE CARSON, M.S., Assistant Professor of Music Education
JAMES DEWBERRY COPELAND, Ed.D. (New York University), Assistant Professor of Business Education
JOHN BROWARD CULPEPPER, M.A.E., M.A., Assistant Professor of Social Science Education
CARROLL FLEMING CUMBEE, M.A.E., Instructor in Core Curriculum Education (On Leave of Absence)
GEORGE SANFORD DAVIS, JR., B.A.E., Instructor in Industrial Arts Education
ELSIE MARGARET DOUTHETT, B.A., Instructor in Physical Education for Girls
CHARLOTTE D. DUNN, M.A., Instructor in Kindergarten Education
CHARLES LIVINGSTON DURRANCE, JR., M.A.E., Instructor in English and Social Studies Education

William Louis Goette, M.A.E., Assistant Professor of Science Education
Lillian Page Hough, M.A., Instructor in Elementary Education, assigned to Second Grade
Homer Howard, M.A., Ph.D., Assistant Professor of Mathematics Education
Mark Bartley Jordan, M.A., Professor of Agricultural Education
Kenneth Paul Kidd, M.A., Assistant Professor of Mathematics Education
Kathleen Tennille King, M.A., Instructor in Elementary Education, assigned to Fourth Grade
Eugene Kitchen, B.A.E., M.A.E., Instructor in Core Curriculum Education
Gladys O'Neal Laird, B.A.E., M.A.E., Instructor in Core Curriculum Education
Hal Graham Lewis, M.A.E., Instructor in Social Science Education
William Francis Lockwood, M.A.E., Instructor in Practical and Fine Arts Education
Ida Ruth McLendon, B.A.E., Instructor in Elementary Education, assigned to Third Grade
Lillian Irma Maguire, M.A., Instructor in English Education
Roy E. Michael, Jr., B.A.E., Instructor in Industrial Arts Education
Ingorie Vause Mikell, B.M., Instructor in Kindergarten Education (part time)
Hazen Edward Nutter, M.A., Director of Florida Curriculum Laboratory
Clara McDonald Olson, M.A.E., Assistant Professor of Integrated Education (On Leave of Absence)
Ruth Beatrice Peeler, M.A., Instructor in Elementary Education, assigned to First Grade
Eunice Jean Pieper, M.A.E., Instructor in Elementary Education, assigned to Fifth Grade
Earl Malcolm Ramer, M.A., Assistant Professor of Core Curriculum Education (On Leave of Absence)
Eulah Mae Snider, A.B., B.S. in L.S., Librarian and Instructor in Education
Billie Knapp Stevens, M.A., Instructor in Physical Education for Boys
Grace Adams Stevens, M.A., Instructor in Elementary Education, assigned to Sixth Grade
Marie Wesley Swinford, R.N., B.S., School Nurse and Instructor in Health Education
Glover Emerson Tully, M.A.E., Instructor in Core Curriculum Education

## GENERAL INFORMATION

The College of Education has as its main purpose the development and the improvement of teaching in all its branches. Through its courses in Education it offers opportunities for study and professional improvement; through its Bureau of Educational Research it offers opportunity for research and the investigation of school problems; and through its laboratory school it offers opportunities for observation and participation in classroom instruction. There are constantly many valuable contacts with public school officials, teachers, and administrators which afford ample facilities for professional improvement.

### GRADUATE CERTIFICATES

Graduates of the College of Education are granted graduate certificates without further examination provided that during their college careers they have complied with the regulations of the State Board of Education covering the certification of teachers. These regulations are fully described in a bulletin on the certification of teachers published by the State Department of Public Instruction in Tallahassee and it is imperative that students who expect to be certificated familiarize themselves with these regulations. In general, they require that an applicant for certification shall have taken three-twentieths of his work, or eighteen semester hours, in Education; that he shall have specialized in the subjects to be entered on the face of the certificate; and that he shall have met certain other requirements more fully described in the bulletin on the certification of teachers.

Applications for the certificate should be made immediately after graduation and should be addressed to Colin English, State Superintendent of Public Instruction, Tallahassee, Florida.

### EXTENSION OF CERTIFICATE

Students enrolled in the College of Education, upon recommendation of the faculty, may receive an extension of one year on any or all valid Florida certificates subject to extension.

### CORRESPONDENCE COURSES

Not more than one-fourth of the semester hours which are applied toward a degree, nor more than 12 of the last 36 semester hours which are earned toward a Bachelor's degree, may be taken by correspondence study or extension class. While in residence, the student will not be allowed to carry on correspondence work without the consent of the Dean; this permission will be granted only in exceptional cases. Not more than 9 semester hours may be earned by correspondence study during the summer vacation period.

### REQUIREMENTS FOR ADMISSION

Students entering the College of Education from the General College will be required to (1) present a certificate of graduation from that college, (2) be recommended for admission to the Upper Division, and (3) have the approval of the Committee on Admissions of the College of Education.

Students entering from other institutions must have the equivalent of graduation from the General College and have the approval of the Committee on Admissions of the College of Education.

### ADDITIONAL REQUIREMENTS FOR CERTAIN GROUPS

Certain additional requirements for admission are specified for admission to the curricula in Health and Physical Education, Agricultural Education, and Industrial Arts Education. For these requirements, see the *Bulletin of Information for the General College.*

### GRADUATION WITH HONORS

Students successfully completing the work of the Upper Division will, according to the character of their work, receive diplomas of graduation, *With Honors*, or of graduation *With High Honors.* For detailed regulations concerning graduation with honors, the student should consult the Dean of the College.

## DEGREES AND CURRICULA

### DEGREES

Only two degrees are offered in the College of Education: Bachelor of Arts in Education and Bachelor of Science in Education. The former degrees of Bachelor of Arts or Bachelor of Science in Health and Physical Education, Bachelor of Science in Agricultural Education, and Bachelor of Science in Industrial Arts Education have been incorporated in these two degrees.

For either degree the student is required to complete 60 semester hours with an average of C or higher, at least 18 resident hours of which must be in Education and the remaining hours of which will be elected by the student in conference with his advisory committee.

In every case, the student must complete at least 24 hours in a subject or field of concentration to be eligible for graduation.

All students except those whose fields of concentration are Health and Physical Education, Agricultural Education, or Industrial Arts Education, will be graduated upon completion of the following curriculum:

### CURRICULUM LEADING TO THE DEGREE OF BACHELOR OF ARTS OR BACHELOR OF SCIENCE* IN EDUCATION

(For those who expect to teach in the junior and senior high school)

| Courses | | | Credits |
|---|---|---|---|
| **CEn. | 13 | —Introduction to Education | |
| En. | 305 | —Development and Organization of Education | 3 |
| En. | 371–372 | —Observation and Student Teaching | 6 |
| En. | 385 | —Pre-Adolescent Child | 3 |
| En. | 386 | —Adolescent Child | 3 |
| En. | 387 | —Health Education | 3 |
| En. | 401 | —School Administration | 3 |

Certification requirements in 2 fields.

Electives to make a total of 60 credits in Upper Division.

### FOR THOSE WHOSE FIELD OF CONCENTRATION IS AGRICULTURAL EDUCATION

**Junior Year**

| Courses | | First Semester | Credits | Courses | | Second Semester | Credits |
|---|---|---|---|---|---|---|---|
| Ag. | 303 | —Farm Shop | 3 | As. | 306 | —Farm Management | 3 |
| Sls. | 301 | —Soils | 3 | Al. | 312 | —Feeds and Feeding | 3 |
| Ay. | 321 | —Field Crops | 3 | Al. | 314 | —Livestock Judging | 3 |
| En. | 306 | —Vocational Education | 3 | En. | 303 | —Methods in Vocational Agriculture | 3 |
| En. | 385 | —The Individual and Education | 2 | En. | 386 | —The Individual and Education | 2 |
| He. | 315 | —Citrus Culture | 3 | He. | 312 | —Vegetable Gardening | 3 |
| | | | 17 | | | | 17 |

**Senior Year**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Dy. | 311 | —Principles of Dairying | 3 | As. | 308 | —Marketing | 3 |
| En. | 409 | —Supervised Teaching in Vocational Agriculture | 3 | Sls. | 302 | —Soil Fertility | 3 |
| En. | 411 | —Special Methods in Vocational Agriculture | 2 | En. | 410 | —Supervised Teaching in Vocational Agriculture | 3 |
| He. | 429 | —Ornamental Horticulture | 3 | En. | 412 | —Special Methods in Vocational Agriculture | 2 |
| Py. | 415 | —Poultry Management or | | Ey. | 314 | —Principles of Entomology and Plant Pathology | 5 |
| Py. | 416 | —Poultry Management | 3 | | | | |
| Vy. | 401 | —Livestock Diseases and Farm Sanitation | 2 | | | | |
| | | Elective in Agriculture | 2 | | | | |
| | | | 18 | | | | 16 |

*For the degree of Bachelor of Science in Education the field of concentration must be in one of the natural sciences.

**Students must have completed this course while registered in the General College or else must include it as a part of the work of the Upper Division.

### FOR THOSE WHOSE FIELD OF CONCENTRATION IS HEALTH AND PHYSICAL EDUCATION

To register for this curriculum, students must have completed the following courses while registered in the General College or else must include them as a part of the work of the Upper Division:

CEn. 13—Introduction to Education
En. 305—Development and Organization of Education
HPl. 261.—Football
HPl. 263—Basketball
HPl. 264—Track and Field
HPl. 266—Baseball

**Junior Year**

| Courses | First Semester | Credits | Courses | Second Semester | Credits |
|---|---|---|---|---|---|
| En. 385 | —The Pre-Adolescent Child | 3 | En. 386 | —The Adolescent Child | 3 |
| En. 393 | —Teaching of Health and Physical Education | 3 | En. 394 | —Teaching of Health and Physical Education | 3 |
| HPl. 361 | —Teaching Physical Education in the Elementary School | 3 | HPl. 362 | —Teaching Physical Education in the Elementary School | 3 |
| HPl. 363 | —Teaching Physical Education in the Secondary School | 3 | HPl. 364 | —Teaching Physical Education in the Secondary School | 3 |
| | Electives | 3 | | Electives | 3 |
| | | 15 | | | 15 |

**Senior Year**

| | | | | | |
|---|---|---|---|---|---|
| En. 401 | —School Administration | 3 | En. 387 | —Health Education | 3 |
| HPl. 411 | —Principles and Administration of Physical Education | 3 | | Electives | 12 |
| | Electives | 9 | | | |
| | | 15 | | | 15 |

FOR THOSE WHOSE FIELD OF CONCENTRATION IS INDUSTRIAL ARTS EDUCATION

To register for this curriculum, students must have completed the following courses while registered in the General College or else must include them as a part of the work of the Upper Division:

CEn. 13 —Introduction to Education
In. 111-112—Mechanical Drawing
In. 211-212—General Shop

**Junior Year**

| Courses | First Semester | Credits | Courses | Second Semester | Credits |
|---|---|---|---|---|---|
| En. 305 | —Development and Organization of Education | 3 | En. 306 | —Vocational Education | 3 |
| En. 385 | —Pre-Adolescent Child | 3 | En. 386 | —Adolescent Child | 3 |
| In. 301 | —Sheet Metal | 3 | In. 302 | —General Shop | 3 |
| In. 305 | —Design and Construction | 3 | Ml. 398 | —General Machine Shop and Metal Work | 3 |
| Ml. 397 | —General Machine Shop and Metal Work | 3 | | Electives | 4 |
| | Electives | 2 | | | |
| | | 16 | | | 15 |

**Senior Year**

| | | | | | |
|---|---|---|---|---|---|
| En. 371 | —Observation and Student Teaching | 3 | En. 372 | —Observation and Student Teaching | 3 |
| Fy. 429 | —Industrial Education Forestry | 3 | En. 401 | —School Administration | 3 |
| In. 401 | —Architectural Drawing | 3 | In. 404 | —Gasoline Motors | 3 |
| | Electives | 6 | | Electives | 5 |
| | | 15 | | | 14 |

# THE COLLEGE OF ENGINEERING

### ADMINISTRATIVE OFFICERS

JOHN JAMES TIGERT, M.A. (Oxon.), Ed.D., D.C.L., LL.D., D.Litt., L.H.D., President
TOWNES RANDOLPH LEIGH, Ph.D. (Chicago), Acting Vice-President
JOSEPH WEIL, B.S.E.E., M.S., Dean
RICHARD SADLER JOHNSON, B.S.P., Registrar

### CHEMICAL ENGINEERING

WALTER HERMAN BEISLER, M.S., D.Sc. (Princeton), Head Professor of Chemical Engineering
RALPH ALEXANDER MORGEN, Ph.D. (California), Professor of Chemical Engineering

### CIVIL ENGINEERING

PERCY LAWRENCE REED, C.E., M.S., Head Professor of Civil Engineering
WILLIAM LINCOLN SAWYER, B.S., M.S., Associate Professor of Civil Engineering
HENRY JAMES MILES, M.S., Assistant Professor of Civil Engineering

### ELECTRICAL ENGINEERING

JOSEPH WEIL, B.S.E.E., M.S., Head Professor of Electrical Engineering; Head of Engineering Division, Radio Station WRUF
STEPHEN PENCHEFF SASHOFF, B.S.E.E., M.S.E.E., Associate Professor of Electrical Engineering
EDWARD FRANK SMITH, B.S.E.E., E.E., Associate Professor of Electrical Engineering
JOHN WESLEY WILSON, B.S.E.E., M.S., Assistant Professor in Electrical Engineering
FORREST BANKS DUNCAN, Chief Operator, WRUF

### INDUSTRIAL ENGINEERING

PHILIP OSBORNE YEATON, B.S., S.B., Head Professor of Industrial Engineering
SILAS KENDRICK ESHLEMAN, M.A., S.M., M.E., E.E., J.D., Assistant Professor of Industrial Engineering
GEORGE OSBORN PHELPS, B.S., M.S., Assistant Professor of Industrial Engineering and Curator of Photographic Laboratory

### MECHANICAL ENGINEERING

NEWTON CROMWELL EBAUGH, B.E. in M. and E.E., M.E., M.S., Head Professor of Mechanical Engineering
WILLIAM WARRICK FINEREN, M.E., Professor of Mechanical Engineering
EDGAR SMITH WALKER, Colonel, U. S. Army (Retired), B.S., United States Military Academy, Professor of Drawing (Special Status)
ALBERT J. STRONG, B.S.M.E., Professor of Drawing (Deceased)
CHESTERFIELD HOWELL JANES, B.S.M.E., M.S., Associate Professor of Mechanical Engineering
ROBERT ALDEN THOMPSON, B.S.M.E., M.S., Assistant Professor of Mechanical Engineering and Instructor, Ground School, Civil Aeronautics Authority
EDWIN S. FRASH, B.S. in M.E., M.E., Instructor in Mechanical Engineering

## GENERAL INFORMATION

The curricula of the College of Engineering are planned to give instruction in the technical aspects of engineering, and in the social and economic phases of modern industrial life. They are not designed to turn out technical experts but rather to give students that education which will later enable them to qualify as Professional Engineers after they have had the requisite practical experience.

After a period of general education, well articulated with subjects basic to Engineering in the General College, the student enters the Upper Division work of the Engineering College. Here he is given instruction in engineering and is encouraged to utilize the time allowed for electives for productive activity in non-technical courses. The individual characteristics of the student are given consideration and he is encouraged to develop his initiative and imagination, to devote his spare time to special technical problems in the laboratory, to study the history and trend of engineering practice as related to social and economic developments, and to coordinate his efforts to produce an educated man well grounded in the fundamentals of engineering practice and well equipped to enter the industrial field and to advance himself in his chosen profession.

The student may select curricula which will give him some specialization in the fields of chemical, civil, electrical, industrial and mechanical engineering, the Bachelor's degree being awarded on the basis of such specialization. By choosing elective courses in specialized fields of radio, aeronautics, air conditioning, management, design, etc., a still further degree of specialization can be secured, if he so desires. For each of the curricula, close coordination between departments gives broad engineering training; and systematic planning gives the necessary detailed factual information required of engineering graduates.

### CIVIL AERONAUTICS AUTHORITY CIVILIAN PILOT TRAINING PROGRAM

The Civil Aeronautics Authority in co-operation with the College of Engineering presents a Civilian Pilot Training Program for giving flight training and ground school instruction in related subjects to a selected group of students.

Students above the Freshman class are examined by a selection board provided they meet the preliminary requirements as to an academic standing of "C" average, physical requirements as set up by the CAA medical section, and are engaged in no work outside of their regular academic studies. This program gives 35 hours of flight instruction, 72 hours of ground school instruction and prepares the student for a CAA Private Pilot Certificate Examination.

### ENTRANCE REQUIREMENTS

To be admitted to the College of Engineering the student should present a certificate of graduation from the General College, and be certified by the entrance committee of the College of Engineering as qualified to pursue a curriculum leading to a degree in engineering. Any student not in the College may register for any course for which he has the proper requisites. In general, however, the four hundred courses are of a professional nature and only students registered in the College are eligible for registration in them.

Students in the General College must choose the proper prerequisite subjects to secure an engineering degree in four years. Experience has shown that the average student requires five years for graduation. Many students find that they can profitably devote five years to an engineering education and plan their program accordingly. Each student

must assume full responsibility for registering for the required courses in their proper sequence and for fulfilling all requirements for his degree.

Upon entering the University, each student who contemplates studying engineering should confer with the head of the department of the engineering course in which he expects to major. The Dean of the College and the various department heads are eager to confer with students pertaining to their studies and will assist them in planning their schedules.

## BACHELORS' DEGREES

The College of Engineering awards the following Bachelors' degrees:

Bachelor of Chemical Engineering
Bachelor of Civil Engineering
Bachelor of Electrical Engineering
Bachelor of Industrial Engineering
Bachelor of Mechanical Engineering

### BACHELOR DEGREE REQUIREMENTS—HONOR POINTS

Students desiring to earn degrees in the College of Engineering must complete the courses outlined in the various curricula and must do work of such quality that the total number of honor points which they have earned in all of the courses counted toward their degree will equal twice the total number of semester hours required for the degree. For information concerning the honor point system, see the *Bulletin of Student Regulations.*

### HONOR STUDENT DESIGNATION

A student who is an applicant for the designation of Honor Student in the College of Engineering must have a certificate of graduation from the General College or its equivalent, and shall have earned at least a B average in his academic work, which must include:

Ml. 181-182
Ps. 205-206-207-208
Cy. 101-102
Ms. 353-354

To be considered for classification as an honor student the applicant must file an application in proper form with the Dean of the College before October 15 and March 15 of each semester. The Dean will then notify the student to appear before a committee which shall have the power to examine the applicant and to pass upon this application.

Honor students, as long as they maintain their high scholastic standing, may be granted by the Dean of the College, upon recommendation by the Head of the Department in which the student is registered, the following privileges:

1. Deviation from the prescribed curricula in the Upper Division.

2. Permission to be absent from scheduled classes, when the absence is justifiable from the professional point of view.

### GRADUATION WITH HONORS

Upon the recommendation of the faculty a student who has an honor point average of 3.0 for the entire curriculum or of 3.5 for the courses of the Upper Division may be graduated *With Honors.*

### GRADUATION WITH HIGH HONORS

Upon the recommendation of the faculty a student may be graduated *With High Honors* provided he meets the following requirements:

1. Is designated as an Honor Student and has secured an honor point average of not less than 3.3 in the Upper Division.

2. Files acceptance of the invitation of the faculty to become an applicant for graduation *With High Honors.*

3. Prepares an outline of some independent work he contemplates doing and submits a copy to each member of his advisory committee before the work is done.

4. Completes this independent work to the satisfaction of the advisory committee appointed by the Dean.

5. Satisfactorily passes a comprehensive examination given him by his advisory committee.

### ENGLISH REQUIREMENT

The responsibility for the correct and effective use of his spoken and written English rests primarily upon the student. Any instructor in the College of Engineering may, at any time, with the approval of the head of his department and the Dean of the College of Engineering, require a student who shows a deficiency in English to elect additional courses, over and above the curriculum requirements, in the Department of English.

### THESIS

Theses are not required of candidates for the Bachelors' degrees in the College of Engineering. However, exceptional students, whom the head of a department believes would be benefited thereby, may be granted permission by the Dean of the College, upon recommendation of the head of the department, to undertake a thesis in lieu of prescribed or elective work in the department in which he is enrolled. Not more than four semester hours will be allowed for such thesis work.

### FLORIDA INDUSTRIES' COOPERATIVE PLAN

Several of Florida's industries, under a cooperative arrangement with the College of Engineering, will employ Florida men in industry at regular intervals during the students' course at the University. Students are eligible for cooperative employment after having completed satisfactorily one year in the General College.

During the month of March any student may file an application with the Dean of the College of Engineering for assignment to industry. Placement will depend upon the openings available and the industrial experience of the applicant, his scholarship and personality. Applications may be accepted from men already in industry who wish to complete their college courses and need college credit of one year or more towards a degree.

After assignment to an industry a student alternates with his industrial partner, each six months period, there being two men on a team. During each period in industry each student is paid for his work, which pay should cover necessary living expenses.

Any industry willing to enter or desirous of entering the Florida Industries' Cooperative Plan should write to the Dean of the College of Engineering, University of Florida.

## MASTER OF SCIENCE IN ENGINEERING

The degree of Master of Science in Engineering may be earned through the Graduate School. (See *Bulletin of the Graduate School.*) A student who holds a Bachelor's degree and the requisite scholastic standing is eligible to major in any department of the College of Engineering. A few graduate assistantships are available from time to time, and those interested in graduate research in any particular department should address the head of that department relative to obtaining an assistantship.

Information concerning graduate fellowships in the Graduate School may be obtained by application to the Dean of the Graduate School. (See *Bulletin of the Graduate School.*)

## PROFESSIONAL DEGREES

The professional degrees of Civil Engineer, Chemical Engineer, Electrical Engineer, Industrial Engineer, and Mechanical Engineer will be granted only to graduates of the College of Engineering of the University of Florida who have:

(a) Shown evidence of having satisfactorily practiced their profession for a minimum of five years following receipt of the Bachelor's degree, during the last two years of which they shall have been in responsible charge of important engineering work. A graduate who is a registered engineer in the State of Florida will be accepted as satisfying this requirement.

(b) Presented a thesis showing independence and originality and of such a quality as to be acceptable for publication by the technical press or a professional society.

(c) Satisfactorily passed an examination at the University upon the thesis and professional work.

A candidate for a professional degree must make application to the Dean of the College of Engineering prior to March 1 of the year in which he expects to have the degree conferred. He must also make application to the Registrar in accordance with the dates specified in the University Calendar. If the candidate appears to satisfy requirements listed in section (a) above, the Dean will form a committee of which the head of the department in which the degree is to be earned is chairman. This committee shall satisfy itself that the candidate has fulfilled all requirements for the degree and report its recommendation to the faculty of the College of Engineering, which will have final authority to recommend to the President and the Board of Control the conferring of the degree.

## LABORATORY FACILITIES

### CHEMICAL ENGINEERING LABORATORIES

Since chemical engineering is concerned with the development and application of manufacturing processes in which chemical or certain physical changes of materials are involved, the chemical engineering laboratories are designed to demonstrate how this is accomplished.

The *Unit Operations Laboratory* is equipped to teach the student the fundamental operations which are the corner stones of chemical engineering. Included in the facilities of the laboratory is equipment to demonstrate the following unit operations on a semi-plant scale: distillation, filtration, centrifuging, heat transfer, gas absorption, evaporation, drying, crushing and grinding, and fluid flow.

The *Technical Laboratory* contains the usual equipment for carrying out chemical experiments on a smaller scale than in the *Unit Operations Laboratory.* In addition it contains certain specialized equipment such as viscosimeters, flash testers, gas analysis equipment, calorimeters, control instruments, and calibration apparatus.

Students are also required to perform experiments on equipment not located in the chemical engineering laboratories. This includes air conditioning, humidity and temperature control tests on other equipment which is part of the University plant.

### CIVIL ENGINEERING LABORATORIES

The Civil Engineering Department has laboratories equipped for work in Surveying, Hydraulics, Sanitary Engineering, Materials Testing, and Hydrology.

The *Surveying Instrument Room* contains the following equipment: Repeating theodolite, precise levels, base-line measurement apparatus, plane tables, transits, levels, precision pantagraph, current meter, and smaller pieces of equipment necessary for field and drawing room work in elementary and higher surveying.

The *Hydraulic Laboratory*, one of the largest and most modern of its type, occupies the first and second floors of the new Hydraulic Laboratory building completed in 1939. The equipment is of modern design and extensive enough so that the theoretical studies of the classroom may be verified in the laboratory. In addition there are facilities for research on hydraulic problems and a complete water treatment pilot plant including a rapid sand filter. The water is recirculated from several storage tanks located in the building. The total capacity of the system is 100,000 gallons and the maximum head available, using the constant head overflow tank on the roof, is fifty feet. Among the principal items of equipment are a 16 inch vertical propeller pump which delivers 4500 g.p.m. at 12 ft. head, a 10 x 12 inch horizontal centrifugal pump which delivers 1760 g.p.m. at 32 ft. head, an air lift pump, hydraulic ram, pelton impulse wheel, reaction turbine, and apparatus for the study and measurement of flow in pipes and open channels.

The *Materials Testing Laboratory* contains one four-hundred-thousand-pound capacity high column Riehle testing machine equipped for both tension and compressive tests; one fifty-thousand-pound low-column machine and apparatus for the usual physical and chemical tests on brick, wood, concrete, steel, cement, asphalt, tars, and oils.

The *Sanitary Engineering Laboratory* is located on the third floor of the new Hydraulic Laboratory building. It contains necessary apparatus and equipment for making the routine tests in connection with the design and operation of water. sewage, and industrial waste treatment plants and has facilities for graduate work and research in these fields. Research on a semi-plant scale can be conducted at the University trickling filter disposal plant which was designed for the dual purpose of laboratory experiments on its operation and for the practical treatment of the campus sewage and laboratory wastes.

The *Hydrological Laboratory* contains anemometers, rain gauges, recording barometers, recording thermometers, recording hygrometer, water level recorders, and other apparatus useful in illustrating the fundamentals of hydrology as applied to engineering design and construction.

### ELECTRICAL ENGINEERING LABORATORIES

The *Dynamo Laboratory* contains dynamo electrical machinery of various types. Motor-generators are used for securing alternating currents of a wide range of voltages and frequencies and for conversion to direct current. Other equipment includes mercury arc rectifier units, miscellaneous battery charging equipment, automotive testing equipment, transformers, electro-dynamometers, and a wide variety of other electrical machinery.

The *Precision Laboratory* contains special devices and instruments for calibrating and standardizing work and is available to the utilities of the State for the solution of special problems. In addition to the instruments of the *Precision Laboratory*, there is a double sine wave alternator for special testing purposes. Miscellaneous instruments of various

types, including oscillographs and a klydonograph, are available for performing tests on miscellaneous electrical equipment.

The *Communications Laboratory*, located on the top floor of the Seagle Building is well equipped. It provides means for testing telephone, telegraph, radio equipment, and electronic devices. In this laboratory will be found a special panel board incorporating cable terminals, line fault equipment, transmission measuring equipment, audio and high frequency oscillators, repeaters, filters, networks, bridges, and a large number of special devices including cathode ray oscilloscopes, field strength measuring equipment, automatic signal recorder, miscellaneous receiving equipment, static recorders, radio goniometers, etc.

Radio Station WRUF, a 5000-watt Western Electric transmitter, operating at 830 kilocycles, cooperates with the laboratory in courses on radio station operation. These courses are open to students who have attained sufficient knowledge to benefit by this work. Station W4XAD, a special experimental radio-telephone station, is licensed at 600 watts for frequencies of 2398, 4756, 6425, 8655, 12,862.5, and 17,310 kilocycles, and is used for experimental work in the field of short wave radio communications. In addition to this station, short wave radio station W4DFU is licensed for operation in the amateur bands.

Students who in general show that they may benefit by additional laboratory work, and who have the necessary educational experience, may be given special permission to carry on individual experimentation and research in these laboratories.

### PHOTOGRAPHIC LABORATORY

The *Photographic Laboratory* contains the following rooms: chemical storage, dark room, film washing, film storage, printing, paper washing and drying, enlarging, paper storage, camera repair, studio, office, and finished film fireproof vault. The laboratory is to be used for experimental research in photography, as a service duplicating and photographic shop for the University, and for class instruction in photography.

### MECHANICAL ENGINEERING LABORATORIES

The laboratories of the Mechanical Engineering Department include facilities for drawing, design, and production of machinery and equipment; and for the study of the performance of machinery and allied apparatus.

Modern drafting rooms are provided, which are capable of taking care of approximately 100 students.

Laboratory facilities for studying the production of machinery include equipment for casting, forging, welding, and machining of metals, and various types of woodworking machines.

Extensive equipment is available for the study of the strength and behavior of wood, cement, concrete, metals, and other materials used in engineering structures and machines. Coupled with this is the *Metallography Laboratory*, which is arranged for the study of internal crystal structure of these materials.

Facilities are provided for studying the performance and other characteristics of steam engines, turbines, boilers, automobile engines, airplane engines, Diesel engines, refrigeration equipment, air conditioning apparatus, airplanes, and auxiliary equipment used with these machines.

Basic engineering instruments are available for use in connection with special studies and research in any of the foregoing fields.

CURRICULA REQUIREMENTS

The student should present a certificate of graduation from the General College which will include C-1, C-3, C-5, C-6, and Military Science or Physical Education.

In addition, the following courses must be taken either in the General College or later: Cy. 101-102, CMs. 23-24, Ms. 353-354, Ml. 181-182, Ps. 205-206-207-208 and a special departmental prerequisite of either Cy. 201-202, Cl. 223-226, Ml. 287-288 or Ig. 261-262. (See page 206 of the *Bulletin of the General College.*)

The student should make every effort to complete these courses before entering the Upper Division, though he may be enrolled in the Upper Division "on probation" until he completes them.

UPPER DIVISION REQUIREMENTS

In addition to the courses listed above, the courses listed below are required for graduation in the various curricula offered. In the following tables the first column represents courses or credits in the first semester, and the second column represents courses or credits in the second semester.

FOR THE DEGREE OF BACHELOR OF CHEMICAL ENGINEERING

| | | | |
|---|---|---|---|
| *Cy. | 301–302 | —Organic Chemistry | 4-4 |
| *Cg. | 345–346 | —Industrial Stoichiometry | 3-3 |
| *Cy. | 401–402 | —Physical Chemistry | 4-4 |
| Cg. | 443–444 | —Chemical Engineering Laboratory | 2-2 |
| Cg. | 447–448 | —Principles of Chemical Engineering | 3-3 |
| Cg. | 457–458 | —Chemical Engineering Design | 2-2 |
| Cg. | 467–468 | —Chemical Engineering Thermodynamics | 3-3 |
| Cy. | 481–482 | —Chemical Literature | ½-½ |
| El. | 341–342 | —Elements of Electrical Engineering | 3-3 |
| El. | 349–350 | —Dynamo Laboratory | 1-1 |
| *French or German | | | 3-3 |
| **Approved Engineering Electives | | | 10 |
| *Ig. | 363–364 | —Applied Mechanics | 5-5 |

FOR THE DEGREE BACHELOR OF CIVIL ENGINEERING

| | | | |
|---|---|---|---|
| Cl. | 329 | —Summer Camp Surveying | 5-0 |
| *Bcy. | 308 | —Sanitary Laboratory Practice | 3-0 |
| *Cy. | 215 | —Water and Sewage | 0-3 |
| *Cl. | 331 | —Railway Engineering | 3-0 |
| *Cl. | 332 | —Highway Engineering | 0-4 |
| Cl. | 325 | —Materials Laboratory | 2-0 |
| *Cl. | 326 | —Theory of Structures | 0-4 |
| *Cl. | 327 | —Hydraulics | 3-0 |
| Cl. | 420 | —Hydraulic Engineering | 0-2 |
| Cl. | 425–426 | —Water and Sewerage | 3-3 |
| Cl. | 433–434 | —Theory and Design of Reinforced Concrete | 2-3 |
| Cl. | 435–436 | —Structural Engineering | 3-3 |
| *Ig. | 363–364 | —Applied Mechanics | 5-5 |
| Ig. | 463 | —Specifications and Engineering Relations | 2-0 |

**18 hours of approved electives of which 8 hours must be in Engineering subjects other than in Civil Engineering.

**Courses Suggested as Electives:**

| | | |
|---|---|---|
| My. | 303–304 | —Military Science |
| My. | 403–404 | —Military Science |
| El. | 341–342 | —Elements of Electrical Engineering |
| El. | 349–350 | —Dynamo Laboratory |
| Ml. | 489 | —Manu acturing Operations |
| Ml. | 385 | —Thermodynamics |
| Ml. | 386 | —Power Engineering |
| Cl. | 431 | —Hydrology |
| Cl. | 437 | —Estimating Quantities and Costs |
| Cl. | 422 | —Hydraulic Laboratory |
| Gy. | 201 | —Physical Geology |
| CSc. | 33 | —Effective Speaking |
| Ae. | 351–352 | —Materials and Methods of Construction |
| CBs. | 14 | —Elementary Accounting |
| Cl. | 328 | —Soil Mechanics |
| Cl. | 438 | —Stalically Indeterminate Structures |

*Courses so marked should be taken in the junior year.

**Students should confer with the Department Head of his major subject on the selection of electives.

FOR THE DEGREE BACHELOR OF ELECTRICAL ENGINEERING

| | | | |
|---|---|---|---|
| *El. | 341–342 | —Elements of Electrical Engineering | 3 3 |
| *El. | 344 | —Problems in D and A Currents | 0-3 |
| El. | 447–448 | —Alternating Current Apparatus | 3-3 |
| *El. | 349–350 | —Dynamo Laboratory | 1-1 |
| El. | 451–452 | —Advanced Dynamo Laboratory | 2-2 |
| El. | 441–442 | —Electrical Engineering Seminar | 1-1 |
| El. | 446 | —Electrical Power Transmission | 0-3 |
| El. | 449 | —Theory of Electric Circuits | 3-0 |
| *Ig. | 363–364 | —Applied Mechanics | 5-5 |
| *Ml. | 385 | —Thermodynamics | 3-0 |
| *Ml. | 386 | —Power Engineering | 0-3 |
| *Ml. | 387–388 | —Mechanical Laboratory | 1-1 |
| Ml. | 489 | —Manufacturing Operations | 3-0 |
| Ig. | 460 | —Engineering Practice | 0-3 |

**20 hours of approved electives of which not less than 9 shall be from one of the following groups:

| Communications | Transmission | Power Plant and Industry |
|---|---|---|
| El. 346 | El. 346 | El. 345 |
| El. 443-444 | El. 440 | El. 440 |
| El. 450 | El. 443-444 | El. 443-444 |
| El. 453-454 | El. 445 | El. 445 |
| El. 457-458 | El. 551 | |

FOR THE DEGREE BACHELOR OF INDUSTRIAL ENGINEERING

| | | | |
|---|---|---|---|
| *CEs. | 13 | —Economic Foundations of Modern Life | 5-0 |
| *CBs. | 14 | —Elementary Accounting | 0-5 |
| Es. | 321–322 | —Financial Organization of Society | 3-3 |
| Bs. | 401–402 | —Business Law | 3-3 |
| *Bs. | | —Electives from Group A | 6 |
| *El. | 341–342 | —Elements of Electrical Engineering | 3-3 |
| *El. | 349–350 | —Dynamo Laboratory | 1-1 |
| Ml. | 385 | —Thermodynamics | 3-0 |
| *Ig. | 363–364 | —Applied Mechanics | 5-5 |
| Ig. | 463 | —Specifications and Engineering Relations | 2-0 |
| Ig. | 469–470 | —Plant Shop Layout and Design | 3-3 |
| Ig. | 460 | —Engineering Practice | 0-3 |
| Ig. | 472 | —Human Engineering | 0-2 |
| | | —Approved Electives | 14 |

**Group A Electives:**

| | | |
|---|---|---|
| CEs. | 15 | —Elementary Statistics |
| Bs. | 313 | —Cost Accounting |
| Es. | 335 | —Economics of Marketing |
| Bs. | 440 | —Trade Horizons in Caribbean America |
| Es. | 351 | —Transportation Principles |
| Bs. | 372 | —Labor Economics |
| Bs. | 422 | —Investments |
| Bs. | 465 | —Realty Principles |
| Bs. | 466 | —Realty Management |

**Recommended Approved Electives:**

| | | | |
|---|---|---|---|
| Ml. | 489–490 | —Manufacturing Operations | 3-3 |
| Ig. | 377 | —Elements of Photography | 2-0 |
| Ig. | 378 | —Principles of Photography | 0-2 |
| Ig. | 477 | —Advanced Photography | 2-0 |
| Ig. | 478 | —Professional Photography | 2-0 |

*Courses so marked should be taken in the junior year.

**Students should confer with the Department Head of his major subject on the selection of electives.

FOR THE DEGREE BACHELOR OF MECHANICAL ENGINEERING

| | | | |
|---|---|---|---|
| *Ig. | 363–364 | —Applied Mechanics | 5-5 |
| *Ml. | 383 | —Materials of Engineering | 2-0 |
| *Ml. | 384 | —Metallography | 0-2 |
| *Ml. | 385 | —Thermodynamics | 3-0 |
| *Ml. | 386 | —Power Engineering | 0-3 |
| *Ml. | 387–388 | —Mechanical Laboratory | 1-1 |
| Ml. | 481 | —Internal Combustion Engines | 3-0 |
| Ml. | 482 | —Refrigeration and Air Conditioning | 0-3 |
| Ml. | 483–484 | —Mechanical Laboratory | 1-1 |
| Ml. | 497–498 | —Mechanical Engineering Seminar | 1-1 |
| Ml. | 489–490 | —Manufacturing Operations | 3-3 |
| Ml. | 491 | —Machine Design | 4-0 |
| *El. | 341–342 | —Elements of Electrical Engineering | 3-3 |
| *El. | 349–350 | —Dynamo Laboratory | 1-1 |
| *El. | 341 | —Problems in DC and AC | 0-3 |
| Cl. | 327 | —Hydraulics | 0-3 |
| Ig. | 463 | —Specifications and Engineering Relations | 2-0 |
| Ig. | 472 | —Human Engineering | 0-2 |
| **Electives | | | 12 |

**Recommended Electives:**

Ml. 480, Ml. 485, Ml. 486, Ml. 487, Ml. 488, Ml. 492, Ml. 493, Ml. 494, Ml. 495, Speech, Business Administration, and courses in other engineering departments.

