

Bulletin of the

UNIVERSITY OF VERMONT  
AND STATE AGRICULTURAL COLLEGE

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BURLINGTON, VERMONT

MARCH  
1949

# Correspondence

ADMISSIONS: For all matters pertaining to the admission of undergraduate students, including requisitions for the catalogue, and information concerning rooms, tuitions, and scholarships *Director of Admissions*

Adult Education.....*Director of Adult Education*

College of Medicine.....*Dean, College of Medicine*

Foreign Study Program.....*Director of Admissions*

Graduate Division.....*Director of Graduate Study*

Summer Session.....*Director of the Summer Session*

TRANSCRIPTS OF RECORDS.....*Office of the Registrar*

EMPLOYMENT OF SENIORS AND ALUMNI *Director of Placement*

MATTERS OF ALUMNI INTEREST.....*Alumni Secretary*

MATTERS OF GENERAL UNIVERSITY INTEREST.....*The President*

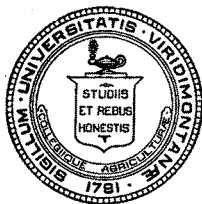
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BULLETIN of the  
UNIVERSITY OF VERMONT  
and STATE AGRICULTURAL COLLEGE



THE CATALOGUE - 1948-1949  
ANNOUNCEMENTS - 1949-1950

BURLINGTON

VERMONT

## U V M ★

§ The University is located at Burlington, Vermont, overlooking an attractive tree-shaded city situated on the shores of Lake Champlain.

§ Burlington, the largest city in the state with a population of 30,000, is 100 miles from Montreal, 240 miles from Boston, and 280 miles from New York City. The city enjoys fast daily plane service to these urban points in addition to regular railroad and bus service.

§ Chartered in 1791, the University is the eighteenth oldest institution of higher learning in the United States and the first institution founded by state legislative action to offer instruction at the university level.

§ Within the six divisions of the University, instruction is offered in fifty-two different curricula, of which thirty-seven are professional and fifteen non-professional.

§ The University is fully accredited by the following accrediting agencies and learned societies:

The Association of American Universities

The New England Association of Colleges and Secondary Schools

The Association of American Colleges

The Association of Colleges of Teacher Training

The American Medical Association

The American Society for Engineering Education

The American Chemical Society

§ Currently enrolled are 3,189 students, of whom 1,939 are residents of Vermont; the remainder represents 27 states and 9 foreign countries.

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★ UVM, the popular method of referring to the University, is derived from the Latin — *Universitas Viridis Montis*.

# UNIVERSITY OF VERMONT AND STATE AGRICULTURAL COLLEGE

## Educational Opportunities

The University of Vermont and State Agricultural College aims to provide for qualified young men and women the opportunity to acquire an understanding and appreciation of the main fields of human knowledge, to develop those qualities of mind and character which will enable them to assume responsible leadership among their fellow men, and to lay the foundations for successful careers. In the process of achieving these aims, the University believes that a student will grow in self-mastery and personal depth, will learn to reason logically, and will develop open-mindedness and tolerance toward the opinion of others.

The instructional activities of the University are organized under four colleges—Agriculture, Arts, Medicine, and Technology; the School of Education and Nursing; and the Graduate Council. Within these six instructional divisions, students may select from a wide variety of curricula.

### THE COLLEGE OF ARTS AND SCIENCES

The College of Arts and Sciences provides a general liberal four-year curriculum leading to the degree of Bachelor of Arts, with opportunity for concentration in one or more of the following departments: Botany, Chemistry, Economics, English, Geology, German, Greek, History, Latin, Mathematics, Music, Philosophy, Physics, Political Science, Psychology, Romance Languages (French and Spanish), and Zoology. It also offers a four-year professional curriculum leading to the degree of Bachelor of Science in Medical Technology.

All pre-professional requirements for admission to colleges of medicine, dentistry, law, and theology may be met in the College of Arts and Sciences by a proper selection of electives. Those who have completed three years of pre-medical study at the University are awarded the degree of Bachelor of Science after successfully completing one year of study in an approved college of medicine.

## THE COLLEGE OF TECHNOLOGY

The College of Technology offers four-year curricula leading to the degree of Bachelor of Science in Civil Engineering, Electrical Engineering, or Mechanical Engineering. Certain departments of this college also offer specialized four-year curricula leading to the professional degree of Bachelor of Science in Chemistry or the Bachelor of Science in Commerce and Economics (Business Administration).

Options in Commerce and Economics during the junior and senior years are: Accounting, Banking, Finance and Insurance, Business Administration, Industrial Management, Marketing and Merchandising, Personnel Management, and Secretarial Studies.

## THE COLLEGE OF AGRICULTURE

The College of Agriculture offers a four-year curriculum leading to the degree of Bachelor of Science in Agriculture, which includes both general and specialized training. The fields of specialization are Agricultural Economics, Agricultural Education, Agronomy, Botany, Dairy Manufacturing, Dairy Production, Horticulture, and Poultry Husbandry. There is also offered in co-operation with the College of Technology a four-year curriculum in Agricultural Engineering which leads to the degree of Bachelor of Science in Agricultural Engineering. A two-year program of courses is offered to prepare students for admission to professional training in veterinary science and forestry at other institutions.

The College of Agriculture also offers a four-year curriculum leading to the degree of Bachelor of Science in Home Economics, with specialization in one of the following fields: Food and Nutrition; Clothing, Textiles, and Related Arts; Home Economics Education; and General Home Economics.

## THE SCHOOL OF EDUCATION AND NURSING

The School of Education and Nursing offers four-year curricula leading to the following degrees: in Elementary, Junior High, Secondary, and Industrial Education, the degree of Bachelor of Science in Education; in Business Education, the degree of Bachelor of Science in Business Education; and in Music Education, the degree of Bachelor of Science in Music Education.

This School also offers a five-year curriculum leading to the degree of Bachelor of Science in Nursing, and a three-year curriculum for graduate nurses leading to the degree of Bachelor of Science in Nursing Education.

## THE COLLEGE OF MEDICINE

The College of Medicine offers a four-year curriculum leading to the degree of Doctor of Medicine.

## THE GRADUATE COUNCIL

Under the supervision of the Graduate Council, instruction is given leading to the degrees of Master of Arts, Science, or Education. The student may elect to work for his appropriate degree in virtually any department of the University.

# History

The University owes its foundation to Ira Allen, who gave four thousand pounds to help establish a university in Burlington. He had aided more than any other one man in forming the State and in preserving its integrity through the troubled years preceding its admission to the Union. In 1791 the first General Assembly of the new State granted the charter for the University. Instruction was begun by the first president, Daniel C. Sanders, in 1800 and four years later the first class was graduated. In 1872 women were first admitted.

The Hon. Justin S. Morrill, Representative and later Senator from Vermont, sponsored the Morrill Land Grant Act of 1862, which provided for colleges to teach Agriculture and the Mechanic Arts. Under this act the Legislature chartered the Vermont Agricultural College in 1864, then the two corporations were joined by mutual agreement in a new corporation, the University of Vermont and State Agricultural College. Four-year courses in Agriculture and in Home Economics were offered and later the Experiment Station and Extension Service were established by the Legislature. Courses in Civil Engineering were first given in 1829, then four-year curricula in Civil, Electrical, and Mechanical Engineering followed.

The study of Medicine began with the appointment in 1804 of a lecturer in Chirurgery and Anatomy, and a full course of Medical Lectures was offered in 1822 by the cooperation of an association of doctors and the University. From this developed the Medical College, which was finally taken completely into the University in 1908. Since 1920, women have been admitted to this college.

Since 1944, the University has offered pre-clinical classroom instruction for the nursing students of most Vermont hospitals.

In 1946, the University was re-organized into its present divisions. Some of the most recently added curricula include Nursing, Business Administration, Agricultural Engineering, Industrial Education, and Business Education.

In the summer of 1948, the University sponsored its first foreign study program. Under this program, known as *The Marshall Plan in Action Course*, a group of 300 students and seven faculty members from many American colleges and universities traveled through Western Europe to study the European Recovery Program at first hand. At the present time, plans are underway for a continuation of this unusual educational enterprise.

## The Campus

The grounds of the University at present include the main campus of about seventy-five acres on which most of the academic and administrative buildings are located around a large, tree-shaded "College Green." That section of the main campus which lies between The Green and Converse Hall has been developed recently by the erection of several buildings and is now known as the East Campus.

Three blocks south of The Green is Redstone Campus, a beautiful residential area for women students which commands an unparalleled view of Mt. Mansfield and Camel's Hump.

Centennial Athletic Field, an eleven-acre tract a short distance west of the main campus, provides excellent facilities for intercollegiate athletic contests. The seating capacity of the football stadium is approximately 5,000 and of the baseball stadium, approximately 3,000.

A University Farm of three hundred acres adjoins the campus and is equipped for agricultural experimental and research projects. There is also a Research Forest of more than 300 mountain acres located in Jericho, another of 200 acres on Pease Mountain in Charlotte, and the Proctor Maple Research Farm in Underhill.

The total physical plant of the University is valued in excess of \$5,600,000.



# Noteworthy Buildings

The following buildings are located on or near the College Green.

**IRA ALLEN CHAPEL:** This fine example of Georgian architecture, which was erected on the northeast corner of The Green in 1927, is the gift of James B. Wilbur of Manchester, Vermont, and is named for the founder of the University. The Chapel contains an excellent three-manual organ and has a seating capacity of twelve hundred.

**BILLINGS LIBRARY:** Located next to the Chapel on College Row, Billings Library is an excellent example of Richardson architecture. It is the gift of Frederick Billings of Woodstock and was erected in 1885.

**WILLIAMS SCIENCE HALL:** Completed in 1896, this building was one of the first completely fireproof buildings in the country. It was given to the University by the late Dr. Edward H. Williams of Philadelphia. Facilities for the Departments of Chemistry, Physics, Zoology, and Botany are housed here, in addition to the Pringle Herbarium, one of the largest collections of its kind in America.

**OLD COLLEGE BUILDING:** "The Old Mill," as it is popularly known, is the oldest building on the campus and stands on the site of the first college edifice which was erected in 1801. The cornerstone of this structure was laid by General Lafayette. Classrooms for the Departments of Speech, Economics, and Political Science are located here.

**GYMNASIUM:** The gymnasium and cage provide facilities for the men's athletic activities and also for the Department of Military Science and Tactics. The gymnasium is also used for large dances, social gatherings, and final examinations.

**MORRILL HALL:** This building was erected by the State in honor of Justin Smith Morrill, for many years a representative and senator from Vermont. As the author of the "Morrill Act," which became law with President Lincoln's signature in 1862, he became the father of the land-grant colleges and universities of the United States. This building, erected in 1906, provides classroom space and offices for the College of Agriculture.

**GRASSMOUNT:** This fine old colonial mansion with spacious rooms was formerly the home of Governor Cornelius P. Van Ness. Many famous people have been entertained here including General Lafayette, whose

## Noteworthy Buildings

statute adorns the campus. For many years, Grassmount has been a dormitory for women.

**WASSON MEMORIAL INFIRMARY:** In October, 1945, in the Wheeler House adjoining the main campus, the Wasson Memorial Infirmary with a complete staff and equipment was opened. There are facilities for examining entering students, general health service, and infirmary care for such illnesses as do not require hospital service.

**WATERMAN MEMORIAL:** Planned as a University Center, the Charles Winfield and Anna R. Waterman Memorial was built from the large estate given to the University by the Honorable Charles W. Waterman of Denver, Colorado. It was completed in 1941. On the main floor are found most of the University's administrative offices. On the floor below are located the University Store, the Cafeteria, and the Student Lounge. In the basement are bowling alleys and the Electrical Engineering Laboratory. The second and third floors are devoted to classrooms, laboratories, offices, and study halls.

**MEDICAL BUILDING:** The College of Medicine is housed in a modern three-story structure located on the north side of the College Green. It contains laboratories, large lecture halls, recitation rooms, and administrative offices in addition to the pathological and anatomical museums. The Medical Library, a division of the University Library, is on the second floor. Adjacent to the campus are the Mary Fletcher Hospital, the Bishop DeGoesbriand Hospital, and the State Department of Public Health Building; the facilities of all these are utilized by the College of Medicine.

**MUSIC BUILDING:** The Department of Music carries on most of its instruction in this remodeled residence just off the main campus. In addition to classrooms, listening rooms, and practice rooms, this building houses the Carnegie College Music Collection.

The following buildings are located on or near the East Campus.

**FLEMING MUSEUM:** The Robert Hull Fleming Museum was given by James B. Wilbur, Miss Katherine Wolcott (a niece of Mr. Fleming) and six other friends of the University. The exhibition rooms contain collections in geology, mineralogy, paleontology, zoology, and archaeology. The art collections include examples of all types of artistic creation from the ancient period to the modern.

The seismograph station is located in an underground vault connected with the Museum. Observations are sent regularly to the Coast and Geodetic Survey at Washington.

**ENGINEERING BUILDING:** Erected in 1891, the Engineering Building houses classrooms for mathematics and laboratories for civil and mechanical engineering. Recently the machine shop has been remodeled and \$100,000 worth of machine tools have been added.

**ART CENTER:** Just back of the Ira Allen Chapel is the center for art instruction. Classes in arts and crafts and in painting are held here. The private studio of the resident artist is also located in this building.

**EAST HALL:** Originally a naval hospital, this building was obtained from the Federal Government in 1947, moved to the East Campus in sections, and reconstructed. It contains ten large classrooms, a geology laboratory, a civil engineering laboratory, a library reference reading room, private offices for the English Department and a student lounge.

**HILLS AGRICULTURE HALL:** On October 16, 1948, Dean Joseph Lawrence Hills, at the age of 87, turned the first shovel of earth for a new building to be named in his honor. When completed in 1949, it will contain facilities for several departments in the College of Agriculture.

**DAIRY SCIENCE BUILDING:** Funds for this building, which is now under construction, and also for Hills Hall were appropriated by the State. When completed, it will house equipment, laboratories, and facilities for all aspects of dairy manufacturing, processing, and merchandising. A dairy salesroom will also be included.

**UNIVERSITY FARM:** The well-equipped University Farm includes a dwelling house, a new dairy barn, a research barn, horse barn, stock judging arena, in addition to swine, poultry, hay, and tool houses.

**SOUTHWICK MEMORIAL:** Located on the Redstone Campus, the Mabel Louise Southwick Memorial is the center of women's activities. A modern gymnasium and theatre, an attractive ballroom, and several sizable lounges provide facilities for many varied functions. This building, given by Mr. and Mrs. J. L. Southwick in memory of their daughter, was erected in 1936.

# The University Libraries

The University Libraries, the largest collection in Vermont, contain more than two hundred thousand books and pamphlets, and a large collection of manuscripts. Organized to serve faculty, student, and extension needs, the Libraries are increased by several thousand volumes a year and by magazines, a large number of which are published abroad. The U. S. Government uses the Library as a depository for its publications, books, pamphlets, and maps.

A staff of seventeen trained members maintains library service for the University and the community daily from 7:45 a.m. to 10:00 p.m. and on Sundays from 2 until 6 p.m.

The University Libraries are housed in various buildings on the campus:

Billings Library contains the working collection of recent or up-to-date volumes, newspapers, magazines, and scholarly journals. The building, the gift of the late Frederick Billings of Woodstock, was designed by H. H. Richardson and erected in 1885. In it is the private library of the late George Perkins Marsh, former resident of Burlington, and one-time U. S. Ambassador to Turkey and to Italy. This is a gentleman's library of the 19th century, rich in philology and European literature.

The Wilbur Library, given by the late James B. Wilbur of Manchester, contains the most extensive collection of Vermont material in existence. The Library is in a well-furnished room in the Fleming Museum, and is supported from an endowment fund.

The Medical Library, in the College of Medicine Building, contains the books and magazines used in an active Medical school.

The Williams Science Hall contains books on chemistry, physics and zoology.

The Waterman Building has shelves for about 75,000 government documents, agricultural literature, and old or little used books.

In East Hall is a reserve book room, where students have access to books containing specific assignments from the faculty.

In the winter of 1947 a society of "Library Fellows" was organized, composed of faculty, alumni, and friends of the University who by special contributions, aid the library in carrying on various phases of its work. The society, of more than 100 members, is open to all who are interested in books, knowledge, the advancement of learning, and the improvement of present library facilities.

# Living Accommodations

## THE WOMEN'S RESIDENCES

All women undergraduate students are required to procure rooms approved by the University. Most freshman women reside in the recently completed Grace Goodhue Coolidge Hall or in South College Hall on the College Green. Other college-owned dormitories, primarily for upper-class women, include Grassmount, Lyman Hall, Redstone Hall, Robinson Hall, Roberts House and Slade Hall. These houses accommodate from twenty-two to thirty-nine women each. Students supply their own bed linen (except mattress pads), blankets, rugs, window curtains, and easy chairs, if desired. Students living in these dormitories obtain their meals either at the Waterman Dining Hall or at the Robinson Dining Hall. Meal contracts for Robinson Dining Hall are required for freshmen and sophomores living on the Redstone Campus, unless other arrangements are approved by the Dean of Women.

There are three cooperative houses owned by the University (Adsit House, Allen House, and Sanders Hall) where, for a selected group of seventy-eight girls, expenses for board can be reduced by carefully planned low-cost meals, prepared and served by the students themselves under the supervision of the House Director. Participants in this plan are selected on the basis of character, scholarship and relative need, and the privilege is usually limited to a residence of two years. Elmwood Hall, McCormick House and Warner House are privately operated dormitories which are supervised by the University. Excellent meals are served in all three houses on a two- or three-meal contract.

Four sorority houses provide room accommodations for sixty-seven upperclass women.

Four private homes, approved by the University, provide kitchenette facilities for thirty-two students wishing to economize by preparing their own meals. In the private houses the householder acts as House Director and the same regulations prevail as in the college units.

In charge of each house and dormitory is a qualified House Director who works closely with the Dean of Women to assure that the highest type of living conditions is maintained. In the larger units the House Director is assisted by a senior or graduate student called the House Fellow.

Those who cannot be accommodated in the dormitories are assigned rooms in approved private homes which are supervised by the University. *No final choice of rooms may be made without the approval of the Dean of Women.* Enrollment is not permitted until this approval is obtained.

## LIVING ACCOMMODATIONS FOR MEN

Converse Hall, a gift of John Heman Converse, was built of Rutland marble in 1895 on the crest of the elevation on the East Campus. The three sections of this Collegiate-Gothic building enclose three sides of a court which opens to the west. The north and middle sections house about 100 upperclass men, and south section contains eight apartments for faculty members.

Chittenden, Buckham, and Wills Halls are three new modern dormitories for men which were constructed on the East Campus in 1947. Each houses 143 students, and all incoming freshman men who do not live locally with their families are assigned to these dormitories.

In the dormitories, a bed, mattress, chest of drawers, wardrobe, desk, and chair are provided for each occupant. Students must supply their own bed linen, blankets, coverlet, towels, desk lamp, rugs, and garment bags. Radios are permitted.

Eleven fraternity houses representing nine national fraternities and two local fraternities provide housing and in some cases dining facilities for approximately 250 upperclass men.

Room and board are provided for thirty-one men at Claggett House, a cooperative residence.

Most men students not boarding at fraternity houses or private homes obtain their meals in the Waterman Dining Hall where good food is served, cafeteria style, at reasonable prices.

## HOUSING FOR MARRIED STUDENTS

Because the facilities for married couples are limited, new students are advised not to bring their wives to the campus until they have obtained satisfactory living accommodations. There is a waiting list for all the University-operated units. The University maintains fifty semi-permanent trailers near Centennial Field. Each trailer includes minimum furniture, an oil stove, ice refrigerator, and space heater. Toilet, laundry, shower facilities and water points are centrally located within the colony.

About twenty lots are available in the colony for married students who wish to bring their own trailers. A nominal rental is charged which entitles these students to the use of the facilities in the colony.

At Fort Ethan Allen, formerly a military post, which is located five miles from the campus, the University maintains facilities for seventy couples in converted barracks. These apartments are furnished with the necessary furniture, including stove and toilet facilities. Regular bus service is available from the gate of the post to the campus. The fare is fifteen cents.

# Personnel Services

## HOUSING BUREAU

In Room 140, Waterman Building, the University maintains a Housing Bureau. Questions concerning accommodations for single men and married students should be directed to this office. A list of rooms in private homes is also available here. The University will do all it can to assist students in locating desirable accommodations within the city, but it does not guarantee to meet the specific needs of all. Questions concerning living accommodations for women students should be directed to the Office of the Dean of Women.

## HEALTH SERVICES

The University has complete facilities to maintain the physical well-being of members of the student body. The institution provides a Student Health Service and Departments of Physical Education for men and for women.

The University Health Service, organized in 1941, is staffed by two physicians and registered nurses who are available at regular hours in the Infirmary. A resident psychiatrist is also available for consultations. The service includes complete physical examinations for all incoming students, the examination of members of athletic squads, care of injuries, consultation on all health and medical problems, and medical care of students who are unable to pay for private medical care. Cases of serious illness are sent to one of the two modern, well-equipped hospitals which are adjacent to the campus.

The Infirmary operates under the following regulations:

1. Every student who pays full tuition for the normal college year of nine months is entitled to a maximum of ten days of free infirmary care and such routine medical care as is needed and as the Infirmary and Health Service can render during the nine months' period.
2. Students who require infirmary care for more than ten days in the college year are charged therefor at the rate of \$2.00 per day.

Every student at the University is required to participate in the Physical Education program for two years. Normally this work is taken in the freshman and sophomore years, but may be postponed on the advice and authorization of one of the University physicians.

## STUDENT PERSONNEL OFFICE

The Office of the Director of Student Personnel provides, among many others, the following services:

**COUNSELING:** Counselors are available to help students with educational, vocational, and personal problems. Counselors, carefully selected from upperclass students, function in the men's dormitories under the supervision of the Director of Student Personnel. Aptitude, interest, and achievement tests are utilized in the counseling program.

**STUDENT EMPLOYMENT:** A Student Employment Bureau is maintained to assist any student enrolled in college in securing either regular or occasional work. The University employs a number of students in the college buildings, the dormitories, the cafeteria, and the academic departments. Opportunities are available in homes, industrial and business establishments in Burlington. Students are encouraged not to seek employment unless their financial need is genuine and unless they feel able to carry it successfully in addition to a normal college program.

**PLACEMENT:** The University maintains a placement service for seniors and alumni. In his senior year each student files his credentials with the Student Placement Office, which brings job opportunities to the attention of qualified candidates.

## VETERANS' EDUCATION OFFICE

The University is trying to meet as fully as possible the particular needs of men and women who on returning from the armed services desire to take up further study or professional training at the collegiate level.

The office of Director of Veterans' Education has been established to cooperate with the Veterans Administration in enrolling and advising veterans with their educational problems. Requests for information concerning educational benefits should be addressed to the applicant's local or regional Veterans Administration office. Requests for information concerning enrollment as a veteran at the University should be addressed to the Director of Veterans' Education, Waterman Building.



# Student Life

The University officially recognizes the activities of a large number of organizations in caring for the social and recreational needs of students, developing their cultural and religious interests, providing them with valuable business and executive experience, and broadening their contact with the public, with their fellow students, and with the educational world. Because it is within this area that qualities of leadership are developed, the University encourages the widest possible participation consistent with its scholastic requirements. The Student Advisory Committee, a committee of the University Senate, is authorized by the Senate to have oversight of organizations and activities of students, to meet with them, and to advise them as seems desirable.

## RELIGIOUS LIFE

The University, although not affiliated with any denominational body, provides a rich program of religious activities. Formal courses of instruction are offered in the College of Arts and Sciences in the History of Religion and in the Old and New Testaments.

All religious activities on the campus are coordinated by a Committee on Religious Life, composed jointly of students and faculty members, representing different faiths. Headquarters are in the Waterman Building, which is the office of the Executive Secretary. The Committee sponsors the University's religious services, including a weekly chapel service and frequent vesper services on Sundays; it serves to coordinate the activities of the student associations devoted to religious and social service programs, such as the Student Christian Association, the Newman Club for Catholic students, the Hillel Foundation for Jewish students, and the several Protestant denominational groups. Inter-denominational and inter-faith meetings are held, with speakers of national reputation as guests. The several churches in Burlington are delighted to welcome University students and cooperate with the Committee on Religious Life in sponsoring many student activities.

## U. V. M. STUDENT GOVERNMENT

"In order to bring about a systematic administration of student affairs on this campus, to codify existing customs and traditions of the University of Vermont, and to provide for an organized student control of campus

activities, we, the students of U. V. M., adopt this constitution." So reads the constitution of the University of Vermont Student Government. All students shall be voting members of this organization on payment of the Student Activity fee. Meetings are held once a month during the college year and may be called at any time by the President of the University, President of the Student Government, five or more members of the Executive Committee, or by the petition of fifty or more members presented to the Executive Committee at least ten days prior to the proposed date of the meeting. Under Student Government is the Student Court, consisting of representatives of each of the undergraduate colleges, which tries such problems of discipline and social conduct as are designated to it by the Executive Committee and the University Council.

## WOMEN'S STUDENT UNION ASSOCIATION

Every woman who enrolls as a student at the University, unless she is a resident of Burlington and living with her parents or guardian, automatically becomes a member of the Women's Student Union Association and is thereafter subject to its authority. This organization regulates some matters of student conduct which are not academic in nature.\* By distributing responsibility and encouraging participation in its activities Student Union aims to develop individual leadership and to encourage self-direction. A social conscience and high ideals of personal integrity are promoted through the honor code. Cooperation based upon a thorough understanding of the rules and regulations of the Association is expected of each student.

Student Union mass meetings are held at stated intervals. All women students are required to attend these mass meetings, as in no other way can they keep in touch with matters with which student government is concerned. The Student Union Council, which is the Executive Committee composed of WSUA officers, meets weekly. The Joint Conference Committee, composed of faculty members and students, meets twice each semester as an open forum for discussion of policies and regulations, and to advise the Student Union Council.

## HONORARY SOCIETIES

The Boulder Society, a self-perpetuating group of senior men, is recognized as an organization responsible for student leadership. Election to this society is counted one of the highest honors that a University man may win. A feature of each Founder's Day is a meeting of this organization at which time the names of new members are announced.

\* For details, see "Handbook."

Other honorary class societies for men that are active on the Campus are Key and Serpent, a junior society; Gold Key, a sophomore society; and Cap and Skull, the senior medical society.

Mortar Board, national senior honorary society for women, has an active chapter at the University. By such an affiliation women at Vermont are brought in closer contact with outstanding college women throughout the country while they still maintain their local significance of service to the Vermont campus. Though membership in Mortar Board comes as the greatest honor for a Vermont woman in recognition of outstanding service, scholarship, and leadership, it is far more than an honor. It is much rather a challenge for continued sound and honest scholarship, for unselfish service in the best interests of the college campus, and for the finest type of womanhood.

In 1938 two honorary class societies for women were organized. The junior society, Staff and Sandal, has twelve members, elected by the junior class from its outstanding leaders.

The Sophomore Aides, fifteen in number, are elected annually by the sophomore class from those who in their freshman year gave evidence of the qualities of scholarship, leadership, and service. The members serve as assistants to Mortar Board.

The Phi Beta Kappa Society established the Vermont Alpha Chapter at the University in 1848. Election of seniors is made in December and at Commencement. The initiates are chosen primarily on the basis of high scholastic standing. The local chapter was the first in Phi Beta Kappa to initiate women into membership.

The Society of the Sigma Xi established the Vermont Chapter at the University in 1945. The initiates are chosen on the basis of proven ability to do research in one of the various sciences, and in the case of students, high scholastic standing. Elections of faculty, graduate and undergraduate students are made in the second semester.

Other national honorary societies include Alpha Zeta, agriculture; Kappa Phi Kappa, education; Omicron Nu, home economics; and Tau Kappa Alpha, debating.

## ATHLETICS

The Physical Education activities for men are carried on in the University Gymnasium, the baseball cage, and on playing fields adjoining. The Physical Education activities for women are centered in the Southwick Memorial Building on the Redstone campus and upon the playing fields nearby. A number of tennis courts, and a skating and hockey rink are provided for the use of all students. Skiing privileges are available on the college campus and also on Mt. Mansfield.

A program of intercollegiate competition is maintained in football, skiing, hockey, baseball, basketball, track, cross-country running, tennis, and rifle marksmanship. The athletic policies of the University are under the direction of the Athletic Council, composed of members of the faculty, the student body, and alumni. Athletic relations are maintained with colleges and universities in New England and the eastern seaboard in all the sports mentioned above. The athletic teams are under the direction of a corps of experienced coaches. The University is a member of the "Yankee Conference," which is composed of the land-grant colleges and universities in New England.

The Varsity Club, composed of men who have earned their "V," meet all visiting athletic teams and work for the general development of athletics at the University.

The Women's Athletic Association sponsors a large number of activities for women students including archery, badminton, basketball, field hockey, folk dancing, life saving, modern dancing, ping-pong, skiing, skating, swimming, tennis, and volley ball. In collaboration with the Modern Dance Workshop, it also sponsors the annual Lilac Day program in the spring.

In addition, the Outing Club sponsors for both men and women students mountain climbing expeditions, ski trips, and other outdoor activities.

## FRATERNITIES AND SORORITIES

Approximately 600 men and 300 women are members of the ten undergraduate fraternities and seven sororities on the campus. These groups provide additional social experience for their members in the form of dances, spreads, athletic activities, social work, and chapter meetings. These activities are under the direction of the Interfraternity Council and Pan-Hellenic Association.

Active chapters on this campus include the following:

### *Fraternities*

Alpha Tau Omega  
Delta Psi  
Kappa Sigma  
Lambda Iota  
Phi Delta Theta  
Sigma Alpha Epsilon  
Sigma Nu  
Sigma Phi  
Tau Epsilon Phi

### *Sororities*

Alpha Epsilon Phi  
Alpha Chi Omega  
Delta Delta Delta  
Delta Phi Epsilon  
Kappa Alpha Theta  
Pi Beta Phi  
Sigma Gamma

## THE VIPS

A very active Vermont Independent Party provides similar types of experiences for a large number of students of both sexes for whom the fraternity system does not hold a strong appeal.

## MUSICAL ACTIVITIES

Opportunities for participation and appreciation are provided for those students with strong musical interests. The University Choir, the University Orchestra, and the University Band appear in public presentations many times during the year. Vesper services, Christmas and Easter concerts, and a Spring Operetta are regular events. Many other concerts and recitals are sponsored by the Department of Music.

## DRAMATICS AND DEBATING

The Department of Speech sponsors many activities in the field of dramatics and debating. Several productions of high dramatic quality are scheduled each year in addition to the Vermont Varieties, an annual show which includes members of the faculty, staff, and student body.

The Debating Team has made an enviable record during the last few years among colleges of the East. Each fall the University is host to approximately sixty colleges which send two or more teams to participate in this annual tournament.

## STUDENT PUBLICATIONS

Those interested in journalism and editorial work find opportunity for expression in a number of student publications. The *Vermont Cynic* is the student newspaper which is published weekly or oftener. The *Ariel* is the annual year-book and is published by members of the Junior Class. Each year, a student group known as the Scribes publishes two issues of *Windfall*, a literary magazine, and a committee from Student Council prepares the annual *Freshman Handbook* for incoming students.

## KAKE WALK

The outstanding social event of the year is the Kake Walk week-end in February. This unique celebration is UVM's gala occasion and many returning alumni attend annually. Festivities include a Masquerade Ball at which a king and queen are crowned, snow sculpture, and athletic events. For two nights, the fraternities and the VIPS compete with one

another in original skits and in the art of *Walkin' fo' de Kake*. Prizes include cups and many beautifully decorated cakes.