*Courses so marked should be taken in the junior year.

**Students should confer with the Department Head of his major subject on the selection of electives.

Students having successfully passed C-2 may be permitted a decrease of two hours in their approved electives.

Students having successfully passed C-4 may be permitted a decrease of two hours in their approved electives.

# THE GRADUATE SCHOOL

### ADMINISTRATIVE OFFICERS

JOHN JAMES TIGERT, M.A. (Oxon.), Ed.D., D.C.L., LL.D., D.Litt., L.H.D., President
JAMES NESBITT ANDERSON, Ph.D., Dean Emeritus
THOMAS MARSHALL SIMPSON, Ph.D., Dean
RICHARD SADLER JOHNSON, B.S.P., Registrar

### THE GRADUATE COUNCIL

THE DEAN
HARLEY WILLARD CHANDLER, M.S., Dean of the University
H. HAROLD HUME, D.Sc., Dean of the College of Agriculture
TOWNES RANDOLPH LEIGH, Ph.D., Head Professor of Chemistry and Dean of the College of Arts and Sciences
WINSTON WOODARD LITTLE, M.S., Professor of Secondary Education and High School Visitor, Dean of the General College
CLIFFORD PIERSON LYONS, Ph.D., Head Professor of English
JAMES SPEED ROGERS, Ph.D., Head Professor of Biology and Geology
ROBERT CROZIER WILLIAMSON, Ph.D., Head Professor of Physics

## GENERAL INFORMATION

### ADMINISTRATION

The affairs of the Graduate School are administered by the Graduate Council, which consists of the Dean as *ex-officio* chairman, and certain members of the faculty, who are appointed annually by the President.

### THE MASTER'S DEGREE

*Degrees Offered.*—Master of Arts; Master of Arts in Architecture; Master of Arts in Education; Master of Science; Master of Science in Agriculture; Master of Science in Engineering; and Master of Science in Pharmacy.

### THE DEGREE OF DOCTOR OF PHILOSOPHY

*Departments.*—The Doctor's degree is offered in the following departments: Animal Husbandry (Animal Nutrition), Biology (Zoology), Chemistry, Pharmacy, and Pharmacognosy and Pharmacology.

For general information, including the teaching faculty, all departments offering graduate work leading to an advanced degree and all strictly graduate courses, as well as conditions of admission and requirements for the advanced degrees, see the *Bulletin of the Graduate School.*

# COLLEGE OF LAW

John James Tigert, M.A. (Oxon.), Ed.D., D.C.L., LL.D., D.Litt., L.H.D., President
Townes Randolph Leigh, Ph.D. (Chicago), Acting Vice-President
Harry Raymond Trusler, M.A., LL.B. (Michigan), Dean and Professor of Law
Richard Sadler Johnson, B.S.P., Registrar
Clifford Waldorf Crandall, B.S., LL.B., LL.D. (Adrian), Professor of Law
Robert Spratt Cockrell, M.A., B.L. (Virginia), Professor of Law
Dean Slagle, M.A., LL.B. (Yale), Professor of Law
Clarence John TeSelle, A.B., LL.B. (Wisconsin), Professor of Law
James Westbay Day, M.A., J.D. (Florida), Professor of Law
Ila Rountree Pridgen, Executive Secretary and Librarian
Ivan E. Odle, B.S., LL.B. (Florida), Assistant Librarian

## GENERAL INFORMATION

### ADMISSION

Applicants for admission to the College of Law must be eighteen years of age, and must have received a degree in arts or science in a college or university of approved standing, or must be eligible for a degree in a combined course in the University, upon the completion of one year of work in the College of Law.

In addition to other requirements, all applicants for admission to the College of Law, whose pre-law training has not been received at this institution, must satisfactorily pass scholastic and legal aptitude tests given by the Board of University Examiners, unless from the nature of their previous record they are excused by the law faculty.

*Women Students.*—Women students who are twenty-one years of age and who fully meet the entrance requirements of the College may enter as candidates for degrees.

*Special Students.*—Special students are not admitted to the College of Law.

*Advanced Standing.*—No work in law done in other institutions will be accepted towards a degree unless the applicant passes satisfactorily the examination held in the subjects in question in this College, or unless credit is given without examination. Credit of an average of C from schools which are members of the Association of American Law Schools, of which this College is a member, will be accepted without examination. In no case will credit be given for work not done in residence at an approved law school.

### PURPOSE

The aim of the College, which is a member of the Association of American Law Schools, registered by the New York Board of Regents, and an approved school of the American Bar Association, is to impart a thorough, scientific, and practical knowledge of the law. It aims to develop keen, efficient lawyers, conversant with the ideals and traditions of the profession. Its policy is characterized by the emphasis of practice as well as theory; pleading as well as historical perspective; skill in brief making, as well as in giving legal information.

### LIBRARY

The Law Library contains over 13,900 volumes. In it are included the published reports of the courts of last resort in every state in the Union and of the Federal Courts, the English Reports, Full Reprint, the English Law Reports, Law Journal Reports, Dominion Law Reports, the Canadian Reports, and the Philippine Reports, together with a collection of digests, encyclopedias, series of selected cases, English and American treatises and text-

books, and the statutes of a majority of American jurisdictions including the Federal statutes.

### ADMISSION TO THE BAR

Upon presenting their diplomas and satisfactory evidence that they are twenty-one years of age and of good moral character, the graduates of the College are licensed, without examination, to practice in the courts of Florida.

### PLEADING AND PRACTICE

An intensive knowledge of pleading and practice should be secured by the student, since legal rights cannot be well understood without a mastery of the rules of pleading whereby they are enforced. The College offers thorough courses in criminal pleading and procedure, common law pleading, equity pleading, Florida civil practice, trial practice, and Federal procedure. Thus, the student on graduation is enabled to enter understandingly upon the practice of law. The College endeavors to serve those who intend to practice elsewhere as efficiently as those who expect to locate in this State.

Believing the students obtain in the Practice Court a better practical knowledge of pleading and practice than can be acquired in any other way, aside from the trial of actual cases, the faculty places special emphasis upon this work. Sessions of the Practice Court are held throughout the year. Each student is required to participate in the trial of at least one common law, one equity, and one criminal case, and is instructed in appellate procedure.

### LEGAL RESEARCH

To enable students to specialize in legal problems of particular interest to them, to acquire a grasp of the technique of legal investigation, and to do more creative work than ordinary courses in law permit, a course in legal research (Lw. 601) is offered. Each student taking the course is required to make an original study of the subject he selects under the guidance of the member of the faculty in whose field it falls. Suitable studies will be submitted by the College to law journals for publication.

Applications for the course should be filed with the Secretary of the College at least one week prior to the first day of registration. Students who register for two or three hours will not be permitted to drop the course for the number of hours for which they have registered and continue it for a lesser number of hours, unless they do so within the first two weeks of the term. No more than three credits may be earned by a student in this course in one term, but the faculty may admit a student to the course (Lw. 602) for a second term.

### STANDARDS OF THE AMERICAN BAR ASSOCIATION

The Council on Legal Education and Admissions to the Bar of the American Bar Association requests that attention be called to the Standards of the American Bar Association adopted in 1921 and by it recommended for enactment by all states. These Standards provide in effect that every candidate for admission to the bar, in addition to taking a public examination, shall give evidence of graduation from a law school which shall require at least two years of study in a college as a condition of admission, and three years of law study (or longer if not a full-time course), which shall have an adequate library and a sufficient number of teachers giving their entire time to the school to ensure actual personal acquaintance and influence with the whole student body, and which shall not be operated as a commercial enterprise.

## DEGREES AND CURRICULA

### BACHELOR OF LAWS

The degree of Bachelor of Laws (LL.B.) is conferred upon those students who satisfactorily complete eighty-five semester hours of law, which must include all of the first-year subjects. Students who have an honor average of 3.0 for all the law work offered for graduation will be eligible for the degree of LL.B. *With Honors.* Those who have an honor point average of 3.5 for all the law work offered for graduation, which work must include Legal Research, will be eligible for the degree of LL.B. *With High Honors.*

Students admitted to advanced standing may receive the degree after one year's residence, but in no case will the degree be granted unless the candidate is in actual residence during all of the third year and passes in this College at least 28 semester hours of law.

All students are required to complete the last 28 credit hours applied towards the degree during regular residence. This may be varied only upon written petition approved by the faculty of the College of Law.

An average of C, or higher, is required in all work counted toward a degree.

### COMBINED ACADEMIC AND LAW COURSE

By pursuing an approved course of collegiate and law studies a student may earn both the academic and the legal degree in six years. Both the College of Arts and Sciences and the College of Business Administration offer such a combined course. For further particulars, see pages 343 and 349 of this Bulletin.

### CURRICULUM LEADING TO THE DEGREE OF BACHELOR OF LAWS

Students completing the first year as outlined below and a total of 85 semester hours of law credit with an average of C, or better, will be awarded the degree of Bachelor of Laws.

#### First Year

| Courses | First Semester | Credits | Courses | Second Semester | Credits |
|---|---|---|---|---|---|
| Lw. 301 | —Torts | 5 | Lw. 302 | —Equity Jurisprudence | 5 |
| Lw. 303 | —Contracts | 3 | Lw. 304 | —Contracts | 3 |
| Lw. 305 | —Criminal Law and Procedure | 4 | Lw. 306 | —Marriage and Divorce | 1 |
| Lw. 309 | —Property | 2 | Lw. 308 | —Common Law Pleading | 3 |
| | | | Lw. 312 | —Property | 2 |

#### Second Year

| | | | | | |
|---|---|---|---|---|---|
| Lw. 401 | —U. S. Constitutional Law | 4 | Lw. 405 | —Equity Pleading | 2 |
| Lw. 402 | —Evidence | 4 | Lw. 406 | —Private Corporations | 4 |
| Lw. 403 | —Agency | 2 | Lw. 408 | —Legal Ethics and Bibliography | 2 |
| Lw. 404 | —Quasi Contracts | 2 | Lw. 410 | —Property | 3 |
| Lw. 409 | —Property | 3 | Lw. 413 | —Florida Civil Practice | 3 |
| Lw. 411 | —Florida Constitutional Law | 2 | Lw. 415* | —Abstracts | 2 |
| Lw. 416 | —Insurance | 2 | Lw. 417* | —Sales | 2 |
| Lw. 421 | —Legislation | 2 | Lw. 418 | —Taxation | 3 |

#### Third Year

| | | | | | |
|---|---|---|---|---|---|
| Lw. 503 | —Public Utilities | 2 | Lw. 502 | —Damages | 2 |
| Lw. 504 | —Municipal Corporations | 2 | Lw. 506 | —Negotiable Instruments | 3 |
| Lw. 505 | —Federal Jurisdiction | 2 | Lw. 508 | —Conflict of Laws | 3 |
| Lw. 509 | —Partnership | 2 | Lw. 515 | —Mortgages | 2 |
| Lw. 513 | —Property | 3 | Lw. 516 | —Practice Court | 1 |
| Lw. 517 | —Practice Court | 1 | Lw. 518 | —Trial Practice II | 2 |
| Lw. 519 | —Trial Practice I | 2 | Lw. 520 | —Creditors' Rights | 3 |
| Lw. 521 | —Trusts | 2 | Lw. 530 | —Administrative Law | 2 |
| Lw. 531 | —Equitable Remedies | 2 | Lw. 602 | —Legal Research | 1 to 3 |
| Lw. 601 | —Legal Research | 1 to 3 | | | |

*Offered in alternate years; Lw. 417 offered in 1940-41.

# CURRICULA IN RADIO BROADCASTING TRAINING

## THE COMMITTEE ON TRAINING FOR RADIO

Harley W. Chandler, *Chairman*, Dean of the University
James E. Chace, Assistant Professor of Business Administration
Henry P. Constans, Head Professor of Speech
William L. Lowry, Assistant Professor of Journalism
Garland W. Powell, Director Radio Station WRUF
Thomas B. Stroup, Associate Professor of English
Joseph Weil, Dean of the College of Engineering and Head Professor of Electrical Engineering

## RADIO STATION WRUF

Garland W. Powell, Director
Joseph Weil, Dean of the College of Engineering, Chief Engineer
Forest Banks Duncan, Chief Operator

## GENERAL INFORMATION

The curricula in Radio Broadcasting Training are designed to give each student a broad cultural background and to train for specialization in radio according to individual interests and aptitudes. It involves training in the fields relevant to that end with the student securing his basic education from the program of the General College and his specialized training in the College of Arts and Sciences, the College of Business Administration, and the College of Engineering. The three general categories of activity involved in radio broadcasting are:

1) technical operation
2) commercial activities
3) programming activities

Since the demand for persons thoroughly trained in radio broadcasting has been steadily increasing, the curricula are organized to acquaint the student with all the aspects of program preparation and production, and with the organization and management of a radio station. Each student is allowed to gain experience in actual radio procedure in Radio Station WRUF, which is used as a laboratory for the course.

A Committee on Training for Radio administers the curricula of Radio Broadcasting. By means of tests, conferences, and other devices, this Committee advises and assists students who are interested in the field.

## METHOD OF REGISTRATION

The student who wishes to register for one of the programs of Training for Radio is to report to the Chairman of the Committee on Training for Radio who will designate one of the members of the Committee as adviser to the student. This adviser will assist the student in outlining his program and will recommend the courses for which the student is to register each semester.

### TECHNICAL CURRICULUM IN RADIO BROADCASTING

For work in the technical field of radio broadcasting, there is available the curriculum in Communications in the College of Engineering. This is open to students after they

have completed the work of the General College, which constitutes the first two years of their program. For further information on this curriculum see page 365, Electrical Engineering. The electives of this curriculum should be utilized in taking some of the Professional Courses in Radio Broadcasting.

### COMMERCIAL CURRICULUM IN RADIO BROADCASTING

A. Completion of the General College program including:

| | |
|---|---|
| C-1 | Man and the Social World |
| C-2 | Man and the Physical World |
| C-3 | Reading, Speaking and Writing |
| C-41 | Man and His Thinking |
| C-42 | General Mathematics |
| C-5 | The Humanities |
| C-6 | Man and the Biological World |
| CEs. 13 | Economic Foundations of Modern Life |
| CEs. 15 | Elementary Statistics |
| CBs. 14 | Elementary Accounting |
| CEh. 33 | Effective Writing |
| Ps. 224 | Sound and Its Application |

B. Registration in the College of Business Administration, following the regular curriculum with emphasis upon courses in advertising and marketing, or the curriculum in Public Administration.

### PROGRAMMING CURRICULUM IN RADIO BROADCASTING

A. Completion of the General College program including:

| | |
|---|---|
| C-1 | Man and the Social World |
| C-2 | Man and the Physical World |
| C-3 | Reading, Speaking and Writing |
| C-41 | Man and His Thinking |
| C-42 | General Mathematics |
| C-5 | The Humanities |
| C-6 | Man and the Biological World |
| Ps. 224 | Sound and Its Application |

and, with the advice of the Committee on Training for Radio, enough electives to complete the program of general education. Some of these electives will be chosen from the professional courses in Radio Broadcasting.

B. Registration in the College of Arts and Sciences, taking a group major in The Humanities or the Social Sciences, including as many of the professional courses in Radio Broadcasting as fit into the group major. The other Upper Division requirements should be met in part by selecting as many courses as fit in with radio broadcasting training, both from the professional courses listed below, and from other courses that are available. The selection of courses shall in all cases be made with the approval of the Committee on Training for Radio.

PROFESSIONAL COURSES IN RADIO BROADCASTING

| Courses | Credits |
|---|---|
| 1. SOUND | |
| Ps. 224—Sound and Its Application | 2 |
| 2. WRITING | |
| CEh. 33—Effective Writing | 4 |
| Jm. 301—News Writing and Editing | 4 |
| Jm. 302—News Writing and Editing | 4 |
| Jm. 406—Radio Writing | 2 |
| 3. SPEAKING | |
| CSc. 33—Effective Speaking | 4 |
| Sch. 311—Speech Training for the Radio | 3 |
| 4. READING | |
| Sch. 307—Interpretation of Literature | 3 |
| Sch. 403—One-Act Play | 3 |
| 5. ADVERTISING | |
| Bs. 433—Advertising | 3 |
| Jm. 403—Newspaper Advertising | 3 |
| 6. SPECIAL COURSES | |
| Jm. 409—Law of the Press | 3 |
| Psy. 306—Applied Psychology | 3 |
| Msc. 310—Music Appreciation | 2 |

# DEPARTMENTS OF INSTRUCTION

Courses with odd numbers are regularly offered in the first semester; courses with even numbers are regularly offered in the second semester. However, if this is not the case, a statement of this fact is made immediately following the course title. In many cases courses are offered both semesters and this is indicated by a statement following the course title. Not all of the courses listed are offered in any one year. To determine which courses are offered the reader should consult the *Schedule of Courses.*

The number of hours listed is the number of hours a week which the class meets.

The number of credits is the number of semester hours assigned a student who receives a passing grade (A, B, C, or D for undergraduate students; A or B for graduate students) when the course is completed.

Some courses are year courses, and are continued throughout the first and second semesters. Unless otherwise noted, the student must take both semesters of such a course in order to receive credit.

The abbreviations used are, wherever possible, the first and last letter of the first word of the name of the department. Occasionally, a third letter is inserted to distinguish between departments.

Several General College courses are listed under the departments in the same general field.

## AGRICULTURAL CHEMISTRY

**Acy. 125.—Agricultural Chemistry.** 3 hours, and 2 hours demonstration. 4 credits. BLACK. The first half of the course Acy. 125-126.

Acy. 125-126: A basic course embodying selected fundamentals of both inorganic and organic chemistry and designed primarily for agricultural students. Suitable also for the general student who wishes a non-laboratory course in science.

**Acy. 126.—Agricultural Chemistry.** 3 hours, and 2 hours demonstration. 4 credits. BLACK. The second half of the course Acy. 125-126.

**Acy. 203.—Analytical Chemistry.** 1 hour, and 6 hours laboratory. 3 credits. BLACK. Prerequisite: Acy. 125-126 or Cy. 101-102.

A brief course in quantitative analysis. The laboratory work is designed to fit the special needs of agricultural students.

**Acy. 204.—Analytical Chemistry.** 2 hours, and 3 hours laboratory. 3 credits. HAWKINS. Prerequisite: Acy. 125-126 or Cy. 101-102.

A brief course in qualitative analysis designed especially for agricultural students.

**Acy. 431.—Agricultural Analysis.** 1 hour and 6 or 9 hours laboratory. 3 or 4 credits. BLACK. The first half of Acy. 431-432. Prerequisite: Acy. 204 or Cy. 202.

Acy. 431-432: The quantitative analysis of agricultural products.

**Acy. 432.—Agricultural Analysis.** 1 hour and 6 or 9 hours laboratory. 3 or 4 credits. BLACK. The second half of Acy. 431-432.

### GRADUATE COURSES

**Acy. 561.—Animal Bio-Chemistry**

**Acy. 563.—Plant Bio-Chemistry**

## AGRICULTURAL ECONOMICS

**As. 201.—Agricultural Economics.** 3 hours. 3 credits. GREENMAN.

An introduction into the field of agricultural economics; principles of economics as applied to agriculture; economic problems of the agricultural industry and the individual farmer.

**As. 302.—Agricultural Resources.** Offered only in the first semester. 2 hours, and 1 hour discussion. 3 credits. HAMILTON.

Potentialities and limitations of agricultural production in the various regions of the United States and the world. Development of surplus and deficient agricultural areas.

**As. 303.—Farm Records.** 2 hours, and 2 hours laboratory. 3 credits. GREENMAN.

Methods and practice of making farm inventories, keeping financial records, and feed and crop records.

**As. 304.—Farm Finance and Appraisal.** 2 hours. 2 credits. GREENMAN.

Problems peculiar to financing farmers and farmers' associations. Special attention is given to the Farm Credit Administration.

**As. 306.—Farm Management.** 2 hours, and 2 hours laboratory. 3 credits. GREENMAN.

The factors of production; systems of farming, their distribution and adaptation; problems of labor, machinery, layout of farms, and rotation systems.

**As. 308.—Marketing.** 2 hours, and 2 hours laboratory. 3 credits. HAMILTON.

Principles of marketing agricultural commodities; commodity exchanges and future trading; auction companies; market finance; market news; marketing of important agricultural commodities. One or two field trips at an estimated cost of $4 each to be paid by the student at the time trips are made.

**As. 311.—Rural Law.** 2 hours. 2 credits. HAMILTON.

Classification of farm property; study of farm boundaries, fences, stock laws, rents, contracts, deeds, abstracts, mortgages, taxes, and laws governing shipping of farm products.

**As. 403.—Advanced Farm Management.** 2 hours, and 2 hours laboratory. 3 credits. GREENMAN. Prerequisite: As. 306.

Research and extension methods in farm management; practice in taking farm surveys; study of successful farms in specialized type of farming areas in Florida. Field trips, at an estimated cost of $10, paid at time trips are made.

**As. 405.—Agricultural Prices.** 3 hours. 3 credits. HAMILTON.

Prices of farm products and the factors affecting them.

**As. 408.—Marketing Fruits and Vegetables.** 2 hours, and 1 hour discussion. 3 credits. HAMILTON.

Marketing of citrus, tomatoes, beans, potatoes, and other Florida products. Two-day field trip, at an estimated cost of $10, paid at time trip is made. An optional trip to terminal markets will be arranged in accordance with demand of present and former students interested.

**As. 409.—Cooperative Marketing.** 2 hours, and 1 hour discussion. 3 credits. HAMILTON.

Cooperative buying and selling organizations, their successes and failures; methods of organization, financing, and business management. Two-day field trip, at an estimated cost of $10, paid at time trip is made.

**As. 410.—Agricultural Statistics.** 2 hours, and 2 hours laboratory. 3 credits. GREENMAN.

The principles involved in the collection, tabulation, and interpretation of agricultural statistics.

**As. 412.—Land Economics.** 2 hours, and 2 hours laboratory. 3 credits. HAMILTON.

History of public land policies; land utilization; land reclamation; marginal and submarginal lands; and land credit. Particular attention is given to the Land Section of the National Resources Board.

**As. 413.—Agricultural Policy.** Offered only in the second semester. 3 hours. 3 credits. GREENMAN.

A history of farmer attempts and accomplishments through organization and legislation to improve the economic and social status of agriculture. Evaluation of present legislative programs and policies affecting the farmer.

**As. 414.—Terminal Markets and Commodity Exchanges.** 3 hours discussion week preceding and week following field trip, respectively. 1 credit. HAMILTON. Prerequisite or corequisite: As. 308 or consent of instructor.

A study of marketing agricultural products in terminal markets and agricultural commodity exchanges by visitation and inspection. The week of Spring Recess will be used for visiting the markets. Estimated cost of trip $40 to $50, to be paid at time trip is made.

**As. 420.—Marketing of Livestock.** Identical with Al. 420. 2 hours, and 2 hours laboratory. 3 credits. SHEALY, HAMILTON.

Market classes and grades of livestock; study of firms handling livestock and distribution problems; factors affecting the price of livestock. Given jointly with the Department of Animal Husbandry. One or two field trips at an estimated cost of $2 each to be paid at time trip is made.

GRADUATE COURSES

**As. 501–502.—Agricultural Economics Seminar**

**As. 505-506.—Research Problems in Farm Management**

**As. 508. —Land Economics**

**As. 511-512.—Research Problems in Marketing Agricultural Products**

**As. 514. —Advanced Marketing of Agricultural Products**

## AGRICULTURAL EDUCATION

*(See Education)*

## AGRICULTURAL ENGINEERING

**Ag. 301.—Drainage and Irrigation.** 2 hours, and 2 hours laboratory. 3 credits. ROGERS.

The drainage and irrigation of lands with treatment of the necessity for such in the production of field, fruit and vegetable crops. The cost, design, operation and upkeep of drainage and irrigation systems. Field work in laying out systems.

**Ag. 302.—Farm Motors.** Identical with In. 404. 2 hours, and 2 hours laboratory. 3 credits. ROGERS.

The general principles of operation of the various sources of farm power. The care, operation and repair of electric motors, internal combustion engines, (including automobile, stationary gasoline engines, truck and tractor) and windmills. Laboratory work includes actual operation and repair.

**Ag. 303.—Farm Shop.** 2 hours, and 2 hours laboratory. 3 credits. ROGERS.

The farm shop jobs that are common to the farms of Florida. Carpentry, concrete construction, light forging, soldering, tool care and repair are some of the jobs given special emphasis. Laboratory work includes actual shop practice.

**Ag. 306.—Farm Machinery.** 2 hours, and 2 hours laboratory. 3 credits. ROGERS.

Machines that are used in the production of field, fruit and truck crops. Care, construction, operation and repair, selection of harvesting, picking, seeding, spraying and tillage machinery. Machines provided for laboratory observation and study.

**Ag. 401.—Farm Buildings.** 1 hour, and 2 hours laboratory. 2 credits. ROGERS.

The arrangement, cost, construction, depreciation, design, location and ventilation of farm buildings.

**Ag. 402.—Farm Concrete.** 1 hour, and 2 hours laboratory. 2 credits. ROGERS.

The coloring, curing, mixing, placing, proportioning, reinforcing and waterproofing of concrete for farm use. Consideration of materials suitable for farm concrete work.

**Ag. 403.—Agricultural Engineering Investigations.** 2 hours. 2 credits. ROGERS. The first half of the course Ag. 403-404.

Ag. 403-404: Assigned reading and reports of recent developments in the field of agricultural engineering.

**Ag. 404.—Agricultural Engineering Investigations.** 2 hours. 2 credits. ROGERS. The second half of the course Ag. 403-404.

**Ag. 406.—Dairy Engineering.** Offered only in the first semester. 2 hours, and 2 hours laboratory. 3 credits. ROGERS. Offered in alternate years. Not offered 1940-41.

The machinery and power used in the manufacture and storage of dairy products. Shop operations necessary to operation of dairy plant considered.

**Ag. 408.—Soil and Water Conservation.** Identical with Sls. 408. 2 hours, and 2 hours laboratory. 3 credits. ROGERS, SMITH. Prerequisites: Sls. 301, Ag. 301. Prerequisite or corequisite: Sls. 302.

For description see Sls. 408.

GRADUATE COURSES

**Ag. 501-502.—Seminar**

**Ag. 503-504.—Research**

## AGRONOMY

**Ay. 321.—Field Crops.** 2 hours, and 2 hours demonstration-laboratory. 3 credits. SENN.

An intensive study of field crops. Crops of southeastern United States—cotton, tobacco, the grains, sweet potatoes, peanuts, sugar cane—soil conservation crops and crop rotation systems are given special emphasis. Hutcheson, Wolfe and Kipp, *Production of Field Crops.*

**Ay. 324.—Forage and Cover Crops.** 2 hours, and 2 hours demonstration-laboratory. 3 credits. SENN.

Plants that produce feed for livestock and methods of establishing pastures. Consideration of plants suited for cover crops and rotation systems of the South. Survey work, topic development and field trips are embodied in the demonstration-laboratory.

**Ay. 325.—Exhibiting and Judging Farm Crops.** 2 hours. 2 credits. SENN.

Designed to fit one to prepare exhibits and to judge competitive farm crop displays. Arrangement of exhibits, assimilation of materials and preparation of premium lists for fairs are considered. Especially adapted to students preparing for teaching agriculture in high schools, and county agent work.

**Ay. 329.—Principles of Genetics.** 3 hours. 3 credits. SENN.

A basic course dealing with fundamental principles of heredity, variation and selection, and the application of genetic principles to plant and animal improvement. Sinnott & Dunn, *Principles of Genetics.*

**Ay. 331.—Laboratory Problems in Genetics.** 2 or 4 hours laboratory. 1 or 2 credits. SENN.

Laboratory methods in applying genetic principles, with breeding experiments illustrating the laws of inheritance. Designed to be taken in conjunction with Ay. 329.

**Ay. 400.—Agricultural Extension Methods.** 3 hours. 3 credits. SENN.

Designed to acquaint students with the activities of the Agricultural Extension Service, including specific duties of the county agent, agricultural specialists and county, state and federal agencies contributing toward the general betterment of agricultural conditions.

**Ay. 422.—Plant Breeding.** 3 hours. 3 credits. SENN.

The fundamental principles of plant improvement. Field practice in artificial pollination, hybridization, and field plot technique, acquaint the student with modern methods employed in plant breeding.

**Ay. 426.—Problems in Crop Production.** Offered either semester. 2 to 6 hours reference or laboratory work. 1 to 3 credits. SENN.

Individual study of selected problems in crop production.

**Ay. 492.—Crops Seminar.** 1 hour. 1 credit. SENN.

Assigned readings, reports and discussions of current developments in the field of plant science.

GRADUATE COURSES

**Ay. 641-642.—Research in Plant Breeding**

**Ay. 643-644.—Research in Crop Production**

**Ay. 651-652.—Conference on Special Agronomic Problems**

## ANIMAL PRODUCTION

**Al. 211.—Principles of Animal Husbandry.** 3 hours. 3 credits. CROWN. For students majoring in departments other than Animal Husbandry. Offered only in second semester.

The place of livestock in agriculture; principles of livestock improvement; characteristics of feeds; and feeding principles.

**Al. 309.—Fundamentals in Animal Husbandry.** 2 hours, and 2 hours laboratory. 3 credits. WILLOUGHBY.

Types and breeds of farm animals; principles of breeding, selection and management.

**Al. 311.—Elementary Nutrition.** 3 hours, and 3 hours laboratory. 4 credits. RUSOFF.

Elements and compounds, metabolic processes in animal nutrition, biological assays.

**Al. 312.—Feeds and Feeding.** 3 hours. 3 credits. BECKER. Prerequisite: Al. 311.

Composition of plants and animals; feeding standards and rations for farm animals.

**Al. 314.—Livestock Judging.** 1 hour, and 4 hours laboratory. 3 credits. KIRK. Prerequisite: Al. 309, or Al. 211.

Special training in livestock judging; show ring methods; contests at fairs.

**Al. 322.—Animal Breeding.** 2 hours. 2 credits. WILLOUGHBY. Prerequisite: Al. 309.

Principles of breeding applied to animals; pedigree and record work; foundation and management of a breeding enterprise.

**Al. 411.—Beef Production.** 2 hours. 2 credits. KIRK, WILLOUGHBY.

Selection, feeding and management of beef cattle; finishing and marketing.

**Al. 413.—Swine Production.** 2 hours, and 2 hours laboratory. 3 credits. CROWN.

Selection, feeding and management of hogs; forage crops and grazing; disease and parasite control; slaughtering of hogs on the farm.

**Al. 414.—Sheep Production.** 2 hours. 2 credits. WILLOUGHBY.

Production methods with sheep and goats; breeds; management in Florida; marketing of wool.

**Al. 415.—Meat Products.** 1 hour, and 4 hours laboratory. 3 credits. KIRK, CROWN.

Farm slaughtering and packing house methods; curing and processing of meats.

**Al. 416.—World Meats.** 2 hours. 2 credits. WILLOUGHBY. Prerequisites: Al. 309, 411, 413.

Meat production in other countries of the world compared with the United States.

**Al. 417.—Breed History.** 2 hours. 2 credits. WILLOUGHBY. Prerequisite: Al. 309.

History of breeds of beef, dairy, and dual purpose cattle; pedigree studies and registration methods.

**Al. 418.—Breed History.** 2 hours. 2 credits. WILLOUGHBY. Prerequisite: Al. 309.

History of breeds of horses, sheep, and swine; pedigree studies and registration methods.

**Al. 419.—Horse Husbandry.** 2 hours. 2 credits. WILLOUGHBY.

Raising horses and mules in the southeast; their use as farm power, multiple hitches; housing and equipment.

**Al. 420.—Marketing of Livestock.** Identical with As. 420. 2 hours, and 2 hours laboratory. 3 credits. SHEALY, HAMILTON.

Market classes and grades of livestock; study of firms handling livestock and distribution problems; factors affecting the price of livestock. Given jointly with the Department of Agricultural Economics. One or two field trips at an estimate cost of $2.00 each to be paid by the student at the time trips are made.

**Al. 421.—Seminar.** 1 hour. 1 credit. Staff Seminar will be conducted jointly with Dairy Husbandry, Dairy Manufacturing and Poultry Husbandry groups. This course is designated for seniors.

**Al. 422.—Seminar.** 1 hour. 1 credit. Staff Seminar will be conducted jointly with Dairy Husbandry, Dairy Manufacturing and Poultry Husbandry groups. This course is designated for seniors.

**Al. 424.—Animal Production.** 3 hours. 3 credits. WILLOUGHBY.

Origin and development of the livestock and meat industries from colonial times to the present; modern management trends and prospects for the future.

GRADUATE COURSES

**Al. 501-502.—Advanced Animal Production**

**Al. 503-504.—Animal Nutrition**

**Al. 505-506.—Livestock Records**

**Al. 508. —Methods in Animal Research**

**Al. 509-510.—Problems in Animal Nutrition**

**Al. 511-512.—Problems in Swine Production**

**Al. 513-514.—Problems in Beef Production**

## ARCHITECTURE

*Courses in the Department of Architecture are carried on by means of the problem or project method, and accomplishment is the sole criterion for advancement. Consequently, the courses are of indeterminate duration, and the time listed for each course represents merely the nominal time which the average student will need to complete the work.*

*Students in the Department of Architecture must complete the various courses in the sequence listed in their respective curricula. Students from other departments may, with the consent of the instructor and the approval of the Director, enroll in courses for which they have sufficient preparation.*

### *Lower Division*

**Ae. 11A.—Fundamentals of Architecture.** WEAVER, PARKER.

A creative introductory course leading the student, through a study of human actions, to devise buildings in which all the arrangements, details, and materials are intended to make human activity both efficient and pleasant. The creation of buildings to meet the requirements of use is emphasized. Drawing of all kinds is taught, not in a formal manner, but as an incidental accompaniment to design. A study of principles of composition and of materials and methods of construction is an integral part of the work from the beginning. Nine projects. Nominal time, 9 hours a week for 4 semesters, or 18 hours a week for 2 semesters. (Equivalent to 12 credits.)

## *Upper Division*

### DESIGN

*This work consists of the design of buildings of the type encountered in contemporary practice. In general, the problems are non-competitive in character and the time for the completion of the solutions is not fixed. Criticisms are given individually, and solutions are in the form of plans, sections, plastic models, and elevations. Other problems which are competitive in character are assigned regularly every four weeks. Such problems are solved without criticism and without references and the solutions are generally limited to nine hours.*

**Ae. 21A.—Architectural Design.** GRAND.

A continuation of Ae. 11A for students in Architecture. The design of simple residential, commercial, and public buildings in wood, brick, and stone with emphasis on the analysis of human requirements, the consideration of the conditions of environment, and the selection of materials for color, texture, and appropriateness. Preliminary studies, design models, and working drawings. Eight projects correlated with Projects in Architecture 1 to 8, inclusive. Nominal time, 15 hours a week for 2 semesters.

**Ae. 21B.—Architectural Design.** ARNETT.

A continuation of Ae. 21A for students in Architecture. The design of more complex buildings including a hospital, a bank, a two-story house, a theater, a high school, a hotel, and two other types. Working drawings, and conferences on the theory of composition. Eight projects correlated with Projects in Architecture 9 to 16, inclusive. Nominal time, 15 hours a week for 3 semesters.

**Ae. 22A.—Architectural Design.** GRAND.

A continuation of Ae. 11A for students in Building Construction. Similar to Ae. 21A. Nominal time, 15 hours a week for 2 semesters.

**Ae. 23A.—Landscape Design.** GRAND.

A continuation of Ae. 11A for students in Landscape Architecture. The design of small properties with emphasis on the principles of landscape composition. Eight projects correlated with Projects in Landscape Architecture 1 to 8, inclusive. Nominal time, 15 hours a week for 2 semesters.

**Ae. 23B.—Landscape Design.** ARNETT.

A continuation of Ae. 23A for students in Landscape Architecture. The design of public and private properties including a park, a country club, a high school grounds, a residential development, and two other projects. Six projects correlated with Projects in Landscape Architecture 9 to 14, inclusive. Nominal time, 15 hours a week for 2 semesters.

### DELINEATION

**Ae. 31A.—Freehand Drawing and Water Color.** GRAND.

A continuation of Ae. 11A for students in Architecture and Building Construction. The delineation of form in architecture with charcoal, pencil, colored pencil, water color, and pen and ink. Color theory, and a continuation of the study of perspective. Eight projects correlated with Projects in Architecture 1 to 8, inclusive. Nominal time, 6 hours a week for 2 semesters.

**Ae. 31B.—Freehand Drawing and Water Color.** GRAND.

A continuation of Ae. 31A for students in Architecture. Outdoor sketching in pencil and water color. Scale and full size details in pencil and charcoal. Eight projects correlated with Projects in Architecture 9 to 16, inclusive. Nominal time, 6 hours a week for 3 semesters.

**Ae. 33A.—Freehand Drawing and Water Color.** GRAND.

A continuation of Ae. 11A for students in Landscape Architecture. Drawing in charcoal, pencil, and water color. Eight projects correlated with Projects in Landscape Architecture 1 to 8, inclusive. Nominal time, 6 hours a week for 2 semesters.

**Ae. 33B.—Freehand Drawing and Water Color.** GRAND.

A continuation of Ae. 33A for students in Landscape Architecture. Outdoor sketching in various media. Six projects correlated with Projects in Landscape Architecture 9 to 14, inclusive. Nominal time, 6 hours a week for 2 semesters.

HISTORY

### Ae. 41A.—History of Architecture. GRAND.

For students in Architecture and Building Construction. An analytical study of the development of the art of building with emphasis on historical and other influences, materials and methods of construction, and principles of composition and planning. A study of the component parts of buildings including such structural elements as walls, roofs, openings, columns, and piers, and the decorative elements such as mouldings and ornament. Individual research, conferences, and illustrated reports. Eight projects. Nominal time, 6 hours a week for 2 semesters.

### Ae. 41B.—History of Architecture. ARNETT.

For students in Architecture, Landscape Architecture, and Painting. A chronological study of the development of the art of building from ancient to modern times with emphasis on environmental influences, architectural development, and significant buildings. Individual research, conferences, and illustrated reports. Six projects. Nominal time, 6 hours a week for 2 semesters.

### Ae. 41C.—Decorative Arts. ARNETT.

For students in Architecture and Painting. A study of the decorative use of various materials, especially those used in building, such as stone, ceramic products, textiles, glass, plaster, wood, and metals. Two projects. Nominal time, 6 hours a week for 1 semester.

CONSTRUCTION AND EQUIPMENT

### Ae. 51A.—Materials and Methods of Construction. HANNAFORD.

A continuation of Ae. 11A for students in Architecture and Building Construction. A study of the materials used in the construction of buildings and of the principles governing the selection and use of such materials. Methods of building construction, the development of construction details, and elementary surveying as applied to building. Eleven projects correlated with Projects in Architecture 1 to 11, inclusive. Nominal time, 9 hours a week for 3 semesters.

### Ae. 53A.—Materials and Methods of Construction. ARNETT.

A continuation of Ae. 11A for students in Landscape Architecture. Methods of constructing walks, steps, terraces, fences, gates, walls, driveways, water supply systems, and the like. Preparation of working drawings, contour maps, and grading plans. Seven projects correlated with Projects in Landscape Architecture 5 to 8, and 12 to 14, inclusive. Nominal time, 9 hours a week for 2 semesters.

### Ae. 51B.—Mechanical Equipment of Buildings. ARNETT, WILSON.

For students in Architecture and Building Construction. A study of plumbing, heating, ventilation, and electrical installations in buildings. The design of simple plumbing systems, selection of types of heating systems, calculation of heat losses and radiator sizes, and the design of interior wiring systems. Three projects correlated with Projects in Architecture 12 to 14, inclusive. Nominal time, 9 hours a week for 1 semester.

PROFESSIONAL RELATIONS

### Ae. 51C.—Professional Relations and Methods. WEAVER.

For students in Architecture and Building Construction. Conferences on professional relations and on methods of modern practice. Ethics, law, specifications, and estimates. Two projects correlated with Projects in Architecture 15 and 16. Nominal time, 9 hours a week for 1 semester.

STRUCTURES

*The courses in structures presuppose a satisfactory knowledge of trigonometry, algebra, analytic geometry, elementary calculus, and elementary physics. The work consists of a series of projects designed to give the student proficiency in solving the structural problems of buildings.*

### Ae. 61A.—Structural Design of Buildings. HANNAFORD.

For students in Architecture and Building Construction. The structural design of the component parts of buildings in wood and steel. The weights of building materials, live loads, and the investigation of the stresses produced in the component parts. Eight projects correlated with Projects in Architecture 1 to 8, inclusive. Nominal time, 12 hours a week for 2 semesters.

**Ae. 61B.—Structural Design of Buildings.** HANNAFORD.

A continuation of Ae. 61A for students in Architecture and Building Construction. The structural design of the component parts of buildings in wood, masonry, cast iron, steel, and reinforced concrete. Eight projects correlated with Projects in Architecture 9 to 16, inclusive. Nominal time for students in Architecture, 12 hours a week for 3 semesters; for students in Building Construction, 15 hours a week for 1 semester and 21 hours a week for 1 semester.

THESIS IN ARCHITECTURE

**Ae. 71A.—Thesis.** WEAVER and STAFF. Prerequisite: Completion of all other requirements for the degree.

A comprehensive final project in architecture based on a program submitted by the student and approved by the faculty. The program must be approved in time to permit not less than 14 weeks for the study of the problem. The presentation will include the architectural, structural, and mechanical equipment drawings, and portions of the specifications. Models and written descriptions may accompany the solution. One project. Nominal time, 48 hours a week for 1 semester.

GRADUATE COURSES

**Ae. 501-502.—Architectural Design**
**Ae. 521-522.—Advanced Freehand Drawing**
**Ae. 525-526.—Advanced Water Color**
**Ae. 531-532.—Historical Research**
**Ae. 551-552.—Building Construction**
**Ae. 553-554.—Structural Design of Buildings**

## ASTRONOMY

**CAy. 23.—Descriptive Astronomy.** Offered only in the first semester. 3 hours, and 2 hours laboratory-observing. 4 credits. KUSNER.

A survey of the astronomical universe. The earth as an astronomical body; the solar system; stars and nebulae; the galaxy; the constellations; astronomical instruments and their uses; amateur telescope making.

**Aty. 302.—Navigation and Nautical Astronomy.** 3 hours. 3 credits. KUSNER. Prerequisite: Plane Trigonometry. Recommended: Advanced trigonometry and elementary descriptive astronomy.

The geographical and astronomical principles and practices involved in determination of position at sea and in the air. Instruments of navigation and their use.

## BACTERIOLOGY

**Bcy. 301.—General Bacteriology.** 2 hours, and 4 hours laboratory. 4 credits. CARROLL. Prerequisites: C-6, or equivalent; Cy. 101-102, or Acy. 125-126.

Morphology, physiology and cultivation of bacteria and related micro-organisms. Tanner, *Bacteriology.*

**Bcy. 302.—Agricultural Bacteriology.** 1 hour, and 4 hours laboratory. 3 credits. CARROLL. Prerequiste: Bcy. 301.

Bacteria and associated micro-organisms in relation to water, milk, silage and farm problems.

**Bcy. 304.—Pathogenic Bacteriology.** 2 hours, and 4 hours laboratory. 4 credits. CARROLL. Prerequisite: Bcy. 301.

Recognition, culture, and special laboratory technique of handling pathogens and viruses; theories and principles of immunity and infection. Stitt, *Practical Bacteriology, Parasitology, and Blood Work.*

**Bcy. 306.—Bacteriology of Foods.** 2 hours, and 4 hours laboratory. 4 credits. CARROLL. Prerequisite: Bcy. 301.

Relation of bacteria, yeast, molds and other micro-organisms to preservation and spoilage of foods. Tanner, *Microbiology of Foods.*

**Bcy. 308.—Sanitary Laboratory Practice.** Offered only in the first semester. 1 hour, and 4 hours laboratory. 3 credits. CARROLL. Corequisite: Cy. 215.

Problems in sewage and public sanitation, designed primarily for sanitary engineers. American Public Health Association and American Water Works Association, *Standard Methods for Examination of Water and Sewage.*

**Bcy. 402.—Dairy Bacteriology.** 1 hour, and 4 hours laboratory. 3 credits. CARROLL. Prerequisite: Bcy. 301.

Consideration of bacteria and related micro-organisms encountered in milk and milk derivatives; milk spoilage, milk fermentation; bacteriology of butter, ice cream, cheese; standard methods of milk analysis and dairy inspection. Hammer, *Dairy Bacteriology.*

**Bcy. 411.—Principles and Practices of Immunology.** 2 hours, and 4 hours laboratory. 4 credits. CARROLL. Prerequisite: Bcy. 301.

Consideration of preparations and therapeutic uses of biologicals from a bacteriological standpoint; diagnostic tests. Zinsser, *Resistance to Infectious Diseases.*

**Bcy. 412.—Industrial Bacteriology.** 2 hours, and 4 hours laboratory. 4 credits. CARROLL. Prerequisite: Bcy. 301.

Consideration of principles and problems in industrial bacteriology; isolation, cultivation and classifications of organisms concerned.

GRADUATE COURSES

**Bcy. 501-502.—Problems in Soil Bacteriology**
**Bcy. 503-504.—Problems in Dairy Bacteriology**
**Bcy. 505-506.—Problems in Pathogenic Bacteriology**
**Bcy. 507-508.—Problems in Water Bacteriology**
**Bcy. 509-510.—Problems in Industrial Bacteriology**

## BAND

*(See Music)*

## BIBLE

**Be. 209.—Biblical Geography and History.** 3 hours. 3 credits. JOHNSON.

An introduction to a more intensive study of Biblical literature. Emphasis on the geography of Palestine and its relations to Assyria, Babylonia and Egypt. Growth of Old Testament literature as affected by these civilizations.

**Be. 210.—Biblical Geography and History.** 3 hours. 3 credits. JOHNSON.

The influence of Persian, Greek, and Roman cultures on Jewish religion and the rise of Christianity. A brief survey of the Apocalyptic movement and its literature.

**Be. 303.—World's Great Religions.** 2 hours. 2 credits. JOHNSON.

A study of some African, Chinese, Japanese and Indian religions showing their development and contribution.

**Be. 304.—World's Great Religions.** 2 hours. 2 credits. JOHNSON.

A study of Buddhism, Zoroastrianism, Judaism, Christianity, Islam, showing some similarities and dissimilarities and contribution of each religion.

**Be. 305.—How to Understand the Bible.** 2 hours. 2 credits. JOHNSON.

A brief survey of how we got the Bible. A study of the evolution of three fundamental ideas in the Hebrew-Christian literature: God, Man, Right and Wrong.

**Be. 306.—How to Understand the Bible.** 2 hours. 2 credits. JOHNSON.

Acquiring a familiarity with Biblical literature by tracing the development of such fundamental ideas as Suffering, Fellowship, Immortality.

**Be. 403.—Old Testament Literature.** 3 hours. 3 credits. JOHNSON.

A survey of Old Testament writings dealing with histories, laws, and legends of Israel, authorship and composition of books, the united and divided kingdoms and the dominating leaders, showing historical sequence and spiritual affiliation.

**Be. 404.—Prophets of Israel.** Offered only in the first semester. 3 hours. 3 credits. JOHNSON.

A study of the background and message of the creative personalities in Hebrew and Jewish religious life. The relation of prophetic thought to present day problems; the study of a great religious movement and how it affected ethics, morality and religion.

**Be. 405.—New Testament Writings.** 3 hours. 3 credits. JOHNSON.

A study of the New Testament writings dealing with their background, authorship, occasion, content, and purpose.

**Be. 406.—Life of Jesus.** Offered only in the first semester. 3 hours. 3 credits. JOHNSON.

An introduction to the main facts in the life of Jesus and to a general knowledge of the Gospel literature.

**Be. 412.—Early Christianity.** 3 hours. 3 credits. JOHNSON.

A general concept of the rise of the Christian movement and the organization of the Christian Church.

## BIOLOGY

All majors in Biology will include courses 209, 210, 325, and 332. Any exceptions, if to be approved for a major, will require permission in advance from the Head of the Department. Students who expect to continue graduate work in this Department should also take Bly. 425-426.

Biology courses that are to be offered as a part of a group major must be selected from 209, 210, 325, 332, 425-426, and, with the permission of the department, 316.

**Bly. 61.—Laboratory in General Biology.** Offered only in the second semester. 6 hours laboratory. 2 credits. WALLACE.

A laboratory course designed to parallel the lectures and discussions of the General College Course, C-6. Open to the 48 highest applicants from students taking C-6. Satisfactory completion of the work of Bly. 61 together with a final standing in the upper half of C-6 forms an acceptable prerequisite to the second-year courses of the department, in place of Bly. 101-102.

**Bly. 101.—General Animal Biology.** 2 hours, and 3 hours laboratory. 3 credits. BYERS. The first half of the course Bly. 101-102.

Bly. 101-102: An introduction to the morphology, physiology, development and classification of invertebrate and vertebrate animals.

**Bly. 102.—General Animal Biology.** 2 hours, and 3 hours laboratory. 3 credits. WALLACE. The second half of the course Bly. 101-102.

**Bly. 209.—Comparative Vertebrate Anatomy.** 2 hours, and 6 hours laboratory. 4 credits. SHERMAN. Prerequisite: Bly. 101-102, or C-6 and Bly. 61.

The morphology and classification of chordate animals.

**Bly. 210.—Vertebrate Embryology.** 2 hours, and 6 hours laboratory. 4 credits. SHERMAN. Prerequisite: Bly. 209.

**Bly. 310.—Mammalian Anatomy and Physiology.** Offered only in the first semester. 2 hours, and 6 hours laboratory. 4 credits. SHERMAN. Prerequisite: Bly. 209.

Lectures on the physiology and anatomy of the mammalian body supplemented by individual dissections of the cat.

**Bly. 316.—Animal Parasitology.** 3 hours, and 4 hours laboratory. 4 credits. BYERS. Prerequisite: Bly. 209; Bly. 332 recommended.

The animal organisms, especially the protozoa and worms, producing disease in man and the higher vertebrates.

**Bly. 325.—Genetics and Evolution.** 3 hours. 3 credits. ROGERS. Prerequisite: Bly. 210 or equivalent.

An introduction to the data and methods of genetics with special reference to their bearing on the problems of organic evolution.

**Bly. 332.—Invertebrate Zoology.** 3 hours, and 4 hours laboratory. 4 credits. BYERS. Prerequisite: Bly. 61 or Bly. 101-102.

An advanced survey of the morphology, developmental stages and classification of the invertebrate phyla.

**Bly. 411.—Individual Problems in Animal Biology.** 3 credits. STAFF. The first half of the course Bly. 411-412. Prerequisite: At least 16 credits in approved major courses in Biology and permission of the Head of the Department.

Bly. 411-412: Qualified students and the instructor concerned may choose a particular topic or problem for study in one of the following fields: Animal Ecology, Limnology (Rogers); Entomology, Zoögeography (Hubbell); Embryology, Mammalian Morphology (Sherman); Advanced Invertebrates, Parasitology (Byers); Laboratory Technique, Arachnida (Wallace); Herpetology, Ichthyology (Carr); Crustacea (Hobbs).

**Bly. 412.—Individual Problems in Animal Biology.** 3 credits. STAFF. The second half of the course Bly. 411-412.

**Bly. 425.—Natural History.** 2 hours and all of Saturday for field or laboratory work. 4 credits. HUBBELL. The first half of the course Bly. 425-426. Prerequisite: Bly. 332.

Bly. 425-426: Animal life of Northern Florida with particular reference to the arthropods. An introduction to Bio-ecology and field methods. The acquirement of a recognition knowledge of the more common aquatic and terrestrial animals is accompanied and followed by field and laboratory work on animal habitats and habitat correlations. A prerequisite to all advanced work in animal ecology and field biology.

**Bly. 426.—Natural History.** 2 hours and all of Saturday for field or laboratory work. 4 credits. ROGERS. The second half of the course Bly. 425-426.

GRADUATE COURSES

**Bly. 505. —History of Biology**

**Bly. 506. —Biological Literature and Institutions**

**Bly. 507-508.—Taxonomic Studies**

**Bly. 509. —Zoogeography**

**Bly. 510. —Animal Ecology**

**Bly. 511-512.—Florida Wild Life**

**Bly. 513-514.—Vertebrate Morphology**

**Bly. 515-516.—Invertebrate Morphology**

**Bly. 519-520.—Individual Problems in Animal Biology**

**Bly. 521-522.—Natural History of Selected Animals**

**Bly. 523-524.—Natural History of Selected Animals**

**Bly. 533-534.—Problems and Concepts of Taxonomy and Nomenclature**

## BOTANY

**Bty. 303.—General Botany.** 2 hours, and 4 hours laboratory. 4 credits. CODY. The first half of course Bty. 303-304.

Bty. 303-304: A study of the form, structure, growth, reproduction, physiology and functions of plants and their various organs; relation of plants to their environment and to each other; principles underlying inheritance, variation and organic evolution. Required of students majoring in Botany, Bacteriology and Plant Pathology.

**Bty. 304.—General Botany.** 2 hours, and 4 hours laboratory. 4 credits. CODY. The second half of course Bty. 303-304.

**Bty. 308.—Taxonomy.** 2 hours, and 4 hours laboratory. 4 credits. CODY. Prerequisites: Bty. 303-304. Desirable prerequisites or corequisites: Sls. 301, Bty. 311.

Identification of common seed plants and ferns of the Gainesville region. Frequent field trips will be made for study of vegetation. Grays, *New Manual of Botany*, 7th Edition.

**Bty. 311.—Plant Physiology.** 2 hours, and 4 hours laboratory. 4 credits. CODY. Prerequisites: One semester of General Botany; Acy. 125-126, or Cy. 262. Desirable prerequisites: Sls. 301, Ps. 211, Pt. 321.

Absorption, assimilation, transpiration, metabolism, respiration, and growth of plants.

**Bty. 401.—Plant Ecology.** 1 hour, and 6 hours laboratory. 4 credits. CODY. Prerequisites: Bty. 308, Bty. 311, Sls. 301 or Sls. 302.

Relation of plants to environment; plant associations and their successions.

**Bty. 403.—Advanced Plant Physiology.** 1 hour, and 6 hours laboratory. 4 credits. CODY. Prerequisites: Bty. 311, Sls. 301, Sls. 302, Acy. 125-126, Ps. 211-212. Corequisites: Cy. 203-204; Cy. 301-302 or Cy. 262; Bcy. 301.

Special consideration of processes of absorption and relation of plant cell to water and the soil; transpiration and photosynthesis. Special problems.

**Bty. 404.—Advanced Plant Physiology.** 1 hour, and 6 hours laboratory. 4 credits. CODY. Prerequisites: Bty. 403, or prerequisites of Bty. 403.

Principles of syntheses by plants; digestion, respiration and growth. A continuation of Bty. 403.

**Bty. 431.—Plant Histology.** 2 hours, and 4 hours laboratory. 4 credits. CODY. Prerequisite: Bty. 304. Desirable prerequisites: Acy. 125-126, Bty. 311, Bcy. 301, Ps. 211-212.

Methods and practice in killing, fixing, sectioning, and staining of plant tissues and organs. Assignment of special plant materials.

**Bty. 432.—Plant Anatomy.** 2 hours, and 4 hours laboratory. 4 credits. CODY. Prerequisite: Bty. 304 or equivalent. Desirable prerequisites: Bty. 431, Cy. 262 or Cy. 301, or equivalents.

Origin, structure and function of principal tissues and organs of plants.

GRADUATE COURSES

**Bty. 501-502.—Problems in Taxonomy**
**Bty. 503-504.—Problems in Plant Physiology**
**Bty. 505. —Problems in Plant Histology**
**Bty. 506. —Research in Plant Histology**
**Bty. 507. —Advanced Plant Anatomy**
**Bty. 508. —Problems in Plant Anatomy**
**Bty. 555-556.—Botany Seminar**

## BUSINESS ADMINISTRATION

*(See Economics and Business Administration)*

## BUSINESS EDUCATION

Note: These courses do not count as credit in Education.
(See also En. 371-372 and En. 421-422.)

**BEn. 81.—Elementary Typewriting.** 3 hours laboratory. 1 credit. COPELAND. The first half of the course BEn. 81-82. Enrollment limited.

BEn. 81-82: Introduction to touch typewriting; practice upon personal and business problems.

**BEn. 82.—Elementary Typewriting.** 3 hours laboratory. 1 credit. COPELAND. The second half of the course BEn. 81-82. Enrollment limited.

**BEn. 91.—Elementary Shorthand.** 5 hours. 2 credits. COPELAND. The first half of the course BEn. 91-92. Corequisite: BEn. 81.

BEn. 91-92: Introduction to Gregg shorthand by direct methods; introductory practice in dictation and transcription.

**BEn. 92.—Elementary Shorthand.** 5 hours. 2 credits. COPELAND. The second half of the course BEn. 91-92. Corequisite: BEn. 82.

***BEn. 93.—Stenography.** 6 hours laboratory. 3 credits. COPELAND. The first half of the course BEn. 93-94. Prerequisites: BEn. 82 and BEn. 92, or ability to type at 30 gross words per minute with 98% accuracy and to take dictation from introductory material at 60 words per minute.

BEn. 93-94: Review of shorthand principles; development of shorthand vocabulary; development of skill in dictation and transcription; problems in typing letters and business forms; filing; introduction to operation of office machines.

***BEn. 94.—Stenography.** 6 hours laboratory. 3 credits. COPELAND. The second half of the course BEn. 93-94.

## CHEMICAL ENGINEERING

**Cg. 345.—Industrial Stoichiometry.** 3 hours. 3 credits. MORGEN. The first half of the course Cg. 345-346. Prerequisites: Cy. 202, physics, and calculus.

Cg. 345-346: Industrial processes and calculations. Hougen and Watson, *Industrial Chemical Calculations.*

**Cg. 346.—Industrial Stoichiometry.** 3 hours. 3 credits. MORGEN. The second half of the course Cg. 345-346.

**Cg. 363.—Metallic Materials of Construction.** 2 hours. 2 credits. Prerequisites: Cy. 101-102 and College Physics.

Production, properties and uses of the ferrous and non-ferrous metals and alloys.

**Cg. 364.—Non-metallic Materials of Construction.** 2 hours. 2 credits. Prerequisites: Cy. 101-102 and College Physics.

Production, properties and uses of such materials of construction as cement, brick, plastics, etc.

**Cg. 443.—Chemical Engineering Laboratory.** Repeated the second semester if required by co-operative students. 6 hours. 2 credits. BEISLER. The first half of the course Cg. 443-444. Corequisite: Cg. 447.

Cg. 443-444: Experiments in chemical engineering operations.

**Cg. 444.—Chemical Engineering Laboratory.** Repeated the first semester if required by co-operative students. 6 hours. 2 credits. BEISLER. The second half of the course Cg. 443-444. Corequisite: Cg. 448.

**Cg. 447.—Principles of Chemical Engineering.** Repeated the second semester if required by co-operative students. 3 hours. 3 credits. BEISLER. The first half of the course Cg. 447-448. Prerequisite: Cg. 346.

Cg. 447-448: Fundamental chemical engineering operations. Badger and McCabe, *Elements of Chemical Engineering.*

**Cg. 448.—Principles of Chemical Engineering.** Repeated the first semester if required by co-operative students. 3 hours. 3 credits. BEISLER. The second half of the course Cg. 447-448.

**Cg. 457.—Chemical Engineering Design.** Offered only in the first semester. 1 hour, and 3 hours laboratory or its equivalent. 2 credits. MORGEN. The first half of the course Cg. 457-458. Corequisite: Cg. 447.

Cg. 457-458: The design of chemical plants and equipment. Vilbrandt, *Chemical Engineering Plant Design;* Tyler, *Chemical Engineering Economics.*

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*Offered only in the Summer Session.

**Cg. 458.—Chemical Engineering Design.** Offered only in the second semester. 1 hour, and 3 hours laboratory or its equivalent. 2 credits. MORGEN. The second half of the course Cg. 457-458. Corequisite: Cg. 448.

**Cg. 467.—Chemical Engineering Thermodynamics.** Repeated the second semester if required by co-operative students. 3 hours. 3 credits. MORGEN. The first half of the course Cg. 467-468. Prerequisites: Cy. 402, calculus.

Cg. 467-468: Fundamental applications of thermodynamics to chemistry and chemical engineering.

**Cg. 468.—Chemical Engineering Thermodynamics.** Repeated the first semester if required by co-operative students. 3 hours. 3 credits. MORGEN. The second half of the course Cg. 467-468.

**Cg. 497.—Honors Course.** Variable credit. STAFF.

**Cg. 498.—Honors Course.** Variable credit. STAFF.

GRADUATE COURSES

**Cg. 511-512.—Advanced Chemical Engineering**
**Cg. 521-522.—Special Topics in Chemical Engineering**
**Cg. 531. —Advanced Chemical Engineering Thermodynamics**
**Cg. 541. —Advanced Unit Operations**

## CHEMISTRY

**Cy. 101.—General Chemistry.** Offered each semester. 3 hours, and 3 hours laboratory. 4 credits. HEATH, JACKSON, OTTE. The first half of the course Cy. 101-102.

Cy. 101-102: Fundamental laws and theories of chemistry. Non-metallic elements and their compounds; metals and their compounds and some of their uses. NOTE: This course meets the requirements in General Chemistry for entrance into a Medical or Dental School and is required for all students who intend to enter the College of Engineering or the School of Pharmacy and for those who major in Chemistry in the Upper Division.

**Cy. 102.—General Chemistry.** Offered each semester. 3 hours, and 3 hours laboratory. 4 credits. HEATH, JACKSON, OTTE. The second half of the course Cy. 101-102.

**Cy. 201.—Analytical Chemistry.** Offered each semester. 2 hours, and 6 hours laboratory. 4 credits. HAWKINS. The first half of the course Cy. 201-202. Prerequisite: Cy. 102 or a grade of at least B in Acy. 126.

Cy. 201-202: Theoretical principles and laboratory technique involved in the qualitative detection and quantitative determination of the common metals and acid radicals.

**Cy. 202.—Analytical Chemistry.** Offered each semester. 2 hours, and 6 hours laboratory. 4 credits. BLACK. The second half of the course Cy. 201-202.

**Cy. 203.—Analytical Chemistry.** 1 hour, and 6 hours laboratory. 3 credits. BLACK. The first half of course Cy. 203-204. Prerequisite: Cy. 102 or Acy. 126.

Cy. 203-204: A course in quantitative and qualitative analysis offered primarily for students of pharmacy.

**Cy. 204.—Analytical Chemistry.** 2 hours, and 3 hours laboratory. 3 credits. HAWKINS. The second half of the course Cy. 203-204.

**Cy. 215.—Water and Sewage.** 2 hours, and 3 hours laboratory. 3 credits. BLACK. Prerequisite: Cy. 101-102.

A theoretical and practical study of the examination and treatment of water and sewage.

**Cy. 262.—Organic Chemistry.** Offered only in the first semester. 3 hours, and 6 hours laboratory. 5 credits. POLLARD. Prerequisite: Cy. 101-102.

A brief elementary course embracing the more important aliphatic and aromatic compounds.

**Cy. 301.—Organic Chemistry.** Repeated the second semester if required by co-operative students. 3 hours, and 3 hours laboratory. 4 credits. LEIGH, POLLARD. The first half of the course Cy. 301-302. Prerequisite: Cy. 102, 202.

Cy. 301-302: Preparation and properties of the various aliphatic and aromatic compounds. Conant, *The Chemistry of Organic Compounds;* Fieser, *Experiments in Organic Chemistry.*

**Cy. 302.—Organic Chemistry.** Repeated the first semester if required by co-operative students. 3 hours, and 3 hours laboratory. 4 credits. LEIGH, POLLARD. The second half of the course Cy. 301-302.

**Cy. 401.—Physical Chemistry.** Repeated the second semester if required by co-operative students. 3 hours, and 3 hours laboratory. 4 credits. JACKSON, HAWKINS. The first half of the course Cy. 401-402. Prerequisites: One year of College Physics, calculus, and Cy. 302. Corequisite: Cy. 301 for engineering students.

Cy. 401-402: Matter in the three states, elementary thermodynamics, solutions, colloids, electricity as applied to chemistry, homogeneous and heterogeneous equilibria, chemical kinetics, photochemistry, introduction to quantum theory.

**Cy. 402.—Physical Chemistry.** Repeated the first semester if required by co-operative students. 3 hours, and 3 hours laboratory. 4 credits. JACKSON, HAWKINS. The second half of the course Cy. 401-402. Corequisite: Cy. 302 for engineering students.

**Cy. 403.—Water Analysis.** 1 hour, and 6 hours laboratory. 3 credits. BLACK. Prerequisite: Cy. 202.

Analysis of waters to determine their potability and fitness for steam raising and other purposes. *Standard Methods of Water Analysis of the A. P. H. A.*

**Cy. 462.—Photographic Chemistry.** 3 hours. 3 credits. HEATH. Prerequisites: Cy. 262, or 302; college physics, or suitable photographic experience; Cy. 202.

Theory and practice of photographic processes and materials, and their uses.

**Cy. 481.—Chemical Literature.** One-half hour or its equivalent. ½ credit. POLLARD. The first half of the course Cy. 481-482. Prerequisite: 3 years of chemistry. A reading knowledge of French and German is desirable.

Cy. 481-482: A general study of the present sources of published chemical information.

**Cy. 482.—Chemical Literature.** One-half hour or its equivalent. ½ credit. POLLARD. The second half of the course Cy. 481-482.

GRADUATE COURSES

**Cy. 501. —Organic Preparations**
**Cy. 504. —Inorganic Preparations**
**Cy. 505. —Organic Nitrogen Compounds**
**Cy. 506. —Special Chapters in Organic Chemistry**
**Cy. 515-516.—Advanced Inorganic Chemistry**
**Cy. 517-518.—Advanced Organic Chemistry**
**Cy. 521-522.—Advanced Physical Chemistry**
**Cy. 523-524.—Special Topics in Physical Chemistry**
**Cy. 525-526.—Chemistry of the Terpenes**
**Cy. 533. —Advanced Analytical Chemistry**
**Cy. 534. —Advanced Sanitary Chemistry**
**Cy. 536. —Advanced Analytical Chemistry**
**Cy. 538. —Quantitative Organic Chemistry**

## CIVIL ENGINEERING

**Cl. 223.—Surveying.** Offered each semester. 2 hours, and 3 hours laboratory. 3 credits. REED, SAWYER. Prerequisites: Trigonometry, Basic Mathematics.

The use of chain, level, and transit; balancing of surveys, calculating of areas, contour work, simple curves; elementary practical problems generally included in a short course for students who do not take advanced surveying work. Breed and Hosmer, *The Principles and Practice of Surveying, Volume I.*

**Cl. 226.—Higher Surveying.** 3 hours. 3 credits. SAWYER. Prerequisite: Cl. 223.

Traverse, triangulation, precise leveling, topographic mapping; city, land, hydrographic, and aerial surveying; practical astronomy, and map projections. Breed and Hosmer, *The Principles and Practice of Surveying, Volume II.*

**Cl. 325.—Materials Laboratory.** 1 hour, and 2 hours laboratory. 2 credits. SAWYER. Prerequisite: Ig. 363. Corequisite: Ig. 364.

Laboratory work in the testing of stone, brick, asphalt, and other road materials; cement, sand, concrete, timber, steel and other materials used in construction. Tucker, *Laboratory Manual in the Testing of Materials.*

**Cl. 326.—Theory of Structures.** 2 hours, and 6 hours laboratory. 4 credits. SAWYER. Prerequisite: Ig. 363. Corequisite: Ig. 364.

The resolution of forces, computation of reactions and stresses in statically determinate structures and the design of simple structures. Shedd and Vawter, *Theory of Simple Structures.*

**Cl. 327.—Hydraulics.** Offered each semester. 2 hours, and 2 hours laboratory. 3 credits. MILES. Prerequisite: Ig. 363. Corequisite: Ig. 364.

The principles underlying the behavior of fluids at rest and in motion. The transportation and measurement of fluids. Schoder and Dawson, *Hydraulics.*

**Cl. 328.—Soil Mechanics.** 2 hours, and 3 hours laboratory. 3 credits. STAFF. Prerequisite: Cl. 325.

Theory of soil mechanics, standard tests, current research, classification of soils, properties, bearing values, settlement, foundations.

**Cl. 329.—Higher Surveying.** Summer Term. 3 hours, and 40 hours laboratory. 6 weeks. 5 credits. SAWYER. Prerequisite: Cl. 226.

Field and office practice in traverse, topographic mapping, base line measurement, triangulation, practical astronomy, steam gauging and hydrographic surveying, precise leveling and adjustments of instruments. Breed and Hosmer, *The Principles and Practice of Surveying, Volume II.*

**Cl. 331.—Railway Engineering.** 2 hours, and 3 hours laboratory. 3 credits. REED. Prerequisite: Cl. 223.

Simple, compound, reversed, vertical, and spiral curves; earthwork; recitation, field and drawing-room work in the principles of railway engineering. Data is obtained in the field for the design work in both Cl. 331 and Cl. 332. Pickles and Wiley, *Route Surveying.*

**Cl. 332.—Highway Engineering.** 2 hours, and 6 hours laboratory. 4 credits. REED. Prerequisite: Cl. 331.

Recitations, field and drawing-room work covering the location, design, and construction of highways. Bruce, *Highway Design and Construction.*

**Cl. 420.—Hydraulic Engineering.** Offered only in the second semester. 2 hours. 2 credits. Prerequisite: Cl. 327.

Lectures and recitations on the design and testing of hydraulic machinery. Turbine and pump characteristics, the homologous series. Water hammer, backwater and drawdown curves.

**Cl. 422.—Hydraulic Laboratory.** 2 hours laboratory. 1 credit. MILES. Corequisite: Cl. 420.

Parallel study in the laboratory of the subject matter presented in Cl. 420. Syllabus and trade literature.

**Cl. 425.—Water and Sewerage.** 2 hours, and 3 hours laboratory. 3 credits. Prerequisites: Cl. 327, Cy. 215, Bcy. 308.

The principles underlying the collection, treatment and disposal of sewage. The design of collection system and treatment plants. Steel, *Water Supply and Sewerage.*

**Cl. 426.—Water and Sewerage.** 2 hours, and 3 hours laboratory. 3 credits. Prerequisite: Cl. 425.

Lectures and recitations on water supply systems. Sources of supply, methods of treatment, the design of a water supply system, including collection, treatment, and distribution. Steel, *Water Supply and Sewerage.*

**Cl. 431.—Hydrology.** 2 hours. 2 credits. Prerequisite: Senior rating.

The principles of hydrology, their relations and applications to engineering design. Meyer, *Elements of Hydrology.*

**Cl. 433.—Theory of Reinforced Concrete.** 2 hours. 2 credits. SAWYER. Prerequisite: Cl. 326.

Theory and design of slabs, beams, girders, columns. Resistance to flexure shear, diagonal tension, bond, compression.

**Cl. 434.—Reinforced Concrete Design.** 1 hour, and 6 hours laboratory. 3 credits. SAWYER. Prerequisite: Cl. 433.

Stress analysis and design of rectangular frame, buildings, footings, retaining walls, highway bridges.

**Cl. 435.—Structural Engineering.** 1 hour, and 6 hours laboratory. 3 credits. SAWYER. Prerequisite: Cl. 326.

Recitations, lectures, and drawing-room work in the analysis of stresses due to moving loads, design of mill buildings in wood and steel. Shedd and Vawter, *Theory of Simple Structures;* Shedd, *Design of Structures in Steel.*

**Cl. 436.—Structural Engineering.** 1 hour, and 6 hours laboratory. 3 credits. SAWYER. Prerequisite: Cl. 435.

Recitations, lectures and drawing-room work in the design of foundations, and bridges. Shedd and Vawter, *Theory of Simple Structures;* Shedd, *Design of Structures in Steel.*

**Cl. 437.—Estimating Quantities and Costs.** 2 hours. 2 credits. SAWYER. Prerequisite: Cl. 326.

Estimating material quantities and costs; valuation, cost keeping, time schedules, and progress charts for engineering work. Stubbs, *Estimates and Costs of Construction.*

**Cl. 438.—Statically Indeterminate Structures.** 3 hours. 3 credits. SAWYER. Prerequisite: Cl. 435.

Classical and modern methods of analysis of continuous beams, long span bridges, rectangular frames, space structures.

GRADUATE COURSES

**Cl. 521-522.—Advanced Steel Structures**
**Cl. 523-524.—Advanced Concrete Structures**
**Cl. 527-528.—Advanced Sanitary Engineering**
**Cl. 529. —Advanced Sanitary Engineering Design**
**Cl. 530. —Sanitary Laboratory Methods**
**Cl. 533. —Advanced Hydraulic Engineering**
**Cl. 534. —Hydraulic Measurements**

## DAIRYING

**Dy. 311.—Principles of Dairying.** 2 hours, and 2 hours laboratory. 3 credits. FOUTS.

Composition and properties of milk; sanitary milk production; common methods of analyzing milk; common dairy processes; farm methods of handling milk.

**Dy. 314.—Theory of Dairy Manufacture.** 2 hours, and 2 hours laboratory. 3 credits. FOUTS. Prerequisites: Acy. 203, Dy. 311, C-42. Corequisite: Acy. 204.

Detailed consideration of the composition and properties of milk in relation to specific dairy plant processes.

**Dy. 316.—Condensed Milk and Dry Milk.** Offered only in the first semester. 2 hours, and 2 to 3 hours laboratory. 3 credits. FOUTS. Prerequisites: Acy. 203, Dy. 311.

Principles and operations involved in the manufacture of condensed milk and dry milk.

**Dy. 411.—Dairy Herd Management.** 2 hours. 2 credits. ARNOLD.

Dairy breeds, selection, breeding and raising of dairy cattle.

**Dy. 412.—Milk Production.** 2 hours, and 2 hours laboratory. 3 credits. ARNOLD. Prerequisites: Al. 311, Dy. 311, Dy. 411.

Feeding and management of dairy cattle for milk production.

**Dy. 413.—Market Milk and Milk Plant Products.** 3 hours, and 2 hours laboratory. 4 credits. FOUTS. Prerequisite: Dy. 311.

Sanitary supervision of the milk supply; methods of handling and processing milk and milk plant products in the commercial dairy; technical operation of milk plants.

**Dy. 414.—Manufacture of Butter and Cheese.** 2 hours, and 2 hours laboratory. 3 credits. FOUTS. Prerequisites: Dy. 311, Dy. 314.

Principles and practices of butter and cheese manufacture.

**Dy. 415.—Ice Cream Manufacture.** 2 hours, and 2 hours laboratory. 3 credits. FOUTS. Prerequisites: Dy. 311, Dy. 314.

The ice cream mix; flavoring and freezing ice cream; ice cream plant operation.

**Dy. 416.—Dairy Technology.** 2 hours, and 6 hours laboratory. 5 credits. FOUTS. Prerequisites: Dy. 311, Dy. 314, Bcy. 301, Bcy. 402.

Advanced laboratory methods and their application in chemical and bacteriological control of milk and milk products.

**Dy. 418.—Approved Dairy Practice.** 1 to 3 credits. FOUTS.

Practical experience in approved dairy plants during the summer preceding, or following, the junior year. Satisfactory work and a written report are the basis of credit allowed.