## STUDENT ORGANIZATIONS

Many other groups and activities are sponsored by departments and special groups, including the following:

American Society of  
Agricultural Engineers  
American Society of  
Civil Engineers  
American Institute of  
Electrical Engineers  
American Society of  
Mechanical Engineers  
Bertha Terrill Home  
Economics Club  
Campus 4-H Club  
Flying Club

Future Farmers  
Goodrich Classical Club  
International Relations Club  
John Dewey Club  
Marketing Club  
Students for Norman Thomas  
Osler Clinical Society  
Reserve Officers Association  
Social Action Committee  
Spanish Club  
Women's Health Council  
Young Republican Club

# The Admission of Students

## THE UNDERGRADUATE COLLEGES

The University of Vermont and State Agricultural College desires to admit students of high character and serious purpose who are qualified to do college work. It seeks as much information as possible about a student before his application is considered. A composite estimate of his capacity to profit by college work is formed from the following items.

1. The recommendation of the school principal
2. The candidate's rank in his graduating class
3. The school record of courses completed
4. Such tests as may be required by the Director of Admissions
5. A personal interview, if required by the Director of Admissions

Of these five items no one is considered as all important in itself. The important thing is the composite picture which results from the combined evidence from them all.

The information collected in connection with a student's application has another distinct value. It is used by the student's personal advisor in guiding the choice of a curriculum and of particular courses. Since education is a continuous process, the University hopes to receive all possible information from the high school for use in planning the college course best adapted to the individual.

Each college of the University desires that its students present a well integrated course of preparation, including certain subjects which it regards as especially desirable. These subjects are not absolutely required, but rather suggested to the high school student and advisor as suitable preparation for college work. Other qualifications being equal, preference is given to those who present the subjects which are deemed especially desirable.

Students will be admitted without any entrance conditions, except in subjects which are prerequisite to courses required in their respective curricula.

Application forms for admission to the University of Vermont and State Agricultural College will be sent upon request. Since the number of rooming accommodations available is limited, it is wise for a candidate for admission to submit his application and credentials as early as possible after the first of February in the year in which admission is sought. Action on applications will be taken in April and notification will be sent

to the students early in May. Inquiries should be addressed to the Director of Admissions, Waterman Building, University of Vermont and State Agricultural College, Burlington, Vermont.

#### COLLEGE OF ARTS AND SCIENCES

Graduation from secondary school normally implies the completion of at least sixteen credits, and this is regarded as the usual requirement for admission. The College of Arts and Sciences recommends that candidates complete the following courses: English (4 years), ancient or modern foreign language (2 years), elementary algebra, plane geometry, history, and science. Additional subjects should be chosen so far as possible in the fields of language, mathematics, and history. For those who intend to take pre-medical or pre-dental work or to concentrate in the sciences a second year of algebra is highly desirable.

#### COLLEGE OF TECHNOLOGY

The College of Technology recommends that candidates for admission to the curricula in Engineering complete the following secondary school courses: English (4 years), algebra (elementary and intermediate), plane geometry, solid geometry, history, and science. Superior students may be accepted without intermediate algebra or solid geometry, or both, but must enroll in a special course.

In addition to the eight or eight and a half units listed above the candidate is advised to choose the remaining units as far as possible in the fields of language, mathematics, history, and science.

Candidates for admission to the Economics and Chemistry Curricula should follow the recommendations for the College of Arts and Sciences above. For the Chemistry Curriculum, solid geometry is desirable.

#### COLLEGE OF AGRICULTURE

Courses considered especially desirable for prospective students in Agriculture are: English (4 years), elementary algebra, plane geometry, and science (2 years). History and a third year of mathematics are also desirable.

Courses considered especially desirable for prospective students in Home Economics are: English (4 years), foreign language (2 years of one language), elementary algebra, plane geometry, history, and science (2 years). A third year of mathematics is also desirable.

#### SCHOOL OF EDUCATION AND NURSING

The School of Education and Nursing recommends that candidates for admission complete the following courses in secondary school: English



(4 years), ancient or modern foreign language (2 years), algebra (elementary), plane geometry, history, and science. Candidates should present additional subjects as far as possible in the fields of language, mathematics, and history. In certain curricula they may receive admission credit for commercial subjects, home economics, manual training, or agriculture, if they have maintained a sufficiently high scholastic record.

For admission to the curricula in Elementary Education and Junior High School Education see Index under "Admission, Elementary Education."

#### SPECIAL AND UNCLASSIFIED STUDENTS

Subject to the usual entrance requirements of the University, persons who are qualified for regular admission may, on payment of specified fees, pursue certain studies in regular college classes as special or unclassified students. This arrangement is intended to accommodate those whose previous study and attainments enable them to pursue with profit special courses of study in particular departments. Students who have been dismissed for low scholarship may not re-enter as special students.

Special students are those who are not candidates for a degree in one of the regular curricula, or who are carrying less than a normal academic load. Unclassified students are those who are not considered members of one of the four regular classes.

Such students are registered and enrolled in the same manner as regular students, and are subject to all regulations of the University. Credit for courses completed may be subsequently counted toward a degree. Special students are not eligible to hold University scholarships.

#### PRELIMINARY REGISTRATION PROGRAM

The days immediately preceding the opening of class work are devoted to certain preliminary events designed to facilitate the adjustment of freshmen to conditions of life and study at college. The full schedule of events is given in a special circular, "*Program of Preliminary Freshman Days*," which is sent to all prospective freshmen by the Admissions Office.

All new students are given scholastic aptitude tests at the opening of the college year. Freshmen also take several placement tests on the basis of which some students are placed in more advanced courses. The scores on all tests are used in advising students regarding the course of study to pursue, and vocational plans. A personal data report, physical examination, and registration photograph are also included in the program.

## ADMISSION TO ADVANCED STANDING

All applicants for admission who have attended another collegiate institution are required to file with the Admissions Office an official transcript of the college record together with a statement of honorable dismissal.

A student who transfers to the University from another accredited college or university may be given provisional credit by the Registrar for all courses satisfactorily completed, provided that similar courses are counted toward graduation at the University of Vermont. Transfer credit is not allowed for work completed with grade "D" or its equivalent, unless a more advanced course in the same subject has been passed with a higher grade.

The credit is provisional, pending satisfactory completion of a semester's work at the University. If the student is in good standing at the end of his first semester, the transfer credits are fully granted. If, however, he is under warning, the departments concerned review the credits and report to the Committee of Admissions who then decide what credits will be allowed. Re-evaluation is rarely permitted once the credits have been finally determined.

## ENROLLMENT

Every student is required to register and enroll on the designated days. All charges for the ensuing semester must be paid, or otherwise provided for, before enrollment is completed. Directions for enrollment are published for each semester.

After enrollment, no changes of studies will be allowed except such as are authorized by the Dean of the college of the University in which the student is registered. After Saturday of the first full week of the semester no enrollment or changes of studies will be permitted, except that a student may drop a course with his Dean's permission during the first three weeks of a semester without incurring any academic penalty.

## COLLEGE ENTRANCE EXAMINATIONS

The College Entrance Examination Board will administer a series of tests during 1949 on the following dates: January 15, April 9, June 4, and August 24.

Complete information may be obtained from the College Entrance Examination Board, P. O. Box 592, Princeton, N. J.

The University does not require that applicants take College Entrance Examinations but recommends that they be used to support applications for admission.

# Student Expenses

The student expenses outlined in the following paragraphs are the anticipated charges for the academic year 1949-50. *Changing costs, however, may require an adjustment of these charges.*

**TUITION:** The tuition charges per semester are in accordance with the following schedule. These charges include health, infirmary, physical education and laboratory fees. However, refundable deposits may be required to cover loss or breakage in certain departments. Additional charges are made for individual lessons in music.

	<i>Residents</i>	<i>Non-residents</i>
Agriculture (see also below).....	\$112.50	\$262.50
Education and Nursing (excluding Elementary and Junior High School Education)...	212.50	262.50
Elementary Education and Junior High School Education.....	none	262.50
Arts and Sciences, Technology.....	212.50	262.50
Medicine .....	275.00	350.00
Graduate Students (per hour).....	14.00	17.50
Special Students (per hour).....	18.00	22.00

**DEFINITION OF A "RESIDENT STUDENT."** For the purpose of determining the tuition to be paid, the Board of Trustees has adopted the following definition: "The term 'resident student' shall include only the following: (a) a minor student whose regular home is with a parent who has been domiciled in the State of Vermont for at least the preceding year; (b) a student of legal age who has himself been domiciled in the State of Vermont for at least the year preceding college matriculation."

**COLLEGE OF AGRICULTURE.** In the College of Agriculture the tuition charge for regular, undergraduate students who are residents of Vermont is reduced through a tuition scholarship of \$200.00 per academic year granted such students by the State. The State enactment also provides that "any student transferring from courses in agriculture and home economics to other courses within the University, or to another educational institution, shall refund to the treasurer of the University . . . any sums which have been received as scholarships under this section, unless excused therefrom by the president."

**EDUCATION AND NURSING.** Most resident students in the Elementary Education and Junior High School Education Curricula pay no tuition. For details see Index, under "Fees and Tuitions, Elementary Education."

## Student Expenses

**COLLEGE OF MEDICINE.** The tuition fee is \$275 per semester for Vermont residents and \$350 for others. There are fifty State Scholarships of \$100 a year each available to Vermont residents. Students allowed to repeat a year are charged full tuition for that year.

An application fee of \$10 is charged each applicant for admission.

**EXCEPTIONAL ENROLLMENTS.** For an enrollment of fewer than twelve hours the charge is \$18.00 (\$22.00 for non-residents) per semester hour. The same fee is charged students carrying for credit courses in excess of the normal program in the several curricula. For a special student fifteen hours is considered normal.

The Deans may grant students permission to "audit" courses in addition to a normal enrollment without additional fee. Such students are expected to do all the work of the course, and receive grades which are entered on their records, although no formal credit is given.

With the approval of his Dean, the Registrar, and the instructor concerned, a student who is regularly enrolled and carrying a normal program may "visit" a course for refresher purposes. Similarly, a student may be given permission to "visit" a course for other than refresher purposes if there are factors that will not permit him to be enrolled as an auditor. In such cases no entry is made on the student's permanent record, no credit is given for the work, and no charge is made.

Students who by reason of conditions over which they have no control require more than four years to complete the requirements for a degree shall be charged no more than the full tuition for four years.

**TUITION FOR COURSES IN APPLIED MUSIC:** Private lessons are approximately one-half hour in length, fifteen being given in each semester. Students who enroll as regular full-time students in the Music Education curriculum, paying full tuition, are charged one-half the regular rates for applied music for such courses as are required in the curriculum. All others pay the scheduled charges.

### PIANO, ORGAN, VIOLIN AND SINGING

One lesson a week.....	\$35.00 per semester
Two lessons a week.....	60.00 per semester
Use of organ one hour a day.....	25.00 per semester

**MATRICULATION FEE:** A fee of five dollars is required of all new regular session matriculants.

**STUDENT ACTIVITY FEE:** All students enrolled in the Colleges of Arts and Sciences, of Technology, and of Agriculture, and in the School of Education and Nursing who are enrolled in twelve semester hours or more are charged a fee of \$7.50 per semester. This fee is assessed, allocated,

and controlled by Student Government and covers the support of recognized student organizations and activities, including subscriptions to the *Vermont Cynic* and the *Ariel*. First-year medical students who enter the College of Medicine after three years in the College of Arts and Sciences are charged this same fee, which includes membership in the Osler Society.

Graduate students, special students, unclassified students, and students in the College of Medicine may, by paying this fee, become entitled to the benefits listed above.

**OSLER SOCIETY FEE:** All students in the College of Medicine are charged an Osler Club fee of \$3.50 per year.

**LATE REGISTRATION FEE:** A late registration fee of six dollars is charged students who fail to complete enrollment at the appointed times. In unusual cases, exemption from this charge may be made by the Deans.

**CHANGE OF ENROLLMENT FEE:** A fee of one dollar is charged, except in the College of Medicine, for any change of enrollment requested by the student concerned. Deans may waive this fee in exceptional cases.

**DEGREE FEE:** The fee for the Baccalaureate Degree, payable during the semester prior to graduation is ten dollars; for the Master's Degree, the technical Degrees of C.E., E.E., or M.E., the fee is twenty-five dollars.

**REGISTRATION DEPOSIT:** A registration deposit of thirty-five dollars is required of every applicant within two weeks after he has received notification of his acceptance as a student of the University. The total amount of this deposit is credited to the student's account on his first semester's bill. In the event that the applicant cancels previous to August 15, fifteen dollars of this amount will be refunded.

**ROOM CHARGES:** Rooms in college dormitories are rented for the entire year and the prices are uniform in all dormitories.

Double rooms are seventy-five dollars per occupant per semester and ninety-seven dollars and fifty cents per single rooms.

The rent for semi-permanent trailers for married couples is twenty-five dollars per month. The charge to married couples who own their own trailers and who wish to park them in the colony is ten dollars per month.

Furnished apartments at Fort Ethan Allen rent for thirty dollars to forty dollars per month depending on the size and the utilities provided. All are furnished; a few are heated.

**BOARD:** All freshman and sophomore women who live on Redstone Campus are required to board at Robinson Hall. The current charge is \$157.50 per semester. Most other students, except those living in coopera-

tive houses or fraternity houses, eat at the Waterman Dining Hall where meals are served cafeteria style. Three well-balanced meals per day may be purchased individually at an approximate cost of \$11.00 per week.

## ESTIMATED EXPENSES PER SEMESTER

The following estimates are based on regular tuition for resident students; non-resident students should add \$50.00 and those receiving scholarships or aid from the State should make appropriate deductions.

Tuition .....	\$212.50
Student Activity Fee .....	\$7.50
Textbooks and Supplies .....	\$20.00-\$30.00
Room .....	\$75.00-\$100.00
Board .....	\$157.50-\$200.00
Average Total .....	\$495.00

## PAYMENT OF BILLS

All charges for the semester are due and payable at the time of registration. Advance payments may be made by remitting funds to the Treasurer prior to registration. Enrollment is not complete until all charges have been paid or otherwise provided for by arrangement with the Treasurer. No bills are mailed by the University. Students are expected to make necessary arrangements so that they may present personal checks, travelers checks, drafts, or cash at registration. Checks should be made payable to the *Treasurer, University of Vermont and State Agricultural College*. Students may deposit sums of money in the Student Bank, which is maintained for their convenience, in the Cashier's Office in the Waterman Building.

**EXTENSIONS AND REFUNDS.** Extension, when necessary, may be arranged with the Treasurer. Charges so deferred, or incurred during the quarter, must be paid or provided for by arrangement satisfactory to the Treasurer before students may take their semester examinations.

Refunds of tuition are made as follows:

1. During the first week of any quarter the full amount is refunded. Thereafter the portion refunded is decreased by 20 per cent for each week of the semester which has elapsed at the time of withdrawal.
2. No refund is made of the matriculation or student activity fee.
3. No refund of room rent is made unless a replacement can be found.
4. Refund of board charges is made on a pro-rata basis.

# Student Aid

Student fees do not meet the full cost of an education at the University. The income from endowments, State and Federal appropriations, and current gifts furnish the balance, amounting in some courses to a contribution of more than \$2,000 a year toward the education of the student.

Many worthy and deserving students, however, are still unable to meet the existing financial charges and for them the University provides, so far as its resources permit, considerable aid in the form of scholarships, loans, prizes, and employment. Application for student aid should be made to the Student Aid Committee on forms which are available in the offices of the Deans. New students should request forms from the Director of Admissions or from their principal if they are attending a high school in Vermont.

## SCHOLARSHIPS

During the past year, a total of \$177,414.30 was awarded to students, including the agricultural, teacher-training, medical, and senatorial scholarships. Of this amount, \$87,000 was provided by the University from scholarship endowments and in the form of prizes. Ninety-five percent of the scholarships were awarded to residents of Vermont. There are, however, a number of scholarships available to non-residents including the Alumni Memorial Scholarships for men.