GRADUATE COURSES

**Dy. 520. —Advanced Dairy Technology**
**Dy. 521-522.—Problems in Milk and Milk Products**
**Dy. 523-524.—Problems in Dairy Production**

## ECONOMICS AND BUSINESS ADMINISTRATION

*Courses preceded by Es. are courses in Economics and courses preceded by Bs. are courses in Business Administration.*

*(The following courses are designed for students in the General College. May be taken for credit by Upper Division students.)*

**CEs. 13.—Economic Foundations of Modern Life.** Offered each semester. 5 hours. 5 credits. ELDRIDGE, MCFERRIN, TUTTLE. Prerequisite: Sophomore standing.

Emphasis on the functioning of the economic system. Economic organization and institutions as parts of the economic order in their functional capacities. The understanding of economic principles and processes, especially those relating to value, price, cost, rent, wages, profits, and interest, insofar as such knowledge is necessary in understanding the economic situation of the present day. The evaluation of economic forces and processes in terms of their contribution to social well being. Prerequisite for advanced standing in Economics and Business Administration.

**CBs. 14.—Elementary Accounting.** Offered each semester. 5 hours. 5 credits. FLY, POWERS, and others.

Designed to provide the basic training in business practice and in accounting. A study of business papers and records; recording transactions; preparation of financial statements and reports. Prerequisite for advanced standing in Economics and Business Administration.

**CEs. 15.—Elementary Statistics.** Offered each semester. 3 hours, and 2 hours laboratory. 4 credits. ANDERSON, GERMOND.

The statistical method as a tool for examining and interpreting data; acquaintance with such fundamental techniques as find application in business, economics, biology, agriculture, psychology, sociology, etc.; basic preparation for more extensive work in the field of statistics. Prerequisite for advanced standing in Economics and Business Administration.

*(The following courses are designed for students in the College of Business Administration.)*

**Bs. 311.—Accounting Principles.** Offered each semester. 3 hours. 3 credits. BEIGHTS, COGBURN. Prerequisite: CBs. 14 or its equivalent.

A study of the mechanical and statistical aspects of accounting; books of record; accounts; fiscal period and adjustments; working papers; form and preparation of financial statements; followed by an intensive and critical study of the problems of valuation as they affect the preparation of the balance sheet and income statements.

**Bs. 312.—Accounting Principles.** Offered each semester. 3 hours. 3 credits. BEIGHTS, COGBURN. Prerequisite: Bs. 311.

Consideration is given to the legal aspects of accounting and related problems resulting from the legal organization form used by businesses: liabilities; proprietorship; partnerships; corporations; capital stock; surplus; followed by a study of the financial aspects of accounting as disclosed by an analysis and interpretation of financial statements: financial ratios and standards, their preparation, meaning, and use.

**Bs. 313.—Cost Accounting.** Offered only in the second semester. 3 hours. 3 credits. BEIGHTS. Prerequisite: Bs. 311.

A study of the methods of collection, classification, and interpretation of cost data; special problems, standard costs, cost systems, uses of cost data in business control. Lectures and problems.

**Es. 321.—Financial Organization of Society.** Offered each semester. 3 hours. 3 credits. DOLBEARE, TUTTLE. The first half of the course Es. 321-322. Prerequisite: CEs. 13.

Es. 321-322: An introduction to the field of finance: a study of the institutions providing monetary, banking and other financial services; interrelationships and interdependence of financial institutions; central banking; government control of finance; significance of financial organization to the economic system as a whole.

**Es. 322.—Financial Organization of Society.** Offered each semester. 3 hours. 3 credits. DOLBEARE, TUTTLE. The second half of the course Es. 321-322.

**Es. 327.—Public Finance.** Offered each semester. 3 hours. 3 credits. CAMPBELL. Prerequisite: CEs. 13.

Principles governing expenditures of modern government; sources of revenue; public credit; principles and methods of taxation and of financial administration as revealed in the fiscal systems of leading countries.

**Es. 335.—Economics of Marketing.** Offered each semester. 3 hours. 3 credits. HESKIN. Prerequisite: CEs. 13.

The nature of exchange and the economic principles underlying trade, with particular attention given to interregional trade. The significance of comparative costs, comparative advantages, and comparative disadvantages. The institutions and methods developed by society for carrying on trading operations; retail and wholesale agencies; elements of marketing efficiency; the cost of marketing; price maintenance; unfair competition; the relation of the government to marketing.

**Bs. 338.—Problems in Retail Distribution.** 3 hours. 3 credits. HESKIN.

The fundamental problems involved in retail distribution are analyzed. Particular attention is paid to the scope of the retailing function, to elements of retail costs and profit, types of retail institutions, sales policies, service policies, merchandising, pricing, brand policies, relation with merchandise sources.

**Es. 351.—Transportation Principles.** Offered each semester. 3 hours. 3 credits. BIGHAM, EUTSLER. Prerequisite: CEs. 13.

The economics of transportation, including railroads, inland waterways, highways, airways, and pipe lines, specifically with reference to the development of facilities and service; contribution to social welfare; economic characteristics; regulation; rates and rate-making principles; valuation and fair return; discrimination; service; coördination of transportation services.

**Bs. 361.—Property Insurance.** 3 hours. 3 credits. CHACE.

Fire and Marine insurance.

**Bs. 362.—Property Insurance.** 3 hours. 3 credits. CHACE.

Bond, title, and casualty insurance.

**Es. 372.—Labor Economics.** 3 hours. 3 credits. CHACE. Prerequisite: CEs. 13.

Labor problems: insecurity, wages and income, hours, sub-standard workers, industrial conflict; attempts to solve labor problems by employees; unionism in its structural and functional aspects; attempts to solve labor problems by employers: personnel management, employee representation, employers' associations; attempts to solve labor problems by state: protective labor legislation, laws relating to settlement of industrial disputes.

**Es. 381.—Economic Geography of North America.** 3 hours. 3 credits. DIETTRICH.

A geographical survey of the continent of North America with special reference to the natural conditions of the United States; involving the analysis of the major regions of the United States from the standpoint of their relation to their natural environment.

**Es. 382.—Utilization of Our Resources.** 3 hours. 3 credits. DIETTRICH.

A comprehensive review of the natural and human resources of the United States followed by an intensive study of the wise and wasteful practices of exploitation and utilization of these resources. A study of the human and economic significance of the principles of conservation with special reference to Florida.

**Es. 385.—Economic Geography of South America.** 3 hours. 3 credits. DIETTRICH.

A geographical survey of the continent of South America, organized around the growth of trade, exports and imports, trade by countries, and general business trends; the economic conditions that influence commercial advance or decline; the major geographic regions; their importance in supplying export products and in consuming import commodities.

**Bs. 401.—Business Law.** Offered each semester. 3 hours. 3 credits. HURST. The first half of the course Bs. 401-402.

Bs. 401-402: Contracts and agency; rights and obligations of the agent, principal, and third party; termination of the relationship of agency. Conveyances and mortgages of real property; sales and mortgages of personal property; the law of negotiable instruments; partnership.

**Bs. 402.—Business Law.** Offered each semester. 3 hours. 3 credits. HURST. The second half of the course Bs. 401-402.

**Es. 404.—Government Control of Business.** 3 hours. 3 credits. MCFERRIN. Prerequisite: CEs. 13.

A study of the evolution of economic control; an examination of the effectiveness of *laissez faire* control in the American economy; legality of and chief methods of effectuating governmental control; the development of the relationship between government and non-public utility monopolies; Federal Trade Commission control of competitive practices; a critical appraisal of recent developments in the field of government control.

**Es. 407.—Economic Principles and Problems.** Offered each semester. 3 hours. 3 credits. ELDRIDGE, BIGHAM, HESKIN. The first half of the course Es. 407-408. Prerequisite: CEs. 13.

Es. 407-408: An advanced course in economic theory with special emphasis on the causes of economic maladjustments arising from the operation of economic forces.

**Es. 408.—Economic Principles and Problems.** Offered each semester. 3 hours. 3 credits. ELDRIDGE, BIGHAM, HESKIN. The second half of the course Es. 407-408.

**Bs. 411.—Advanced Accounting.** Problems. 3 hours. 3 credits. BEIGHTS. Prerequisite: Bs. 312.

A study of specialized accounting problems; mathematics of accounting; statement of affairs; consignments; installments; ventures; insurance; and other related subjects.

**Bs. 412.—Auditing.** 3 hours. 3 credits. BEIGHTS. Prerequisite: Bs. 312.

A study of auditing theory and current auditing practice; principal kinds of audits and services of the public accountant; professional and ethical aspects of auditing. Lectures, discussions, and problems.

**Bs. 413.—Advanced Accounting.** Systems. 3 hours. 3 credits. BEIGHTS. Prerequisite: Bs. 312.

Consideration is given to the principles underlying the structure of accounting systems. A detailed analytical study of six or more systems is made. Reports on systems in operation for various industries are made.

**Bs. 414.—Income Tax Procedure.** 3 hours. 3 credits. COGBURN. Prerequisite: Bs. 311.

A study of the Federal Income Tax Law and Regulations, and related accounting problems; preparation of tax returns for individuals, corporations and fiduciaries.

**Bs. 417.—Governmental Accounting.** 3 hours. 3 credits. COGBURN. Prerequisite: Bs. 312.

A study of the basic principles underlying fund accounting. Detailed consideration is given to the preparation and use of the budget, system of accounts, special vouchers, records, statements.

**Bs. 418.—Advanced Accounting.** C.P.A. Problems. 3 hours. 3 credits. BEIGHTS. Prerequisite: Bs. 312.

A continuation of the study of specialized accounting problems; receiverships; foreign exchange; stock brokerage; estates and trusts; budgets; business taxes; consolidations and mergers; and other problems usually covered in C.P.A. examinations.

**Bs. 422.—Investments.** Offered each semester. 3 hours. 3 credits. DOLBEARE. Prerequisite: Es. 321-322.

The nature of investments; investment policies and types of securities; analysis of securities; the mechanics and mathematics of security purchases; factors influencing general movements of security prices.

**Bs. 423.—Commercial Banking.** 3 hours. 3 credits. DOLBEARE. Prerequisite: Es. 321-322.

Banking policies, practices, and problems; the relations of the individual bank with other banks, the money market, and other classes of financial institutions.

**Bs. 426.—Banking Systems.** 3 hours. 3 credits. TUTTLE. Prerequisite: Es. 321-322.

A study of the development of central banking and its functions; the relationships existing between central banks and (1) the government, (2) other banks; and an analysis of the banking systems of the United States, England, France, Germany, and Canada in the light of central banking functions.

**Bs. 427.—Principles and Problems of Corporation Finance.** 3 hours. 3 credits. MCFERRIN.

Lectures, discussions, and problems. A study of the economic and legal forms of business enterprise; the instruments of business finance; financial problems as they relate to the ordinary operations of the business involving working capital, income, dividend policy, current borrowing, credit extension, and the business cycle.

**Bs. 428.—Principles and Problems of Corporation Finance.** 3 hours. 3 credits. McFERRIN. Prerequisite: Bs. 427. A continuation of Bs. 427.

The sale of corporation securities; problems incident to growth and expansion; business failures and financial reconstruction; social aspects of corporate financial policy, regulation and control of corporate fiscal policy and taxation of corporations.

**Es. 430.—Problems in Taxation.** Offered each semester. 3 hours. 3 credits. BIGHAM. Prerequisite: Es. 327.

An intensive study of the problems of taxation primarily related to the following taxes: general, property, income, business, inheritance, and commodity.

**Bs. 432.—Market Management.** 3 hours. 3 credits. HESKIN. Prerequisite: Es. 335.

Marketing problems from the viewpoint of an administrative head of a business unit; sales administration; purchasing administration; credit administration. Topics covered include product analysis, sales planning, selection of channels of distribution, pricing policy, sales programs, sales organization, supervision of sales force, purchasing procedure, sources of supply, the place of price in the purchasing function, speculative purchasing, purchasing efficiency, credit management, delivery problems.

**Bs. 433.—Advertising.** 3 hours. 3 credits. HESKIN.

The relation of the principles of advertising to economic theory; psychology of advertising; a study of agencies, media and methods.

**Bs. 438.—Problems in Sales and Market Analysis.** 3 hours. 3 credits. HESKIN. Prerequisite: Es. 335.

Methods used in analyzing the selling, advertising, and merchandising problems of manufacturers, wholesalers, and retailers; the use of market research; the objective of market investigations; planning market investigations; sales survey methods; preparation of reports; quantitative analysis; measurement of market conditions and their effects on sales; market trends.

**Bs. 440.—Trade Horizons in Caribbean America.** 3 hours. 3 credits. DIETTRICH.

A regional trade course covering the West Indies, Mexico, Central America, Colombia, and Venezuela. The commercial importance of each republic and island as a market for American goods and as a source of raw materials and foodstuffs; Florida's commercial position in such trade as a result of its geographical proximity to this area.

**Bs. 442.—Trade Horizons in the Far East.** 3 hours. 3 credits. DIETTRICH.

A study of human relationships to natural environment as presented in the economic adjustments in the Far East and in its commercial connections with the Western World; the major geographic regions in the area, their economic significance in production of various raw materials, foodstuffs, and manufactured goods; and the market for western products furnished by this region.

**Bs. 443.—Foreign Trade.** 3 hours. 3 credits. CAMPBELL.

Problems in foreign trade: promotion of overseas trade; foreign trade surveys; products of international commerce; trade barriers, tariffs, customs; foreign commercial policies; exporting systems and methods; financing of foreign trade; problems of shipment; legal aspects of foreign trade; importing problems; foreign trade of Florida.

**Bs. 444.—Ocean Transportation.** 3 hours. 3 credits. CAMPBELL.

Problems in ocean transportation: types of ocean carriers; ocean routes; ocean ports; services of ocean freight carriers; ship brokerage and freight brokerage; passenger carriers; steamship combinations and conferences; ocean freight rate-making; vessel and cargo documents; regulation of shipping; government aid to ship-building and operation; shipping of Florida ports.

**Es. 446.—The Consumption of Wealth.** Offered each semester. 3 hours. 3 credits. MATHERLY.

An economic analysis of the problems involved in determining the extent and trends of consumer demand and in the adjustments of productive processes to that demand.

**Es. 454.—Principles of Public Utility Economics.** Offered each semester. 3 hours. 3 credits. BIGHAM. Prerequisite: CEs. 13.

The nature, place and development of public service corporations; types of public control, valuation and rate making; regulation of service, accounts, reports, and securities; combinations; public relations; public ownership.

**Es. 456.—Problems in Public Service Industries.** 3 hours. 3 credits. BIGHAM.
An intensive study of the more important problems raised in the introductory courses in transportation and public utilities.

**Bs. 461.—Life Insurance.** 3 hours. 3 credits. EUTSLER.
The functions and nature of life insurance; the economic characteristics of life insurance; the fundamentals of the science of life insurance; practices and policies of insurance companies; types of insurance companies.

**Es. 463.—Problems in Social Security.** 3 hours. 3 credits. EUTSLER.
An analysis of the meaning and nature of social security, especially as related to economic security; the distinctions between social and private insurance; the hazards of low income groups; an evaluation of projects and methods for eliminating, reducing, or indemnifying these hazards; the problems of social security in the United States, especially concerning experiences with relief measures, the development of legislation, the problems of financing and administering security programs, and the relationship between economic planning and security.

**Bs. 465.—Realty Principles.** 3 hours. 3 credits. CHACE.
Fundamentals of realty economics.

**Bs. 466.—Realty Management.** 3 hours. 3 credits. CHACE.
The organization of realty enterprises; management of real property; handling of rentals; administration of real estate development.

**Es. 467.—Economic History.** 3 hours. 3 credits. DIETTRICH.
A study of the development of the present economic order and its institutions. Variant forms of economic life are surveyed with emphasis placed on capitalism and its culture. Some of the problems that have arisen as a result of capitalistic economy are analyzed.

**Es. 468.—Economic History in the Making.** 3 hours. 3 credits. DIETTRICH.
The era of industrialism; contemporary economic organization; types of economic reform; special consideration of current social and economic problems in England, France, Germany, Soviet Russia, and the United States.

**Es. 469.—Business Forecasting.** 3 hours. 3 credits. ANDERSON. Prerequisite: CEs. 15.
A survey of the problem of the reduction of business risk by forecasting general business conditions; statistical methods used by leading commercial agencies in forecasting.

**Es. 470.—Business Forecasting.** 3 hours. 3 credits. ANDERSON. Prerequisite: CEs. 15.
The application of statistical technique and economic principles to specific problems of business forecasting. Seasonal variation, trend lines, and multiple correlation analysis. Methods of forecasting the stock market and the price of important commodities.

**Es. 485.—International Economic Relations.** 3 hours. 3 credits. ATWOOD.
A study of the development of international economic policies; geographic, economic, social, and political factors underlying contemporary international problems; economic and political methods employed by the leading commercial nations to expand their economic interests.

**Es. 487.—Economic Geography of Europe.** 3 hours. 3 credits. DIETTRICH.
A study of human relationships to natural environment as presented in the economic adjustments in Europe and in its commercial connections with the other continents, especially with North America.

**Es. 491.—Geographic Foundations of the British Empire.** 3 hours. 3 credits. DIETTRICH.
An analytical study of the economic and commercial problems of the world's largest empire; a study of the basic factors which affected the establishment of the empire; and the geographic and economic interrelationships influencing its present position in world economy.

GRADUATE COURSES

**Es. 501-502.—Seminar in Economic Principles and Problems**
**Es. 505-506.—The Development of Economic Thought**
**Es. 509. —The Development of Economic Institutions**
**Bs. 511-512.—Accounting Theory**

**Bs. 513-514.—Seminar in Accounting Principles and Problems**
**Es. 524. —Corporation Finance and Investments**
**Es. 528. —Problems in Money and Banking**
**Es. 530. —Problems in Taxation**
**Es. 531. —Economic Functions of Middlemen**
**Es. 556. —Problems in Public Service Industries**
**Es. 565. —Problems in Social Security**
**Es. 569-570.—Problems in Statistics and Business Forecasting**
**Es. 572. —Problems in Labor Relations**
**Es. 585. —International Economic Relations**
**Es. 589. —Problems in Economic Geography**

## EDUCATION

**CEn. 13.—Introduction to Education.** Offered each semester. 3 hours. 3 credits. NORMAN.

An attempt is made to foreshadow the field of Education so that the student may see the whole field before he studies its detailed and technical parts. Butterwick and Seegers, *An Orientation Course in Education.*

**En. 303.—Methods in Vocational Agriculture.** Offered only in the second semester. 3 credits. GARRIS.

General methods of teaching high school subjects applied to vocational agriculture. Garris, *Special Methods in Teaching Vocational Agriculture.*

**En. 305.—Development and Organization of Education.** 3 hours. 3 credits. HAYGOOD.

An attempt to interpret and evaluate present-day education, and to point out possible developments. Agenda Committee, *Citizens' Conference on the Crisis in Education.*

**En. 306.—Vocational Education.** Offered only in the first semester. 3 hours. 3 credits. GARRIS.

Development, function, and scope of vocational, agricultural, home economics, trade and industrial, and commercial education as provided for by the National Vocational Education Act of Congress.

**En. 329.—Personality Adjustment.** 3 hours. 3 credits. CRAGO.

Problems of adjustment of children and adolescents. A study of methods of properly conditioning children, of the development of wholesome attitudes and normal behavior. Sherman, *Mental Hygiene.*

**En. 371.—Observation and Student Teaching.** 3 hours. 3 credits. STAFF. The first half of the course En. 371-372. Prerequisite: Permission of the staff committee.

En. 371-372: A critical survey of the materials and methods used in each of the various fields of secondary education, examined in relation to the most valid aims, values, principles and practices. The major problems involved in teaching in each field will be intensively studied in the light of recent experimentation. After a period of observation in the student's chosen field he will participate in actual classroom teaching.

**En. 372.—Observation and Student Teaching.** 3 hours. 3 credits. STAFF. The second half of the course En. 371-372. Prerequisite: En. 371.

**En. 385.—The Pre-Adolescent Child.** 3 hours. 3 credits. CRAGO. The first half of the course En. 385-386.

En. 385-386: Designed to acquaint the student with the growth and development of children into mature personalities. The findings of recent research will be studied through outside reading, class discussion and observation. Methods of evaluation of child growth will be included.

**En. 386.—The Adolescent Child.** 3 hours. 3 credits. CRAGO. The second half of the course En. 385-386.

**En. 387.—Health Education.** Offered only in the second semester. 3 hours. 3 credits. SALT.

A consideration of the principles underlying health education, together with the organization and administration of such a program; the role of the teacher in health instruction, who shall teach health, the organization of materials for instructional purposes, criteria for the evaluation of health materials and methods, the role of local, state and national non-official organizations in health teaching programs.

**En. 393.—Teaching of Health and Physical Education.** 6 or more hours of observation, participation, and discussion. 3 credits. SALT. The first half of the course En. 393-394.

En. 393-394: Directed observation, participation, and teaching in the health and physical education program of the Yonge Laboratory School. (Note: Must be taken concurrently with HPl. 361-362 and HPl. 363-364.)

**En. 394.—Teaching of Health and Physical Education.** 6 or more hours of observation, participation, and discussion. 3 credits. SALT. The second half of the course En. 393-394.

**En. 401.—School Administration.** 3 hours. 3 credits. SIMMONS.

Problems peculiar to schools in Florida; the supervising principal, qualifications, relation to superintendent, boards, teachers, pupils, patrons, and community; adapting the school to the child's needs; business practices.

**En. 402.—Administration Practice.** 3 hours. 3 credits. SIMMONS. Prerequisite: En. 401.

The supervision of instruction; visits to schools for the study of administrative and supervising practice; a survey of one school system.

**En. 406.—Elementary School Administration.** 3 hours. 3 credits. SIMMONS. Prerequisites: En. 305 and the required junior courses.

The problems that usually confront the elementary school principal will be stressed in this course. Reavis, Pierce and Stulken, *The Elementary School.*

**En. 408.—High School Administration.** 3 hours. 3 credits. LITTLE.

Practical management and administration of the modern high school.

**En. 409.—Supervised Teaching in Vocational Agriculture.** Offered each semester. 9 hours laboratory. 3 credits. TENNEY.

For part-time and evening classes in vocational agriculture. Under supervision, students will assist in organizing and teaching part-time and evening students in the Gainesville area.

**En. 410.—Supervised Teaching in Vocational Agriculture.** Offered each semester. 9 hours laboratory. 3 credits. TENNEY.

For all-day classes in vocational agriculture. Under supervision, students will observe and teach all-day classes in vocational agriculture in the P. K. Yonge Laboratory School or in other schools located in the Gainesville area.

**En. 411.—Special Methods in Vocational Agriculture.** Offered each semester. 2 hours. 2 credits. GARRIS.

Teaching part-time and evening classes in vocational agriculture. Organization, course content, and methods of teaching applied to adult classes for vocational agriculture. Garris, *Special Methods in Teaching Vocational Agriculture.*

**En. 412.—Special Methods in Vocational Agriculture.** Offered each semester. 2 hours. 2 credits. TENNEY.

Teaching all-day classes in vocational agriculture. Organization of a long-time teaching program, methods in Future Farmer work, and class management for high school classes in vocational agriculture. Garris, *Special Methods in Teaching Vocational Agriculture.*

**En. 421.—Advanced Directed Teaching.** 6 or more hours of teaching. 2 credits. MEAD and STAFF. The first half of the course En. 421-422. Prerequisite: En. 371-372.

En. 421-422: The student is given practice in the art of teaching by actually taking over responsibility for the teaching-learning situation and putting into operation under direction and supervision the theories, methods, materials, and teaching techniques acquired during his junior year through observation and participation.

**En. 422.—Advanced Directed Teaching.** 6 or more hours of teaching. 2 credits. MEAD and STAFF. The second half of the course En. 421-422.

GRADUATE COURSES

**En. 501. —Public School Curriculum**
**En. 503. —Educational Measurements**
**En. 504. —School Survey**
**En. 506. —Teaching Farm-Shop Work**
**En. 507. —Educational Psychology**
**En. 508. —Democracy and Education**
**En. 509. —School Administration**
**En. 510. —Foundations of Modern Education**
**En. 511-512.—Teaching Vocational Agriculture**
**En. 516. —Character and Personality Development**
**En. 517. —Educational Statistics**
**En. 518. —High School Administration**
**En. 521. —Business Administration of a School System**
**En. 523. —Introduction to Graduate Study of Education**
**En. 524. —Major Sequence in Secondary Education**
**En. 525. —Major Sequence in Childhood Education**
**En. 528. —Supervision of Instruction**
**En. 529. —Florida Workshop. Cooperating Schools Division**
**En. 530. —Florida Workshop. Cooperating Schools Division**
**En. 536. —Elementary Supervision**
**En. 539. —Exceptional Children**
**En. 541. —Control and Support of Public Education**
**En. 542. —The Curriculum and the Educational Plant**
**En. 544. —School Legislation**
**En. 551. —Florida Workshop. Principals Division**
**En. 553. —Florida Workshop. Agricultural Education Division**
**En. 555-556.—Florida Workshop. Bulletin Series Division**
**En. 557. —Work-Conference on School Administrative Problems**
**En. 562. —Guidance and Counseling**
**En. 565-566.—Problems in Agricultural Education**
**En. 567-568.—Problems in Agricultural Education**
**En. 569. —Problems in Part Time and Evening Classes**
**En. 581. —Reorganization of Secondary School English**
**En. 597. —Elementary School Administration**
**En. 603. —Foundations of Method**
**En. 605-606.—Public School Administration**
**En. 619. —Child Growth and Development**

## ELECTRICAL ENGINEERING

Radio courses in the Department of Electrical Engineering are given in cooperation with Radio Station WRUF. Qualified students can secure practical experience in station operation.

**El. 341.—Elements of Electrical Engineering.** Offered each semester. 3 hours. 3 credits. SMITH. The first half of course El. 341-342. Prerequisite: One year of college physics, including electricity and magnetism; differential and integral calculus.

El. 341-342: Electric and magnetic circuits; electrostatics; electro-magnetics; representation of alternating currents by vectors and complex quantities; measurement of power in single phase and polyphase circuits; generation, transmission, and utilization of electrical energy; characteristics of apparatus; selection, testing, and installation of electrical equipment.

**El. 342.—Elements of Electrical Engineering.** Offered each semester. 3 hours. 3 credits. SMITH. The second half of the course El. 341-342.

**El. 344.—Problems in Direct and Alternating Currents.** Offered each semester. 3 hours. 3 credits. WILSON. Corequisite: El. 342.

Problems on Kirchoff's *Laws for Electric and Magnetic Circuits;* electrostatics; energy and power; wave form; power in single and polyphase circuit; transients; unbalanced circuits; harmonics.

**El. 345.—Electrical Illumination.** 2 hours, and 5 hours laboratory. 4 credits. WILSON. Corequisite: El. 341.

Illumination; modern light sources; reflection, transmission, and absorption; diffusion; refraction; glare; color; application of lighting units to various types of buildings; circuits for lighting; control equipment for lighting; wiring methods; flood-lighting.

**El. 346.—Electrical Communications.** 3 hours, and 3 hours laboratory. 4 credits. WILSON. Corequisite: El. 342.

Speech and hearing; receivers and loud speakers; principles of various systems of wire and radio telegraphy and telephony; elementary tube theory; amplifiers, radio receivers, and transmitters.

**El. 349.—Dynamo Laboratory.** Offered each semester. 3 hours laboratory. 1 credit. SMITH. The first half of the course El. 349-350. Corequisite: El. 341.

El. 349-350: Experimental studies and tests on direct current and alternating current apparatus.

**El. 350.—Dynamo Laboratory.** Offered each semester. 3 hours laboratory. 1 credit. SMITH. The second half of the course El. 349-350. Corequisite: El. 342.

**El. 440.—Industrial Applications of Electrical Equipment.** 3 hours. 3 credits. WILSON. Corequisite: El. 447-448.

Application of motors to industry and transportation; electric heating; electric welding; starting and speed control; protective equipment signal systems; wiring design for light and power.

**El. 441.—Electrical Engineering Seminar.** 1 hour. 1 credit. SASHOFF. The first half of the course El. 441-442. Prerequisites: Not less than 14 credits in courses in Electrical Engineering.

El. 441-442: Discussions on topics from current engineering periodicals, on research projects in progress in the laboratories, and on new developments in industry.

**El. 442.—Electrical Engineering Seminar.** 1 hour. 1 credit. SASHOFF. The second half of the course El. 441-442.

**El. 443.—Industrial Electronics.** 3 hours. 3 credits. SASHOFF. The first half of the course El. 443-444. Prerequisites: El. 341-342, El. 344.

El. 443-444: Electron tubes and their application to radio, television, and industry.

**El. 444.—Industrial Electronics.** 3 hours. 3 credits. SASHOFF. The second half of the course El. 443-444.

**El. 445.—Electrical Instruments, Meters, and Relays.** 3 hours. 3 credits. WILSON. Prerequisites: El. 341-342, El. 344.

Design, construction, testing, and application of electrical instruments, meters, and relays. Knowlton, *Eleetric Power Metering.*

**El. 446.—Electric Power Transmission.** 3 hours. 3 credits. SASHOFF. Prerequisites: El. 341-342, El. 344.

Electric and magnetic field distribution; inductive interference; corona; calculation; performance, electrical and mechanical design of short and long lines.

**El. 447.—Alternating Current Apparatus.** 3 hours. 3 credits. WILSON. The first half of the course El. 447-448. Prerequisites: El. 341-342, El. 344.

El. 447-448: Design, characteristics, and operation of alternating current apparatus particularly transformers, generators, motors, and rotary converters.

**El. 448.—Alternating Current Apparatus.** 3 hours. 3 credits. WILSON. The second half of the course El. 447-448.

**El. 449.—Theory of Electric Circuits.** 3 hours. 3 credits. SASHOFF. Prerequisites: El. 341-342, El. 344.

Networks; resonance phenomena; the infinite line; reflection; filters; inductive interference, coupled circuits; impedance matching.

**El. 450.—Theory of High Frequency Circuits.** 3 hours. 3 credits. SASHOFF. Prerequisite: El. 449.

Radio frequency amplifiers; modulators and detectors; oscillators; radiation phenomena.

**El. 451.—Advanced Dynamo Laboratory.** 5 hours laboratory. 2 credits. SMITH. The first half of the course El. 451-452. Prerequisite: El. 349-350.

El. 451-452: Experimental tests on alternating current apparatus, particularly transformers, synchronous machinery, and induction motors.

**El. 452.—Advanced Dynamo Laboratory.** 5 hours laboratory. 2 credits. SMITH. The second half of the course El. 451-452.

**El. 453.—Radio Station Operation.** 3 hours laboratory. 1 credit. SASHOFF, DUNCAN. The first half of the course El. 453-454. Prerequisite: El. 346.

El. 453-454: Operation, maintenance, and testing of a broadcasting station, under actual operating conditions and under the direction of licensed operators.

**El. 454.—Radio Station Operation.** 3 hours laboratory. 1 credit. SASHOFF, DUNCAN. The second half of the course El. 453-454.

**El. 457.—Electronics Laboratory.** 5 hours. 2 credits. SASHOFF. The first half of the course El. 457-458. Prerequisites: El. 341-342, El. 344.

**El. 458.—Electronics Laboratory.** 5 hours. 2 credits. SASHOFF. The second half of the course El. 457-458.

GRADUATE COURSES

**El. 541-542.—Advanced Experimental Electrical Engineering**

**El. 543. —Advanced Electrical Circuit Theory**

**El. 545-546.—Advanced Course in Communication Engineering**

**El. 547-548.—Advanced Communications Laboratory**

**El. 549-550.—Electrical Engineering Research**

**El. 551. —Symmetrical Components**

**El. 552. —Theory of Vacuum Tubes**

## ENGLISH

The courses in English, advanced as well as introductory, have one common purpose: to enrich the student's experience by intimate association with those writings in our language, past and present, which contribute most to meaningful living. The central aim is to help men of all vocations acquire some appreciation of our literary heritage, essential to a cultivated outlook on life, and to help men of all vocations acquire greater facility in the knowledge and use of our language. The aim is thus twofold: education for enlightened leisure and for enlightened labor. Bacon's words are pertinent: "Studies serve for delight, for ornament, and for ability. . . . Some books are to be tasted, others to be swallowed, and some few to be chewed and digested."

*Majors.*—The following courses are required for English majors: CEh. 37-38, Eh. 301-302, Eh. 305, Eh. 399. CEh. 37-38 should, if possible, be elected in the sophomore year. English majors should elect a foreign language in the sophomore year.

*Prerequisites.*—There are no rigid prerequisites for non-majors.

*Important.*—All of the courses in English are so organized that they may be taken for credit either semester.

**C-3 (31-32).—Reading, Speaking, and Writing.**

(See *Bulletin of Information for the General College.*)

**CEh. 33.—Effective Writing.** Offered only in the second semester. 4 hours. 4 credits. CLARK. Prerequisite: C-3, or permission of C-3 Course Chairman.

Designed to aid the student to present his ideas in writing which is not only accurate and clear but pleasing and attractive to the reader. Students are encouraged to do creative work.

**CEh. 34.—Reading for Leisure.** Offered each semester. 4 hours. 4 credits. SKAGGS. Prerequisite: C-3, or permission of C-3 Course Chairman.

Designed to aid the student in planning for himself a well-rounded, leisure-reading program, which will serve to keep him abreast of the best in contemporary thought and literature.

**CEh. 35.—Literary Masters of America.** 3 hours. 3 credits. CONNER. The first half of the course CEh. 35-36. May be taken for credit without CEh. 36.

CEh. 35-36: The writers emphasized are selected from the most eminent American authors between Irving and Frost, such writers as everyone should or would like to know, regardless of his intended vocation.

**CEh. 36.—Literary Masters of America.** 3 hours. 3 credits. CONNER. The second half of the course CEh. 35-36. May be taken for credit without CEh. 35.

**CEh. 37.—Literary Masters of England.** 3 hours. 3 credits. LYONS. The first half of the course CEh. 37-38. May be taken for credit without CEh. 38.

CEh. 37-38: The most interesting and significant English writers are read and discussed, primarily for an appreciation of their art and outlook on life.

**CEh. 38.—Literary Masters of England.** 3 hours. 3 credits. LYONS. The second half of the course CEh. 37-38. May be taken for credit without CEh. 37.

**CEh. 313.—Masterpieces of World Literature.** 3 hours. 3 credits. STROUP, MOUNTS (ATKIN, HAUPTMANN, BRUNET assisting). The first half of the course CEh. 313-314. May be taken for credit without CEh. 314.

CEh. 313-314: A lecture and reading course designed to acquaint the student with some of the greatest books in the world, books which every educated man should know.

**CEh. 314.—Masterpieces of World Literature.** 3 hours. 3 credits. STROUP, MOUNTS (ATKIN, HAUPTMANN, BRUNET assisting). The second half of the course CEh. 313-314. May be taken for credit without CEh. 313.

**Eh. 221.—Types of Humorous Literature.** 3 hours. 3 credits. MOORE.

An approach to the masterpieces of humorous literature, with some attention to the nature and function of humor and to its various types.

**Eh. 301.—Shakespeare.** 3 hours. 3 credits. ROBERTSON.

The primary design is to increase the student's enjoyment and appreciation of the plays. Devoted chiefly to the romantic comedies and the history plays, including *A Midsummer Night's Dream, The Merchant of Venice, Much Ado, As You Like It, Twelfth Night, Richard the Third,* and *Henry the Fourth.* As an aid to the reading of Shakespeare, some of the most interesting features of the Elizabethan stage and drama are treated briefly.

**Eh. 302.—Shakespeare.** 3 hours. 3 credits. ROBERTSON.

The great tragedies will be studied, notably *Hamlet, Othello, King Lear, Macbeth,* and *Antony and Cleopatra.* Required of majors.

**Eh. 303.—Major Poets of the Victorian Period.** 3 hours. 3 credits. FARRIS.

Reading and discussion of such major writers as Browning, Tennyson, Arnold, the Rossettis, Morris, Swinburne, and Kipling.

**Eh. 304.—Major Prose Writers of the Victorian Period.** 3 hours. 3 credits. FARRIS.

Reading and discussion of such eminent Victorians as Carlyle, Dickens, Macaulay, Arnold, Ruskin, Thackeray, Huxley, and Hardy.

**Eh. 305.—Introduction to the Study of the English Language.** (Offered each semester.) 3 hours. 3 credits. ELIASON.

Designed to meet the needs of three types of students: (a) For the general student it offers a means of improving his written and spoken English by showing him what "good English" is. (b) For the English teacher in the secondary school it provides an adequate minimum knowledge of the English Language. (c) For the English Major and beginning graduate student it serves as an introduction to further linguistic study. Primary emphasis is placed, not upon grammatical rules, but rather upon the most interesting features of our language as written and spoken.

**Eh. 309.—Short Story.** 2 hours. 2 credits. FARRIS.

Studies in the history, criticism, and appreciation of the short story as a literary type. Lectures, extensive readings.

**Eh. 312.—Exposition.** 2 hours. 2 credits. FARRIS.

Advanced studies in composition especially designed to meet the needs of those intending to pursue graduate study, those preparing to enter the professions, engage in research, etc.

**Eh. 354.—Browning.** 3 hours. 3 credits. FARRIS.

Wide reading and discussion of the writings of Browning and a few of his immediate contemporaries.

**Eh. 355.—Business Writing.** 3 hours. 3 credits. CLARK.

A general course in business letter and report writing. The more common types of business letters are written, such as letters of application, letters of credit, and sales letters. Reports are written upon projects of the students' special interest.

This course is especially designed to meet the needs of students in Business Administration and allied fields. Prerequisite: C-3.

**Eh. 399.—Introduction to the Study of Literature.** 3 hours. 3 credits. LYONS.

A consideration of the nature of literature, its types, forms, content, and values. Designed to provide the student with a better critical understanding of literary art. Lectures, wide reading, and discussion.