Any student who has received an endowed or current scholarship in consideration of financial need is expected to repay that scholarship should he, at any time prior to graduation, transfer to another institution.

Following is a list of some of the scholarships and prizes available. A complete list of endowed scholarships and loan funds will be found in the appendix.

*Alumni Memorial Scholarship Fund.* An annual gift from the Alumni Council available for men only. Worthy students who are in need of funds and who meet the qualifications of scholarship, character, leadership, and participation in student activities are recommended to the Student Aid Committee by a special committee of the Alumni Council.

*Honor.* Two hundred dollars each, for the freshman year only, awarded in each accredited Vermont high school to the highest standing boy and girl eligible for admission to the University.

*Debating.* Four scholarships; two for \$212.50 and two for \$425.

*Editorial.* Six scholarships of \$100 to \$175 each.

*Prize Speaking.* One of \$200 and one of \$75.

*Vocal.* Eighteen scholarships of \$75 to \$150 each. (Temporarily suspended.)

*Literary.* Seven scholarships of \$75 to \$100 each.

*Senatorial.* Sixty at \$120 each, for students in the College of Arts and Sciences, the College of Technology, and the School of Education and Nursing, awarded by members of the Vermont Senate. Apply to a senator from your county.

*Elementary and Junior High School Education.* A limited number of scholarships, varying in amount according to qualifications and need, are awarded annually by the State Board of Education to students in these two curricula, in addition to the tuition exemption.

*Endowed Scholarships.* About forty available to residents of particular towns of the State, and others available to non-residents.

*Wilbur Fund.* The income from the fund is available to needy students who are residents of Vermont and have an average of 86 or higher, in amounts varying with individual needs.

*Classical Scholarships.* Five annually of \$200 each are offered to freshmen who are residents of states other than Vermont. Appointees will study Greek and Latin, either as major subjects or as background for other work. Applicants must have completed at least three years of preparatory Latin with honor grades. The scholarships will be continued through the college course for those who maintain the required standard of scholarship and continue the study of Greek and Latin. Address inquiries to the Chairman of the Classical Department, Waterman Building, Burlington, Vt.

## LOAN FUNDS

Loan funds are apportioned annually to needy and deserving students, permitting them to pay a part of the cost of college attendance at some future time. The notes are usually repaid during the productive years immediately following graduation.

## STUDENT EMPLOYMENT

For details concerning Student Employment, see *Personnel Services*.



# General Information

## DEGREES

Degrees are conferred on the recommendation of the different Colleges, and specific requirements will be found in the sections devoted to the respective Colleges. No student is eligible for a degree unless he has completed eight semesters, or the equivalent in semesters and quarters, except that permission may be granted in special cases by the University Council. With the exception noted in the next sentence, every candidate for a degree is required to spend his final year in residence. Those who have completed three years of pre-medical study in the University are awarded their degrees after one year of study in any approved College of Medicine. The degrees are as follows:

### COLLEGE OF ARTS AND SCIENCES

LIBERAL ARTS CURRICULUM: *Bachelor of Arts (B.A.)*

PRE-MEDICAL CURRICULUM (3 YRS.) AND MEDICINE (1 YR.): *Bachelor of Science (B.S.)*

MEDICAL TECHNOLOGY CURRICULUM: *Bachelor of Science in Medical Technology (B.S. in M.T.)*

### COLLEGE OF TECHNOLOGY

CHEMISTRY CURRICULUM: *Bachelor of Science in Chemistry (B.S. in Ch.)*

COMMERCE AND ECONOMICS CURRICULUM: *Bachelor of Science in Commerce and Economics (B.S. in Cm. and Ec.)*

CIVIL ENGINEERING CURRICULUM: *Bachelor of Science in Civil Engineering (B.S. in C.E.)*

ELECTRICAL ENGINEERING CURRICULUM: *Bachelor of Science in Electrical Engineering (B.S. in E.E.)*

MECHANICAL ENGINEERING CURRICULUM: *Bachelor of Science in Mechanical Engineering (B.S. in M.E.)*

### COLLEGE OF AGRICULTURE

AGRICULTURAL CURRICULUM: *Bachelor of Science in Agriculture (B.S. in Ag.)*

AGRICULTURAL ENGINEERING CURRICULUM: *Bachelor of Science in Agricultural Engineering (B.S. in Ag. Engrg.)*

HOME ECONOMICS CURRICULUM: *Bachelor of Science in Home Economics (B.S. in H.Ec.)*

## SCHOOL OF EDUCATION AND NURSING

BUSINESS EDUCATION CURRICULUM: *Bachelor of Science in Business Education* (B.S. in Bus. Ed.)

\*ELEMENTARY EDUCATION CURRICULUM: *Bachelor of Science in Education* (B.S. in Ed.)

\*INDUSTRIAL EDUCATION CURRICULUM: *Bachelor of Science in Education* (B.S. in Ed.)

\*JUNIOR HIGH SCHOOL EDUCATION CURRICULUM: *Bachelor of Science in Education* (B.S. in Ed.)

MUSIC EDUCATION CURRICULUM: *Bachelor of Science in Music Education* (B.S. in Mus.Ed.)

SECONDARY EDUCATION CURRICULUM: *Bachelor of Science in Education* (B.S. in Ed.)

NURSING CURRICULUM: *Bachelor of Science in Nursing* (B.S. in N.)

NURSING EDUCATION CURRICULUM: *Bachelor of Science in Nursing Education* (B.S. in N.Ed.)

## GRADUATE DEPARTMENT

*Master of Arts* (M.A.); *Master of Science* (M.S.); *Master of Education* (M.Ed.); *Civil Engineering* (C.E.); *Electrical Engineer* (E.E.); *Mechanical Engineer* (M.E.)

## COLLEGE OF MEDICINE

MEDICAL CURRICULUM: *Doctor of Medicine* (M.D.)

## HONORS

## GENERAL HIGH STANDING

The Bachelor's Degree may be conferred "with Honors," by vote of the Senate, in recognition of general high standing in scholarship. Three grades are distinguished and indicated by inscribing on the diploma the words *cum laude*, *magna cum laude*, or *summa cum laude*. In the College of Medicine, the five students who have attained the highest average of marks during the entire four years' course are graduated as Doctors of Medicine, *cum laude*. The names of those who have received these honors and of those who have won prizes will be printed in the Commencement program and in the next annual Catalogue.

\* Granted in co-operation with the Vermont State Board of Education.

### SPECIAL HONORS IN THE COLLEGE OF ARTS AND SCIENCES

A student in the College of Arts and Sciences who at the end of his junior year has an average of 85 or above for the work of the sophomore and junior years, may become an applicant for Special Honors in a particular subject. His program for the senior year must be approved not later than the end of the junior year by the department in which Honors are sought and by the Committee on Honors, and he must present a satisfactory thesis and pass an oral examination on the field of special study.

### DEANS' LISTS

The Deans of the undergraduate colleges publish at the beginning of each semester the names of those students who have attained an average of at least 85 in their college credit courses during the preceding semester.

### GRADING SYSTEM

Scholarship is graded on a percentage scale. Grades are reported and recorded numerically. The minimum passing grade in the undergraduate colleges is 60; any grade lower than 60 represents a failure and indicates that the course must be repeated if credit is to be obtained.

To be eligible for graduation, a student must have passed with an average grade of 72 or above in the work required for graduation in his curriculum.

### ACADEMIC DISCIPLINE

The continuance of each student upon the rolls of the University, the receipt by him of academic credits, his graduation, and the conferring of any degree or the granting of any certificate are strictly subject to the disciplinary powers of the University, which is free to cancel his registration at any time on any grounds if it considers such action to be for the welfare of the institution. The disciplinary authority of the University is vested in the President in such cases as he considers proper, and, subject to the reserve powers of the President, in the several Deans.

### USE OF ENGLISH

Correct English usage is demanded by all departments in the University. Written work of any kind which is unsatisfactory in manuscript form, grammar, punctuation, spelling, or effectiveness of expression will be penalized, regardless of contents. Students whose written work falls below the standard of correct usage may be remanded to the English Department for additional instruction, even though Freshman English has been passed.

## SCHOLASTIC REPORTS

All students enrolled in the Academic Colleges receive reports of scholarship from the Registrar's office after the close of each semester. Special reports of low standing are sent by the Deans' offices about the middle of each semester. All these reports are made both to the student concerned and to his parent or guardian.

In the College of Medicine one report is sent covering the work of the college year.

On leaving the University every former student or graduate may procure one photographic transcript of record without charge. Extra copies may be obtained at a cost of one dollar per copy.

## NUMBERING AND DESCRIPTION OF COURSES

A separate number is used for each semester course and for each semester of a year course. The form 1, 2 indicates that the separate semesters may be taken independently for credit, while 1-2 indicates that they may not be so taken and, unless otherwise stated, must be taken in this sequence.

Courses numbered from 100 to 199 are advanced courses, normally open only to juniors and seniors; those numbered from 200 to 299 are for graduate students only. The letter "G" preceding the course number indicates that the course has been approved by the Director of Graduate Study for credit toward advanced degrees, when taken by graduate students.

The number of credit hours *per semester* for each course is given in italics on the first line of the description, and is followed by Roman numerals indicating the semester or semesters during which it is given in the usual academic year.

In certain departments, a form such as (2-3) immediately follows the course title. This indicates the number of class hours respectively of lecture or recitation and of laboratory for the course. Lecture and recitation periods are fifty minutes in length, laboratory periods at least two class hours or 110 minutes.

Courses are elective, unless otherwise stated, subject to the prerequisites indicated. Prerequisite courses are in the same subject as the courses for which they are required, unless otherwise designated. Rotating and alternating courses show the college year during which they are to be given.



FRATERNITY ICE SCULPTORS

KAKE WALK KING AND QUEEN





WOMEN'S SKI TEAM

UVM TOUCHDOWN



# The College of Arts and Sciences

## OBJECTIVE

The College of Arts and Sciences aims to provide for young men and women the means and opportunity of fitting themselves intellectually, emotionally, and spiritually to play a responsible part in the world of thought and action.

It devotes itself to the inculcation of ideals and the cultivation of ideas. It seeks to encourage habits of clear, independent thinking and effective expression; to stimulate an appreciative understanding of the thought and achievement of man; to develop sound critical judgment and a spirit of tolerance; to arouse the intellectual curiosity which is the basis of continuing self-education.

Its fundamental purpose is to instill the courage and conviction to exemplify the enduring values of American democracy.

## THE LIBERAL ARTS CURRICULUM

The curriculum in Liberal Arts, leading to the degree of Bachelor of Arts, is designed to secure adequate training in language, particularly in English, as the mother tongue and the chief tool of thought and expression, and in certain other subjects essential to an understanding of the various fields of human knowledge; and to provide for further study and mastery of a chosen field of concentration.

Every candidate for this degree must fulfill the requirements stated below, and present a total of 120 semester hours of credit. For those required to take Military Science and Physical Education the total of credit hours shall be increased by the number of hours required in those subjects.

### REQUIRED OF ALL STUDENTS:

1. English. English Composition the first year, unless exempted, and the second year either English Literature or American Literature.
2. Foreign Language. One course of at least intermediate grade in French, German, Greek, Latin, or Spanish, to be completed as early as possible in the college career.
3. Science. One laboratory course, normally the first year, to be chosen from Botany, Chemistry, Geology, Physics, and Zoology.

4. Physical Education and Military Science. Two years of Physical Education for men and women, two years of Military Science for men, a year course in Hygiene for women.
5. Field of Concentration. Each student, in consultation with his advisor, must choose a field of concentration during his sophomore year. The specific courses making up the field, as well as the student's whole program for the last two years, are chosen in consultation with the Chairman of the Department in which the major part of the work is to be taken and must have his approval. There are certain restrictions to be met:
  - the field must be a well integrated whole, adapted to the student's special interests;
  - it must include a minimum of six courses totalling not less than 36 semester hours, at least half, but not all, to be taken in one subject;
  - it must contain at least two advanced courses in one subject and one advanced related course in another subject;
  - each student must take at least one course, normally an advanced course, in his field of concentration in each semester of his junior and senior years.

ADDITIONAL REQUIREMENTS FOR STUDENTS CONCENTRATING IN FIELDS IN THE FOLLOWING DIVISIONS:

1. \*Language and Literature, or Music: History (American, Ancient, Medieval, or Modern European) the first year; a second foreign language reaching the intermediate level; a second year course in the Social Science division.
2. Social Science: History (American, Ancient, Medieval, or Modern European) the first year; during the first two years a total of two year courses in different departments, chosen from the following: Economics, Philosophy, Political Science, and Psychology.
3. Science and Mathematics: Freshman Mathematics (11, 12) and Calculus (21-22)† the first two years; Inorganic Chemistry† the first year and General Physics† the second year; a total of two year courses in the divisions of Language, Literature, and Fine Arts (including Music) and of the Social Sciences.

\* It is strongly recommended by the respective departments that students who wish to choose modern foreign language as their field of concentration complete Intermediate Latin in college unless they presented four years of Latin for entrance. The English Department states that "students concentrating in English will be aided by courses in Latin, particularly if they intend to continue with graduate study."

† Students concentrating in Mathematics may omit Inorganic Chemistry. Those concentrating in Botany or Zoology may omit Calculus and may postpone Chemistry and Physics each one year, beginning their special subject the first year.



## PRE-PROFESSIONAL PREPARATION

Students who plan to enter professional colleges requiring previous collegiate preparation should register in the College of Arts and Sciences. The variety of courses offered and the freedom of election in that College is such that all the requirements for any professional school may be met. Many students will desire so to direct their four-year undergraduate course that in addition to a general and sound education appropriate pre-professional training is obtained for later work in the medical sciences, law, or theology.

## MEDICAL SCIENCES (MEDICINE, DENTISTRY)

The requirements for admission to an accredited medical college include not less than three years of undergraduate work, during which the courses required by the American Medical Association must be completed.\* Any student who wishes to enter medical college should by the beginning of his sophomore year consult the catalogue of the college of his choice and arrange to include in his program courses required by that particular school.

Students will find it definitely to their advantage to plan a four-year program which, in addition to the required courses listed below, includes courses leading to the fulfillment of the requirements for a Bachelor of Arts degree. Those who wish to meet the minimum requirements for admission to medical college follow the first three years of the program below. By successfully completing these three years here and one year in an accredited medical college, they will qualify, on application, as candidates for a Bachelor of Science degree.

In the following outline, courses listed are normally taken in the year indicated. The program may be modified both for the needs of the individual student and to allow for concentration in a particular field. A student must have completed a total of 90 semester hours by the end of the third year to be considered for admission to a medical college.

FIRST YEAR	1st SEMESTER	2nd SEMESTER	SECOND YEAR	1st SEMESTER	2nd SEMESTER
English Composition.....	3	3	English or American Literature.....	3	3
Inorganic Chemistry.....	4	4	†Intermediate For. Lang. ....	3	3
Mathematics.....	3	3	Quantitative Chemistry.....	3	3
Zoology.....	4	4	Physics.....	5	5
Foreign Language (Elementary or Intermediate).....	3	3	Electives.....	3-6	3-6
Physical Education.....	(1)	(1)	Physical Education.....	(1)	(1)
Military Science (Men).....	(2)	(2)	Military Science (Men).....	(2)	(2)
Hygiene (Women).....	(1)	(1)	† Unless already completed.		

\* For further information see Index under "Admission, College of Medicine."

## THIRD YEAR

1st 2nd  
SEMESTER

## FOURTH YEAR

Organic Chemistry .....	5	5	Courses in field of concentra-
Social Science Electives .....	6	6	tion and electives
Courses in field of concentra-			
tion and electives			

The requirements for admission to colleges of dentistry vary but in all cases include at least two years of college work with at least one course each in biology, inorganic chemistry, physics, and English. Hence, the course of study advised as preparation for medicine may be used as a basis for selection by those interested in dentistry.

## LAW

American law schools, as a rule, require graduation from a four-year college with a Bachelor's degree prior to admission. There is no prescribed curriculum which is an absolute requisite for admission, but the student is advised to include in his undergraduate course substantial elections in the field of languages, literature, history, economics, political science, and philosophy.

## THEOLOGY

Graduation from a four-year college is rapidly becoming prerequisite for admission to most theological seminaries. Although no prescribed curriculum is demanded as preparation for such professional schools, the student is advised to elect substantially from the departments of languages, particularly classics, history, philosophy, psychology, and social studies.

## THE MEDICAL TECHNOLOGY CURRICULUM

The curriculum is divided into two parts, the pre-clinical period consisting of three years of work in the College of Arts and Sciences and the clinical period of fifteen months under the supervision of the College of Medicine.

The work of the pre-clinical period is designed to fulfill the basic distribution requirements of the Liberal Arts Curriculum and at the same time give the students a scientific background which will enable them to learn to perform intelligently the highly specialized techniques of the modern diagnostic laboratory. The work of the clinical period consists of learning techniques, taking prescribed courses in the College of Medicine, and practical experience in the laboratories of the teaching hospitals.

The clinical period begins with the summer following completion of the junior year in the College of Arts and Sciences. At the end of eleven

months, if the student's work is satisfactory, the degree of Bachelor of Science in Medical Technology is conferred at the regular Commencement exercises. The final four months of the program are devoted to full-time work in the hospital laboratory, at the end of which time the student may be recommended to the Registry of Medical Technologists as eligible to take the examination for certification by that body.

Following is the normal outline of courses:

FIRST YEAR		1st SEMESTER	2nd SEMESTER	SECOND YEAR		1st SEMESTER	2nd SEMESTER
English Composition .....		3	3	English or American Literature .....		3	3
Inorganic Chemistry .....		4	4	Quantitative Chemistry .....		4	4
Zoology (Intro. & Vert.) .....		4	4	Botany and Microtechnique .....		4	4
Freshman Mathematics .....		3	3	French or German (Elementary or Intermediate) .....		3	3
Physical Education .....		(1)	(1)	Elective .....		3	3
Military Science (Men) .....		(2)	(2)	Physical Education .....		(1)	(1)
Hygiene (Women) .....		(1)	(1)	Military Science (Men) .....		(2)	(2)
THIRD YEAR		1st SEMESTER	2nd SEMESTER	SUMMER: Basic Techniques		3 hours	
Organic Chemistry .....		4	4	FOURTH YEAR		1st SEMESTER	2nd SEMESTER
*Intermediate French or German .....		3	3	Special Techniques .....		5	...
Zoology (Histology) .....		4	...	Clinical Pathology .....		5	...
Botany (Bacteriology) .....		4	...	Biochemistry .....		1	9
Non-science Electives .....		3	3	Hospital Assignments .....		4	2
				Bacteriology .....		...	7

\* Unless already completed.

## COURSES OF INSTRUCTION

### ART

*Assistant Professor Colburn and Mrs. Mills; \*Professor Prindle, Mr. Turner*

#### HISTORY OF ART

##### 1 GREEK ART.

*Three hours. II*

The history of art in Greek lands through the Greco-Roman period, with emphasis on sculpture and architecture and some attention to vase-painting. The aim is to help the student understand the meaning of art and appreciate some of the masterpieces.

*Prerequisite:* sophomore standing.

*Mr. Turner*

##### 2 EUROPEAN PAINTING.

*Three hours. I*

The works of important European painters from 1400 to 1825, and the broader features of the historical background. Among the topics

\* Deceased, February 14, 1949.

are museums and their functions, and the ways in which paintings are reproduced for study or for enjoyment in the home.

*Prerequisite:* sophomore standing.

*Mr. Prindle*

#### 4 MODERN ART.

*Three hours. II*

Study and appreciation of contemporary trends in sculpture, architecture, and painting from the period of Impressionism through Surrealism, with emphasis on French and American influences.

*Prerequisite:* sophomore standing.

*Mrs. Mills*

### ARTS AND CRAFTS

#### 11, 12 ARTS AND CRAFTS.

*Three hours. I, II*

Experiences in functional design using various media to develop good taste and creative ability. Different processes including leather tooling, block-printing, ceramics, and work with metal and plastics are presented. A weekly lecture period relates the history and appreciation of arts and crafts to student work.

*Prerequisite:* sophomore standing.

*Mrs. Mills*

### DRAWING AND PAINTING

#### 21, 22 DRAWING AND PAINTING.

*\*Two or three hours. I, II*

Composition and painting techniques, with emphasis on a clearer understanding of modern schools of painting and on individual development.

*Mr. Colburn*

### ART EDUCATION

For courses in ART EDUCATION, see Elementary Education 4-5, 101.

### BOTANY

For courses in BOTANY, see the College of Agriculture.

### CHEMISTRY

For courses in CHEMISTRY, see the College of Technology.

\* This course may not be taken for credit by freshmen. Others may take it for credit once or twice, and in exceptional cases a third time by permission of the instructor and the Committee on Studies. To receive credit a student must complete at least three semester hours.

## CLASSICAL LANGUAGES

Professors \*Prindle and Kidder; Assistant Professor Pooley;  
Mr. Turner

SPECIAL REQUIREMENTS FOR CONCENTRATION IN LATIN: Satisfactory completion of twenty-four semester hours, including 101-102 and additional advanced reading courses (six semester hours or more), and an advanced related course (at least six semester hours), normally in another foreign language or English. Other combinations may be approved. Courses in Greek are recommended, particularly to those who contemplate graduate work in Classics.

### GREEK

#### 1-2 ELEMENTARY GREEK. *Four hours. I, II*

For those who want a slight acquaintance with the language as well as for those who wish to continue the study of Greek. Mr. Pooley

#### 11-12 PLATO AND HOMER. *Three hours. I, II*

Plato's *Apology* and selections from the *Iliad* and *Odyssey* of Homer.  
Prerequisite: 1-2. Mr. Turner

#### 101-102 GREEK DRAMA. *Three hours. I, II*

The reading of three plays of Sophocles, Euripides, and Aristophanes, and lectures on the Greek theatre and on the origin, evolution, and history of Attic tragedy and comedy.

Prerequisite: 11-12. Mr. Turner

For GREEK LITERATURE IN TRANSLATION, see General Literature 1

### LATIN

#### 1-2 ELEMENTARY LATIN. *Three hours. I, II*

Elements of the language, for those who present less than two years of entrance Latin. Credit is allowed only if Latin 11-12 is also completed.

#### 11-12 INTERMEDIATE LATIN. *Three hours. I, II*

Vocabulary, forms, and syntax, and readings from such authors as Caesar, Cicero, Ovid, and Virgil.

Prerequisite: 1-2, or two years of high school Latin.

#### 21-22 LATIN PROSE AND POETRY. *Three hours. I, II*

Selections from Livy or Cicero; Virgil, *Eclogues*; one play of Plautus or Terence.

Prerequisite: 11-12, or four years of high school Latin. Mr. Prindle

\* Deceased, February 14, 1949.

## 101-102 CATULLUS, PLINY, HORACE.

*Three hours. I, II*

Selections from the poems of Catullus, the letters of Pliny, and the *Odes* and *Epodes* of Horace.

*Prerequisite:* 21-22.

*The Staff*

## G103 VIRGIL.

*Three hours. I*

The entire *Aeneid* is read in the original or in translation. The poem is considered with reference to its structure, its literary qualities, and its position in literature. (Offered in alternate years, 1949-50.)

*Prerequisite:* 101-102.

*Mr. Prindle*

## G105 OVID.

*Three hours. I*

Selections from the *Metamorphoses* are studied in detail. (Offered in alternate years, 1950-51.)

*Prerequisite:* 101-102.

*Mr. Prindle*

## G106 CICERO.

*Three hours. II*

Selections from the *Orations*, the *Letters*, and the philosophical works; the position of Cicero in the political and literary history of his age. (Offered in alternate years, 1950-51.)

*Prerequisite:* 101-102.

*Mr. Pooley*

## G110 ADVANCED READING.

*Three hours. II*

Selections to be read are chosen according to the needs and interests of the class from such authors as Tacitus, Lucretius, Juvenal, and Martial.

*Prerequisite:* 101-102.

*The Staff*

## G120 PROSE COMPOSITION.

*Three hours. I*

Required of those who wish to be recommended to teach Latin.

*Prerequisite:* 101-102.

*Mr. Pooley*

## G131-132 ENGLISH WORDS.

*Three hours. I, II*

Among the topics treated are dictionaries and their use, the Indo-European family of languages, the history of the English language, word formation, the ways in which Latin and Greek words have come into English, and the respective places of the Classical and Anglo-Saxon elements in the English vocabulary. (Offered in alternate years, 1949-50.)

*Prerequisite:* junior standing, English or American Literature, and Elementary Latin or its equivalent.

For CLASSICAL MYTHOLOGY, see General Literature 5-6.

For GREEK ART, see History of Art 1.

For LATIN LITERATURE IN TRANSLATION, see General Literature 4.

For THE TEACHING OF LATIN, see Secondary Education 152.

## ECONOMICS

For courses in ECONOMICS, see the College of Technology.

## EDUCATION

For courses in EDUCATION, see the School of Education and Nursing.

## \*ENGLISH

*Professors Pope and Lindsay; Assistant Professors Bogorad†, Dean, Hughes, Marston‡, Sullivan, Trevithick, and Wainwright; Mr. Aldridge, Misses Bandel and Cyert, Mrs. Evans, Messrs. Holmes and Hopwood, Mrs. McGinley, Messrs. Stoel and Yelton*

**SPECIAL REQUIREMENTS FOR CONCENTRATION:** Satisfactory completion of "English Literature" and six semester courses of advanced grade. The advanced related course (at least six semester hours) may be in language, music, or any social science course approved by the department.

### 1-2 ENGLISH COMPOSITION.

*Three hours. I, II*

Criticism of the common errors of writing and speech; study of words, sentences, and paragraph construction; theme writing, oral reports, study of selected literature as illustrative of the principles discussed. Required of all freshmen, except those who demonstrate proficiency by a preliminary test.

*The Staff*

### 13, 14 PERIODICAL WRITING.

*Three hours. I, II*

13 News writing.

14 Short story and other forms of writing.

*Prerequisite:* 1-2 or exemption therefrom.

*Mr. Dean*

### 16 EXPOSITORY WRITING.

*Three hours. I, II*

The writing of expository papers and articles. Required of sophomore engineers; open to others only by permission of the instructor.

*Prerequisite:* 1-2 or exemption therefrom.

*The Staff*

### 18 ADVANCED COMPOSITION.

*Three hours. II*

Recommended to those who wish to teach English, and to those who wish practice in writing. (Offered in alternate years, 1949-50.)

*Prerequisite:* sophomore standing.

*Mr. Lindsay*

### 21, 22 ENGLISH LITERATURE.

*Three hours. I, II*

An outline of the history of English literature from its beginning to modern times. Required of students concentrating in English, and normally prerequisite to advanced courses in English literature.

*Prerequisite:* 1-2 or exemption therefrom.

*The Staff*

\* Sophomores and freshmen excused from English Composition must take English Literature, American Literature or World Literature.

† On leave of absence 1948-1949.

‡ Visiting Assistant Professor 1948-1949.

## 23, 24 AMERICAN LITERATURE.

*Three hours. I, II*

A survey of American literature, exclusive of the drama, from colonial beginnings to the present. Extensive reading, written reports, and class discussions. Normally prerequisite to advanced courses in American literature.

23 The 17th to the mid-19th century.

24 The mid-19th century to the present.

*Prerequisite:* 1-2 or exemption therefrom.

*The Staff*

## 25, 26 MASTERPIECES OF WORLD LITERATURE.

*Three hours. I, II*

A detailed study, in English translation, of ten masterpieces of world literature which have made significant contributions to the development of western culture.

*Prerequisite:* 1-2 or exemption therefrom.

*Miss Bandel*

## G101-102 CHAUCER.

*Three hours. I, II*

*The Canterbury Tales* and chief minor poems, with emphasis on the reading of Chaucer's work as poetry, his literary scope and qualities, and the picture of his time portrayed in his writing. (Offered in alternate years, 1949-50.)

*Prerequisite:* 21, 22 or 23, 24.

*Miss Hughes*

## G107-108 SHAKESPEARE.

*Three hours. I, II*

Lectures and collateral reading on the Elizabethan drama with literary study and textual interpretation of selected plays of Shakespeare.

*Prerequisite:* 21, 22 or 23, 24.

*Mr. Pope*

## G111 RENAISSANCE PROSE AND POETRY.

*Three hours. I*

The major writers of the Tudor and Stuart periods; English prose from the early humanists to the Restoration. English poetry from Wyatt and Surrey to Donne and his followers, including the development of Elizabethan lyric poetry. (Offered in alternate years, 1949-50.)

*Prerequisite:* 21, 22 or 23, 24.

*Mr. Bogorad*

## G112 MILTON.

*Three hours. II*

The works of John Milton, including *Paradise Lost*, *Paradise Regained*, *Samson Agonistes*, some of the minor poems, and selections from the prose works. Lectures, discussions, and reports. (Offered in alternate years, 1949-50.)

*Prerequisite:* 21, 22 or 23, 24.

*Mr. Bogorad*G117, 118 RESTORATION AND EIGHTEENTH CENTURY. *Three hours. I, II*

The works, including selected plays and novels, of significant writers from 1660 to 1800, from Dryden to the early romantic poets. Particular emphasis on the rise of the essay, the satires of Pope and Swift, and the works of Dr. Johnson and his circle. (Offered in alternate years, 1950-51.)

*Prerequisite:* 21, 22 or 23, 24.

*Mr. Marston*



## G121, 122 THE ROMANTIC PERIOD.

*Three hours. I, II*

Lectures and class discussion, collateral reading, individual study of selected topics and reports in class. (Offered in alternate years, 1949-50.)

121 The development of the Romantic Movement through Wordsworth and Coleridge. *Mr. Lindsay*

122 Byron, Shelley, Keats, and other Romantic poets and prosewriters. *Mr. Pope*

*Prerequisite:* 21, 22 or 23, 24.

## G127-128 ENGLISH NOVEL.

*Three hours. I, II*

English fiction from its origins through the nineteenth century. Masterpieces are stressed and read critically. (Offered in alternate years, 1949-50.)

*Prerequisite:* 21, 22 or 23, 24.

*Mr. Wainwright*

## G131-132 VICTORIAN LITERATURE. (1832-1900).

*Three hours. I, II*

A study of the lives and the works (except the novel) of the significant writers of the era by lectures, discussion, and reports. Outstanding poets and prose writers are studied as spokesmen of their own age and harbingers of the present one. (Offered in alternate years, 1950-51.)

*Prerequisite:* 21, 22 or 23, 24.

*Mr. Wainwright*

## G137 MODERN NOVEL.

*Three hours. I*

*Prerequisite:* 21, 22 or 23, 24.

*Mr. Pope*

## G138 MODERN DRAMA.

*Three hours. II*

(Offered in alternate years, 1950-51.)

*Prerequisite:* 21, 22 or 23, 24.

*Mr. Pope*

## G139 MODERN AMERICAN AND BRITISH POETRY.

*Three hours. I*

*Prerequisite:* 21, 22 or 23, 24.

*Mr. Wainwright*

## G140 MODERN SHORT STORY.

*Three hours. II*

*Prerequisite:* 21, 22 or 23, 24.

*Mr. Lindsay*

## G151, 152 AMERICAN NOVEL.

*Three hours. I, II*

Masterpieces of nineteenth-century American fiction selected on the basis of literary merit. Lectures, class discussions, oral and written reports. (Offered in alternate years, 1950-51.)

151 Hawthorne, Melville, and others.

152 Mark Twain, Howells, James and others.

*Prerequisite:* 21, 22 or 23, 24.

*Mr. Trevithick*

## G157, 158 MAJOR AMERICAN AUTHORS.

*Three hours. II*

The writings of some major American authors considered from the viewpoint of literature, their historical importance, and their contributions to the thought of the present. Informal discussion, textual analysis, prepared papers. (Offered in alternate years, 1949-50.)