**Eh. 401.—American Literature.** 3 hours. 3 credits. SPIVEY.

A study of American literature from the beginnings to 1850.

**Eh. 402.—American Literature.** 3 hours. 3 credits. SPIVEY.

A general survey of American literature (all types and all regions) from Whitman to the present, with the major emphasis upon such writers as Whitman, Howells, James, Twain, Lanier, the local colorists, Wharton, Cather, Glasgow, Lewis, Robinson, Frost and O'Neill.

**Eh. 403.—The Novel.** 3 hours. 3 credits. FARRIS. The first half of the course Eh. 403-404. May be taken for credit without Eh. 404.

Eh. 403-404: The development of the novel from earlier fiction; the great novels of the eighteenth, nineteenth and twentieth centuries. Major emphasis upon the modern novel.

**Eh. 404.—The Novel.** 3 hours. 3 credits. FARRIS. The second half of the course Eh. 403-404. May be taken for credit without Eh. 403.

**Eh. 405.—Drama of the Restoration and Eighteenth Century.** 3 hours. 3 credits. ROBERTSON.

A survey of the English stage from Dryden to Sheridan, with emphasis upon principal plays, playwrights, and dramatic tendencies.

**Eh. 406.—Modern Drama.** 3 hours. 3 credits. ROBERTSON.

A study of recent and contemporary drama, with emphasis upon such major English and American playwrights as Shaw and Eugene O'Neill. The work of Ibsen and other Continental writers will be treated briefly.

**Eh. 407.—Contemporary Literature: Fiction.** 3 hours. 3 credits. MOUNTS.

A consideration of the most important English and American writers of prose fiction from Thomas Hardy to the present, with major emphasis upon recent novelists.

**Eh. 408.—Contemporary Literature: Poetry.** 3 hours. 3 credits. LYONS.

Reading, critical interpretation, and discussion of modern British and American poetry, with chief emphasis upon recent poetry.

**Eh. 409.—Chaucer.** Offered only in the second semester. 3 hours. 3 credits. ELIASON.

Designed to help the student appreciate Chaucer as a story teller, as a wise, humorous, and penetrating observer of human life, and as a great poet.

**Eh. 413.—The Renaissance in England.** 3 hours. 3 credits. STROUP.

The origin of the movement in Italy and its spread in England; special emphasis on the development of English drama. The work of the Renaissance humanists, such as Colet, Erasmus, and More and the work of the Elizabethan and Jacobean dramatists, such as Marlowe, Kyd, Greene, Jonson, Beaumont and Fletcher will be studied.

**Eh. 414.—The Renaissance in England.** 3 hours. 3 credits. STROUP.

The lyric and epic poetry of the period and with the various prose works to 1660. Selections from such poets as Spenser, Drayton, Donne, Milton and from such prose masters as Ascham, Sidney, Lily, Bacon, and Fuller will be studied.

**Eh. 415.—Milton.** 3 hours. 3 credits. STROUP.

Though the emphasis will fall upon *Paradise Lost*, all of Milton's poetry will be read and much of his prose. Attention will be given to Milton's social, religious, educational, and philosophical views, and his work will be related to his age. Wide reading in the literature of the period will be expected.

**Eh. 417.—Spenser.** 3 hours. 3 credits. MOUNTS.

The purpose is to lead the student to a large familiarity with the text of Spenser to deal with some of the problems of allusion, structure and style, and to suggest the poet's relationship to his predecessors and contemporaries.

**Eh. 418.—The Literature of the South.** Offered only in the first semester. 3 hours. 3 credits. SPIVEY.

A study of the poetry and prose written by Southerners or reflecting the life in the region, and a consideration of various literary centers and local color movements. Chief emphasis on 19th and 20th century literary productions.

**Eh. 419.—Elizabethan Drama.** 3 hours. 3 credits. ROBERTSON.

A course in the origins and development of the Elizabethan drama, exclusive of Shakespeare, with emphasis upon such major writers as Marlowe, Kyd, Chapman, Marston, Webster, and Jonson.

**Eh. 427.—Imaginative Writing.** 2 hours. 2 credits. FARRIS. The first half of the course Eh. 427-428. May be taken for credit without Eh. 428.

Eh. 427-428: Designed to help the student who desires guidance in developing his capacity for original work. Group discussion, individual conferences, many papers.

**Eh. 428.—Imaginative Writing.** 2 hours. 2 credits. FARRIS. The second half of the course Eh. 427-428. May be taken for credit without Eh. 427.

**Eh. 433.—English Literature of the Late 17th and Early 18th Centuries.** 3 hours. 3 credits. CONGLETON.

A study of English prose and poetry from Dryden through Pope, with chief emphasis upon Dryden, Defoe, Addison and Steele, Pope and Swift.

**Eh. 434.—English Literature of the Eighteenth Century, 1744-1800.** 3 hours. 3 credits. SPIVEY.

All the works of Johnson, the best of Boswell, and the most interesting of Goldsmith, Garrick, Reynolds, Burke, and other members of the famous Literary Club will be studied.

**Eh. 443.—The English Romantic Period.** 3 hours. 3 credits. FOX.

Reading and discussion. Chief emphasis on the work of Burns, Blake, Coleridge and Wordsworth.

**Eh. 444.—The English Romantic Period.** 3 hours. 3 credits. FOX.

Reading and discussion. Chief emphasis on the work of Byron, Keats, and Shelley.

GRADUATE COURSES

**Eh. 501-502.—American Literature**

**Eh. 505. —Drama of the Restoration and 18th Century**

**Eh. 509-510.—Chaucer**

**Eh. 511-512.—Old and Middle English**

**Eh. 513-514.—The Renaissance in England**

**Eh. 515. —Milton**

**Eh. 517. —Spenser**

**Eh. 518. —Studies in American Literature**

**Eh. 519. —Elizabethan Drama**

**Eh. 530. —Individual Work**

**Eh. 533-534.—English Classicism**

**Eh. 541. —Beowulf**

**Eh. 543-544.—The English Romantic Movement**

## ENTOMOLOGY

**Ey. 201.—Man and Insects.** 3 hours. 3 credits. CREIGHTON and HIXSON. This course or Ey. 301 are prerequisites or corequisites of all courses in Entomology except Ey. 314. Only students in freshmen and sophomore classes permitted to register for this course.

The influence of insects upon man's agricultural and social world. The course treats of the contrast between the history of man and insects; the influence of insects upon domestic life, agriculture, commerce, industry, wars, human diseases, and medical practices, machine development, engineering, legal practices, scientific investigations, and upon other insects. It is designed to broaden the knowledge of all students concerning the influence of man's greatest limiting factor in the continuance of the human race.

**Ey. 301.—Introduction to Entomology.** 2 hours, and 4 hours laboratory. 4 credits. CREIGHTON and HIXSON. This course or Ey. 201 are prerequisites or corequisites for all other courses in Entomology except Ey. 314.

An introduction to entomology which is based upon a study of the structure, classification, life histories, and control of major insect enemies of American agricultural crops. Particular stress is placed upon Southern and Florida economic insects. This course is designed for all students in the College of Agriculture either as a pre or corequisite for other entomology courses.

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*Not offered in 1940-41.

*Ey. 304.—**Advanced Entomology.** 2 hours, and 6 hours laboratory. 5 credits. CREIGHTON.

A survey of the major phases of entomology including biological and natural control, insect histology, insect taxonomy, insect ecology, economic entomology, insect behavior, and the experimental method. This course is designed primarily for students majoring in the field of entomology.

**Ey. 311.—Entomology Seminar.** 1 hour. 1 credit. CREIGHTON and HIXSON.

This is attended by all graduates and undergraduates in the department of entomology. Students are required to prepare papers dealing with some phase of agriculture and submit them for correction by members of the staff. At regular intervals students appear before the seminar group at which time they give talks dealing with the subjects selected.

**Ey. 312.—Entomology Seminar.** 1 hour. 1 credit. CREIGHTON and HIXSON. The second half of the course Ey. 311-312.

**Ey. 314.—Principles of Economic Entomology.** 2 hours, and 4 hours laboratory. 4 credits. CREIGHTON and HIXSON. For agricultural teachers only.

The fundamental principles of entomology, stressing the economic aspects. This course includes a study of national insect problems with a detailed discussion of the insects of importance on all cultivated plants and domestic animals in the Florida area.

**Ey. 405.—Insect Control.** 2 hours, and 2 hours laboratory. 3 credits. CREIGHTON and HIXSON.

A study of the methods of control including insecticides, repellants, cultural, biological, legal, and natural. Consideration is given the toxicological principles of insecticides. This course is designed for all students in agriculture and provides them with ideal training to meet the every day problems of insect attacks upon man, domestic animals, and cultivated plants.

**Ey. 408.—Insect Morphology and Physiology.** 3 hours, and 4 hours laboratory. 5 credits. CREIGHTON.

The external and internal anatomy of insects together with the functioning of the parts of the body and the systems of organs. A course designed for students majoring in the department of entomology.

**Ey. 411.—Apiculture. An Introduction to Bee Culture.** 2 hours. 2 credits. CREIGHTON.

A study of the organization of a bee colony, life processes, races of bees, manipulation, value of colonies, nectar and pollen sources, pollination value, diseases, selection of apiary site, economic importance of industry, apparatus, and marketing of products.

**Ey. 420.—Medical and Veterinary Entomology.** 3 hours. 3 credits. HIXSON.

A study of the Arthropods that are parasitic upon man and animals, including insects and their near relatives. This course includes a study of insects and their close relatives that affect the health of man and animals, and their relationship to diseases. This course is designed for students in agriculture, particularly in entomology and animal industry; also for students in other educational work in which the health of man and animals are important considerations.

**Ey. 430.—Insect Histology.** 1 hour, and 2 hours laboratory. 2 credits. CREIGHTON.

The histological structure of insects. A study of the laboratory technique involved in the preparation of insect tissues for microscopical study. A course designed for students majoring in entomology and other students who are interested in technique methods.

**Ey. 432.—Florida Fruit and Vegetable Insects.** 2 hours, and 2 hours laboratory. 3 credits. CREIGHTON.

A detailed study of the identification, life histories, and control of the major insect pests of Florida's fruit and vegetable crops. A course designed for all students in the College of Agriculture, especially those interested in economic plant life.

**Ey. 441.—Plant Quarantine, Inspection, and Control.** 2 hours, and 2 hours laboratory. 3 credits. CREIGHTON, BROWN, GOODWIN.

A study of the legal, operational, and administrative principles of plant quarantine inspection and control together with a study of plant quarantine organization methods and control and eradication efforts of the past and present. A course designed for all students interested in the future of Florida's agricultural industry.

GRADUATE COURSES

**Ey. 501-502.—Methods of Research in Entomology**

**Ey. 503-504.—Problems in Entomology**

**Ey. 506. —Advanced Insect Histology**

**Ey. 507-508.—Advanced Insect Taxonomy**

**Ey. 509-510.—Advanced Insect Embryology**

**Ey. 513. —Advanced Insect Morphology**

**Ey. 515. —Biological and Natural Control**

## FORESTRY

FOREST RANGER

*First Year*

**Fy. 101.—Principles of Forestry.** 3 hours. SWINFORD.

Designed to acquaint students with fundamentals, and a survey of the field.

**Fy. 106.—Forest Improvement.** Offered only in the first semester. 2 hours, and 1 field period. SWINFORD.

Character and construction of roads, trails, electric lines, lookout towers, and improvements and conveniences.

**Fy. 107.—Forest Protection.** Offered only in the second semester. 3 hours. FRAZER.

The protection from fire, animals, insects, and other enemies.

**Fy. 110.—Local Dendrology.** Offered only in the first semester. 2 hours, and 1 field period. DEVALL.

The botanical features of the important Florida trees and shrubs and their identification; the use and construction of botanical keys.

**Fy. 111.—Forest Regeneration.** 2 hours, and 4 hours in field. MILLER.

Practices and methods of obtaining natural and artificial regeneration as pertain to the South. Collecting and planting of seeds. Cultivation and care of seedlings.

**Fy. 112.—Forest Measurements.** 2 hours, and 1 field period. DEVALL.

Introduction to the methods and procedure of measuring forest stands for all forest products and the use of instruments necessary in forest surveying.

**Fy. 114.—Forest Mapping.** 4 hours laboratory. MILLER.

Forest Service methods of topographic mapping, reducing, enlarging and making of field maps. The use of compass and plane table.

**Fy. 116.—Timber Growing Methods.** 2 hours, and 4 hours in field and laboratory. 4 all-day field trips arranged. WESTVELD.

Site factors that influence tree growth and distribution; classification of forests; cultural methods for growing a forest crop.

*Second Year*

**Fy. 202.—Wood Identification.** 2 hours, and 4 hours laboratory. SWINFORD.

The study of the structure of the commercial woods of the U. S. through the microscope and hand lens.

**Fy. 206.—Grazing and Wild Life.** 2 hours, and 1 field period. DEVALL.

Relationship of grazing and forest practices, wild life protection, care, food, shelter, etc. The study of the habits of native animals and their care in the field.

**Fy. 208.—Forest Construction.** 2 hours, and 1 field period. SWINFORD.

Principles of forest construction, use of drafting tools, building planning, work analysis, methods and types of construction, construction materials and costs.

**Fy. 209.—Logging and Lumbering.** 2 hours, and 1 field period. MILLER.

Logging practices in the South and neighboring regions; sawmill mechanics and practices; lumber grading, seasoning and storage; preservative treatment of finished lumber.

**Fy. 211.—Naval Stores and Forest Products.** 3 hours. SWINFORD.

Naval Stores theory and practice; production of major forest pulpwood; and minor forest products such as chemical wood, distillation wood, rubber and maple sugar.

**Fy. 213.—Advanced Forest Measurements.** 2 hours, and 1 field period. FRAZER.

Continuation of Fy. 112. Emphasis on computation and analysis of data relating to measurement of forests and forest products.

**Fy. 215.—Forest Property Administration.** 2 hours. ZIEGLER.

Administrative duties and procedures for rangers on national, state, and private forest properties.

**Fy. 217.—Management Plans.** 2 hours, and 2 hours laboratory. ZIEGLER.

A short course in the principles and practices of forest management intended to enable a ranger to interpret and execute forest management plans and intelligently assist in their compilation.

UPPER DIVISION COURSES

**Fy. 220.—Introduction to Forestry.** Offered each semester. 2 hours. 2 credits. WESTVELD.

A basic course designed to acquaint the student with the various phases and fundamental underlying principles of the field of Forestry.

**Fy. 301.—Dendrology.** 2 hours, and 4 hours laboratory. 4 credits. DEVALL.

The botany of trees of the United States, silvical characterization including general range and local occurrence, field identification.

**Fy. 302.—Forest Mensuration.** Offered only in the first semester. 2 hours, and 4 hours laboratory. 4 credits. FRAZER.

Use of tools, graphical and others, and practice in the technique of measuring forest products and standing timber.

**Fy. 306.—Forest Protection.** Offered only in the first semester. 2 hours. 2 credits. FRAZER.

Technique of forest fire protection, as developed and practiced in the United States with special emphasis on the Southern states.

**Fy. 309.—Wood Technology and Timber Physics.** Offered only in the second semester. 2 hours, and 4 hours in field. 4 credits. SWINFORD. Prerequisite: Fy. 301.

Identification of commercial woods of the United States, especially those of Florida, by appearance, structure, use of microscope, hand lens; preparation of wood slides; testing for mechanical properties of woods; effect of density on strength, etc.

**Fy. 310.—Reforestation and Nursery Practice.** 2 hours, and 4 hours laboratory. 3 credits. MILLER.

Cleaning, grading, germination tests, plantings in School nursery, cultivation and care of seedlings.

**Fy. 311.—Foundations of Silviculture.** 2 hours, and 4 hours field and laboratory. 3 credits. WESTVELD.

Classification of forest vegetation: climatic, edaphic, physiographic, and biotic factors of the site; forest succession.

**Fy. 312.—Game Management.** Offered each semester. 1 hour, and 4 hours laboratory. 3 credits. DEVALL.

The properties of game populations, including fish, birds and mammals; improvement of game range; methods of census; measurement and diagnosis of productivity; predator control; food cover types; and field studies in classification and identification.

**Fy. 313.—Farm Forestry.** Offered each semester. 2 hours, and 2 hours field and laboratory. 3 credits. WESTVELD, FRAZER.

Farm forests in the farm management plan; economic and other values of farm forests; methods of growing and protecting farm forests; measuring and marketing farm forest products; wood preservation. Florida conditions.

**Fy. 318.—Forest Utilization and Products.** 3 hours. 3 credits. ZIEGLER.

Rough forest products, poles, piling, logs, cross-ties, posts, pulp-wood, mine timbers, boxes and crates, cooperage, furniture and flooring, veneers and plywood, naval stores industry—field operations, turpentine still and products.

**Fy. 320.—Silviculture.** 1 hour, and 8 hours field and laboratory. 3 credits. WESTVELD. Prerequisite: Fy. 311.

Factors influencing natural regeneration: methods of cutting to secure natural regeneration: methods of cutting for stand improvement; slash disposal; preparation of silvicultural plans.

**Fy. 407.—Forest Recreation and Landscape Forestry.** 1 hour, and 4 hours laboratory. 3 credits. MILLER.

Practical experience in designing of recreational areas. Construction, use, care, etc., of such areas.

**Fy. 409.—Forest Finance.** 2 hours. 2 credits. MILLER.

Forests as investments, interest rates, carrying charges, maturity, relation of intermediate to final and net incomes, and forest insurance.

**Fy. 410.—Forest History and Policy.** 2 hours. 2 credits. FRAZER.

History of forest land use in the United States. Development of conservation agencies and study of federal and state laws affecting forests.

**Fy. 412.—Seminar.** Offered only in the first semester. 1 hour. 1 credit. STAFF.

Round-table discussion of the trends, developments, problems, etc., that are found in forestry from time to time.

**Fy. 413.—Regional Silviculture.** 3 hours. 3 credits. WESTVELD. Prerequisites: Fy. 311, Fy. 320.

The ecological and economic factors that influence silvicultural practice, and the application of silvicultural methods to the forests of the United States and Alaska.

**Fy. 414.—Wood Preservation and Seasoning.** 2 hours, and 2 hours laboratory. 3 credits. NEWINS.

Decay, preservatives, treating plants and apparatus, methods and costs, objects treated and results, fire proofing, painting and finishing woods, conditioning of wood-storage, stacking, air seasoning, kiln drying and schedules.

**Fy. 416.—Forest Management Working Plans.** 1 hour, and 5 hours in field. 3 credits. ZIEGLER.

Application of principles of Forest Management in making working plans for specific forest areas, beginning with the school forest working plans; measures for sustained yield, increase or reduction of growing stock.

**Fy. 418.—Logging and Lumbering.** 3 hours. 3 credits. MILLER.

Utilization of major forest products; logging engineering, transportation, equipment, costs, lumbering manufacture, plant, milling practice, and merchandising products.

**Fy. 419.—Principles of Forest Management.** 3 hours. 3 credits. ZIEGLER.

Principles of forest management, forest organization, management plans, subdivisions of forest area, forest regulations, cutting cycle, normal forest, etc.

**Fy. 420.—Forest Economics and Administration.** 3 hours. 3 credits. ZIEGLER.

A world survey of forest resources; land economics as applied to forestry; supply, demand, price trends and forest net income, forest taxation, public and private forest administration.

**Fy. 421.—Kiln Drying of Lumber.** Offered each semester. 1 hour, and 4 hours laboratory. 3 credits. NEWINS.

Principles and practices of the kiln drying of lumber, temperatures, moisture, etc.

**Fy. 422.—Advanced Mensuration.** 2 hours. 2 credits. FRAZER.

Advanced problems in forest mensuration, involving sampling of forest stands and study of growth.

**Fy. 429.—Industrial Education Forestry.** 2 hours, and 2 hours laboratory. 3 credits. NEWINS. For Industrial Education students only.

Identification of woods, cell structure, seasoning, sap stains, etc.

**Fy. 430.—Seminar.** 1 hour. 1 credit. STAFF.

A continuation of Fy. 412. Required of all Seniors in Forestry.

**Fy. 431.—Forest Problems Seminar.** Offered each semester. Lecture, field and laboratory work arranged. 2 credits. STAFF.

Discussion of and investigation in some particular field of Forestry. The student will be assigned to the member of the staff in whose field his interest lies.

## FRENCH

IMPORTANT: With the exception of CFh. 33-34 and Fh. 201-202, all the courses in French may be taken either semester for credit. In special instances Fh. 202 may be taken—with permission of the instructor—even though the student has not had Fh. 201. In all other courses the first semester is **not** a prerequisite for the second semester.

**CFh. 33.—Reading of French.** 3 hours. 3 credits. ATKIN, BRUNET. The first half of the course CFh. 33-34. Open to those students who have had no previous work in French.

CFh. 33-34: A beginning course basic for further study. The main objective is the attainment of the maximum reading ability that can be developed within the year; grammar and pronunciation are subordinated. Reading of easy texts is begun at once.

**CFh. 34.—Reading of French.** 3 hours. 3 credits. BRUNET. The second half of the course CFh. 33-34.

**Fh. 201.—Second-Year French.** 3 hours. 3 credits. ATKIN, BRUNET. The first half of the course Fh. 201-202. Prerequisite: One year of college French, or two years of high school French.

Fh. 201-202: Reading of stories, essays, and plays; General review and translation of simple English into French.

**Fh. 202.—Second-Year French.** 3 hours. 3 credits. ATKIN, BRUNET. The second half of the course Fh. 201-202.

**Fh. 305.—Conversation and Composition.** 3 hours. 3 credits. ATKIN. Prerequisite: Fh. 201-202 or permission of the instructor.

Training and practice in oral and written expression.

**Fh. 306.—Conversation and Composition.** 3 hours. 3 credits. ATKIN. Prerequisite: Fh. 201-202 or permission of the instructor.

Practice in precise and fluent speaking and in correct and effective composition.

**Fh. 307.—Masterpieces of French Literature.** 3 hours. 3 credits. ATKIN. Prerequisite: Fh. 201-202 or permission of the instructor.

Reading and discussion of such eminent writers as Rabelais, Montaigne, Moliere, Racine, Voltaire, and Rousseau.

**Fh. 308.—Masterpieces of French Literature.** 3 hours. 3 credits. ATKIN. Prerequisite: Fh. 201-202 or permission of the instructor.

Reading and discussion of such eminent writers as Victor Hugo, Balzac, Stendhal, Anatole, Flaubert, France.

**Fh. 403.—French Literature, 1800-1850.** 3 hours. 3 credits. ATKIN. Prerequisite: Fh. 307-308 or permission of the instructor.

Study of the chief literary figures of the first half of the nineteenth century.

**Fh. 404.—French Literature, 1850-1900.** 3 hours. 3 credits. ATKIN. Prerequisite: Fh. 307-308 or permission of the instructor.

Study of the writers of the second half of the nineteenth century.

**Fh. 417.—French Pronunciation.** 2 hours. 2 credits. ATKIN. Prerequisite: Fh. 201-202.

Description of French speech sounds; practice in pronunciation.

**Fh. 418.—Selections from Contemporary French.** 2 hours. 2 credits. ATKIN. Prerequisite: Fh. 201-202.

The selections read, and discussed in English, consisting mostly of brief extracts from recent books and periodicals, are good specimens of French expository prose, and are informative of French ideas and opinions. Considerable attention is given to points of vocabulary and idiomatic phrasing.

**Fh. 420.—Contemporary French Civilization.** 2 hours. 2 credits. ATKIN. Prerequisite: Fh. 201-202.

Land, people, institutions and culture of present-day France. The course is conducted in English with reading in French and English.

**Fh. 421.—Contemporary French Civilization.** 2 hours. 2 credits. ATKIN. Prerequisite: Fh. 201-202.

The culture of present-day France, with emphasis upon art and letters.

**Fh. 427.—French-English Word Study.** 2 hours. 2 credits. ATKIN. Prerequisite: Fh. 201-202.

Differentiation of meaning in French and English words of similar spelling. Comparison of the meanings of such words should be useful to students and teachers of either language. Previous knowledge of Latin is not necessary though desirable.

**Fh. 428.—French-English Word Study.** 2 hours. 2 credits. ATKIN. Prerequisite: Fh. 201-202.

Further comparison of related words in French and English.

**Fh. 430.—Individual Work.** Variable credit. ATKIN.

An opportunity to study, for credit, certain phases of French literature, language, and civilization for which there are no special course offerings. Through this means a student can complete an undergraduate major or graduate minor. Fh. 430 may be elected for additional credit in subsequent sessions. Students will be helped to plan a definite program, and will meet the instructor for frequent conferences.

GRADUATE COURSES

**Fh. 505-506.—French Novel**
**Fh. 509. —French Classicism**
**Fh. 511. —Teachers' Course in French**
**Fh. 513. —Eighteenth Century Literature**
**Fh. 515. —French Literature of the Renaissance**
**Fh. 517-518.—Old French**
**Fh. 520-521.—Contemporary French Civilization**
**Fh. 527-528.—French-English Word Study**
**Fh. 530. —Individual Work**

## GENERAL SCIENCE

**Gl. 320.—The History of Science.** 2 hours. 2 credits. PHIPPS.

A history of the development of science restricted primarily to the physical and biological sciences. The treatment is non-technical and the social significance of the important discoveries and inventions will be studied. Designed for science majors and minors as well as those who teach science in the secondary schools. Open to students in their last semester of the General College with the approval of the Dean.

## GEOLOGY

**Gy. 201.—Physical Geology.** 3 hours, and 3 hours laboratory. 4 credits. HUBBELL.

An introduction to geology.

**Gy. 202.—Historical Geology.** 3 hours, and 3 hours laboratory. 4 credits. HUBBELL. Prerequisite: Gy. 201.

Introduction to the history of the earth and its inhabitants.

**Gy. 204.—Physiography of North America.** 3 hours, and 3 hours laboratory. 4 credits. HUBBELL. Prerequisite: Gy. 201.

Surface features and physiographic regions of the North American continent; their structure, the processes which have formed them, and their stage of geographic development.

## GERMAN

IMPORTANT: With the exception of CGn. 33-34 and Gn. 201-202, all the courses in German may be taken either semester for credit. In special instances Gn. 202 may, with permission of the instructor, be taken even though the student has not had Gn. 201. In all other courses the first semester is **not** a prerequisite for the second semester.

**CGn. 33.—Reading of German.** 3 hours. 3 credits. JONES, HAUPTMANN. The first half of the course CGn. 33-34. Open to those students who have had no previous work in German. Prerequisite to all other courses in German.

CGn. 33-34: This course is designed to give students an opportunity to attain, without stressing formal grammar, a moderate proficiency in the reading of German.

**CGn. 34.—Reading of German.** 3 hours. 3 credits. JONES, HAUPTMANN. The second half of the course CGn. 33-34.

**Gn. 201.—Second-Year German.** 3 hours. 3 credits. JONES, HAUPTMANN. The first half of the course Gn. 201-202. Prerequisites: CGn. 33-34 or equivalent.

Gn. 201-202: Reading of modern stories, essays, and dramas; practice in conversation.

**Gn. 202.—Second-Year German.** 3 hours. 3 credits. JONES, HAUPTMANN. The second half of the course Gn. 201-202.

**Gn. 303.—Masterpieces of German Literature.** 3 hours. 3 credits. JONES. Prerequisite: Gn. 201-202 or equivalent. This course is prerequisite for all other advanced courses in German Literature.

Reading and discussion of such eminent German writers as Hans, Sachs, Goethe, Lessing, and Schiller.

**Gn. 304.—Masterpieces of German Literature.** 3 hours. 3 credits. JONES. Prerequisite: Gn. 201-202 or equivalent. This course is prerequisite for all other advanced courses in German Literature.

Reading and discussion of such eminent German writers as Heine, Hauptmann, Werfel, and Mann.

**Gn. 325.—Scientific German.** 3 hours. 3 credits. JONES. Prerequisite: Gn. 201-202 or permission of the instructor.

Reading of representative scientific prose selections.

**Gn. 326.—Scientific German.** 3 hours. 3 credits. JONES. Prerequisite: Gn. 201-202 or permission of the instructor.

Readings in each student's chosen science.

**Gn. 401.—German Writers in Translation.** 3 hours. 3 credits. JONES. *No knowledge of the German language is required;* no language credit is allowed for the course.

A study of the German Classical period, with emphasis upon the writings of Lessing, Goethe, and Schiller (in translation).

**Gn. 402.—German Writers in Translation.** 3 hours. 3 credits. JONES. *No knowledge of the German language is required;* no language credit is allowed for the course.

Intensive study of Lessing, Goethe, and Schiller.

**Gn. 403.—The German Classical Period.** 3 hours. 3 credits. JONES. Prerequisite: Gn. 303-304 or permission of the instructor.

Designed to afford an opportunity for a detailed study of the works of the Classical authors (in the original), together with the cultural background of the period.

**Gn. 404.—The German Classical Period.** 3 hours. 3 credits. JONES. Prerequisite: Gn. 303-304 or permission of the instructor.

Study (in the original) of Lessing, Goethe, and Schiller.

**Gn. 430.—Individual Work.** Variable credit. HAUPTMANN.

Gn. 430 makes it possible for a student to study, for credit, certain phases of German literature, language, and civilization for which there are no special course offerings. Through this means a student can complete an undergraduate major or graduate minor. Gn. 430 may be elected for additional credit in subsequent sessions. Students will be helped to plan a definite program, and will meet the instructor for frequent conferences.

**Gn. 501-502.—Reading Course.** 4 hours. 0 credits. HAUPTMANN. Open to graduate students, faculty members and seniors who are planning to do graduate work.

A special course for beginners who are primarily interested in meeting the reading requirements for advanced degrees.

## GREEK

**Gk. 33.—Beginners' Greek.** 3 hours. 3 credits. BRUNET. The first half of the course Gk. 33-34.

Gk. 33-34: A beginning course basic for further study, designed to introduce the student to the study of Greek and to develop a moderate reading ability.

**Gk. 34.—Beginners' Greek.** 3 hours. 3 credits. BRUNET. The second half of the course Gk. 33-34.

## HEALTH AND PHYSICAL EDUCATION

**HPl. 261.—Football.** 3 hours. 3 credits. MCALLISTER.

A consideration of football from the viewpoint of the interscholastic coach, presenting fundamentals in blocking, tackling, kicking, passing, individual position play, appropriate offensive formations and plays, and various defensive formations.

**HPl. 263.—Basketball.** 3 hours. 3 credits. MCALLISTER.

Fundamentals of basketball for men; dealing with the techniques of shooting, passing, dribbling, stops, and guarding. A consideration of offensive team play, defensive team play, signals, scouting, team strategy, training, practice sessions, selection and placing of players, and other essentials of the modern court game.

**HPl. 264.—Track and Field.** 2 hours. 2 credits. BEARD.

Discussion of procedures and techniques involved in coaching the standard track and field events.

**HPl. 266.—Baseball.** 2 hours. 2 credits. MCALLISTER.

Discussion covering the fundamentals of fielding, batting, base running, play of the various positions, offensive and defensive team play, and the rules of the game.

**HPl. 361.—Teaching Physical Education in the Elementary School.** 3 hours. 3 credits. SALT. The first half of the course HPl. 361-362.

HPl. 361-362: Methods and Materials. The program of physical education activities for the elementary school involving directed play, small group play, large group play, rhythms, sport units; together with appropriate procedures and methods for conducting such a program. (Note: Must be taken concurrently with En. 393-394.)

**HPl. 362.—Teaching Physical Education in the Elementary School.** 3 hours. 3 credits. SALT. The second half of the course HPl. 361-362.

**HPl. 363.—Teaching Physical Education in the Secondary School.** 3 hours. 3 credits. SALT. The first half of the course HPl. 363-364.

HPl. 363-364: Methods and Materials. The program of physical education activities for the secondary school involving team games, rhythms, gymnastics activities, individual and dual sports; together with appropriate procedures and methods for conducting such a program. (Note: Must be taken concurrently with En. 393-394.)

**HPl. 364.—Teaching Physical Education in the Secondary School.** 3 hours. 3 credits. SALT. The second half of the course HPl. 363-364.

**HPl. 411.—Principles and Administration of Physical Education.** 3 hours. 3 credits. SALT.

Fundamental principles upon which the present day program of physical education is based, together with a study of the history, aims, objectives, and contemporary trends in this field. The organization and administration of the program pertaining to the playground, gymnasium, swimming pool, service unit, intramural and interscholastic athletics.

**HPl. 462.—Community Recreation.** Offered each semester. 6 hours laboratory. 3 credits. SALT.

A laboratory course in which the student is assigned weekly duties on a community playground under supervision.

**HPl. 463.—Recreational Crafts.** Offered each semester. 2 hours. 2 credits. BOHANNON.

Theory and practice in craftsmanship, including metal, leather, and woodwork. It also covers phases of weaving and the art of making objects that are related to play and life in the open.

GRADUATE COURSES

**HPl. 531-532.—Guided Professional Development in Health and Physical Education**

**HPl. 533-534.—Problems in Physical Education**

## HISTORY

*In all the courses offered in this department political, economic, social, religious and cultural aspects are given consideration. Prerequisites: C-1 or Hy. 313-314 (formerly Hy. 101-102) or equivalent.*

**CHy. 13.—History of the Modern World.** Offered each semester. 4 hours. 4 credits. LEAKE. Prerequisite: C-1. Designed for General College students. Prerequisite to advanced courses in History for students entering from the General College.

The historical background of present day civilization is considered insofar as that background has been developed in the fabric of the historical movements since 1815. The political, economic, social, religious, artistic, and cultural aspects of the nineteenth and twentieth centuries are studied.

**Hy. 301.—American History, 1492-1776.** 3 hours. 3 credits. LEAKE. The first half of the course Hy. 301-302.

The Colonial Period up to 1776.

**Hy. 302.—American History, 1776-1830.** 3 hours. 3 credits. LEAKE. The second half of the course Hy. 301-302.

The early Constitutional Period.

**Hy. 303.—American History, 1830-1876.** 3 hours. 3 credits. LEAKE. The first half of the course Hy. 303-304.

The Civil War and Reconstruction.

**Hy. 304.—American History, 1876-1940.** 3 hours. 3 credits. LEAKE. The second half of the course Hy. 303-304.

From Reconstruction to the present.

**Hy. 305.—English History to 1485.** 3 hours. 3 credits. PAYNE. The first half of the course Hy. 305-306.

From early times to the end of the War of the Roses, 1485.

**Hy. 306.—English History, 1485 to 1688.** 3 hours. 3 credits. PAYNE. The second half of the course Hy. 305-306.

From 1485 to the "Glorious Revolution", 1688.

**Hy. 307.—The Renaissance and Reformation.** 3 hours. 3 credits. LEAKE. The first half of the course Hy. 307-308.

The Renaissance.

**Hy. 308.—The Renaissance and Reformation.** 3 hours. 3 credits. LEAKE. The second half of the course Hy. 307-308.

The Protestant Revolution and the Catholic Reformation.

**Hy. 309.—The French Revolution and the Napoleonic Era.** 3 hours. 3 credits. LEAKE. The first half of the course Hy. 309-310.

The causes and course of the French Revolution.

**Hy. 310.—The French Revolution and the Napoleonic Era.** 3 hours. 3 credits. LEAKE. The second half of the course Hy. 309-310.

The Napoleonic Era.

**Hy. 311.—English History, 1688 to 1815.** 3 hours. 3 credits. PAYNE. The first half of the course Hy. 311-312.

From the Revolution of 1688 to the close of the Napoleonic Period.

**Hy. 312.—English History, 1815-1940.** 3 hours. 3 credits. PAYNE. The second half of the course Hy. 311-312.

From the Congress of Vienna to the present.

**Hy. 313.—Europe During the Middle Ages.** 3 hours. 3 credits. GLUNT. The first half of the course Hy. 313-314.

Hy. 313-314: The history of Western Europe from 476 A.D. to the Renaissance and Reformation. This course is a prerequisite for other history courses for students who do not enter the Upper Division from the General College.

**Hy. 314.—Europe During the Middle Ages.** 3 hours. 3 credits. GLUNT. The second half of the course Hy. 313-314.

**Hy. 315.—Latin American History to 1850.** 3 hours. 3 credits. GLUNT. The first half of the course Hy. 315-316.

Hy. 315-316: First semester work covers the discovery, settlement, and early development of South and Central America. Second semester work covers the discovery, settlement, and early development of Latin America to 1850.

**Hy. 316.—Latin American History to 1850.** 3 hours. 3 credits. GLUNT. The second half of the course Hy. 315-316.

**Hy. 317.—Latin American History, 1850-1900.** 3 hours. 3 credits. GLUNT. The first half of the course Hy. 317-318.

**Hy. 318.—Latin American History, 1900 to 1940.** 3 hours. 3 credits. GLUNT. The second half of the course Hy. 317-318.

**Hy. 331.—Survey of American History.** 3 hours. 3 credits. LEAKE. The first half of the course Hy. 331-332.

Hy. 331-332: A general survey course on the development of the United States, designed for students in Public Administration. Not open to other students unless they have completed C-1 and CHy. 13 or Hy. 313-314.

**Hy. 332.—Survey of American History.** 3 hours. 3 credits. LEAKE. The second half of the course Hy. 331-332.

**Hy. 401.—Ancient Civilizations.** 3 hours. 3 credits. PAYNE. The first half of the course Hy. 401-402.

Hy. 401-402: Egyptian, Assyrian, Babylonian, Persian, Semitic, Hellenic, and Roman peoples.

**Hy. 402.—Ancient Civilizations.** 3 hours. 3 credits. PAYNE. The second half of the course Hy. 401-402.

**Hy. 403.—History of Europe, 1648 to 1714.** 3 hours. 3 credits. PAYNE. The first half of the course Hy. 403-404.

Hy. 403-404: The history of Europe from the Treaty of Westphalia to the French Revolution.

**Hy. 404.—History of Europe, 1714-1789.** 3 hours. 3 credits. PAYNE. The second half of the course Hy. 403-404.

GRADUATE COURSES

**Hy. 501-502.—American History, 1492 to 1830**

**Hy. 503-504.—American History, 1830 to the Present**

**Hy. 505-506.—English History to 1688**

**Hy. 507-508.—The Renaissance and the Reformation**

**Hy. 509-510.—Seminar in American History**

**Hy. 511-512.—English History, 1688 to the Present**

**Hy. 515-516.—Latin American History to 1850**

**Hy. 517-518.—Latin American History, 1850 to the Present**

**Hy. 601-602.—Ancient Civilizations**

**Hy. 603-604.—History of Europe, 1648 to 1789**

## HORTICULTURE

**He. 201.—Principles of Horticulture.** 2 hours, and 2 hours laboratory. 3 credits. WOLFE, WATKINS.

The principles underlying home and commercial production of fruits, vegetables and flowers. A course designed especially for students not expecting to major in horticulture and not counting for a major.

**He. 312.—Vegetable Gardening.** 2 hours, and 2 hours laboratory. 3 credits. ABBOTT.

Principles and practice of vegetable growing, with special attention to the home garden. A brief general course or an introduction to further work in olericulture.

**He. 314.—Principles of Fruit Production.** 3 hours. 3 credits. ABBOTT.

The principles underlying fruit production, with special reference to such factors as water relations, nutrition, temperature, fruit setting, and geographic influences.

**He. 315.—Citrus Culture.** 2 hours, and 2 hours laboratory. 3 credits. ABBOTT. The first half of the course He. 315-316. May be taken for credit without He. 316.

He. 315-316: A thorough study of all phases of the growing of citrus fruits, including propagation, selection of site, planting, grove operations, harvesting and varieties. A three-day trip is required each semester.

**He. 316.—Citrus Culture.** 2 hours, and 2 hours laboratory. 3 credits. ABBOTT. The second half of the course He. 315-316.

**He. 317.—Plant Propagation and Pruning.** 2 hours, and 2 hours laboratory. 3 credits. ABBOTT.

Principles and practices in the propagation and pruning of orchard and garden crops, and the physiological and economic factors related to them.

**He. 411.—Nut Culture.** 2 hours. 2 credits. WOLFE.

A study of the culture of the pecan, tung, and other nuts grown in Florida.

**He. 412.—Deciduous Fruits.** 3 hours. 3 credits. WOLFE.

A study of the culture of peaches, pears, persimmons, grapes, and other deciduous fruits including the strawberry as grown in Florida.

**He. 423.—Major Subtropical Fruits.** 3 hours. 3 credits. WOLFE.

A study of the propagation, culture and commercial production of the avocado and mango. A three-day field trip will be made.

**He. 424.—Minor Subtropical and Tropical Fruits.** 3 hours. 3 credits. WOLFE.

Studies of the culture and relationships of such fruits as the guavas, carissa, sapodilla, star-apple, papaya, lychee, tamarind, etc. A three-day field trip will be made.

**He. 425.—Commercial Truck Crops.** 2 hours, and 2 hours laboratory. 3 credits. ABBOTT. Prerequisite: He. 312.

The principles and practices in the commercial production of the important truck crops of Florida, including beans, celery, cabbage, potato, tomato and watermelon. A three-day trip will be required.

**He. 426.—Systematic Olericulture.** 2 hours, and 2 hours laboratory. 3 credits. ABBOTT.

The origin, history, types, classification, nomenclature and adaptations of vegetables.

**He. 427.—Elementary Floriculture.** 2 hours, and 2 hours laboratory. 3 credits. WATKINS.

The principles of flower culture, with special emphasis on the growing of annuals and perennials for the home garden.

**He. 428.—Commercial Floriculture.** 2 hours, and 2 hours laboratory. 3 credits. WATKINS.

The propagation and handling of commercial florists crops and the management of greenhouses.

**He. 429.—Ornamental Horticulture.** 1 hour, and 4 hours laboratory. 3 credits. WOLFE, WATKINS.

Plant materials suitable for use in ornamental horticulture with special application to the beautification of homes and schools in Florida.

**He. 430.—Advanced Ornamental Horticulture.** 1 hour, and 4 hours laboratory. 3 credits. WATKINS, WOLFE.

Plant materials for use in landscape work, with more emphasis given to use in commercial landscaping and to tropical materials.

GRADUATE COURSES

**He. 503-504.—Horticulture Seminar**

**He. 505-506.—Horticulture Problems**

**He. 507-508.—Research in Horticulture**

**He. 514. —Advanced Citriculture**

**He. 515. —Advanced Olericulture**

**He. 518. —Advanced Floriculture**

## INDUSTRIAL ARTS EDUCATION

**In. 111.—Mechanical Drawing.** 6 hours lecture-laboratory. 3 credits. BOHANNON.

Designed for industrial arts students. Freehand sketching, lettering, orthographic projection, geometric construction, working drawing and blue printing, care and use of instruments.

**In. 112.—Mechanical Drawing.** 6 hours lecture-laboratory. 3 credits. BOHANNON. Prerequisite: In. 111.

Designed for industrial arts students. Perspective rendering, tracings and blue prints for a small building; different types of letters, machine sketching, and conventions. Suggestions and plans as to the most effective way of teaching a course of this type.

**In. 211.—General Shop.** 6 hours lecture-laboratory. 3 credits. BOHANNON.

Designed for industrial arts students. Practice in use of hand tools commonly found in school shops; types of construction, design, woodfinishing; block-printing. Analysis of logical teaching units in projects and problems in the various phases of industrial arts.

**In. 212.—General Shop.** 6 hours lecture-laboratory. 3 credits. BOHANNON. Prerequisite: In. 211.

Designed for industrial arts students. Use of hand tools and power machines, with special emphasis on the speed lathe; use, parts and care of machines; shop equipment and construction. In addition to the development of manipulative skills, special emphasis is given to selecting projects, and writing the various types of instruction sheets.

**In. 301.—Sheet Metal.** 6 hours lecture-laboratory. 3 credits. BOHANNON. Prerequisites: In. 111-112.

Design and construction in sheet metal for industrial arts students. Scope of sheet metal, various methods of drafting and construction, shop arrangements and equipment, methods of motivation for secondary school students in this phase of work.

**In. 302.—General Shop.** 6 hours lecture-laboratory. 3 credits. BOHANNON. Prerequisites: In. 111, 211, 301.

Units given in machine drawing; bench woodwork, advanced cabinet work, concrete work, sheet metal; in addition, several craft activities presented.

**In. 305.—Design and Construction.** Offered only in the second semester. 6 hours lecture-laboratory. 3 credits. BOHANNON.

Designed for industrial arts students. Advanced problems in design and construction taken from some area of work in the general shop in selected advanced areas in which the student desires major emphasis.

**In. 401.—Architectural Drawing.** Offered only in the second semester. 6 hours lecture-laboratory. 3 credits. Prerequisite: In. 111-112.

Designed for industrial arts teachers. Study made of building materials, sources and prices; landscaping as to orientation; plans, elevations, sections, details, conventions; types and styles of domestic architecture, and a review of the history of architecture.

**In. 404.—Farm Motors.** Identical with Ag. 302. 4 hours lecture-laboratory. 3 credits. ROGERS.

A general understanding of the various types of gasoline motors. Lecture-laboratory work on the theories and practical phases of engines; fuel systems, carburation, ignition; starting and generating systems.

## INDUSTRIAL ENGINEERING

**Ig. 260.—Summer Shop Course** in which 12 weeks' summer work may be offered for three hours electives. 3 credits.

**Ig. 261.—Introduction to Engineering.** 1 hour. 1 credit. WEIL and STAFF. The first half of the course Ig. 261-262.

Ig. 261-262: An introductory study of the engineering profession, its history, development, vocabulary, nomenclature, and chief ideals. This course is given to assist the student in the choice of the particular field of engineering which he proposes to elect as his field of concentration, and to give the elementary language of the profession. Williams, *Building an Engineering Career.*

**Ig. 262.—Introduction to Engineering.** 1 hour. 1 credit. WEIL and STAFF. The second half of the course Ig. 261-262.

**Ig. 363.—Applied Mechanics.** Offered each semester. 4 hours, and 2 hours laboratory. 5 credits. YEATON, PHELPS, ESHLEMAN. The first half of the course Ig. 363-364. Prerequisites: Ms. 353-354, Ps. 205-206.

Ig. 363-364: (a) Statics, equilibrium, centers of gravity, moments of inertia and friction. (b) Mechanics of materials. (c) Kinematics. Chambers, *Mechanics of Engineering;* Timashouko and MacCollough, *Elements of Strength of Materials.*

**Ig. 364.—Applied Mechanics.** Offered each semester. 4 hours, and 2 hours laboratory. 5 credits. YEATON, PHELPS, ESHLEMAN. The second half of the course Ig. 363-364.

**Ig. 377.—Elements of Photography.** 1 hour, and 3 hours laboratory. 2 credits. PHELPS. Prerequisite: Cy. 101-102, or C-2.

Types of cameras; films, paper; exposures, developing and printing; pictorial report; lighting; copying, lantern slides; dark-room procedure. Text: Mack and Martin, *The Photographic Process.*

**Ig. 378.—Principles of Photography.** 1 hour, and 3 hours laboratory. 2 credits. PHELPS. Prerequisite: Ig. 377.

Lenses, lense mounts, exposures; films; filters; composition, trimming, mounting, enlarging; developers, reducers, intensifiers, the reversing process; stock room and storage. Text: Mack and Martin, *The Photographic Process.*

**Ig. 460.—Engineering Practice.** Offered each semester. 3 hours. 3 credits. WEIL. Prerequisite: Senior rating in engineering.

Projects selected from the general fields of engineering are solved by the student. His solutions are compared with those actually obtained by the practicing professional engineer. The course involves the principles of design, selection and use of engineering apparatus, plants and systems; engineering finance as applied to public utilities; legal factors as applied to engineering practice; the relations of engineering and the public: engineering ethics. Lister, *Applied Economics for Engineers.*

**Ig. 463.—Specifications and Engineering Relations.** Offered each semester. 2 hours. 2 credits. REED, ESHLEMAN. Prerequisite: Ig. 364.

Specifications for materials and construction of engineering projects; advertising and letting contracts; agreements and contractual relations. Mead, *Contracts, Specifications, and Engineering Relations.*

**Ig. 469.—Plant, Shop, Layout and Design.** 2 hours, and 3 hours laboratory. 3 credits. PHELPS. The first half of the course Ig. 469-470. Prerequisites: CEs. 13, El. 342, Ig. 364.

Ig. 469-470: An intensive study of some industry; its layout, design, machinery, operations, and product. Alford, *Principles of Industrial Management for Engineers.*

**Ig. 470.—Plant, Shop, Layout and Design.** 2 hours, and 3 hours laboratory. 3 credits. PHELPS. The second half of the course Ig. 469-470.

**Ig. 472.—Human Engineering.** Offered each semester. 2 hours. 2 credits. YEATON. Prerequisite: Ig. 463.

Problems of production engineering and management. The human factors in industry. Tead, *Human Nature and Management.*

**Ig. 477.—Advanced Photography.** 1 hour, and 3 hours laboratory. 2 credits. PHELPS. Prerequisites: Ig. 378 and one year of Physics. Supplementary course: Cy. 462.

Theory and operation of moving picture cameras and projectors, types of film, cinema developing, titling and editing; photo-engraving; color photography; preparation of slides and film strips; projects.

**Ig. 478.—Professional Photography.** 1 hour, and 3 hours laboratory. 2 credits. PHELPS. Prerequisite: Ig. 477.

Selection of lenses, patterns, formulas, and combinations; shutters, location, timing and use; filters, addition and subtraction of color values, combinations, fractional exposures; professional film and paper, density vs. contrast; aerial photography and photogrammetry; cathode tube and high speed photography; photo-micrography; interpretation of photographs.

GRADUATE COURSES

**Ig. 561-562.—Advanced Shop Layout and Design**
**Ig. 563-564.—Management Training**

## JOURNALISM

**Jm. 213.—Propaganda.** 3 hours. 3 credits. EMIG.

A study of newspapers, magazines, the radio, and movies designed to develop a clear understanding of the forces that create and control propaganda and public action. Observance of history in the making, the management and moulding of public thought, the attitudinizing of people, the strategy of propagandists and symbol-makers and their use of such idea-transmitting agencies as the newspaper, magazine, radio, movies, home, school, church, political parties, groups, recreation, etc. An inquiry into the influence of propaganda on government, law-making, business, education, morality, war, and peace.

**Jm. 214.—Introduction to Journalism.** 3 hours. 3 credits. EMIG.

A survey designed to acquaint the student with possible opportunities for a career in such fields of journalism as the newspaper, magazine, movies, and the radio, and to familiarize him with the qualifications requisite for the various types of work. A study of the publishing field, the daily and weekly newspaper, reporting, political and financial writing, news agencies, press associations, syndicates, free-lancing, foreign correspondence, advertising, circulation, etc.; magazines; trade business, and agricultural publications; the movies; and the radio.

**Jm. 215.—History of Journalism.** 3 hours. 3 credits. EMIG.

The origin and development of newspapers and magazines in the United States, the South, Florida, and foreign countries, with emphasis on the great journalistic personalities, the problems they encountered, their method of meeting those problems, and their contributions to the nation and to journalism.

**Jm. 216.—Principles of Journalism.** 3 hours. 3 credits. LOWRY.

Principles underlying newspaper publishing and news reporting revealed through research based on reporting problems. Ethics of newspaper publishing imposed by recognition of social responsibilities.

**Jm. 301.—News Writing and Editing.** 2 hours, and 6 hours laboratory. 4 credits. LOWRY. The first half of the course Jm. 301-302. Prerequisite: Jm. 216.

Jm. 301-302: Writing and editing news of local, state, national, and international affairs, such as the courts, city hall, police station, county building, business, science, etc. Actual reporting for newspapers.

**Jm. 302.—News Writing and Editing.** 3 hours, and 6 hours laboratory. 4 credits. LOWRY. The second half of the course Jm. 301-302.

**Jm. 314.—Magazine Writing and Editing.** 3 hours. 3 credits. LOWRY.

Preparation of special articles for publication in newspapers and magazines coordinated with study of magazine editing problems. Supervised marketing of articles produced in the course.

**Jm. 317.—Business and Mechanics of Publishing.** 3 hours. 3 credits. LOWRY.

Business and editorial management of small publications, leading into study of printing materials and processes as background for understanding by the editorial worker of the conditions under which his copy and instructions will be carried through to the finished product.

**Jm. 318.—Newspaper Management.** 3 hours. 3 credits. LOWRY.

Daily newspaper organization and operation from the standpoint of the business office, considering the newspaper as a manufactured product. Analytical study of circulation, advertising, office management, accounting, plant management, and financing in their relationship to the business office.

**Jm. 403.—Newspaper Advertising.** 3 hours. 3 credits. EMIG.

Technique and practice of newspaper advertising, with emphasis on selling, writing, and laying out local and classified advertising. Newspaper advertising procedure; advertising department organization, budget, and rates; sales problems of retail stores in the trade area; market data and trade surveys; copy services; appeals; space; typography; local advertising plans, campaigns, and promotion; relations with local and national advertisers. The classified advertising department, organization, and rates; solicitation; shop forms and office records; copy; collections; accounting; and promotion. Ten projects involving practical problems in newspaper advertising.

**Jm. 404.—Newspaper and Magazine Illustration.** 3 hours. 2 credits. LOWRY.

Appeals on which newspaper and magazine editors rely in planning, selecting, editing, and making up illustrations; detailed laboratory practice in analysis of news values in illustrations, and in planning makeup of and writing cutlines for photographs, drawings, and layouts.

**Jm. 406.—Radio Writing.** 3 hours. 2 credits. EMIG.

A study of the technique of preparing news material for regular presentation over WRUF. Instruction in preparing news articles, commentations, and advertising plans for radio presentation. Designed for (1) students who plan a journalistic career in radio, (2) students who plan a career in business or public service and desire to supplement other courses with a study of the radio medium, (3) students majoring in journalism who desire more knowledge of the radio phase of journalism, and (4) other students seeking a general knowledge and appreciation of the radio as an idea-distributing agency and social force.

**Jm. 407.—Editorial Writing and Management.** 3 hours. 3 credits. EMIG.

Development of the editorial as a literary form; great editorial leaders and masterpieces; editorial thinking; analysis of editorial policies; problems of editorial management. Emphasis on editorial and interpretative writing.

**Jm. 408.—Advanced Public Opinion.** 3 hours. 3 credits. EMIG.

A study of the power and influence of propaganda and public opinion in modern life with respect to government, politics, education, business, etc.; the technique and strategy of directing propaganda and public opinion; methods of measuring public opinion; current trends in public opinion.

**Jm. 409.—Law of the Press.** 3 hours. 3 credits. LOWRY.

Libel, contempt of court, right of privacy, constitutional guarantees of freedom of the press, copyright, and legal advertising as foundation for proper handling of newspaper editorial and business relationships. How to avoid difficulties rather than how to handle them once involved. Special attention to Florida statutory and common law.

**Jm. 410.—World Journalism.** 2 hours. 2 credits. EMIG.

A cultural study of contemporary newspapers as they operate on the broad stage of international affairs, the conditions under which news of the world is gathered and transmitted, and the viewpoints of people of other countries as revealed in newspapers. Foreign newspapers, as well as American, will be studied.

**Jm. 411.—Public Relations.** 3 hours. 3 credits. EMIG.

Principles, methods, and means of reaching and influencing the public. Public relations programs will be prepared. Non-technical; designed for students of the social sciences, as well as for journalism majors.

**Jm. 412.—Contemporary Journalistic Thought.** 3 hours. 3 credits. EMIG.

Salient professional problems encountered in the administration of journalistic publications. Problems of human integration, such as practical, legislative, economic, political, educational, with which journalism must concern itself. Integration of knowledge of other fields of learning, and an attempt to focus this integration on current journalistic situations.

Non-technical: designed for students of the social sciences as well as for journalism majors.

GRADUATE COURSES

**Jm. 503-504.—Special Studies in Newspaper Production**

**Jm. 505-506.—Special Studies in Public Opinion**

## LATIN

**Ln. 201.—Second-Year Latin.** 3 hours. 3 credits. BRUNET. Prerequisite: One year college Latin or two years high school Latin, or equivalent. The first half of the course Ln. 201-202.

Ln. 201-202: Reading, interpretation and discussion of important Latin writings, with the emphasis upon Caesar, Cicero, and Virgil. The work will be adapted to the proficiency of the individual student.

**Ln. 202.—Second-Year Latin.** 3 hours. 3 credits. BRUNET. The second half of the course Ln. 201-202.

## LAW

**Lw. 301.—Torts.** 5 hours. 5 credits. TRUSLER.

History, definitions, and elements of torts; particular torts. *Burdick on Torts;* Burdick, *Cases on Torts*, 4th edition.

**Lw. 302.—Equity Jurisprudence.** 5 hours. 5 credits. TRUSLER.

Jurisdiction; principles of adjudication; fraud, accident, and mistake; remedies—injunctions, specific performance, interpleader, bills quia timet. Keigwin, *Cases in Equity Jurisprudence.*

**Lw. 303.—Contracts.** 3 hours. 3 credits. TE SELLE.

Formation; consideration; object; operation, assignments. Costigan, *Cases on Contracts*, 3rd edition.

**Lw. 304.—Contracts.** 3 hours. 3 credits. TE SELLE. Prerequisite: Lw. 303.

Third party beneficiaries; joint obligations; interpretation of contract; rules relating to evidence and construction; discharge of contract. Costigan, *Cases on Contracts*, 3rd edition.

**Lw. 305.—Criminal Law and Procedure.** 4 hours. 4 credits. COCKRELL.

Sources of criminal law; nature and elements of crime; particular crimes. Jurisdiction; arrest; preliminary examination and bail; grand jury; arraignment, pleas, and motions; nolle prosequi and motions to quash; jeopardy; verdict; new trial; arrest of judgment; judgment, sentence, and execution. Mikell, *Cases on Criminal Law and Procedure*, 3rd edition.

**Lw. 306.—Marriage and Divorce.** 1 hour. 1 credit. COCKRELL.

Marriage; nature of the relation; capacity of parties; annulment; divorce; alimony; effect on property rights; custody and support of children; agreements of separation. Vernier, *Cases on Marriage and Divorce.*

**Lw. 308.—Common Law Pleading.** 3 hours. 3 credits. CRANDALL.

Development of the personal actions at common law; theory of pleading and its peculiar features; demurrers; pleas; replication de injuria; duplicity; departure; new assignment; motions based on pleadings; general rules of pleadings. Keigwin, *Cases on Common Law Pleading*, 2nd edition.

**Lw. 309.—Property.** 2 hours. 2 credits. DAY.

Personal property; possession and rights based thereon; acquisition of title; liens and pledges; conversion. Warren, *Cases on Property*, 2nd edition.

**Lw. 312.—Property.** 2 hours. 2 credits. DAY.

Introduction to the law of conveyancing; rights incident to ownership of land and estates therein, including the land itself, air, water, fixtures, emblements, waste; profits; easements; licenses; covenants running with the land. Warren, *Cases on Property*, 2nd edition; Day, *Outline on Property*.

**Lw. 401.—United States Constitutional Law.** 4 hours. 4 credits. SLAGLE.

Distribution of powers; civil rights; impairment of contractual obligations; due process; equal protection; and interstate commerce. Hall, *Cases on Constitutional Law*.

**Lw. 402.—Evidence.** Offered only in the first semester. 4 hours. 4 credits. TE SELLE.

Witnesses, including competency, privilege, examination, impeachment and rehabilitation; character evidence; hearsay and the exceptions to its exclusion; opinion; real evidence; proof of execution of writings; the "best evidence" rule; judicial notice, presumptions, and burden of proof. Morgan and Maguire, *Cases on Evidence*.

**Lw. 403.—Agency.** 2 hours. 2 credits. COCKRELL.

Nature, creation of the relation; rights and duties of agents; termination, nature, extent, construction, and execution of authority of agents; rights, duties, and liabilities of agents; principal and third persons inter se; particular classes of agents. Mechem, *Cases on Agency*, 2nd edition.

**Lw. 404.—Quasi Contracts.** Offered only in the first semester. 2 hours. 2 credits. CRANDALL.

Origin and nature of quasi contract; benefits conferred in misreliance on rights or duty, from mistake of law, and on invalid, unenforceable, illegal, or impossible contract; benefits conferred through dutiful intervention in another's affairs; benefits conferred under constraint; action for restitution. Woodruff, *Cases on Quasi Contracts*, 3rd edition.

**Lw. 405.—Equity Pleading.** Offered only in the second semester. 2 hours. 2 credits. COCKRELL.

Pleading in equity; parties to, proceedings in a suit in equity; bills in equity; disclaimer; demurrers and pleas; answer and replication; preparation of bills, demurrers, pleas, answers. Keigwin, *Cases in Equity Pleading*, 2nd edition; *Florida Chancery Act*.

**Lw. 406.—Private Corporations.** 4 hours. 4 credits. SLAGLE.

Creation and citizenship; powers and liabilities; corporations and the state; foreign corporations; practice in forming and conducting corporations, preparing by-laws, electing officers, and in conducting corporate business. Canfield and Wormser, *Cases on Corporations*, 3rd edition.

**Lw. 408.—Legal Ethics and Bibliography.** 3 hours. 2 credits. ODLE.

Organization of the bar; attorneys and professional conduct; the classes of law books; the location and use of decisions and statutes; the trial brief; the brief on appeal. Arant, *Cases on Legal Ethics;* Eldean, *How to Find the Law*, 3rd edition.

**Lw. 409.—Property.** 3 hours. 3 credits. DAY.

Titles and conveyancing; the execution of deeds; estates created; covenants for titles; estoppel by deed; priorities among titles. Warren, *Cases on Property*, 2nd edition.

**Lw. 410.—Property.** 3 hours. 3 credits. CRANDALL.

Wills; testamentary capacity; revocation; probate; administration of estates. Warren, *Cases on Wills*. *Florida Probate Act*.

**Lw. 411.—Florida Constitutional Law.** 2 hours. 2 credits. TRUSLER.

Constitutional guarantees; departments of government; homesteads and exemptions; married women's property. Constitution, Statutes, and Judicial Decisions of Florida.

**Lw. 413.—Florida Civil Practice.** Offered only in the second semester. 3 hours. 3 credits. COCKRELL.

Organization of courts; parties; joinder and consolidation of actions; issuance, service, and return of process; appearance; trial; verdict; proceedings after verdict; appellate proceedings; peculiar characteristics of the common law actions; special proceedings. Crandall, *Florida Common Law Practice*.

*Lw. 415.—Abstracts. Offered only in the second semester. 2 hours. 2 credits. DAY. Prerequisite: Lw. 312.

Interpretation of maps and plotting of lots described by metes and bounds; the formal requisites of conveyances in use in Florida; deeds executed by public and judicial officers; liens and contracts for the sale of lands. *Florida Statutes* and selected Florida cases.

Lw. 416.—Insurance. Offered only in the first semester. 2 hours. 2 credits. COCKRELL.

Theory, significance; insurable interest; concealment, representations, warranties; subrogation; waiver and estoppel; assignees, beneficiaries; creditors. Vance, *Cases on Insurance*, 2nd edition.

Lw. 417.—Sales. Offered only in the second semester. 2 hours. 2 credits. DAY.

Sale and contract to sell; statute of frauds; illegality; conditions and warranties; delivery; acceptance and receipt; vendor's lien; stoppage in transitu; bills of lading; remedies of seller and buyer. *Vold on Sales.*

Lw. 418.—Taxation. 3 hours. 3 credits. CRANDALL.

Legitimate purposes of taxation; the so-called property tax and tax administration; excise taxes; estate and inheritance taxes; income taxes. Magill and Maguire, *Cases on the Law of Taxation*, 3rd edition.

Lw. 421.—Legislation. 2 hours. 2 credits. ODLE.

The role of legislation in the development of the law; growth and province of legislation; forms of legislation; technique of legislative research; procedure and drafting; interpretation and construction of statutes. Horack, *Materials on Legislation.*

Lw. 502.—Damages. 2 hours. 2 credits. TRUSLER.

General principles; sorts; measure in contract and tort actions; avoidable consequences; value; interest; death by wrongful act. Trusler, *Florida Cases on Damages.*

Lw. 503.—Public Utilities. 2 hours. 2 credits. SLAGLE.

Nature of public utilities; common carriers; telegraphs and telephones; light, water and gas companies; inns; warehouses; elevators; stockyards; public control; rights and obligations at common law and under federal and state statutes. Welch, *Cases on Public Utility Regulation*, 2nd edition.

Lw. 504.—Municipal Corporations. Offered only in the first semester. 2 hours. 2 credits. CRANDALL.

Nature; creation; control; nature of ordinances; powers; legislative and administrative procedure; home rule; initiative, referendum, recall; officers; merit system; remedies; torts. Seasongood, *Cases on Municipal Corporations.*

Lw. 505.—Federal Jurisdiction. 2 hours. 2 credits. SLAGLE.

System of courts created under authority of the United States, jurisdiction, removal of cases from state courts; substantive law applied by federal courts; appellate jurisdiction. Dobie, *Cases on Federal Jurisdiction and Procedure.*

Lw. 506.—Negotiable Instruments. 3 hours. 3 credits. DAY.

Law merchant; definitions and general doctrines; contracts of the maker, acceptor, etc.; proceedings before and after dishonor of negotiable instruments; absolute defenses; equities; payments; conflict of laws. Britton, *Cases on Bills and Notes*, 2nd edition.

Lw. 508.—Conflict of Laws. 3 hours. 3 credits. SLAGLE.

Jurisdiction; sources of law and comity; remedies, rights of action, procedure; rights; inheritance; obligations ex delicto and ex contractu; personal relations; property inheritance; administration of estates; judgments and obligations. Lorenzen, *Cases on Conflict of Laws*, 2nd edition.

Lw. 509.—Partnership. 2 hours. 2 credits. DAY.

Creation, nature, characteristics of a partnership; partner's interest, liability; powers, rights, duties; rights and remedies of creditors; termination of partnership. Mechem, *Cases on Partnership*, Matthews' Revision.

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*Not offered in 1940-41; offered alternate years.

**Lw. 513.—Property.** 3 hours. 3 credits. CRANDALL.

Conditional estates; licenses and waivers; reversions and remainders; rule in Shelley's Case, future uses; future interests; executory devises and bequests; vesting of legacies. Kales, *Cases on Future Interests*, 2nd edition.

**Lw. 515.—Mortgages.** Offered only in the second semester. 2 hours. 2 credits. COCKRELL.

Nature; elements; discharge; assignment; redemption; foreclosure; injunction and account; extent of the lien; priority between mortgage liens and competing claims; equity of redemption. Keigwin, *Cases on Mortgages.*

**Lw. 516.—Practice Court.** 6 hours laboratory. 1 credit. TE SELLE, DAY.

Preparation of pleadings and trials of civil and equity cases.

**Lw. 517.—Practice Court.** 3 hours laboratory. 1 credit. COCKRELL.

Preparation of indictments and informations, and trial of criminal cases.

**Lw. 518.—Trial Practice, II.** 2 hours. 2 credits. TE SELLE.

New trials; bills of exceptions; appellate proceedings; new rules of civil procedure. McBaine, *Cases on Trial Practice, Federal Rules of Civil Procedure*, selected cases.

**Lw. 519.—Trial Practice, I.** 2 hours. 2 credits. TE SELLE.

Jurisdiction; process; the jury; instructions; trials; verdicts; judgments. McBaine, *Cases on Trial Practice.*

**Lw. 520.—Creditors' Rights.** 3 hours. 3 credits. TE SELLE.

Remedies of the unsecured creditor; fraudulent conveyances; creditors' agreements; general assignment for benefit of creditors; equity and statutory receiverships; bankruptcy. Holbrook and Aigler, 4th edition.

**Lw. 521.—Trusts.** 2 hours. 2 credits. DAY.

The Anglo-American system of uses and trusts; creation, transfer, extinguishment of trust interests; priorities between competing equities; construction of trust dispositions. *Bogert on Trusts;* selected cases.

**Lw. 530.—Administrative Law.** 2 hours. 2 credits. SLAGLE.

Creation of administrative tribunals; legislative functions; judicial functions; administrative functions; doctrine of separation of powers; limits upon discretion; securing information; notice and hearing; enforcement of rules and orders; control of action; judicial relief. Stason, *Cases and Materials on Administrative Tribunals.*

**Lw. 531.—Equitable Remedies.** 2 hours. 2 credits. CRANDALL.

Interpleader; bills of peace; bills quia timet; removal of cloud on title; declaratory judgments. Chafee, *Cases on Equitable Remedies.*

**Lw. 601.—Legal Research. Private Research.** 1 to 3 credits. Prerequisite: Juniors: 2.5 honor point average; Seniors: 2.0 honor point average.

Mature investigation of special problems in substantive or adjective law, jurisprudence or legal history, under the supervision of a member or members of the faculty.

**Lw. 602.—Legal Research. Private Research.** 1 to 3 credits. Prerequisite: Juniors: 2.5 honor point average; Seniors: 2.0 honor point average.

Mature investigation of special problems in substantive or adjective law, jurisprudence or legal history, under the supervision of a member or members of the faculty.

## MATHEMATICS

**C-42.—General Mathematics.** Offered each semester. 4 hours. 4 credits. STAFF.

Designed to acquaint the student with the general nature of mathematics, the manner in which the mathematical mode of thought is used in the world of today, and the role which it has occupied in the development of that world. A survey of some of the fundamental principles and methods of procedure in the main branches of elementary mathematics, with considerable attention being given to the utilization and cultural importance of the subject and its relations to other branches of knowledge.

**CMs. 23.—Basic Mathematics.** Offered each semester. 4 hours. 4 credits. STAFF. The first half of the course CMs. 23-24. Prerequisite: C-42, except for the superior group in Mathematics.

CMs. 23-24: Designed for General College students. In place of the traditional college algebra, trigonometry, and analytic geometry in succession, this course offers a completely new sequence of topics including much of the above plus a liberal amount of the calculus. Thus the student will obtain early a working knowledge of such mathematics as is basic to the study of the sciences and other subjects, and needed for the cultivation of habits productive of clear thinking, writing, and speaking. Moreover, the choice of material is so made as to present mathematics as an integrated whole, and at the same time to show its correlation with other subjects in the curriculum.

**CMs. 24.—Basic Mathematics.** Offered each semester. 4 hours. 4 credits. STAFF. The second half of the course CMs. 23-24.

**Ms. 215.—Plane Trigonometry and Logarithms.** 3 hours. 3 credits.

The solution of the triangle; practical applications of logarithms; trigonometric analysis.

**Ms. 302.—Plane Analytic Geometry.** 3 hours. 3 credits. Prerequisite: CMs. 23-24 or equivalent.

The algebraic study of the figures of geometry and the plane sections of a cone. Higher plane curves. Systems and transformation of coordinates.

**Ms. 308.—Business Mathematics.** 3 hours. 3 credits. Prerequisite: C-42 or equivalent.

Modern mathematical treatment of the problems of banking and business. Derivation and application of numerous formulas of importance in the financial world.

**Ms. 311.—Advanced College Algebra.** 3 hours. 3 credits. PIRENIAN. The first half of the course Ms. 311-312. Prerequisite: CMs. 23-24, or equivalent.

Ms. 311-312: The further treatment of some of the material and processes of CMs. 23-24, and the introduction to more advanced topics. Hall and Knight, *Higher Algebra.*

**Ms. 312.—Advanced College Algebra.** 3 hours. 3 credits. PIRENIAN. The second half of the course Ms. 311-312.

**Ms. 320.—Theory of Equations.** 3 hours. 3 credits. Prerequisite: CMs. 23-24 or equivalent.

Theorems and methods of solution relating to equations of higher degree. Dickson, *First Course in the Theory of Equations.*

**Ms. 325.—Advanced General Mathematics.** 3 hours. 3 credits. KOKOMOOR. Prerequisite: Consent of instructor.

Continuation of the arithmetic and algebraic topics treated in C-42 together with some supplementary material. The deeper meaning of laws underlying number operations. Some properties of positive whole numbers. Equations of various types classified and general solutions given. Higher functional analysis. Valuable to prospective teachers of mathematics and others who wish to continue some mathematical work without becoming specialists in pure mathematics.

**Ms. 326.—Advanced General Mathematics.** 3 hours. 3 credits. KOKOMOOR. Prerequisite: Consent of instructor. May precede, follow, or be taken simultaneously with Ms. 325.

Continuation of the geometric and trigonometric topics treated in C-42 together with some supplementary material. The nature of a geometric proof. Types of proof. Problems in geometric construction. The generalization of theorems. Trigonometry as an extension of geometry. Analysis of the locus idea in mathematics. Field and laboratory work in geometry and trigonometry.

Valuable to prospective teachers of mathematics and others who wish to continue some mathematical work without becoming specialists in pure mathematics.

**Ms. 353.—Differential and Integral Calculus.** Offered each semester. STAFF. 4 hours. 4 credits. The first half of the course Ms. 353-354. Prerequisite: CMs. 23-24 or equivalent.

Ms. 353-354: Differentiation and integration. Typical problems solved by these methods are calculation of rates of change, computation of areas, volumes, moments of inertia, energy, power, and many others. Various advanced topics of special value to engineers and scientists.

**Ms. 354.—Differential and Integral Calculus.** Offered each semester. STAFF. 4 hours. 4 credits. The second half of the course Ms. 353-354.

**Ms. 385.—Advanced Trigonometry.** 3 hours. 3 credits. Prerequisites: Plane trigonometry and solid geometry, or CMs. 23-24.

Special emphasis on spherical trigonometry. The first part of the course consists of a recapitulation of the essentials of plane trigonometry and the development of some further topics in that field. Then follows a development of the formulas relating to triangles formed by great circles on a sphere.

**Ms. 402.—Solid Analytic Geometry.** 3 hours. 3 credits. Prerequisite: Consent of instructor.

An introductory course dealing with lines, planes, surfaces, transformations of coordinates, the general equation of the second degree, and properties of quadrics. Snyder and Sisam, *Analytic Geometry of Space.*

**Ms. 420.—Differential Equations.** Offered only the first semester. 3 hours. 3 credits. DOSTAL. Prerequisite: Ms. 353-354.

The classification, solution, and application of various equations which contain expressions involving not only variables, but also the derivatives of these variables. Conkwright, *Differential Equations.*

**Ms. 421.—Higher Mathematics for Engineers and Physicists.** Offered only in the second semester. 3 hours. 3 credits. DOSTAL. Prerequisite: Ms. 353-354.

Introduces the student to various mathematical fields. Sokolnikoff, *Higher Mathematics for Engineers and Physicists.*

**Ms. 431.—College Geometry.** 3 hours. 3 credits. KOKOMOOR.

The use of elementary methods in the advanced study of the triangle and circle. Special emphasis on solving original exercises. Valuable to prospective high school geometry teachers. Altshiller-Court, *College Geometry.*

GRADUATE COURSES

**Ms. 511-512.—Introduction to Higher Algebra**

**Ms. 518. —Theory of Groups of Finite Order**

**Ms. 519. —Theory of Probability and Theory of Sampling**

**Ms. 520. —Advanced Statistics**

**Ms. 521. —Empirical Analysis and Curve Fitting**

**Ms. 522. —Finite Differences and Interpolation**

**Ms. 524. —Synthetic Projective Geometry**

**Ms. 525-526.—Econometrics**

**Ms. 529-530.—Biometrics**

**Ms. 536. —Foundations of Geometry**

**Ms. 551-552.—Advanced Topics in Calculus**

**Ms. 555-556.—Functions of a Complex Variable**

**Ms. 559-560.—Functions of Real Variables**

**Ms. 568. —History of Elementary Mathematics**

**Ms. 575. —Fundamental Concepts of Modern Mathematics**

## MECHANICAL ENGINEERING

**Ml. 181.—Engineering Drawing.** Offered each semester. 1 hour, and 5 hours drawing. 2 credits. FRASH.

Designed to teach the student how to make and how to read engineering drawing. French, *Engineering Drawing.*

**Ml. 182.—Descriptive Geometry.** Offered each semester. 1 hour, and 5 hours drawing. 2 credits. FRASH. Prerequisite: Ml. 181.