157 Emerson, Whitman, and Thoreau

158 Poe, Emily Dickinson, and T. S. Eliot

*Prerequisite:* 21, 22 or 23, 24.

*Mr. Lindsay**Mr. Trevithick*

## G161, 162 HISTORY OF THE LANGUAGE.

*Three hours. I, II*

161 Current English. Modern American speech; the nature of language and the principles of its change and growth.

162 Old and Middle English. Development of the language from its beginnings to the standard usage of the present, with reading of various illustrative selections. (Offered in alternate years, 1950-51.)

*Prerequisite:* 21, 22 or 23, 24; 161 for 162.

*Miss Hughes*

## G171, 172 LITERARY THEORY.

*Three hours. I, II*

The more important critical writings, ancient and modern, considered as contributions to the theory of literature and as aids to interpretation of literary works. (Offered in alternate years, 1950-51.)

171 Bibliography and methods of literary study.

172 History and principles of criticism.

*Prerequisite:* 21, 22 or 23, 24.

*Mr. Lindsay*

## G174 POETICS.

*Three hours. II*

An introduction to poetics, with an elementary study of the forms and nature of poetry. (Offered in alternate years, 1949-50.)

*Prerequisite:* 21, 22 or 23, 24.

*Mr. Lindsay*

## G175-176 CREATIVE CRITICISM.

*Three hours. I, II*

A seminar devoted to critical analysis of contemporary fiction.

*Prerequisite:* 21, 22 or 23, 24.

*Mr. Aldridge*

For BIBLICAL LITERATURE, see Religion 11, 12; for foreign literatures in translation, see General Literature.

## GENERAL LITERATURE

## 1 GREEK LITERATURE IN TRANSLATION.

*Three hours. I*

Lectures on the development of the various branches of Greek literature and on its chief authors, with special emphasis on Homeric epic and drama. Readings in standard translations from the more important writers. No knowledge of Greek required.

*Prerequisite:* junior standing.

*Mr. Turner*

## 4 LATIN LITERATURE IN TRANSLATION.

*Three hours. II*

Lectures on the development of Latin literature and on the principal Latin writers, with some emphasis on the historical background and attention to the relation of Latin literature to Greek and English literature. Readings in standard translations from the more important authors. No knowledge of Latin required.

*Prerequisite:* junior standing.

*Mr. Prindle*

## 5-6 CLASSICAL MYTHOLOGY.

*Three hours. I, II*

The more important myths and their influence on English literature and art. Lectures, assigned readings, short papers, and recitations. (Not offered, 1949-50.)

*Prerequisite:* sophomore standing and some classical background.

*Mr. Prindle*

## 12 GERMAN LITERATURE IN TRANSLATION.

*Three hours. II*

Lectures on the development of German literature; reading and discussion of representative works. No knowledge of German required.

*Prerequisite:* junior standing.

*Mr. Carpenter*

## 22 THE RUSSIAN NOVEL.

*Three hours. II*

A study of the Russian novel through the reading in English translation of selected works from Turgenev, Dostoevsky, and Tolstoy. Six novels will be read during the semester. Outside reading and class reports.

*Prerequisite:* junior standing.

*Mr. Stool*

## GEOLOGY

*Assistant Professor Doll*

SPECIAL REQUIREMENTS FOR CONCENTRATION: Satisfactory completion of eight semester courses in geology, of which four are of advanced grade, and of one advanced related course (six semester hours or more) in botany, chemistry, physics, or zoology. A course in some other subject may be approved, to meet particular needs.

## 1-2 INTRODUCTORY GEOLOGY. (3-2)

*Four hours. I, II*

The composition, structure, and surface forms of the earth, and the agencies active in their production; a general survey of the earth's history as recorded in the rocks. Lectures, laboratory, field trips, and lantern slides.

## 11 MINERALOGY. (2-2)

*Three hours. I*

The crystallographic and physical properties of minerals, and their determination by means of the blowpipe. Lectures and laboratory.

*Prerequisite:* 1-2.

## 12 ECONOMIC GEOLOGY. (2-2)

*Three hours. II*

The characteristics, occurrence, distribution, production, and uses of the more important mineral resources. Trips to Vermont localities of economic interest. Lectures and laboratory.

*Prerequisite:* 11.

21 ENGINEERING GEOLOGY. (2-2) *Three hours. I*

The recognition of common minerals and rocks; rock structures and their effects on engineering problems. Lectures and laboratory. *Required of students in Civil Engineering, not open to others.*

111 STRUCTURAL GEOLOGY. (2-2) *Three hours. I*

Structural features of the earth's crust produced by earth movements. Emphasis on the mechanics of folding, fracturing, faulting, and rock flowage, and the relation of such structures to mountain-building. Lectures and laboratory. (Offered in alternate years, 1949-50.)

*Prerequisite: 11.*

112 FIELD GEOLOGY. (1-6) *Three hours. II*

Field methods in the geologic mapping of an assigned area. One conference a week on the problems and progress of the field work; a written report on the area, accompanied by a field map, submitted at the end of the course. (Offered in alternate years, 1949-50.)

*Prerequisite: 111.*

115-116 PHYSIOGRAPHY. (2-2) *Three hours. I, II*

The land forms on the surface of the earth and their origins; external and internal forces modifying the earth. The physiographic provinces of North America are emphasized. Lectures and laboratory. (Offered in alternate years, 1950-51.)

*Prerequisite: 1-2.*

## GERMAN

*Professor Carpenter; Assistant Professor Webster; Messrs. Kahn, Russell and Wurthmann*

**SPECIAL REQUIREMENTS FOR CONCENTRATION:** Satisfactory completion of eight semester courses in German, including at least four of advanced grade, and at least one advanced related year course, normally in a language.

1-2 ELEMENTARY GERMAN. *Three hours. I, II*

For students who present less than two years of entrance German. Pronunciation, oral practice, grammar, and easy reading are stressed during the first two quarters, the reading of simple narrative material during the third. *Credit is allowed only if German 11-12 is also completed.*

## 11-12 INTERMEDIATE GERMAN.

*Three hours. I, II*

Intensive and extensive reading of short stories, novels, plays, and some scientific material, with particular emphasis on the acquisition of a basic vocabulary necessary for reading German works in any field.

*Prerequisite:* 1-2 or equivalent.

## 21, 22 COMPOSITION AND CONVERSATION.

*Three hours. I, II*

Training in writing and speaking German. Translation into German, free composition, and oral reports are required.

*Prerequisite:* 11-12 and permission of the department. *Mr. Carpenter*

G101-102 INTRODUCTION TO GERMAN LITERATURE. *Three hours. I, II*

Selected works of Goethe, Schiller, and Lessing, and a survey of the development of German literature from the beginnings through the classical period, with practice in hearing, writing, and speaking German.

*Prerequisite:* 11-12.

*Mr. Carpenter*

## G105 GOETHE'S FAUST.

*Three hours. I*

Reading in class of Part I and most of Part II; study of sources of the poem and its influence, particularly on English literature; outside reading of several plays from other literatures, which deal with a similar theme. (Offered in alternate years, 1949-50.)

*Prerequisite:* 101-102.

*Mr. Carpenter*

## G106 GERMAN LITERATURE: 1800-1850.

*Three hours. II*

The Romantic movement and Young Germany. Reading of selected works, chiefly by Kleist, Grillparzer, and Heine. (Offered in alternate years, 1949-50.)

*Prerequisite:* 101-102.

*Mr. Carpenter*

## G107 GERMAN LITERATURE: 1850-1900.

*Three hours. I*

Reading in class of plays, beginning with dramas of Hebbel, illustrating the development of the realistic trend which burst forth in Naturalism; study of Impressionism and Neo-romanticism; outside reading of typical short stories and novels. (Offered in alternate years, 1950-51.)

*Prerequisite:* 101-102.

*Mr. Carpenter*

## G108 GERMAN LITERATURE: THE 20TH CENTURY.

*Three hours. II*

Reading in class of selected works, mainly dramas, exemplifying Expressionism and New Reality; collateral reading of typical short stories and novels. (Offered in alternate years, 1950-51.)

*Prerequisite:* 101-102.

*Mr. Carpenter*

**G121, 122 ADVANCED COMPOSITION AND CONVERSATION. *Three hours. I, II***

Training in the written and oral use of German, with special attention to the acquisition of a correct pronunciation, based on the study of phonetics. Recommended to those preparing to teach German.

*Prerequisite:* 21, 22 or 101-102, and permission of the department.

*Mr. Carpenter*

**HISTORY**

*Professor Evans; Associate Professor Putnam; Assistant Professors Pooley and Schultz; Mr. Turner*

**SPECIAL REQUIREMENTS FOR CONCENTRATION:** Satisfactory completion of four year courses (twenty-four semester hours) in history, including two of advanced grade, and at least one advanced related course, ordinarily in one of the other social sciences.

**1-2 ANCIENT HISTORY.**

*Three hours. I, II*

A survey of the ancient Greek and Roman worlds. *Mr. Turner*

**5-6 MEDIAEVAL EUROPE.**

*Three hours. I, II*

The history of Europe from the late Roman Empire to the Renaissance, with particular emphasis on political and cultural developments.

*Mr. Pooley*

**11-12 SURVEY OF EUROPEAN HISTORY.**

*Three hours. I, II*

An introduction to European history, commencing with the rise of the national state and the beginnings of modern economic life.

*Mr. Evans*

**21-22 SURVEY OF AMERICAN HISTORY.**

*Three hours. I, II*

A general survey of American history from the early national period to the present, for students who intend to take only one course in the subject.

*Mr. Schultz*

**111-112 EARLY MODERN HISTORY.**

*Three hours. I, II*

The Renaissance, the Reformation, and seventeenth century Europe, with special attention to the economic and social history of the period. (Offered in alternate years, 1949-50.)

*Prerequisite:* one course.

*Mr. Evans*

**113-114 EUROPE IN THE MODERN AGE.**

*Three hours. I, II*

History of Europe from the seventeenth century to the present.

*Prerequisite:* one course.

*Mr. Evans*

**121-122 EARLY AMERICAN HISTORY.**

*Three hours. I, II*

American history from the discovery through the Civil War. (Offered in alternate years, 1950-51.)

*Prerequisite:* one course.

*Mr. Putnam*

## 123-124 LATER AMERICAN HISTORY.

*Three hours. I, II*

History of the United States from 1865 to the present. (Offered in alternate years, 1949-50.)

*Prerequisite:* one course.

*Mr. Putnam*

## G127-128 AMERICAN FRONTIERS.

*Three hours. I, II*

The westward movement to the end of the nineteenth century and its influence in shaping American ideals and institutions. (Offered in alternate years, 1950-51.)

*Prerequisite:* 121-122, or 123-124.

*Mr. Putnam*

## G141-142 FRENCH REVOLUTION AND NAPOLEON.

*Three hours. I, II*

French history from 1789 to 1815, with special attention to the impact of French ideas and power upon Europe.

*Prerequisite:* 113-114 and one other course.

*Mr. Evans*

## G151-152 CONTEMPORARY HISTORY.

*Three hours. I, II*

The world since 1918, stressing the background of current events.

*Prerequisite:* two courses, preferably 113-114 and 123-124.

*Mr. Evans*

## G155-156 ENGLISH HISTORY.

*Three hours. I, II*

The British role in history since Roman days.

*Prerequisite:* 11-12; English 21-22 or equivalent; junior standing.

*Mr. Schultz*

## G161-162 LATIN AMERICAN HISTORY.

*Three hours. I, II*

The political, social, and economic development since the Spanish Conquest. (Offered in alternate years, 1950-51.)

*Prerequisite:* two courses.

*Mr. Putnam*

## G165-166 CANADIAN HISTORY.

*Three hours. I, II*

Canadian development from the French exploration and settlement to the present with emphasis on the evolution of self-government and relations with the United States. (Offered in alternate years, 1949-50.)

*Prerequisite:* two courses.

*Mr. Putnam*

## G191-192 SEMINAR.

*Two hours. I, II*

Advanced study in a selected field. Open to graduate students and to seniors by permission.

*Mr. Putnam*

## HOME ECONOMICS

The following courses are open to juniors and seniors in the College of Arts and Sciences. Credit for courses marked with a star is accepted for degrees conferred by this College. For descriptions, see HOME ECONOMICS in the College of Agriculture.

**FAMILY LIVING**

41 HOME NURSING

\*152 FAMILY LIVING

\*153 CHILD CARE AND  
DEVELOPMENT**FOOD AND NUTRITION**

1 FOOD SELECTION

HOME MANAGEMENT

\*102 HOME MANAGEMENT

**MATHEMATICS**

For courses in MATHEMATICS, see the College of Technology.

**\*MUSIC***Professor Bennett; Associate Professor Pappoutsakis; Assistant  
Professor Marston; Misses Shively and de Blasius*

**SPECIAL REQUIREMENTS FOR CONCENTRATION:** Satisfactory completion of 1, 2, 7-8, and two of the following: 101-102, 105-106, 107-108, and 121, 122. It is recommended that the related course be Aesthetics (Psychology 113-114) or an advanced course in French or German.

**HISTORY AND THEORY OF MUSIC**

1, 2 SURVEY OF MUSICAL LITERATURE.

*Three hours. I, II*

Orchestral, chamber, choral, and operatic music for concert and radio listeners. No previous technical knowledge is required.

1 From Palestrina to Beethoven.

2 From Schubert to Stravinsky.

*Mr. Bennett*

5-6 ELEMENTARY SIGHT-SINGING, EAR-TRAINING, AND THEORY.

*Two hours. I, II*

Recommended to precede or accompany 7-8, but may be taken separately.

*Mr. Pappoutsakis*

7-8 ELEMENTARY HARMONY.

*Three hours. I, II*

Harmonization of melodies and basses, using triads, inversions, seventh chords, and modulation.

*Prerequisite:* familiarity with scales and keys, and ability to read simple music at the piano.

*Mr. Bennett*

11-12 ADVANCED SIGHT-SINGING, EAR-TRAINING, AND THEORY.

*Two hours. I, II*

Recommended to precede or accompany 101-102 or 105-106, but may be taken separately.

*Prerequisite:* 5-6.*Mr. Pappoutsakis*

\* For the curriculum in Music Education, see the index.



**G101-102 ADVANCED HARMONY AND HARMONIC ANALYSIS.**

*Prerequisite:* 7-8.

*Three hours. I, II*

**G105-106 COUNTERPOINT.**

*Three hours. I, II*

*Prerequisite:* 7-8.

*Mr. Bennett*

**G107-108 ORCHESTRATION AND CONDUCTING.**

*Three hours. I, II*

The characteristics of instruments; arranging for orchestra; technique of the baton; elementary instrumental technique. (Offered in alternate years, 1950-51.)

*Prerequisite:* 7-8; 101-102 is also desirable.

*Mr. Pappoutsakis*

**121, 122 HISTORY OF MUSIC.**

*Three hours. I, II*

Changes in musical structure and style, and their relation to contemporaneous artistic, literary, religious, and social movements.

121 The Renaissance, Bach, Mozart.

122 Beethoven, romanticism, Brahms, the twentieth century.

*Prerequisite:* 1, 2; junior standing.

*Mr. Bennett*

**MUSIC EDUCATION**

**31, 32 ELEMENTARY SCHOOL METHODS AND PRACTICE TEACHING.**

*Three hours. I, II*

The teaching of music in the primary and grammar grades. Observation and practice teaching in the schools of Burlington and vicinity. (Offered in alternate years, 1949-50.)

31 Grades 1 to 3.

32 Grades 4 to 6.

*Prerequisite:* 1, 2; credit or enrollment in 5-6.

**G151, 152 SECONDARY SCHOOL METHODS AND PRACTICE TEACHING.**

*Three hours. I, II*

The administration and content of required and elective high school music courses. Observation and practice teaching in the schools of Burlington and vicinity. (Offered in alternate years, 1950-51.)

151 Junior high school music.

152 Senior high school music.

*Prerequisite:* credit or enrollment in 1, 2 and 5-6.