The principles of projection and the development of surfaces. Higbee, *Drawing Board Geometry.*

**Ml. 287.—Mechanism and Kinematics.** Offered each semester. 2 hours, and 3 hours drawing. 3 credits. FINEREN. Prerequisites: CMs. 23-24, Ps. 205.

Revolving and oscillating bodies, link work, belts, pulleys, gears, and cams; trains of mechanisms and the velocity and directional ratio of moving parts. Schwamb, Merrill and James, *Elements of Mechanism.*

**Ml. 288.—Elementary Design.** Offered each semester. 2 hours, and 3 hours drawing. 3 credits. FINEREN. Prerequisite: Ml. 182.

The size and proportions of standard machine parts, screws, threads, bolts, nuts, pipe, pipe fittings, shafts, bearings, tolerances and allowances, riveted and welded joints, springs, lubrication, and design of simple machine parts. French, *Engineering Drawing.*

**Ml. 383.—Materials of Engineering.** 2 hours. 2 credits. ESHLEMAN. Prerequisites: Ps. 205-206, Cy. 101-102.

The properties, manufacture and testing of brick, concrete, timber, iron, steel, alloys, and non-ferrous metal; heat treatment and modifying processes. Moore, *Materials of Engineering.*

**Ml. 384.—Metallography.** 2 hours, and 2 hours laboratory. 2 credits. ESHLEMAN. Prerequisite: Ml. 383.

The crystal structure of ferrous and non-ferrous metals and their alloys; the iron-carbon diagram, heat treatment, and use of steel and cast iron. Williams and Homerburg, *Principles of Metallography.*

**Ml. 385.—Thermodynamics.** Offered each semester. 3 hours. 3 credits. EBAUGH, THOMPSON. Prerequisites: Ms. 353-354, Ps. 205-206, Cy. 101-102.

Energy equations and availability of energy; gases, vapors, and mixtures; engineering applications in flow of fluids, vapor power cycles, gas compression and refrigeration. Ebaugh, *Engineering Thermodynamics.*

**Ml. 386.—Power Engineering.** Offered each semester. 3 hours. 3 credits. EBAUGH, THOMPSON. Prerequisite: Ml. 385 or Cg. 467-8.

Steam and internal combustion engine power plants and their auxiliary equipment. Gaffert, *Steam Power Stations.*

**Ml. 387.—Mechanical Laboratory.** 1 hour, and 3 hours laboratory. 1 credit. THOMPSON, JANES. Corequisite: Ml. 385.

The preparation of engineering reports, computation aids, and the measurement of length, area, time, speed, pressure, and temperature. Shoop and Tuve, *Mechanical Engineering Practice.*

**Ml. 388.—Mechanical Laboratory.** 1 hour, and 3 hours laboratory. 1 credit. THOMPSON, JANES. Prerequisite: Ml. 387; Corequisite: Ml. 386.

Analysis of fuels, heating value, flue gas analysis, and the testing of boilers, turbines, engines and steam plant auxiliary apparatus. Shoop and Tuve, *Mechanical Engineering Practice.* A.S.M.E., *Power Test Codes.*

**Ml. 397.—General Machine Shop and Metal Work.** 6 hours lecture-laboratory. 3 credits. JANES. The first half of the course Ml. 397-398.

Ml. 397-398: Recommended for properly qualified students in the College of Education. It consists of classroom study and laboratory practice in pattern work, foundry, forging, welding and general machine-shop operation.

**Ml. 398.—General Machine Shop and Metal Work.** 6 hours lecture-laboratory. 3 credits. JANES. The second half of the course Ml. 397-398.

**Ml. 480.—Honors Course.** Required for students who expect to graduate with high honors.

**Ml. 481.—Internal Combustion Engines.** 3 hours. 3 credits. JANES. Prerequisite: Ml. 385.

Gas and liquid fuel, internal combustion engines, hot-air engines, and gas producers. Automotive, aircraft, and Diesel power plants. Streeter and Lichty, *Internal Combustion Engines.*

**Ml. 482.—Refrigeration and Air Conditioning.** 3 hours. 3 credits. EBAUGH. Prerequisite: Ml. 385.

Refrigerating and air conditioning apparatus and their applications to the industrial, commercial and residential fields. A.S.R.E., *Data Book;* Jennings and Lewis, *Air Conditioning.*

**Ml. 483.—Mechanical Laboratory.** 1 hour, and 3 hours laboratory. 1 credit. JANES. Prerequisite: Ml. 387; Corequisite: Ml. 481.

The testing of lubricants, gasolines, automobile engines, aircraft engines, and high and low speed Diesel engines. U. S. Government Specifications, *Lubricants and Liquid Fuels;* A.S.M.E., *Power Test Codes;* Shoop and Tuve, *Mechanical Engineering Practice.*

**Ml. 484.—Mechanical Laboratory.** 1 hour, and 3 hours laboratory. 1 credit. EBAUGH. Prerequisite: Ml. 387; Corequisite: Ml. 482.

Tests of an ammonia ice plant, freon direct expansion air conditioner, air washers, air conditioner, fans, the study of pneumatic and electric controls, and air distribution. A.S.M.E., A.S.R.E., and A.S.H.&V.E., *Test Codes,* Shoop and Tuve, *Mechanical Engineering Practice.*

**Ml. 485.—Aeronautics.** 2 hours. 2 credits. THOMPSON. Prerequisites: Ps. 205, 206.

The fundamentals of aircraft with introductory aerodynamics and the engineering requirements of mechanical flight. Chatfield, Taylor, and Ober, *The Airplane and Its Engine.*

**Ml. 486.—Aerodynamic Laboratory.** 4 hours laboratory. 1 credit. THOMPSON. Prerequisite: Ml. 487.

Aerodynamic experimentation on small models. Verification of aerodynamic theory. Methods and equipment used in aerodynamic research. Government publications and N.A.C.A. Reports.

**Ml. 487.—Aerodynamics.** 3 hours. 3 credits. THOMPSON. Prerequisites: Ig. 363-364, Ml. 385.

The flow of compressible fluids; the airfoil; propellers; airplane performance; control and surfaces; stability calculations. Wood, *Technical Aerodynamics.*

**Ml. 488.—Airplane Design.** 2 hours, and 3 hours laboratory. 3 credits. THOMPSON. Prerequisite: Ml. 487.

Introductory airplane design; layout principles; weight and balance analysis; the aerodynamics and preliminary design of a selected type of airplane. Department of Commerce Specifications, N.A.C.A. Reports, Wood, *Airplane Design.*

**Ml. 489.—Manufacturing Operations.** 1 hour, and 4 hours laboratory. 3 credits. JANES. The first half of the course Ml. 489-490. Prerequisite: Ig. 364.

Ml. 489-490: Machinery, materials, and methods used in manufacturing. Subjects covered include casting, forging, heat treatment, welding, cutting and machining of metals with applications of time and motion study and cost analysis. Roe and Lytle, *Factory Equipment.*

**Ml. 490.—Manufacturing Operations.** 1 hour, and 4 hours laboratory. 3 credits. JANES. The second half of the course Ml. 489-490.

**Ml. 491.—Machine Design.** 3 hours, and 3 hours drawing. 4 credits. FINEREN. Prerequisites: Ml. 288, 383, Ig. 363-364.

The calculation, proportioning and detailing of machine parts, shop and mill layout, and the design of machines to perform certain functions.

**Ml. 492.—Advanced Machine Design.** 2 hours, and 3 hours drawing. 3 credits. FINEREN. Prerequisite: Ml. 491.

A continuation of Ml. 491 with advanced problems in design.

**Ml. 493.—Mechanical Design.** 3 hours. 3 credits. EBAUGH and STAFF. The first half of the course Ml. 493-494.

**Ml. 494.—Mechanical Design.** 3 hours. 3 credits. EBAUGH and STAFF. The second half of the course Ml. 493-494.

**Ml. 495.—Power Plant Design.** 2 hours, and 3 hours laboratory. 3 credits. EBAUGH. Prerequisite: Ml. 386.

The selection of power plant equipment to meet given load conditions. Heat balances and layout are included.

**Ml. 497.—Seminar.** 1 hour. 1 credit. THOMPSON and STAFF. The first half of the course Ml. 497-498.

**Ml. 498.—Seminar.** 1 hour. 1 credit. THOMPSON and STAFF. The second half of the course Ml. 497-498.

GRADUATE COURSES

**Ml. 581-582.—Advanced Mechanical Design**

**Ml. 583-584.—Mechanical Research**

**Ml. 585. —Advanced Air Conditioning**

**Ml. 586. —Advanced Engineering Thermodynamics**

**Ml. 589-590.—Advanced Mechanical Laboratory**

## MILITARY SCIENCE

**My. 101.—First Year Infantry.** 2 hours theory, and 2 hours practical. HALLORAN. The first half of the course My. 101-102.

My. 101-102: Military fundamentals; discipline; military history; sanitation; first aid; organization; map reading; leadership; weapons; rifles and rifle marksmanship. War Department, *Training Regulations.*

**My. 102.—First Year Infantry.** 2 hours theory, and 2 hours practical. HALLORAN. The second half of the course My. 101-102.

**My. 103.—First Year Artillery.** 1 hour theory, and 3 hours practical. KEATINGE. The first half of the course My. 103-104.

My. 103-104: Military fundamentals; discipline; sanitation; first aid; organization; leadership; field artillery instruction; map reading.

**My. 104.—First Year Artillery.** 1 hour theory, and 3 hours practical. KEATINGE. The second half of the course My. 103-104.

**My. 201.—Second Year Infantry.** 2 hours theory, and 2 hours practical. BLAIN. The first half of the course My. 201-202.

My. 201-202: Military fundamentals; leadership; weapons—automatic rifle; characteristics of infantry weapons; scouting and patroling, combat principles of the rifle squad. War Department, *Training Regulations.*

**My. 202.—Second Year Infantry.** 2 hours theory, and 2 hours practical. BLAIN. The second half of the course My. 201-202.

**My. 203.—Horse Drawn Field Artillery.** Offered each semester. 1 hour theory, and 3 hours practical. ENNIS.

Leadership; transport; care of animals; equitation; driving and draft, horse-drawn; stable management; battery communications. War Department, *Training Regulations.*

**My. 204.—Motorized Field Artillery.** Offered each semester. 1 hour theory, and 3 hours practical.

Leadership; transport; care and operation of motor vehicles; driving and draft, motorized; fire control instruments. War Department, *Training Regulations.*

**My. 301.—Third Year Infantry.** 3 hours theory, and 3 hours practical. 2 credits. ROBERTS. The first half of the course My. 301-302.

My. 301-302: Military fundamentals; aerial photograph reading; leadership; weapons—machine gun, Howitzer company weapons, pistol; review of rifle marksmanship; combat training; defence against chemical warfare; administration; care and operation of motor vehicles; care of animals, and stable management. War Department, *Training Regulations.*

**My. 302.—Third Year Infantry.** 3 hours theory, and 3 hours practical. 2 credits. ROBERTS. The second half of the course My. 301-302.

**My. 303.—Third Year Field Artillery.** 3 hours theory, and 3 hours practical. 2 credits. DONALDSON. The first half of the course My. 303-304.

My. 303-304: Reconnaissance, selection and occupation of position; leadership; gunnery; transport; service of the piece; defence against chemicals; aerial photograph reading; transport, motorized.

**My. 304.—Third Year Field Artillery.** 3 hours theory, and 3 hours practical. 2 credits. DONALDSON. The second half of the course My. 303-304.

**My. 401.—Fourth Year Infantry.** 3 hours theory, and 3 hours practical. 2 credits. RING. The first half of the course My. 401-402.

My. 401-402: Military fundamentals; military history and policy; military law; O. R. C. regulations; leadership; weapons—tanks, mechanization combat training; property; emergency procurement and funds. War Department, *Training Regulations.*

**My. 402.—Fourth Year Infantry.** 3 hours theory, and 3 hours practical. 2 credits. RING. The second half of the course My. 401-402.

**My. 403.—Fourth Year Field Artillery.** 3 hours theory, and 3 hours practical. 2 credits. LUCAS. The first half of the course My. 403-404.

My. 403-404: Military history and policy; military law; leadership (work as an instructor in all practical basic field artillery subjects); tactics; O. R. C. regulations; property; emergency procurement and funds. War Department, *Training Regulations.*

**My. 404.—Fourth Year Field Artillery.** 3 hours theory, and 3 hours practical. 2 credits. LUCAS. The second half of the course My. 403-404.

## MUSIC

See page 311 for regulations concerning registration for Band.

**Msc. 101.—Orchestra Music.** 1 hour. 1 credit. BROWN. The first half of the course Msc. 101-102.

**Msc. 102.—Orchestra Music.** 1 hour. 1 credit. BROWN. The second half of the course Msc. 101-102.

**Msc. 107.—Sight Singing.** 1 hour. 1 credit. DEBRUYN.

Designed to equip the student with an adequate understanding of, and a working ability in, the reading and singing of notes. Some attention will be given to the technic of voice.

**Msc. 310.—Music Appreciation.** 1 hour, and 2 hours laboratory or audition. 2 credits. MURPHREE.

Intended to foster a better understanding and enjoyment of good music, by listening intensively to and discussing the works of a wide variety of composers.

May be taken in conjunction with C-5, or following C-5. Material to be presented not only for intrinsic cultural value, but also to benefit those interested in radio; place of music in commercial broadcasting, types of music required for various radio programs, will be considered.

Special topics: Bach and pre-Bach; Sonata form and development of the symphony; the Wagnerian music-drama; ultra-modern music.

More intensive use of the Carnegie Music Set.

**Bd. 111.—First Year Band.** 3 hours. 2 credits. BROWN.

**Bd. 112.—First Year Band.** 3 hours. 2 credits. BROWN.

**Bd. 211.—Second Year Band.** 3 hours. 2 credits. BROWN.

**Bd. 212.—Second Year Band.** 3 hours. 2 credits. BROWN.

## PAINTING

*Courses in the Department of Painting are carried on by means of the problem or project method, and accomplishment is the sole criterion for advancement. Consequently, the courses are of indeterminate duration, and the time listed for each course represents merely the nominal time which the average student will need to complete the work.*

*Students in the Department of Painting must complete the various courses in the sequence listed in their respective curricula. Students from other departments may, with the consent of the instructor and the approval of the Director, enroll in courses for which they have sufficient preparation.*

### *Lower Division*

**Pg. 11A.—Fundamentals of Pictorial Art.** HOLBROOK.

A comprehensive introductory course to the fields of painting and commercial art, carried on by means of a coordinated series of beginning projects emphasizing the principles of creative design. Problems in line, pattern, and color, followed by the development of pictures or commercial layouts. The study of light and shade, and color; drawing from the cast, model, and landscape; painting from still life. Acquaintance with various media including water color, pencil, charcoal, and oil. Six projects. Nominal time, 9 hours a week for 4 semesters, or 18 hours a week for 2 semesters. (Equivalent to 12 credits.)

### *Upper Division*

#### COMPOSITION

**Pg. 21A.—Pictorial Composition.** HOLBROOK.

A continuation of Pg. 11A for students in Painting. The study of principles, technique, and media. Fully developed pictures in oil, designs for mural decorations in water color, book illustrations, and small compositions. Nine projects correlated with Projects in Painting 1 to 9, inclusive. Nominal time, 9 hours a week for 3 semesters.

**Pg. 21B.—Pictorial Composition.** HOLBROOK.

A continuation of Pg. 21A for students in Painting. Development and completion of larger pictures in oil, designs for murals, and small compositions. Six projects correlated with Projects in Painting 10 to 15, inclusive. Nominal time, 15 hours a week for 2 semesters.

**Pg. 22A.—Commercial Design.** HOLBROOK.

A continuation of Pg. 11A for students in Commercial Art. The study of principles, technique, and media. The design of posters, wallpaper, rugs, and the like. The processes of duplicating graphic material, and a study of lettering. Six projects correlated with Projects in Commercial Art 1 to 6, inclusive. Nominal time, 9 hours a week for 2 semesters.

**Pg. 22B.—Commercial Design.** HOLBROOK.

A continuation of Pg. 22A for students in Commercial Art. Magazine covers, fixtures, book plates, magazine advertisements, book jackets and covers, illustrations, and the artistic development of an advertising campaign. Six projects correlated with Projects in Commercial Art 7 to 12, inclusive. Nominal time, 18 hours a week for 2 semesters.

#### DRAWING

**Pg. 31A.—Freehand Drawing.** HOLBROOK.

A continuation of Pg. 11A for students in Painting. Studies for projects and supplementary drawing from models. Nine projects correlated with Projects in Painting 1 to 9, inclusive. Nominal time, 18 hours a week for 3 semesters.

**Pg. 31B.—Freehand Drawing.** HOLBROOK.

A continuation of Pg. 31A for students in Painting. Studies for projects and supplementary drawing from models. Six projects correlated with Projects in Painting 10 to 15, inclusive. Nominal time, 12 hours a week for 2 semesters.

**Pg. 32A.—Freehand Drawing.** HOLBROOK.

A continuation of Pg. 11A for students in Commercial Art. Studies for projects, sketches from models, and studies in perspective. Six projects correlated with Projects in Commercial Art 1 to 6, inclusive. Nominal time, 12 hours a week for 2 semesters.

**Pg. 32B.—Freehand Drawing.** HOLBROOK.

A continuation of Pg. 32A for students in Commercial Art. Studies for projects and supplementary drawing from models. Six projects correlated with Projects in Commercial Art 7 to 12, inclusive. Nominal time, 12 hours a week for 2 semesters.

### HISTORY

**Pg. 41A.—History of Painting.** HOLBROOK.

For students in Painting. The history of painting with special attention to the principles of design as applied by painters of the past and present. Individual research, conferences, and illustrated reports. Six projects. Nominal time, 6 hours a week for 2 semesters.

### PAINTING

**Pg. 51A.—Oil Painting.** HOLBROOK.

A continuation of Pg. 11A for students in Painting. Painting of still life and the head. Six projects correlated with Projects in Painting 1 to 6, inclusive. Nominal time, 15 hours a week for 2 semesters.

**Pg. 51B.—Oil Painting.** HOLBROOK.

A continuation of Pg. 51A for students in Painting. Painting of the head and figure. Nine projects correlated with Projects in Painting 7 to 15, inclusive. Nominal time, 15 hours a week for 3 semesters.

**Pg. 52A.—Oil Painting.** HOLBROOK.

A continuation of Pg. 11A for students in Commercial Art. Painting of still life, landscapes, heads, and the figure. Six projects correlated with Projects in Commerical Art 1 to 6, inclusive. Nominal time, 12 hours a week for 2 semesters.

**Pg. 52B.—Water Color.** GRAND.

A continuation of Pg. 52A for students in Commercial Art. Still life and simple landscapes in water color. Six projects correlated with Projects in Commercial Art 7 to 12, inclusive. Nominal time, 9 hours a week for 2 semesters.

### THESIS IN PAINTING

**Pg. 61A.—Thesis.** HOLBROOK, GRAND. Prerequisite: Completion of all other requirements for the degree.

A final comprehensive problem in painting presented as a representative piece of professional work in the student's particular medium and field with full preliminary studies and cartoon. The subject must be approved by the faculty in time to permit not less than 12 weeks for the development of the problem. One project. Nominal time, 48 hours a week for 1 semester.

### GRADUATE COURSES

**Pg. 501-502.—Pictorial Composition**

**Pg. 523-524.—Oil Painting**

## PHARMACOGNOSY

**Pgy. 221.—Practical Pharmacognosy.** 6 hours laboratory. 3 credits. EDWARDS. The first half of the course Pgy. 221-222.

Pgy. 221-222: Sources of crude drugs and systematic classification of the vegetable and animal drugs of the United States. Pharmacopoeia and National Formulary. Youngken, *Textbook of Pharmacognosy; United States Pharmacopoeia and National Formulary.*

**Pgy. 222.—Practical Pharmacognosy.** 6 hours laboratory. 3 credits. EDWARDS. The second half of the course Pgy. 221-222.

**Pgy. 242.—Drug Plant Histology.** Offered only in the first semester. 4 hours laboratory. 2 credits. EDWARDS.

Internal structure of medicinal plants. Cellular elements and types of tissues used as diagnostic characters in identification and detection of adulterations.

**Pgy. 342.—Microscopy of Drugs.** 4 hours laboratory. 2 credits. EDWARDS. Prerequisite: Pgy. 242.

Microscopic structures and characteristics of types of drugs, methods of identification of powdered drugs and food products, and of detecting adulterations.

**Pgy. 442.—Commercial Methods.** 2 hours, and 2 hours laboratory. 3 credits. JOHNSON.

A study of the economics of the crude drug industry. Sources of supply, importations, preparation and commercial distribution.

GRADUATE COURSES

**Pgy. 501. —Advanced Histology and Microscopy of Vegetable Drugs**

**Pgy. 521-522.—Special Problems in Pharmacognosy**

**Pgy. 525-526.—Drug Plant Analysis**

## PHARMACOLOGY

**Ply. 351.—Pharmacology.** 3 hours. 3 credits. EDWARDS. Prerequisite: Pgy. 221-222.

The manner of action, dosage, therapeutic uses, and toxicology of official and non-official drugs and poisons. Sollmann, *A Manual of Pharmacology; United States Pharmacopoeia and National Formulary.*

**Ply. 362.—Pharmacological Standardization.** 2 hours, and 4 hours laboratory. 4 credits. EDWARDS. Prerequisite: Ply. 351.

A continuation of pharmacology begun in Ply. 351 with special emphasis on biological assaying, employing the official methods. Sollmann, *A Manual of Pharmacology; United States Pharmacopoeia and National Formulary.*

**Ply. 451.—Principles of Biologicals.** 3 hours. 3 credits. EDWARDS. Prerequisite: Ply. 362.

Advanced study of the pharmacology of drugs and pharmacological standardization with special reference to toxins, antitoxins, serums and vaccines.

**Ply. 452.—Principles of Biologicals.** 3 hours. 3 credits. EDWARDS.

A study of gland products and vitamins with reference to action, standardization and uses.

**Ply. 455.—New Remedies.** 2 hours, and 2 hours laboratory. 3 credits. FOOTE. The first half of the course Ply. 455-456. Prerequisite: Phy. 353 or Phy. 354.

Ply. 455-456: A study of the most important non-official remedies currently found in modern prescription practice and over-the-counter sales. More than twelve hundred remedies are available for study.

**Ply. 456.—New Remedies.** 2 hours, and 2 hours laboratory. 3 credits. FOOTE. The second half of the course Ply. 455-456.

GRADUATE COURSES

**Ply. 512. —Advanced Pharmacology**

**Ply. 514. —Advanced Pharmacology Laboratory**

**Ply. 517. —Clinical Methods**

**Ply. 551-552.—Special Problems in Pharmacology**

## PHARMACY

**Phy. 211.—Inorganic Pharmacy.** 3 hours, and 4 hours laboratory. 5 credits. HUSA. Prerequisites: Cy. 101-102, Phy. 223-224.

The inorganic compounds used in medicine; their Latin titles, origin, and physical, chemical, and physiological properties; their preparation and use in compounding remedies.

**Phy. 223.—Galenical Pharmacy.** 2 hours, and 3 hours laboratory. 3 credits. HUSA. The first half of the course Phy. 223-224. Prerequisite or corequisite: Cy. 101-102.

Phy. 223-224: Galenical preparations such as syrups, spirits, tinctures, extracts, and emulsions. The preparation of these materials extemporaneously on a small scale, and their manufacture in larger amounts.

**Phy. 224.—Galenical Pharmacy.** 2 hours, and 3 hours laboratory. 3 credits. HUSA. The second half of the course Phy. 223-224.

**Phy. 353.—Organic and Analytical Pharmacy.** Offered only in the second semester. 3 hours, and 6 hours laboratory. 5 credits. FOOTE. The first half of the course Phy. 353-354. Prerequisites: Cy. 262; Pgy. 222; Phy. 223-224.

Phy. 353-354: The chemistry and pharmacy of natural and synthetic drugs, including qualitative drug analysis.

**Phy. 354.—Organic and Analytical Pharmacy.** Offered only in the first semester. 3 hours, and 6 hours laboratory. 5 credits. FOOTE. The second half of the course Phy. 353-354. May be taken before Phy. 353 if the prerequisites are satisfied.

**Phy. 361.—Prescriptions and Dispensing.** 2 hours, and 6 hours laboratory. 4 credits. HUSA. The first half of the course Phy. 361-362. Prerequisites: Phy. 211; Prerequisites or corequisites: Phy. 353; Phy. 354.

Phy. 361-362: Methods of compounding and dispensing various types of prescriptions, methods of detecting and overcoming incompatibilities, accepted methods of checking, pricing and filing prescriptions, professional pharmacy, hospital pharmacy and dental pharmacy. Husa, *Pharmaceutical Dispensing.*

**Phy. 362.—Prescriptions and Dispensing.** 2 hours, and 6 hours laboratory. 4 credits. HUSA. The second half of the course Phy. 361-362.

**Phy. 372.—Commercial Pharmacy.** 4 hours. 4 credits. HUSA. Prerequisite: Phy. 211.

The management of the retail pharmacy; business management, including merchandise information, retail buying, advertising, salesmanship, and accounting.

**Phy. 381.—Pharmaceutical Jurisprudence.** 2 hours. 2 credits. JOHNSON. Prerequisite: Phy. 211.

National, state, and local laws and regulations governing the practice of pharmacy; the pharmacist's liability, both criminal and civil, for his own violation of laws and for violation on the part of his agents.

**Phy. 402.—Pharmaceutical Arithmetic.** 2 hours. 2 credits. JOHNSON. Prerequisite: Phy. 354.

Calculations used in pharmaceutical work with emphasis on practical problems.

**Phy. 432.—Advanced Drug Analysis.** 1 hour, and 6 hours laboratory. 3 credits. FOOTE. Prerequisite: Phy. 353-354.

The more difficult analytical methods of the *United States Pharmacopoeia*, supplemented by other methods.

### GRADUATE COURSES

**Phy. 502.—Selected Topics in Pharmacy**

**Phy. 503.—Advanced Pharmacy**

**Phy. 504.—Advanced Galenical Pharmacy**
**Phy. 541.—Manufacturing Pharmacy**
**Phy. 553.—Synthetic Pharmaceuticals**
**Phy. 554.—Advanced Pharmacy**

## PHILOSOPHY

**Ppy. 301.—Ethics.** 3 hours. 3 credits. ENWALL.

The ethical problems are presented in their logical as well as in their historical perspective. The following topics are samples: God and Evil, Happiness, Duty, Freedom, and Personality.

**Ppy. 302.—The Philosophy of Religion.** 3 hours. 3 credits. ENWALL.

An endeavor to evaluate the religious consciousness. Readings and discussions will center around theism, agnosticism, naturalism, and humanism.

**Ppy. 303.—Introduction to Philosophy. (Formerly CPp. 54).** 3 hours. 3 credits. ENWALL.

This course attempts to serve as a broad survey of philosophic problems and especially modern philosophic problems, such as evolution, the moral consciousness, progress, the principles of aesthetics, and the meaning of religion. It is a foundation course.

**Ppy. 401.—Advanced Logic Seminar.** 2 hours. 3 credits. ENWALL. The first half of the course Ppy. 401-402. Prerequisites: Ppy. 409-410.

Ppy. 401-402: Theories of thought and knowledge.

**Ppy. 402.—Advanced Logic Seminar.** 2 hours. 3 credits. ENWALL. The second half of the course Ppy. 401-402.

**Ppy. 403.—Philosophy of Nature Seminar.** 2 hours. 3 credits. ENWALL. The first half of the course Ppy. 403-404. Prerequisites: Ppy. 409-410.

Ppy. 403-404: Man's relation to nature. The various philosophical doctrines: Materialism, pantheism, realism, agnosticism, humanism, idealism, et cetera.

**Ppy. 404.—Philosophy of Nature Seminar.** 2 hours. 3 credits. ENWALL. The second half of the course Ppy. 403-404.

**Ppy. 407.—The Philosophic Conceptions of the Great English Poets.** 2 hours. 3 credits. ENWALL.

Selected plays from Shakespeare; the philosophic poems of Wordsworth.

**Ppy. 408.—The Philosophic Conceptions of the Great English Poets.** 2 hours. 3 credits. ENWALL.

The philosophic poems of Browning and Tennyson.

**Ppy. 409.—History of Ancient Philosophy.** 3 hours. 3 credits. ENWALL.

The development of philosophic thought from its appearance among the Ionic Greeks to the time of Descartes.

**Ppy. 410.—History of Modern Philosophy.** 3 hours. 3 credits. ENWALL.

A continuation of Ppy. 409. Special attention given to the works of Descartes, Spinoza, Leibnitz, Hume, and Kant.

**Ppy. 412.—Outstanding Personalities and Problems in Philosophy.** 2 hours. 2 credits. ENWALL. Prerequisites: Ppy. 409-410.

This course is intended, primarily, for those students who desire to acquaint themselves with the more fundamental problems of philosophy, but are unable to take the time required for Ppy. 409, 410.

### GRADUATE COURSES

**Ppy. 501-502.—Advanced Logic, Seminar**
**Ppy. 503-504.—Advanced History of Philosophy**
**Ppy. 505-506.—Philosophy of Nature, Seminar**
**Ppy. 507-508.—Hume and Kant, Seminar**

## PHYSICAL EDUCATION

**Pl. 101.—Physical Education.** 3 hours of instruction and activity. The first half of the course Pl. 101-102.

Pl. 101-102: The program is designed to present training and instructional opportunities in the following sports: ping pong; shuffle board, field sports, tumbling and apparatus, wrestling, boxing, water sports, golf, tennis, horse shoes.

**Pl. 102.—Physical Education.** 3 hours of instruction and study. The second half of the course Pl. 101-102.

**Pl. 201.—Second Year Physical Education.** 3 hours. The first half of the course Pl. 201-202.

Pl. 201-202: Advanced techniques in the work offered in Pl. 101-102.

**Pl. 202.—Second Year Physical Education.** 3 hours. The second half of the course Pl. 201-202.

## PHYSICS

**Ps. 101.—Elementary Physics.** Offered each semester. 4 hours. 3 credits. BLESS, PERRY, KNOWLES, WILLIAMSON. The first half of the course Ps. 101-102. Prerequisites: C-2, or consent of instructor. Corequisite: Ps. 103. May be taken for credit without Ps. 102.

Ps. 101-102: A course in general physics for science students.

**Ps. 102.—Elementary Physics.** Offered each semester. 4 hours. 3 credits. BLESS, PERRY, KNOWLES, WILLIAMSON. The second half of the course Ps. 101-102. Corequisite: Ps. 104.

**Ps. 103.—Laboratory for Ps. 101.** Offered each semester. 3 hours laboratory. 2 credits. BLESS and STAFF. The first half of the course Ps. 103-104. Corequisite: Ps. 101. May be taken for credit without Ps. 104.

**Ps. 104.—Laboratory for Ps. 102.** Offered each semester. 3 hours laboratory. 2 credits. BLESS and STAFF. The second half of the course Ps. 103-104. Corequisite: Ps. 102.

**Ps. 205.—Engineering Physics.** 4 hours. 3 credits. PERRY, SWANSON. The first half of the course Ps. 205-206. Prerequisite: One year of college mathematics. Corequisite: Ps. 207, Ms. 353. May be taken for credit without Ps. 206.

Ps. 205-206: Theory of mechanics, heat, sound, electricity, and light.

**Ps. 206.—Engineering Physics.** 4 hours. 3 credits. PERRY, SWANSON. The second half of the course Ps. 205-206. Corequisite: Ps. 208, Ms. 354.

**Ps. 207.—Laboratory for Physics 205 and 211.** 3 hours laboratory. 1 credit. PERRY and STAFF. The first half of the course Ps. 207-208. Corequisite: Ps. 205 or Ps. 211. May be taken for credit without Ps. 208.

**Ps. 208.—Laboratory for Physics 206 and 212.** 3 hours laboratory. 1 credit. PERRY and STAFF. The second half of the course Ps. 207-208. Corequisite: Ps. 206 or Ps. 212.

**Ps. 211.—Elementary Physics.** 5 hours. 4 credits. WILLIAMSON, PERRY. The first half of the course Ps. 211-212. Prerequisite: CMs. 23-24. Corequisite: Ps. 207.

Ps. 211-212: Designed to meet the needs of students majoring in physics and others who are qualified and desire to cover more material and problem work than is possible in Ps. 101-102 or Ps. 205-206.

**Ps. 212.—Elementary Physics.** 5 hours. 4 credits. WILLIAMSON, PERRY. The second half of the course Ps. 211-212. Corequisite: Ps. 208.

**Ps. 221.—Recent Advances in Physics.** 2 hours. 2 credits. BLESS. Prerequisite: C-2.

A cultural, non-mathematical course for the general student who does not major in the physical sciences, but who desires to have an understanding of the science of physics as a part of his cultural training. It is hoped that this course will enable the student to follow intelligently the advances in the sciences as they appear in the press. Contents: Historical development; the electrical age; discovery of the electron; X-rays, radio-activity; quantum physics; relativity; wave mechanics; nuclear physics; transmutation of elements; medical and biological applications of the new discoveries.

**Ps. 224.—Sound and Its Application.** 2 hours. 2 credits. WILLIAMSON. Prerequisite: C-2.

A course for the general student, not majoring in the sciences, but interested in the various phases of sound, with emphasis on music. Contents: Sound waves; sources of sound; reception and recording; musical instruments; the voice and hearing; radio transmission and reception; depth sounding; supra-sonics.

**Ps. 226.—Agricultural Physics.** 3 hours. 3 credits. KNOWLES. Prerequisite: C-2. Open only to General College students preparing for Agriculture or to students in the College of Agriculture.

Designed for students majoring in Agriculture. The subject matter is confined to the material having direct applications in the field of agriculture. An attempt is made to give the student a working knowledge of the fundamental physical principles which he will encounter in his work in soils, agricultural engineering, plant physiology, dairying.

**Ps. 292.—Meterology.** 2 hours, and 2 hours laboratory. 3 credits. PERRY. Prerequisite: C-2.

A brief general course, designed to give the student an insight into the physical processes and laws underlying the phenomena of weather and climate. It is to satisfy the interested curiosity of the general student as well as to furnish a foundation for further study on the part of those, such as aviation students, who are interested from the practical standpoint.

**Ps. 303.—Experimental Physics.** 6 to 9 hours laboratory. 2 or 3 credits. STAFF. The first half of the course Ps. 303-304. Prerequisite: One year of Physics.

Ps. 303-304: Experiments of a more advanced type than those of the elementary courses, together with study of the theory of the experiments and assigned reading, designed to meet the needs and interests of the individual students.

**Ps. 304.—Experimental Physics.** 6 to 9 hours laboratory. 2 or 3 credits. STAFF. The second half of the course Ps. 303-304.

**Ps. 307.—Heat.** 2 hours, and 3 hours laboratory. 3 credits. SWANSON. Prerequisite: One year of Physics. Corequisite: Calculus.

An intermediate treatment, with experiments to illustrate. Temperature and its measurement; combustion; specific heats; expansion; conduction; radiation; change of state; first and second laws of thermodynamics. Choice of experiments is permitted to meet the needs of the individual student.

**Ps. 309.—Light.** Offered only in the second semester. 2 hours, and 3 hours laboratory. 3 credits. SWANSON. Prerequisite: One year of physics. Corequisite: Calculus.

An intermediate treatment with experiments to illustrate. Lenses; optical instruments; interference; diffraction; dispersion; polarization; emission of spectra and Bohr theory. Choice of experiments is permitted to meet the needs of the individual student.

**Ps. 311.—Electricity and Magnetism.** 3 hours, and 3 hours laboratory. 4 credits. KNOWLES. Prerequisite: One year of college physics. Corequisite: Calculus.

A course designed to meet the growing need of physics, chemistry and biology students for a working knowledge of the basic principles of electricity, together with some familiarity with the various types of electrical measuring devices. Topics discussed include: basic principles of electrostatics; magnetism; direct current circuits, measurements, and instruments; electrolytic and voltaic cells, thermoelectricity; introduction to alternating currents; elementary principles of vacuum tube operation.

**Ps. 315.—Demonstrations in Physics.** Offered only in the Summer Session. 2 credits. SWANSON. Prerequisite: C-2 or consent of instructor.

Demonstrations in Physics and associated topics in sciences, designed for high school teachers of General Science as well as of Physics with the view of helping the teacher present clearly to the high school student some of the most fundamental principles of the Physical Sciences. Topics having a direct and significant bearing upon the teaching of Physics and General Science in high school will be selected. Special emphasis will be placed on the use of simple demonstration apparatus as an aid in clarifying the physical principles.

**Ps. 316.—Spectrochemical Analysis.** 2 hours, and 3 hours laboratory. 3 credits. SWANSON. Prerequisites: One year of Physics.

For students of Chemistry and Physics interested in chemical analysis carried out by spectrographic means. Lenses and spectrographic instruments; emission and absorption spectra and nomenclature; discharge in vacuo, arc and spark; qualitative spectrochemical analysis; quantitative spectrochemical analysis; absorption methods.

**Ps. 320.—X-rays and the New Physics.** 2 hours, and 3 hours laboratory. 3 credits. BLESS. Prerequisite: One year of college physics. Desirable corequisite: Calculus.

A companion course to Ps. 321. Also of interest to students wishing some knowledge of X-rays and their applications. The discovery of X-rays and radioactivity; the Bohr theory; photoelectric effect; X-ray spectroscopy; biological applications of X-rays; the neutron; positron; high voltage production and phenomena; cosmic rays.

**Ps. 321.—Advanced General Physics.** 3 hours. 3 credits. WILLIAMSON. Prerequisite: One year of college physics. Corequisite: Calculus.