*Miss Marston*

**G155-156 APPLIED MUSIC METHODS.**

*One hour. I, II*

Methods of teaching piano, organ, singing, or violin.

*Prerequisite:* three years' instruction in chosen instrument at the University, or equivalent.

*Misses Marston, Shively, and de Blasius*

For SCHOOL MUSIC, see Elementary Education 11-12 and 13-14.

**APPLIED MUSIC**

**41, 42 CHOIR.**

*\*One hour. I, II*

Study of works by Bach, Handel, Palestrina, modern Russian composers and others. Weekly services; monthly vespers; Christmas,

Lenten-Easter, and other concerts; annual opera; Baccalaureate service. Three hours of rehearsal weekly, if taken for credit.

*Mr. Bennett, director; Miss Marston, organist*

43, 44 ORCHESTRA.

*\*One hour. I, II*

Study of symphonic and other instrumental literature. The orchestra plays at concerts and the opera, alone and with the choir, and at Commencement. Three hours of rehearsals weekly.

*Mr. Pappoutsakis, conductor*

47, 48 PIANO.

*\*One or two hours. I, II*

*Miss Marston*

49, 50 ORGAN.

*\*One or two hours. I, II*

*Miss Marston*

53, 54 SINGING.

*\*One or two hours. I, II*

*Miss Shively*

55, 56 VIOLIN.

*\*One or two hours. I, II*

*Miss de Blasiis*

## PHILOSOPHY AND RELIGION

*Professor Dykhuizen; Assistant Professors Hall and Levitsky*

SPECIAL REQUIREMENTS FOR CONCENTRATION: Satisfactory completion of Philosophy 1, 2, 4, 107, 108, 114, and either 103 or 105, and an advanced related course or courses, chosen in consultation with the departmental advisor to fit the needs of the individual student.

### PHILOSOPHY

#### 1 INTRODUCTION TO PHILOSOPHY.

*Three hours. I*

A presentation of the chief problems of philosophy.

*Prerequisite:* sophomore standing. *Messrs. Dykhuizen and Levitsky*

\* All courses in applied music may be taken for several years, but no student may receive credit toward graduation totalling more than six semester hours in choir or orchestra or both together. One hour of credit per semester will be given for one private lesson in piano, organ, singing, or violin under a member of the department and five hours practice per week; two hours credit will be given for two private lessons and ten hours practice per week, on recommendation of the instructor and the chairman of the department and on condition that the instruction be accompanied or preceded by either, 1, 2 or 7-8.

For the fees for instruction and use of organ, see the Index under "Fees."

- 2 LOGIC.** *Three hours. II*  
 The principles and conditions of correct thinking with emphasis on the detection of fallacies of thought.  
*Prerequisite:* sophomore standing. *Messrs. Dykhuizen and Levitsky*
- 4 ETHICS.** *Three hours. II*  
 An examination of the ideas underlying man's moral behavior. The aim is to develop an acceptable and coherent theory of conduct.  
*Prerequisite:* sophomore standing. *Messrs. Dykhuizen and Levitsky*
- 20 SOCIAL PHILOSOPHY OF AMERICAN AGRICULTURE.** *Three hours. I*  
 European backgrounds; the history of American thought regarding agriculture in this country; the more important agricultural problems of today in the light of American democratic thought. Normally open for credit only to students in Agriculture.  
*Prerequisite:* senior standing. *Mr. Dykhuizen*
- 103 METAPHYSICS.** *Three hours. I*  
 Basic philosophical problems concerning knowledge, value, and reality.  
*Prerequisite:* 1; junior standing. *Mr. Levitsky*
- 105 SOCIAL PHILOSOPHY.** *Three hours. I*  
 The meanings and values inherent in social life. (Offered in alternate years, 1950-51.)  
*Prerequisite:* 1 or 4; junior standing. *Mr. Levitsky*
- 107, 108 HISTORY OF PHILOSOPHY.** *Three hours. I, II*  
 107 Ancient and Medieval philosophy.  
 108 Modern philosophy.  
*Prerequisite:* 1; junior standing. *Mr. Dykhuizen*
- 109 HISTORY OF AMERICAN PHILOSOPHY.** *Three hours. I*  
 The thought of leading American philosophers from colonial times to the present. (Offered in alternate years, 1949-50.)  
*Prerequisite:* 1; junior standing. *Mr. Levitsky*
- G114 INTELLECTUAL BACKGROUND OF MODERN LIFE.** *Three hours. II*  
 Intellectual movements which have influenced the thought and life of today.  
*Prerequisite:* senior standing or consent of the instructor.  
*Mr. Dykhuizen*

For AESTHETICS, see Psychology 113-114.

For ECONOMIC PHILOSOPHY, see Economics 195 and 196.

For POLITICAL PHILOSOPHY, see Political Science 193, 194.

## RELIGION

## 1, 2 HISTORY OF RELIGION.

*Three hours. I, II*

Religion from early primitive forms to the great world religions of the present. Study of the living religions of today with most emphasis given to Hinduism, Buddhism, Confucianism, Shinto, Judaism, Islam, and Christianity.

*Prerequisite:* sophomore standing.

*Mr. Hall*

## 11, 12 OLD AND NEW TESTAMENT.

*Three hours. I, II*

A critical study of the Jewish-Christian tradition. It includes much reading in the scripture as well as in background material.

*Prerequisite:* sophomore standing.

*Mr. Hall*

## SOCIOLOGY

## 1-2 INTRODUCTORY SOCIOLOGY.

*Three hours. I, II*

The basic features of group behavior; sociological concepts, social organization, and social interaction.

*Prerequisite:* sophomore standing.

*Mr. Levitsky*

## 102 SOCIAL PROBLEMS.

*Three hours. II*

A descriptive analysis of particular social problems.

*Prerequisite:* Philosophy 4 or Psychology 1-2 or Sociology 1-2; junior standing.

*Mr. Levitsky*

## PHYSICS

*Professors Holmes and Walbridge; Assistant Professors Rooney and Woodward; Messrs. Burgess and Shields*

**SPECIAL REQUIREMENTS FOR CONCENTRATION:** Satisfactory completion of three advanced courses in physics and Mathematics 111, 112. Additional advanced courses in physics, mathematics, and chemistry are recommended.

## 1-2 INTRODUCTORY PHYSICS. (2-2)

*Three hours. I, II*

An introductory course for students not concentrating in a science. Subjects included are mechanics, heat, sound, light, electricity, and magnetism. Demonstration lectures, presenting experimental facts and theoretical conclusions, are closely coordinated with laboratory work.

*Prerequisite:* one year each of secondary school algebra and geometry.

*The Staff*

## 11-12 GENERAL PHYSICS. (3-4)

*Five hours. I, II*

For students concentrating in a science. The first semester deals with mechanics and heat, the second with sound, light, electricity and magnetism, and atomic physics. Experimental facts and theoretical principles are presented, with special attention to the scientific method employed and emphasis on training in simple reasoning. Laboratory and class work are closely coordinated.

*Prerequisite:* Mathematics 1, 2 or 11, 12.

*The Staff*

## G111, 112 MECHANICS AND WAVE MOTION. (3-0)

*Three hours. I, II*

Continuation and developments of the principles and methods of mechanics with emphasis on the integration of fundamental physical principles with mathematics and with the extension of these principles to wave motions.

111 Forces and other vector quantities. Work and energy.

112 The dynamics of rigid bodies, wave motion and introduction to wave mechanics.

*Prerequisite:* 11 and Mathematics 111 or special permission of the instructor.

*Mr. Walbridge*

## G121, 122 HEAT AND THERMODYNAMICS.

*Three hours. I, II*

Experimental facts and theoretical principles of heat. (Not offered 1949-50.)

121 Thermometry, expansion, specific heat and gas laws. (2-2)

122 Thermal conduction and thermodynamics (3-0). The basic theory of the conduction of heat and the relation between work and heat; various thermodynamical cycles and the thermodynamics of radiation.

*Prerequisite:* 11 and Calculus for 121; 121 and Mathematics 111 for 122.

*Mr. Woodward*

## G141, 142 MAGNETISM AND ELECTRICITY. (2-2)

*Three hours. I, II*

The fundamental principles; magnetic and electric field strengths and potentials. Resistance and energy relations in direct current circuits; capacitance and inductance; applications to transient phenomena; alternating currents.

141 Basic principles of magnetism and electrostatics, resistance and energy relations.

142 Capacitance; inductance and alternating currents.

*Prerequisites:* 12 and Calculus for 141; 141 for 142.

*Mr. Holmes*

## G151, 152 X-RAYS AND CRYSTAL STRUCTURE. (2-2)

*Three hours. I, II*

The production and properties of X-rays with laboratory uses of X-ray tubes and measurements of wave lengths and of absorptions. The application of X-ray methods to the study of crystal structure. (Not offered 1949-50.)

151 Elementary work in the field of x-rays, with some application to crystal structure.

152 Advanced study of the interactions between radiation and matter.

*Prerequisite:* 171 for 151; 151 for 152.

*Mr. Walbridge*

**G161, 162 OPTICS AND SPECTROSCOPY. (2-2) *Three hours. I, II***

A geometrical theory of reflection and refraction, mirrors and lenses; the wave properties of light, interference and diffraction, polarized light; the spectra of various elements and their part in the development of theories of atomic structure.

161 The centered optical system.

162 Physical optics and spectroscopy.

*Prerequisite:* 12 for 161; 161 and Calculus for 162. *Mr. Woodward*

**G171, 172 ELECTRON AND ATOMIC PHYSICS. (2-2) *Three hours. I, II***

The behavior of individual electrons and of aggregates of electrons; phenomena associated with motions of electrons in magnetic fields; photoelectric effect and thermionic emission; vacuum tube characteristics and applications; radioactivity and atomic disintegration.

171 Fundamental electronics and thermionic emission.

172 Vacuum tube circuits: ionization; radioactivity and cosmic rays.

*Prerequisite:* 12 and Calculus for 171; 171 for 172.

*Messrs. Holmes and Rooney*

**181-182 EXPERIMENTAL PHYSICS. (0-6) *Three hours. I, II***

Students concentrating in Physics may, with the approval of a member of the staff, select a subject and work without the detailed guidance necessary in the usual type of laboratory work. The course is a step between ordinary undergraduate laboratory work and elementary research. It will involve both theoretical and experimental work. The student will do independent study with frequent consultations with the instructor. (Not offered 1949-50.)

*Prerequisite:* two advanced year courses.

*The Staff*

**G201-202 SEMINAR.**

*One hour. I, II*

Members of the staff and graduate students meet once a week to study contemporary advances in Physics and for reports on research being done in the department. (Not offered 1949-50.)

*The Staff*

**G211-212 RESEARCH.**

*Nine to twelve hours. I, II*

For students seeking a Master of Science degree in Physics. A problem is selected in consultation with a member of the staff.

*Prerequisite:* six semester courses in the 100 group and either advanced calculus or differential equations.

*The Staff*

**POLITICAL SCIENCE**

*Professor Carroll; Associate Professor Nuquist; Assistant Professors Haugen and Kruse; Mr. Robinson*

**SPECIAL REQUIREMENTS FOR CONCENTRATION:** Satisfactory completion of four semesters of advanced courses in political science and an advanced

course (six or more semester hours) ordinarily in one of the other social sciences.

1, 2 AMERICAN GOVERNMENT.

*Three hours. I, II*

1 The federal government.

2 State governments.

*The Staff*

51, 52 INTERNATIONAL RELATIONS.

*Three hours. I, II*

51 Development and principles of international politics.

52 International organization.

*Prerequisite:* sophomore standing; 51 for 52.

*Messrs. Kruse and Robinson*

61, 62 LOCAL GOVERNMENT.

*Three hours. I, II*

61 Rural government.

62 Municipal government.

*Prerequisite:* sophomore standing.

*Mr. Nuquist*

71, 72 COMPARATIVE GOVERNMENT.

*Three hours. I, II*

71 Governments of the British Commonwealth of Nations.

72 Governments of Continental Europe.

*Prerequisite:* sophomore standing.

*Messrs. Carroll and Haugen*

76 GOVERNMENTS OF THE FAR EAST.

*Three hours.*

(Not offered 1949-50.)

77 GOVERNMENTS OF LATIN AMERICA.

*Three hours.*

(Not offered 1949-50.)

G151 FOREIGN POLICY OF THE UNITED STATES.

*Three hours. I*

Nature and conduct of American foreign policy.

*Prerequisite:* any course except 1, 2.

*Mr. Kruse*

G153-154 WORLD POLITICS.

*Three hours. I, II*

An analysis of the foreign policies of countries other than the United States, with emphasis on selected problems in Europe, Latin America, and the Pacific Area.

*Prerequisite:* 51, 52.

*Mr. Kruse*

G156 INTERNATIONAL LAW.

*Three hours. II*

Principles and applications of public international law.

*Prerequisite:* 51, 52.

*Mr. Kruse*

G163 STATE GOVERNMENT.

*Three hours. I*

Organization and administration of state government. (Not offered 1949-50.)

*Prerequisite:* 1, 2, and one other course.

*Mr. Nuquist*

**G173, 174 CONSTITUTIONAL LAW.***Three hours. I, II*

173 Nature of the American constitutional system.

174 Organization and power of Congress.

*Prerequisite:* 1, 2, and either one other course or Economics 11, 12;  
junior standing.*Mr. Carroll***G177, 178 INTERGOVERNMENTAL RELATIONS.***Three hours. I, II*

The interrelations of national, state, and local governments in the United States, including a study of special districts, interstate cooperation, and administrative controls accompanying grants-in-aid.

177 Modern problems of the federal system.

178 Joint administration of public functions.

*Prerequisite:* 1, 2 and either one other course or Economics 103-104;  
177 or 183 for 178.*Mr. Haugen***G183-184 PUBLIC ADMINISTRATION.***Three hours. I, II*

183 Organization and function of public administration.

184 Procedure of administrative agencies.

*Prerequisite:* 1, 2 and one other course.*Mr. Nuquist***G186 ADMINISTRATIVE LAW.***Three hours. II*

(Not offered 1949-50.)

*Prerequisite:* 1, 2, and one other course.*Mr. Nuquist***G193, 194 POLITICAL THEORY.***Three hours. I, II*

193 Development of political theory.

194 Recent political theory.

*Prerequisite:* two courses, and permission of the instructor.*Mr. Robinson***G196 POPULAR GOVERNMENT.***Three hours. II*

Problems of popular government throughout the world, including electoral procedures, non-voting, unicameralism, relation between executive and legislative branches, trend toward centralization, initiative, referendum, recall, judicial review, etc. (Not offered 1949-50.)

*Prerequisite:* two courses.*Mr. Carroll***PSYCHOLOGY***Professor Metcalf; Associate Professor Ansbacher; Assistant Professor Chaplin; Misses Corcoran and Pizinger*

SPECIAL REQUIREMENTS FOR CONCENTRATION: Satisfactory completion of at least twelve semester courses, eight in psychology, including 1-2, 104, and 107, and the other four either in zoology or in philosophy. Zoology 1 and 4, in the freshman year if possible, are strongly recommended.



## 1-2 GENERAL PSYCHOLOGY.

*Three hours. I, II*

An introduction to the entire field, emphasizing the normal adult human being.

*Prerequisite:* sophomore standing.

*The Staff*

## G101 SOCIAL PSYCHOLOGY.

*Three hours. I*

The social factors in personality and the psychological aspects of social relations, groups, institutions, and culture.

*Prerequisite:* 1-2.

*Mr. Ansbacher*

## G102 PHYSIOLOGICAL PSYCHOLOGY. (2-2)

*Three hours. II*

Relationships between the psychological processes and the functions of the nervous system and endocrine glands.

*Prerequisite:* 1-2.

*Mr. Chaplin*

## G103 APPLIED PSYCHOLOGY.

*Three hours. I*

Applications of psychological methods to problems of personnel selection, vocational guidance, efficiency of work, influencing others, crime and delinquency, accidents. Training in opinion surveys.