Particularly suitable for those who wish to obtain a better understanding of the whole of the science and of the philosophic tendencies of the present day physics, as well as for students of mathematics who may be interested in physical applications. More quantitative treatment of some of the most fundamental laws of physics, including among other topics kinetic theory of gases, alternating and oscillating current phenomena, radio and television.

**Ps. 405.—Theoretical Mechanics.** 3 hours. 3 credits. BLESS. The first half of the course Ps. 405-406. Prerequisites: Two years of college physics; calculus.

Ps. 405-406: Statics of systems of rigid bodies. Motions of particles and of rigid bodies under constant and variable forces. (The same recitations are held for Ps. 505-506. Graduate students are required to solve problems of a more advanced character.)

**Ps. 406.—Theoretical Mechanics.** 3 hours. 3 credits. BLESS. The second half of the course Ps. 405-406.

**Ps. 412.—Advanced Electricity.** 2 hours, and 4 hours laboratory. 4 credits. KNOWLES. Prerequisite: Ps. 311 or equivalent, and calculus.

Varying and alternating current circuits, measurements, and instruments; complex algebra; solution of alternating current circuits; coupled circuits.

**Ps. 423.—Chemical Physics.** 3 hours. 3 credits. WILLIAMS. The first half of the course Ps. 423-424. Prerequisites: Two years of physics and two years of chemistry. May be taken for credit without Ps. 424.

Ps. 423-424: For students of Chemistry and Physics who are interested in the application of physical methods to chemical problems, as well as in the phenomena in the border regions between Chemistry and Physics. First semester: osmosis; kinetic theory of gases; concentration of isotopes; specific heats and heats of combustions; mass spectrography. Second semester: molecular dipole moments as determined from dielectic measurements; molecular structures as determined from band spectra, Raman spectra, and X-ray and electron diffraction.

**Ps. 424.—Chemical Physics.** 3 hours. 3 credits. WILLIAMS. The second half of the course Ps. 423-424. May be taken for credit without Ps. 423.

GRADUATE COURSES

**Ps. 503. —Kinetic Theory of Gases**

**Ps. 505-506.—Theoretical Mechanics**

**Ps. 508. —Thermodynamics**

**Ps. 510. —Physical Optics**

**Ps. 512. —Elements of Quantum Mechanics**

**Ps. 513-514.—Advanced Experimental Physics**

**Ps. 517-518.—Modern Physics**

**Ps. 521-522.—X-rays**

**Ps. 523-524.—Seminar in Modern Theory**

## PLANT PATHOLOGY

*Prerequisites to any course in Plant Pathology are Bty.* 303 *and* 304. *It is suggested that students secure permission to take Bly.* 101 *and* 102 *in place of* C-6 *in the Sophomore year.*

**Pt. 321.—Plant Pathology.** 2 hours, and 4 hours laboratory. 4 credits. WEBER. Prerequisite to all courses in Plant Pathology.

Presents a conception of (a) plant diseases caused by mechanical injury, environmental factors, parasitic bacteria, fungi and other plants, etc.; (b) life cycles and role of fungi and bacteria; (c) the economic importance and control of plant disease.

**Pt. 322.—Vegetable Diseases.** 1 hour, and 4 hours laboratory. 3 credits. WEBER.

A study of the most destructive diseases of tomatoes, potatoes, celery, peppers, cucumbers, etc., in Florida and recognition of vegetable diseases occurring elsewhere.

**Pt. 325.—Introduction to Forest Pathology.** 2 hours, and 4 hours laboratory. 4 credits. WEBER.

Designed to acquaint Forestry students with fundamentals of plant diseases in the field of Forestry.

**Pt. 334.—Fungicides.** 1 hour, and 4 hours laboratory. 3 credits. WEBER.

Ingredients, preparation, application and effectiveness of fungicidal liquids and dusts in plant disease control.

**Pt. 423.—Fruit Diseases.** 1 hour, and 4 hours laboratory. 3 credits. WEBER.

A detailed study of diseases of citrus and an acquaintance with diseases of certain subtropical fruits and peach, pear, apple, grape, cherry, plum, etc., occurring in the United States.

**Pt. 424.—Field Crop Diseases.** 1 hour, and 4 hours laboratory. 3 credits. WEBER.

A study of the diseases of the principal crops such as sugar cane, cotton, tobacco, peanuts, corn, soybeans, etc., their identification, cause and control.

**Pt. 434.—Mycology.** 6 hours laboratory. 3 credits. WEBER.

The classification of saprophytic and parasitic fungi based on their structure and form.

GRADUATE COURSES

**Pt. 523-524.—Advanced Plant Pathology**

**Pt. 541-542.—Problems in Plant Pathology**

## POLITICAL SCIENCE

**CPl. 13.—Political Foundations of Modern Life.** Offered each semester. 4 hours. 4 credits. DAUER. Prerequisite: C-1. Prerequisite to advanced courses in Political Science.

An examination of the principles and practices of our political institutions; how government functions in the United States; what information can be drawn from the practices of other countries.

**Pcl. 309.—International Relations.** 3 hours. 3 credits. CARLETON. The first half of the course Pcl. 309-310.

Pcl. 309-310: The nature of international relations, nationalism, imperialism, militarism, armaments; history of international relations; foreign policies; function and problems of democracy; international organization; the League of Nations and the World Court.

**Pcl. 310.—International Relations.** 3 hours. 3 credits. CARLETON. The second half of the course Pcl. 309-310.

**Pcl. 311.—American State and Municipal Administration.** 3 hours. 3 credits. CAWTHON. The first half of the course Pcl. 311-312.

Pcl. 311-312: A critical study of state administration with problems embracing that of Florida.

**Pcl. 312.—American State and Municipal Administration.** 3 hours. 3 credits. CAWTHON. The second half of the course Pcl. 311-312.

**Pcl. 313.—American Government and Politics.** 3 hours. 3 credits. PAYNE. The first half of the course Pcl. 313-314.

Pcl. 313-314: First semester: A study of the structure and function of the federal government. Second semester: A study of state, county, and municipal governments. This course is a prerequisite for other courses in Political Science and for students not entering the Upper Division from the General College.

**Pcl. 314.—American Government and Politics.** 3 hours. 3 credits. PAYNE. The second half of the course Pcl. 313-314.

**Pcl. 401.—American Constitutional Law.** 3 hours. 3 credits. LEAKE. The first half of the course Pcl. 401-402.

Pcl. 401-402: A complete study and analysis of the Federal Constitution, with study and briefing of leading cases in constitutional law.

**Pcl. 402.—American Constitutional Law.** 3 hours. 3 credits. LEAKE. The second half of the course Pcl. 401-402.

**Pcl. 403.—International Law.** 3 hours. 3 credits. DAUER. The first half of the course Pcl. 403-404.

Pcl. 403-404: The law of peace; case study of the application of international law in national courts; the subjects and objects of international law. Case study of the so-called law of war and the law of neutrality.

**Pcl. 404.—International Law.** 3 hours. 3 credits. DAUER. The second half of the course Pcl. 403-404.

**Pcl. 405.—History of Political Theory.** 3 hours. 3 credits. CAWTHON. The first half of the course Pcl. 405-406.

Pcl. 405-406: History of ancient, medieval, and modern political theories.

**Pcl. 406.—History of Political Theory.** 3 hours. 3 credits. CAWTHON. The second half of the course Pcl. 405-406.

**Pcl. 407.—Comparative Government.** 3 hours. 3 credits. DAUER. The first half of the course Pcl. 407-408.

Pcl. 407-408: Government of England, the British Commonwealth, France, Germany, Italy and Russia.

**Pcl. 408.—Comparative Government.** 3 hours. 3 credits. DAUER. The second half of the course Pcl. 407-408.

**Pcl. 409.—American Foreign Policy.** 3 hours. 3 credits. LAIRD.

**Pcl. 411.—Public Administration.** 3 hours. 3 credits. LAIRD. The first half of the course Pcl. 411-412.

**Pcl. 412.—Public Administration.** 3 hours. 3 credits. LAIRD. The second half of the course Pcl. 411-412.

GRADUATE COURSES

**Pcl. 501-502.—American Constitutional Law**
**Pcl. 503-504.—International Law**
**Pcl. 505-506.—Political Theory**
**Pcl. 507-508.—Comparative Government**
**Pcl. 509-510.—International Relations**
**Pcl. 511-512.—American State and Municipal Administration**
**Pcl. 513-514.—Seminar**
**Pcl. 611-612.—Public Administration**

## POULTRY HUSBANDRY

**Py. 301.—Fundamentals in Poultry Production.** 2 hours, and 2 hours laboratory. 3 credits. ANDERSON, EMMEL, MEHRHOF.

Economic importance of the industry; breeds and varieties; principles of production and exhibition judging; location and construction of buildings; breeding; hatching; brooding; rearing pullets; managing layers; feeding; marketing; diseases.

**Py. 312.—Advanced Incubation, Brooding, and Rearing.** 2 hours, and 2 hours laboratory. 3 credits. ANDERSON.

A study of the embryology of the chick, different types of hatchery equipment; incubation principles and practices; brooding equipment; methods of brooding chicks; rearing pullets; and caponizing. Chick sexing and judging. One or more field trips to hatcheries, broiler plants and poultry farms.

**Py. 314.—Poultry Feeds and Feeding.** 2 hours, and 2 hours laboratory. 3 credits. ANDERSON.

Principles of poultry nutrition and their application to poultry feeding: physiology of digestion, absorption and elimination. Nutritional requirements for different ages; suitable feeds, balancing rations, and practical feeding methods.

**Py. 415.—Poultry Management.** 2 hours, and 2 hours laboratory. 3 credits. MEHRHOF. Prerequisite: Py. 301 or 3 hours in any other poultry husbandry course.

Systematic study of poultry farming; types, farm layouts, successful poultry farms, cost and returns in egg production, factors relating to costs and returns in egg production and investment. One or more field trips to commercial poultry farms.

**Py. 416.—Poultry Management.** 2 hours, and 2 hours laboratory. 3 credits. MEHRHOF. Prerequisite: Py. 301 or 3 hours in any other poultry husbandry course.

Hatchery management: location, plans, investment, cost of producing chicks, factors affecting cost of baby chicks. Broiler production: equipment and designs of broiler plants, management of broilers; costs and returns of broiler production, factors affecting costs and investments. Pullet production: layout of pullet ranges, costs and returns in rearing pullets; factors affecting cost of production. One or more field trips to hatcheries, broiler plants, and commercial poultry farms.

**Py. 417.—Marketing Poultry Products.** Offered only in the second semester. 2 hours, and 2 hours laboratory. 3 credits. ANDERSON.

Preparation of eggs and poultry for market; grading, packing and storing of eggs and poultry. Study of egg and meat quality; judging eggs. Field trip to poultry markets.

**Py. 427.—Advanced Poultry Judging and Poultry Breeding.** 2 hours, and 2 hours laboratory. 3 credits. ANDERSON.

Study of classification and points of excellence. Theory and practice of judging birds for egg production and exhibition. Principles of genetics applied to poultry; the laws of heredity governing standard and production characters in poultry. Methods and practices of breeding and analysis of records. One or more trips to poultry shows and poultry breeding farms.

**Py. 429.—Problems in Poultry Production.** 1 to 4 credits. MEHRHOF, ANDERSON. The first half of the course Py. 429-430. Prerequisite: Permission of instructor.

Py. 429-430: Qualified students may choose a topic or problem for study. Problems that may be selected are housing and equipment, feeding, breeding, marketing, and management. Type and scope of work determine credits allowed.

**Py. 430.—Problems in Poultry Production.** 1 to 4 credits. MEHRHOF, ANDERSON. The second half of the course Py. 429-430.

GRADUATE COURSES

**Py. 531-532.—Advanced Poultry Management**

**Py. 533-534.—Poultry Research Problems**

## PSYCHOLOGY

**CPs. 43.—Psychological Foundations of Modern Life.** Offered each semester. 3 credits. HINCKLEY, WILLIAMS, MOSIER.

The social and personal implications of psychology to every day living. An understanding of human motivation and one's own personality. A study of how the individual acquires and organizes sensory experiences and how these are used in the guidance of effective thinking and behavior.

**Psy. 301.—Advanced General Psychology.** 3 hours. 3 credits. WILLIAMS. Prerequisite: CPs. 43.

An advanced critical and constructive consideration of the topics in the field of general psychology; methods, systems, mind-body relationships, consciousness, nervous structure, behavior, mental processes, affection, emotion, volition, learning, intelligence, self.

**Psy. 303.—Physiological Psychology.** 2 hours, and 2 hours laboratory. 3 credits. WILLIAMS. Prerequisite or corequisite: CPs. 43.

Lectures and laboratory work on the brain, spinal cord and nerves; muscles; glands; sense organs; and structure-functional relations. Designed and taught primarily for premedical and predental students and for students interested in neurology. Freeman, *Introduction to Physiological Psychology.*

**Psy. 304.—Experimental Psychology.** Offered each semester. 4 hours. 3 credits. WILLIAMS. Prerequisite or corequisite: CPs. 43.

Methods of psychological investigation; collection and treatment of data, individual differences, reactions, work and fatigue, sensations, perceptions, illusions, images, memory, attention, learning judgments. Foster and Tinker, *Experiments in Psychology.*

**Psy. 305.—Social Psychology.** Offered only in the second semester. 3 hours. 3 credits. WILLIAMS. Prerequisite: CPs. 43.

Influence of the social environment upon the mental, social, moral and emotional development of the child, the adolescent, and the adult. General orientation, typical and atypical forms of behavior, social stimulations and responses, social attitudes, social adjustments, language development, personality development, and social changes. Katz and Schanck, *Social Psychology.*

**Psy. 306.—Applied Psychology.** Offered only in the first semester. 3 hours. 3 credits. WILLIAMS. Prerequisite: CPs. 43.

Application of the principles and methods of psychology to the major problems in human relations. Application to business and industry, studies in the selection of personnel, employment, job analysis, effect of conditions of work, and methods of work on productivity. Psychological factors in advertising and selling. Problems of human motivation, individual differences, and personality.

**Psy. 307.—Legal Psychology.** Offered only in the second semester. 3 hours. 3 credits. MOSIER. Prerequisite: CPs. 43.

Application of the principles and methods of psychological thinking to problems in the legal field. Effect of sensation, perception, attention, memory, suggestion on the validity of testimony. Methods of obtaining and evaluating testimony. Psychological methods of detecting guilt. Mental disorder and mental defect in relation to legal problems of responsibility and crime. Problems in the psychology of delinquency. The judge, jury and lawyer as psychological individuals. Burtt, *Legal Psychology.*

**Psy. 309.—Personality Development.** Offered each semester. 3 hours. 3 credits. HINCKLEY. Prerequisite: CPs. 43.

A study of the mechanisms of personality formation, with special emphasis upon the varieties of human adjustment. The more inevitable problems of human life with their normal and abnormal solutions. The origin and modification of behavior. Processes of motivation and adjustment. Development and measurement of personality traits. Techniques of mental hygiene. Shaffer, *Psychology of Adjustment.*

**Psy. 310.—Abnormal Psychology.** Offered each semester. 3 hours. 3 credits. HINCKLEY. Prerequisite: CPs. 43.

A study of the abnormal phases of mental life, and the ways by means of which the individual develops abnormal habits of thinking and acting. A survey of the signs of beginning maladjustment and procedures which should be followed to correct these tendencies. Special suggestions are given for the prevention and treatment of mental disease. Morgan, *Psychology of Abnormal People.*

**Psy. 312.—Psychology of Problem Children.** Offered only in the first semester. 3 hours. 3 credits. WILLIAMS. Prerequisite: CPs. 43.

Individual differences, intelligence, feeble-mindedness, dull and backward children, superior and gifted children, speech and motor defects, sensory and neurological disorders, conduct problems, social and emotional maladjustments, and other topics concerning exceptional and mentally peculiar children. Scheidemann, *Psychology of Exceptional Children.*

**Psy. 314.—History and Systems of Psychology.** 3 hours. 3 credits. WILLIAMS. Prerequisite: CPs. 43.

A critical survey of the historical development of psychology from the early Greek period, with special emphasis on the contributions of the Germans, the French, the English, and representative writers as Aristotle, Descartes, Hobbes, Locke, the Mills, Fechner, Wundt, Binet, James and many others. The more recent trends, schools and systems as Structuralism, Functionalism, Behaviorism, and Gestalt Psychology. Pillsbury, *History of Psychology.*

**Psy. 401.—Readings in Experimental Psychology.** 3 hours. 3 credits. MOSIER. Prerequisites: CPs. 43, Psy. 304. It is advisable that this course be followed by Psy. 402.

A consideration of experimental literature in the fields of retention, conditioned response, learning transfer of training, feeling, emotion, reaction time, and association.

**Psy. 402.—Readings in Experimental Psychology.** 3 hours. 3 credits. MOSIER. Prerequisites: CPs. 43, Psy. 304. While not a prerequisite, it is advisable that Psy. 401 precede this course.

A consideration of experimental literature in the fields of psychophysics, sensation, perception of form, color and space, attention, problem-solving, and the higher thought processes.

**Psy. 405.—Theory of Psychological Measurement.** 2 hours, and 2 hours laboratory. 3 credits. MOSIER. Prerequisite: CPs. 43.

Quantitative methods of experimental psychology; collection and treatment of data; correlation; prediction. History of testing, nature of measurement, characteristics of groups, reliability of tests and the concept of correlation, validity, item analysis. Practice in the construction of mental tests.

**Psy. 406.—Psychological Tests.** 2 hours, and 2 hours laboratory. 3 credits. MOSIER. Prerequisite: CPs. 43.

Tests of general intelligence, special aptitudes, personality traits, and business ability; organization and administration; methods and results; theory of test construction and scoring; practical uses of tests.

**Psy. 408.—Comparative Psychology.** 3 hours. 3 credits. WILLIAMS. Prerequisites: CPs. 43 and 3 other hours in psychology.

A review of the psychological experiments in which animals were used as subjects with an attempt to trace the phylogenetic development of human behavior and intelligence. Innate and learned behavior. Motivation, individual differences, social conduct and ideational activities. Moss, *Comparative Psychology.*

GRADUATE COURSES

**Psy. 501-502.—Readings in Experimental Psychology**
**Psy. 505. —Advanced Statistical Methods in Psychology**
**Psy. 506. —Psycho-Physical Theory in the Construction of Tests**
**Psy. 508. —Advanced Comparative Psychology**
**Psy. 509. —Human Motivation**
**Psy. 510. —Social Psychiatry**
**Psy. 512. —Psychology of Problem Children**
**Psy. 514. —History and Systems of Psychology**
**Psy. 515. —Social Psychology**

## SOCIOLOGY

**CSy. 13.—Sociological Foundations of Modern Life.** 4 hours. 4 credits. MACLACHLAN. Prerequisite: C-1.

The basic forces in human society. Sociology in creative dependence upon the other social sciences. Social resources and complexities in modern America. The metropolitan environment and the social institutions. The American regions as social environments and as challenges to citizenship.

**Sy. 301.—Outlines of Sociology.** 3 hours. 3 credits. The first half of the course Sy. 301-302. Prerequisite: C-1.

Sy. 301-302: Persons in the totality of their social relations; the family and home; the community and methods of scientific study and appraisal; problems arising out of maladaptions in associational life such as those centering around population increase, decrease and abnormality in composition or quality; race relations; health, crime, poverty. A few trips to state institutions. The second semester will emphasize principles and processes of life in association, social values, and social progress. This course is required of all majoring in the department and is a prerequisite to all 400 courses except by special permission. CSy. 13 may be substituted for Sy. 301.

**Sy. 302.—Outlines of Sociology.** 3 hours. 3 credits. The second half of the course Sy. 301-302.

**Sy. 311.—Problems of Child Welfare.** 2 hours. 2 credits. Prerequisite or corequisite: Sy. 301 or equivalent.

Problems growing out of the physical and social maladjustments of the child; child labor; treatment of dependent and delinquent children; community organization for delinquency prevention. Special consideration of *Tomorrow's Children in the South.*

**Sy. 316.—The Field of Social Work.** 2 hours. 2 credits. MACLACHLAN and STAFF.

Administrative and promotional social work. Case work: Child welfare, family, medical, psychiatric, probation and parole, protective. Group social work: Boys' and girls' clubs, recreational, social settlement, scouting, etc. Social research and investigation. Field study of social work agencies in Gainesville and surrounding areas.

**Sy. 332.—Public Health and Sanitation.** Offered only in the second semester. 3 hours. 3 credits. EHRMANN and special lecturers.

Brief history of public health measures from ancient to modern times. Fundamental relation of man to his microbic enemies and physical environment. Sanitation. Organization, powers, functions, and accomplishments of special health departments: federal, state and local agencies.

**Sy. 337.—Social Anthropology.** Offered only in the second semester. 2 hours. 2 credits. EHRMANN.

Physical anthropology: physical characteristics of prehistoric and modern man; race distinction; distribution of races; a critical analysis of racial theories—Aryanism, Nordicism, Nazism. Archaeology. Cultural anthropology: the development of culture; a comparative study of representative cultures. The American Indian. The Timucua and Seminole Indians of Florida.

**Sy. 344.—Marriage and the Family.** Offered only in the first semester. 3 hours. 3 credits. EHRMANN.

The nature and development of domestic institutions, marriage and the family. Problems of adjustment to modern conditions. Changes in marital and domestic relations with particular emphasis on preparation for marriage. The status of women and laws pertaining to marriage in Florida. Divorce, family disorganization, child training.

**Sy. 415.—Social Legislation.** 2 hours. 2 credits. Prerequisite: Sy. 301-302 or consent of instructor.

The fields of social legislation; history of social legislation, especially in Florida. Principles of social legislation; study of the welfare aspects of our State Constitution and Compiled General Laws as compared with those of some other states. Suggested changes.

**Sy. 421.—Rural Sociology: Our Changing Rural Society.** 3 hours. 3 credits. MACLACHLAN. Prerequisite: Sy. 301-302 or consent of instructor.

American rural life and the changing regions. Major trends in relation to resources and problems. Leadership and development in the new order. Rural social and economic planning, pro and con. The rural resources of Florida.

**Sy. 423.—Social Pathology.** 3 hours. 3 credits. Prerequisite: Sy. 301-302 or consent of instructor.

The pathology of the individual, of domestic relation, of social organization and of cultural relations. Methods of treatment and prevention.

**Sy. 424.—Criminology.** 3 hours. 3 credits. MACLACHLAN. Prerequisite: Sy. 301-302 or consent of instructor.

Nature and causes of crime; punishment, treatment, prevention. Sociological aspects of criminal law and procedure.

**Sy. 426.—The City in American Life.** 3 hours. 3 credits. MACLACHLAN. Prerequisite: Sy. 301-302 or consent of instructor.

A study of the rising cities of America in their effects upon individuals and social institutions. Cultural change in American life as related to the sweep of invention and the dominance of the metropolitan region. The cities of 1940 are examined as centers of social change and of challenge to education, government, and other group realities. The principles of city and regional planning are reviewed via case studies of cities, and criticized in relation to their demands upon citizenship.

**Sy. 441.—Advanced Social Theory.** 3 hours. 3 credits. Prerequisite: Sy. 301-302.

**Sy. 442.—Applied Sociology.** 3 hours. 3 credits. Prerequisite: Sy. 301-302 or equivalent.

Theories developed in previous courses applied to a long-term program of improvement. Social investigation as the basis of social planning. Outstanding achievements in Europe and America.

**Sy. 443.—The American Negro.** Offered only in the first semester. 2 hours. 2 credits. EHRMANN.

Social, economic, and political aspects of racial problems in the United States with particular emphasis on the American negro. Brief history of the negro from early days of slavery to the present. Contrast between the cultures of the whites and the negroes in the North and South. Racial segregation and discrimination. The role of the negro in southern culture today.

**Sy. 447.—Social Research and Investigation.** 3 hours. 3 credits. MACLACHLAN.

The study and application of current methods of research in sociology. Study of procedures and organization of research organizations at work in the United States.

**Sy. 450.—Population Problems.** 3 hours. 3 credits. Offered only in the second semester. MACLACHLAN.

A study of the dramatic social effects of population changes in the modern world. The problems created by the rapid current changes in American population and a survey of methods of studying the relation of population changes and social trends.

**Sy. 490.—The South Today.** 3 hours. 3 credits. MACLACHLAN. Prerequisite: Sy. 301-302 or consent of the instructor.

The social resources and challenges of the modern South. Measures of southern culture. The place of the South in the nation. Programs and plans for the region reviewed and contrasted. A broad view of the foundations of southern life.

GRADUATE COURSES

**Sy. 511.—Problems of Child Welfare**

**Sy. 515.—Social Legislation**

**Sy. 521.—Rural Sociology: Our Changing Rural Society**

**Sy. 523.—Social Disorganization**

**Sy. 526.—The City in American Life**

**Sy. 531.—Development of Social Thought**

**Sy. 542.—Applied Sociology**

**Sy. 544.—Marriage and the Family**

**Sy. 548.—Community Organization**

**Sy. 560.—Special Topics**

**Sy. 571.—Social Research**

**Sy. 590.—The South; Regional Resources and Culture**

## SOILS

**Sls. 301.—Soils.** 2 hours, and 2 hours laboratory. 3 credits. SMITH and HENDERSON. Prerequisites: Acy. 125-126 or Cy. 101-102.

The nature and properties of soils with elementary treatment of genesis, morphology and classification. Soil types and problems in Florida.

**Sls. 302.—Soil Fertility.** 2 hours, and 2 hours laboratory. 3 credits. SMITH. Prerequisites: Sls. 301.

General principles of soil fertility. The physical, chemical and biological factors affecting soil fertility and crop production. Studies on samples of soil from the home farm; commercial fertilizers, manures, green manures and organic matter maintenance, crop rotations and permanent soil fertility.

**Sls. 401.—Soil Morphology and Classification.** 1 hour, and 4 hours laboratory. 3 credits. HENDERSON. Prerequisite: Sls. 301.

Soil genesis, morphology and classification including mapping; physical and chemical composition and reactivity of the important soils of Florida and of the United States in relation to their proper management as land surface units.

**Sls. 402.—Advanced Soil Fertility.** 3 hours. 3 credits. SMITH. Prerequisite: Sls. 302.

Soil and plant relationships especially from the standpoint of normal growth under field conditions; interrelationships of chemistry, physics and microbiology; mineral and organic balance, the role of trace elements; deficiency symptoms; quality production; fertilizer materials; placement and cultural relationships.

**Sls. 405.—Soil Microbiology.** 3 hours. 3 credits. SMITH. Prerequisites or corequisites: Sls. 302 and Bcy. 301.

Occurrence and activities of soil microorganisms and their influence on soil fertility.

**Sls. 408.—Soil and Water Conservation.** Identical with Ag. 408. 2 hours, and 2 hours laboratory. 3 credits. ALLISON and FRAZIER ROGERS. Prerequisites: Sls. 301, Ag. 301. Prerequisite or corequisite: Sls. 302.

The social and economic aspects of soil deterioration. Principles involved in soil conservation, and methods of control as applied to Florida, will be carefully developed. Given jointly with the Department of Agricultural Engineering.

**Sls. 420.—Special Problems in Soils.** 2 to 6 hours laboratory. 1 to 3 credits. SMITH.

Research problems in soils for qualified students in all departments of the College of Agriculture.

**Sls. 491.—Soils Seminar.** 1 hour. 1 credit. ALLISON. The first half of the course Sls. 491-492.

Assigned reading, reports and discussion of recent developments in soil science.

**Sls. 492.—Soils Seminar.** 1 hour. 1 credit. ALLISON. The second half of the course Sls. 491-492.

GRADUATE COURSES

**Sls. 501.—Advanced Soil Microbiology**
**Sls. 502.—Soil Chemistry**
**Sls. 507.—Advanced Special Soils**
**Sls. 508.—Advanced Special Soils**
**Sls. 551.—Research in Soil Fertility**
**Sls. 553.—Research in Soil Physics**
**Sls. 555.—Research in Soil Chemistry**
**Sls. 557.—Research in Soil Microbiology**
**Sls. 559.—Research in Land Use**

## SPANISH

IMPORTANT: With the exception of CSh. 33-34 and Sh. 201-202, all the courses in Spanish may be taken either semester for credit. In special instances Sh. 202 may by taken—with permission of the instructor—even though the student has not had Sh. 201. In all other courses the first semester is not a prerequisite for the second semester.

**CSh. 33.—Reading of Spanish.** 3 hours. 3 credits. FOGELQUIST, HATHAWAY. The first half of the course CSh. 33-34. Open to those students who have had no previous work in Spanish.

CSh. 33-34: Introduction to materials involved in the reading and speaking of Spanish, with special reference in content to South America.

**CSh. 34.—Reading of Spanish.** 3 hours. 3 credits. FOGELQUIST, HATHAWAY. The second half of the course CSh. 33-34.

**Sh. 201.—Second-Year Spanish.** 3 hours. 3 credits. FOGELQUIST, HATHAWAY. The first half of the course Sh. 201-202. Prerequisite: CSh. 33-34 or equivalent.

Sh. 201-202: Readings in representative Spanish and Latin-American literature of moderate difficulty. Conversation practice.

**Sh. 202.—Second-Year Spanish.** 3 hours. 3 credits. FOGELQUIST, HATHAWAY. The second half of the course Sh. 201-202.

**Sh. 263.—Spanish American Civilization.** 2 hours. 2 credits. HAUPTMANN, FOGELQUIST. *No knowledge of the Spanish language required;* no language credit allowed for the course.

A study of contemporary developments in Latin America, with emphasis upon background, social forces, and present trends.

**Sh. 264.—Spanish American Civilization.** 2 hours. 2 credits. HAUPTMANN, FOGELQUIST. *No knowledge of the Spanish language required;* no language credit allowed for the course.

A study of contemporary developments in Latin America, with emphasis upon literature and the arts.

**Sh. 303.—Masterpieces of Spanish Literature.** 3 hours. 3 credits. FOGELQUIST. Prerequisite: Sh. 201-202 or permission of instructor.

Reading and discussion of such eminent writers as Juan Ruiz, Rojas, Cervantes, and Lope de Vega. (Provision will be made for those students who wish to study South American literature.)

**Sh. 304.—Masterpieces of Spanish Literature.** 3 hours. 3 credits. FOGELQUIST. Prerequisite: Sh. 201-202 or permission of instructor.

Reading and discussion of such eminent writers as Perez Galdos, and the Nobel Prize winners Echegaray and Benavente.

**Sh. 313.—Advanced Composition and Conversation.** 3 hours. 3 credits. FOGELQUIST. The first half of the course Sh. 313-314. Prerequisite: Sh. 201-202 or permission of instructor.

Sh. 313-314: Training and practice in oral and written expression in Spanish.

**Sh. 314.—Advanced Composition and Conversation.** 3 hours. 3 credits. FOGELQUIST. The second half of the course Sh. 313-314. Prerequisite: Sh. 201-202 or permission of instructor.

**Sh. 323.—Commercial Spanish.** 3 hours. 3 credits. FOGELQUIST. Prerequisite: Sh. 201-202 or permission of the instructor.

Writing of business letters, circulars, and advertisements, with special emphasis upon South American usages.

**Sh. 324.—Commercial Spanish.** 3 hours. 3 credits. FOGELQUIST. Prerequisite: Sh. 201-202 or permission of instructor.

Further attention to business letters, and a study of commercial documents and business practices, stress being placed on those of South America.

**Sh. 403.—Literature of the Golden Age.** 3 hours. 3 credits. HAUPTMANN. Prerequisite: Sh. 303-304 or permission of the instructor.

A study of the leading dramatists and prose writers of the sixteenth century.

**Sh. 404.—Literature of the Golden Age.** 3 hours. 3 credits. HAUPTMANN. Prerequisite: Sh. 303-304 or permission of the instructor.

A study of the leading dramatists and prose writers of the seventeenth century.

**Sh. 405.—Contemporary Spanish Literature.** 3 hours. 3 credits. HAUPTMANN. Prerequisite: Sh. 303-304 or permission of the instructor.

Lectures and readings in the leading writers of the late nineteenth century.

**Sh. 406.—Contemporary Spanish Literature.** 3 hours. 3 credits. HAUPTMANN. Prerequisite: Sh. 303-304 or permission of the instructor.

Lectures and readings in the leading writers of the early twentieth century.

**Sh. 407.—South American Literature.** 3 hours. 3 credits. FOGELQUIST. Prerequisite: Sh. 303-304 or permission of the instructor.

Study of the leading dramatists and prose writers of Spanish-speaking Latin-America.

**Sh. 408.—South American Literature.** 3 hours. 3 credits. FOGELQUIST. Prerequisite: Sh. 303-304 or permission of the instructor.

Study of the most important recent writers of Spanish-speaking Latin-America. Particular attention is paid to the modernist movement.

**Sh. 413.—Phonetics.** 3 hours. 3 credits. HAUPTMANN. Prerequisite: Permission of the instructor.

Training and practice in the precise pronunciation of Spanish. Preliminary study of phonetics.

**Sh. 414.—Phonetics.** 3 hours. 3 credits. HAUPTMANN. Prerequisite: Permission of the instructor.

Training and practice in the precise and fluent speaking of Spanish.

**Sh. 430.—Individual Work.** Variable credit. HAUPTMANN.

Sh. 430 makes it possible for a student to study, for credit, certain phases of Spanish literature, language, and civilization for which there are no special course offerings. Through this means a student can complete an undergraduate major or graduate minor. Sh. 430 may be elected for additional credit in subsequent sessions. Students will be helped to plan a definite program, and will meet the instructor for frequent conferences.

GRADUATE COURSES

**Sh. 501-502.—Old Spanish**

**Sh. 503-504.—Golden Age**

**Sh. 505-506.—Contemporary Spanish Literature**

**Sh. 509. —Contemporary Latin-American Literature.**

**Sh. 530. —Individual Work**

## SPEECH

*In addition to the courses listed below the Department of Speech maintains a Speech Clinic which offers individual assistance to students desiring aid in overcoming speech defects. Applicants for this service should communicate as soon as possible with Professor Constans.*

**CSc. 33.—Effective Speaking.** Offered each semester. 4 hours. 4 credits. STAFF. Prerequisite: C-3. Prerequisite or corequisite to advanced courses in Speech.

Designed to aid the student through demonstration and practice to talk effectively to a group.

**Sch. 301.—Advanced Public Speaking.** Offered each semester. 3 hours. 3 credits. CONSTANS. Prerequisite: CSc. 33.

Structure, style, and delivery of speeches for formal occasions, with special emphasis on the psychology of audience persuasion. Practice in speaking before off-campus audiences.

**Sch. 303.—Argumentation and Debating.** 3 hours. 3 credits. HOPKINS. Prerequisite or corequisite: CSc. 33.

A study of the principles of argumentation and their application to issues of current public interest, with special reference to the national varsity debate question. All students expecting to join the debate squad should take this course.

**Sch. 304.—Argumentation and Debating.** 3 hours. 3 credits. HOPKINS. Prerequisite: Sch. 303.

A continuation of Sch. 303. This course is devoted to meeting the practical problems of debate.

**Sch. 307.—Interpretation of Literature.** 3 hours. 3 credits. Prerequisite or corequisite: CSc. 33.

Voice training: exercises for developing the effectiveness of the body and voice; oral reading of short stories and narrative poetry.

**Sch. 308.—Interpretation of Literature.** 3 hours. 3 credits. Prerequisite: Sch. 307, or consent of instructor.

Advanced oral interpretation of lyric poetry, dialect readings, novels, plays; arrangement and presentation of public programs.

**Sch. 311.—Speech Training for the Radio.** 4 hours. 3 credits. Prerequisite or corequisite: CSc. 33 and consent of instructor.

Study of vocal considerations for all uses of the microphone; writing and presentation of announcements, addresses, and radio continuity; preparation of radio drama.

**Sch. 312.—Courtroom Speaking.** 3 hours. 3 credits. CONSTANS. Prerequisite: CSc. 33.

Reading and analysis of courtroom speeches by famous lawyers, and presentation of original arguments based upon hypothetical cases. Designed primarily for students who contemplate entering Law. Hicks, *Famous American Jury Speeches.*

**Sch. 314.—Types of Public Discussion.** Offered only in the first semester. 2 hours. 2 credits. HOPKINS. Prerequisite: CSc. 33.

Study and practice in the principles and methods of group discussion. Special attention given to panel and open-forum discussion. How to use parliamentary procedure.

**Sch. 403.—One-Act Play.** 3 hours. 3 credits. CONSTANS. Prerequisite: CSc. 33.

The one-act play as a type of drama; the reading and criticism of the best one-act plays by contemporary writers; the technique of play-writing.

**Sch. 404.—Dramatic Production.** 3 hours. 3 credits. Prerequisite: CSc. 33.

Consideration of voice, line reading, and the principles of character interpretation; the problem of directing, stage equipment, costuming, lighting, and make-up. Rehearsal of plays.

**Sch. 405.—Famous American Speakers.** 3 hours. 3 credits. HOPKINS. Prerequisite: Sch. 301, or Sch. 303.

Speeches of the greatest American authors studied against the background of their lives and the issues of their times, with special emphasis on present political speeches.

**Sch. 406.—Famous British Speakers.** 2 hours. 2 credits. HOPKINS. Prerequisite: Sch. 301, or Sch. 303.

Speeches of the great British authors studied against the background of their lives and the issues of their times.

## VETERINARY SCIENCE

**Vy. 301.—Veterinary Anatomy and Physiology.** 2 hours, and 2 hours laboratory. 3 credits. SHEALY.

The skeleton; articulations; muscles; circulatory, digestive, urinogenital, respiratory, and nervous systems; endocrine glands; special senses.

**Vy. 401.—Livestock Diseases and Farm Sanitation.** 2 hours. 2 credits. SHEALY.

Control of the principal diseases of farm animals; dehorning, castration, restraint, and practical methods of farm sanitation.

**Vy. 402.—Poultry Diseases.** 2 hours. 2 credits. EMMEL.

Causes, symptoms, methods of prevention, and treatment of diseases of poultry.

### GRADUATE COURSES

**Vy. 543-544.—Problems in Animal Pathology**