*Prerequisite:* 1-2.

*Mr. Ansbacher*

## G104 STATISTICAL METHODS IN PSYCHOLOGY.

*Three hours. II*

Tabular and graphic representation of psychological data; measures of central tendency and variability; functions and applications of the normal probability curve; sampling and reliability; testing of experimental hypotheses; and correlation techniques.

*Prerequisite:* 1-2; Math. 1 or the equivalent.

*Mr. Ansbacher*

## G105 CHILD PSYCHOLOGY.

*Three hours. I*

The development of the human mind from birth to maturity. (Offered in alternate years, 1949-50.)

*Prerequisite:* 1-2.

*Mr. Metcalf*

## G106 CHARACTER AND PERSONALITY.

*Three hours. II*

A survey of methods used and results obtained in the analytical study of the nature and development of the mature individual. (Offered in alternate years, 1949-50.)

*Prerequisite:* 1-2.

*Mr. Metcalf*

## G107 SYSTEMATIC PSYCHOLOGY.

*Three hours. I*

A comparative study of the leading contemporary schools of psychological thought.

*Prerequisite:* 1-2.

*Mr. Metcalf*

**G108 ABNORMAL PSYCHOLOGY.***Three hours. II*

The more unusual mental processes, the methods of observing and interpreting them, and their bearing on our understanding of the normal mind.

*Prerequisite:* 1-2.

*Mr. Metcalf*

**G109-110 TESTS AND MEASUREMENTS.***Three hours. I, II*

Individual training in the fundamental concepts of psychological measurement, the administration of tests, and the interpretation of results.

*Prerequisite:* 104.

*Mr. Ansbacher*

**G111-112 EXPERIMENTAL PSYCHOLOGY. (1-4)***Three hours. I, II*

The student performs experiments designed to develop skill in psychological methods of procedure and thought.

*Prerequisite:* 104.

*Mr. Chaplin*

**G113-114 AESTHETICS.***Three hours. I, II*

The mental processes involved in the response to the beautiful in art and nature. (Offered in alternate years, 1950-51.)

*Prerequisite:* 1-2.

*Mr. Metcalf*

**ROMANCE LANGUAGES**

*Professor Daggett; Associate Professor Doane; Assistant Professors Johnston, Towne, and Willard; Mr. Saindon and Miss DiRubbo*

**SPECIAL REQUIREMENTS FOR CONCENTRATION IN FRENCH OR SPANISH:** Satisfactory completion of six semester courses of advanced grade, and at least one advanced course (six semester hours or more), ordinarily in another foreign language or English.

**FRENCH****1-2 ELEMENTARY FRENCH.***Three hours. I, II*

Grammar, pronunciation, composition, translation, dictations, and use of the spoken language, for beginners and those who present less than two years of preparatory French. *Credit is given only if Intermediate French is also completed.*

*Mr. Saindon and others*

**11-12 INTERMEDIATE FRENCH.***Three hours. I, II*

Grammar, composition, translation, and conversation. The class work is conducted, as much as possible, in French.

*Prerequisite:* 1-2 or two years of preparatory French.

*Mr. Johnston and others*

- G101-102 INTRODUCTION TO FRENCH LITERATURE. *Three hours. I, II*  
Recitations, lectures, outside reading and reports. Selected texts from the 17th, 18th, and 19th centuries are the basis of study.

*Prerequisite:* 11-12.

Mr. Daggett

- G107-108 FRENCH LITERATURE: 19TH CENTURY. *Three hours. I, II*  
Recitations, lectures, outside reading, and reports. A careful study of the outstanding authors of the romantic, realistic, and naturalistic schools.

*Prerequisite:* 101-102.

Mr. Daggett

- G111 FRENCH LITERATURE: 18TH CENTURY. *Three hours. I*

Selected readings, lectures on the main currents of the literature of the century with emphasis on Montesquieu, Diderot, Voltaire, and Rousseau. Lesage, Marivaux, and Beaumarchais will be studied in the drama. (Offered in alternate years, 1949-50.)

*Prerequisite:* 101-102.

Mr. Johnston

- G112 FRENCH LITERATURE: 20TH CENTURY. *Three hours. II*

Lectures on the development of the novel and the drama in the period from 1900 to the present. Selected readings from Proust, Roland, Claudel, Gide, Giraudoux, Duhamel, Romain, and Malraux. (Offered in alternate years, 1949-50.)

*Prerequisite:* 101-102.

Mr. Johnston

- G113-114 FRENCH LITERATURE: 17TH CENTURY. *Three hours. I, II*

Lectures, recitations, outside reading, and reports. The influence of society, the Academy, and the Church on the literature of the period is emphasized. (Offered in alternate years, 1950-51.)

*Prerequisite:* 101-102.

Mr. Daggett

- G121-122 CONVERSATION AND COMPOSITION. *Three hours. I, II*

Composition, conversation, and phonetics. Required of those who wish to be recommended to teach French.

*Prerequisite:* good standing in 11-12.

Mr. Doane

- G201-202 GRADUATE COURSES. *Three hours. I, II*

Courses are offered for resident candidates for the Master of Arts degree, and further opportunities for independent work are provided.

## ITALIAN

- 1-2 ELEMENTARY ITALIAN. *Three hours. I, II*

Grammar, composition, translation, and practice in the spoken language for beginners.

*Prerequisite:* permission of the department.

Mr. Johnston

## 11-12 INTERMEDIATE ITALIAN.

*Three hours. I, II*

Grammar, composition, translation, and conversation.

*Prerequisite:* Italian 1-2 or its equivalent.*Mr. Johnston*

## SPANISH

## 1-2 ELEMENTARY SPANISH.

*Three hours. I, II*Grammar, composition, and translation for beginners, with frequent practice in pronunciation and use of the spoken language. *Credit is given only if Intermediate Spanish is also completed.**Mr. Doane and others*

## 11-12 INTERMEDIATE SPANISH.

*Three hours. I, II*

Readings from selected authors. Composition, grammar, and practice in conversation. Spoken Spanish is used to a considerable extent in class.

*Prerequisite:* 1-2 or two years of preparatory Spanish.*Mr. Towne and others*G101-102 INTRODUCTION TO SPANISH LITERATURE. *Three hours. I, II*

Selected texts from the 17th century to modern times; recitations, collateral reading, and reports.

*Prerequisite:* 11-12.*Mr. Towne*

## G105-106 SPANISH-AMERICAN LITERATURE.

*Three hours. I, II*

The evolution of Latin-American thought as reflected in the literatures of the various Spanish-speaking countries from the 15th century to the present. The course is conducted in Spanish. (Offered in alternate years, 1949-50.)

*Prerequisite:* permission of the department.*Mr. Willard*

## G107 SPANISH LITERATURE: 19TH CENTURY.

*Three hours. I*

The principal literary currents of the 19th century, from Romanticism up to the generation of 1898. Representative readings from the poetry, drama, and novel of the period. The course is conducted in Spanish.

*Prerequisite:* 101-102.*Mr. Willard*

## G108 SPANISH LITERATURE: 20TH CENTURY.

*Three hours. II*

The origins and main aspects of the intellectual conflicts in modern Spain, as reflected in the literary works from the generation of 1898 to the present. The course is conducted in Spanish.

*Prerequisite:* 107.*Mr. Willard*

G113-114 SPANISH LITERATURE: GOLDEN AGE. *Three hours. I, II*

Selected readings from the novel, poetry, drama of the 16th and 17th centuries with special attention to Cervantes and the dramatists. (Offered in alternate years, 1950-51.)

*Prerequisite:* 101-102.

*Mr. Daggett*

G121-122 CONVERSATION AND COMPOSITION. *Three hours. I, II*

Composition, conversation, and phonetics. Required of those who wish to be recommended to teach Spanish.

*Prerequisite:* good standing in 11-12.

*Miss DiRubbo*

G201-202 GRADUATE COURSES. *Three hours. I, II*

Courses are offered for resident candidates for the Master of Arts degree and further opportunities for independent work are provided.

## RUSSIAN

1-2 ELEMENTARY RUSSIAN. *Three hours. I, II*

Grammar, translation, extensive practice in the spoken and written language for beginners.

*Prerequisite:* sophomore standing.

*Mr. Willard*

11-12 INTERMEDIATE RUSSIAN. *Three hours. I, II*

Systematic grammar review, composition, extensive oral practice. Readings from Pushkin, Lermontov, Gogol, Tolstoy, and others.

*Prerequisite:* 1-2, or its equivalent.

*Mr. Willard*

## SOCIOLOGY

For courses in SOCIOLOGY, see the Department of Philosophy and Religion.

## SPEECH

*Associate Professor Huber, Assistant Professor Luse; Mr. Anderson, Mrs. Connell, Mr. Humphrey*

1 BASIC SPEECH. *Three hours. I, II*

The elements of speech and their practical application to the individual speaking voice. Exercises to develop pleasing quality of voice, flexibility, range, and power and to improve articulation. *The Staff*

**3 PARLIAMENTARY PROCEDURE.***One hour. I*

Study and practice in the fundamentals of conducting a meeting. The class meets twice a week with one hour of outside preparation.  
*Prerequisite:* sophomore standing. *Mr. Huber*

**11 PUBLIC SPEAKING.***Three hours. I, II*

Preliminary analysis, gathering material, organization and delivery of public speeches with special attention on the use of visual aids and the speech to inform. Two-thirds of the time is devoted to student performance.  
*Mrs. Connell and Staff*

**12 ARGUMENTATION.***Three hours. II*

Inductive, deductive, and causal reasoning as applied to the speaking situation; designed to develop through performance skill in logical expression of thought.  
*Prerequisite:* 11; sophomore standing. *Mr. Huber*

**14 GROUP DISCUSSION.***Three hours. II*

The basic methods of procedure in committees, round table discussions, lecture forums, symposiums, panels, and other types of discussion; designed to develop through performance skill in the thought processes involved in discussion leadership. (Offered in alternate years, 1949-50.)  
*Prerequisite:* 11; sophomore standing. *Mr. Huber*

**31 ORAL INTERPRETATION OF LITERATURE.***Three hours. I, II*

Study and oral interpretation of prose and poetry; techniques of analysis and presentation. At least two-thirds of the time is devoted to student presentation.  
*Prerequisite:* 1. *Mr. Humphrey*

**71 VOICE SCIENCE.***Three hours. I*

The physical, anatomical, physiological, and phonetic factors of speech. (Offered in alternate years, 1948-49.)  
*Prerequisite:* 1; sophomore standing. *Miss Luse*

**74 INTRODUCTION TO SPEECH CORRECTION.***Three hours. II*

A basic course in the causes, symptoms, and treatment of speech disorders. (Offered in alternate years, 1950-51.)  
*Prerequisite:* 1; sophomore standing. *Miss Luse*

**111 PERSUASION.***Three hours. I*

Human motivation, attitudes and how to change them, emotion, stereotypes, attention, and audience psychology; training in their use through student performance. (Offered in alternate years, 1948-49.)  
*Prerequisite:* six hours, including 11. *Mr. Huber*

## 116 SPEECH COMPOSITION.

*Three hours. II*

A study of speech style by analysis of great speeches and by writing longer speeches, intended primarily for those who expect to use public speaking as a basic tool in their careers. (Offered in alternate years, 1950-51.)

*Prerequisite:* six hours, including 11.

*Mr. Huber*

## 133 ACTING AND DIRECTING.

*Three hours. I*

Introduction to techniques of directing and acting; problems in play analysis, character analysis, and presentation; participation in improvisations and one-act plays as actor and director. Emphasis on group analysis and presentation. (Offered in alternate years, 1949-50.)

*Prerequisite:* 31.

*Mr. Humphrey*

## 140 PLAY PRODUCTION.

*Three hours. II*

Sources of materials, play selection, casting and rehearsing, production organization. For prospective directors of plays, operettas, and festivals in schools, colleges, and community groups. (Offered in alternate years, 1949-50.)

*Prerequisite:* 133.

*Mr. Humphrey*

## 171, 172 SPEECH CORRECTION.

*Three hours. I, II*

The etiology, symptoms, and treatment of voice and articulatory disorders; the problems of stuttering and organic disorders of speech. (Offered in alternate years, 1949-50).

*Prerequisite:* 71 and 74; 171 for 172.

*Miss Luse*

## ZOOLOGY

*Professor Moody; Associate Professor Rowell; Assistant Professors David, Lochhead, and Parsons; Miss Paulsen*

**SPECIAL REQUIREMENTS FOR CONCENTRATION:** Satisfactory completion of at least one semester of elementary botany, and in zoology at least eight semester courses, which must include Zoology 1, 2, 4, three courses (twelve semester hours or more) of advanced grade, and the senior seminar. The advanced related course (six semester hours or more) may be in botany, chemistry, geology, physics, or psychology.

## 1 INTRODUCTION TO ZOOLOGY. (2-4)

*Four hours. I*

Basic information on the structure, function, embryology, and heredity of selected animal forms, for all beginning students. Designed to give the general student greater appreciation of the world of animals and man, and the science student background for further study in zoology. Lectures, laboratory.

*Mr. Rowell and Staff*

- 2 INVERTEBRATE ZOOLOGY. (2-4) *Four hours. II*  
 The anatomy, physiology, life history, and evolutionary aspects of selected representatives of the more important invertebrate phyla. Lectures, laboratory.  
*Prerequisite:* 1. *Mr. Lochhead and Staff*
- 4 VERTEBRATE ZOOLOGY. (2-4) *Four hours. II*  
 Survey of Phylum Chordata; structure and biology of vertebrate animals; dissection of typical submammalian vertebrates. Lectures, laboratory.  
*Prerequisite:* 1. *Miss David and Staff*
- 21 EVOLUTION. (3-0) *Three hours. I*  
 Evidence of the occurrence of evolution; history of animal life on the earth; evolution of man; principles of evolutionary change.  
*Prerequisite:* sophomore standing. *Mr. Moody*
- 31 GENERAL ENTOMOLOGY. (2-4) *Four hours. I*  
 Introduction to the study of insects, with emphasis on morphology, physiology and evolution. Lectures, laboratory.  
*Prerequisite:* 1. *Mr. Parsons*
- 52 PHYSIOLOGY. (3-0) *Three hours. II*  
 Introduction to some chemical and mechanical fundamentals of animal physiology, with special reference to man.  
*Prerequisite:* 1, junior standing; some knowledge of chemistry.  
*Mr. Lochhead*
- 101 COMPARATIVE ANATOMY. (2-4) *Four hours. I*  
 Study of the evolution of the organ systems of vertebrates, accompanied by the dissection of a mammal. Lectures, laboratory.  
*Prerequisite:* 4. *Miss David*
- 102 PRIMATE ANATOMY. (0-8) *Four hours. II*  
 Detailed dissection of the monkey. Laboratory.  
*Prerequisite:* 101. *Miss David*
- 105 COMPARATIVE HISTOLOGY. (2-4) *Four hours. I*  
 Microscopic anatomy of selected invertebrate and vertebrate animals. Basic tissue similarities and specializations in relation to function. Lectures, laboratory.  
*Prerequisite:* 4, and 106 or Botany 112. *Mr. Rowell*
- 106 VERTEBRATE EMBRYOLOGY. (2-4) *Four hours. II*  
 General principles of development of an ovum; comparisons of early organogenesis in frog, chick, and mammal. Lectures, laboratory.  
*Prerequisite:* 4, junior standing. *Mr. Rowell*



- 108 INSECT ECOLOGY. (2-4) *Four hours. II*  
 Relationship between insects and their environment, with emphasis on those of agricultural and medical importance. Lectures, laboratory, reports, field work.  
*Prerequisite:* 31. *Mr. Parsons*
- G115 HEREDITY. (3-0) *Three hours. I*  
 Principles of inheritance and their physical basis.  
*Prerequisite:* junior standing and four semesters of courses selected from botany, psychology, and zoology. *Mr. Moody*
- G116 HUMAN GENETICS AND EUGENICS. (3-0) *Three hours. II*  
 Principles of human inheritance; what is inherited; interaction of heredity and environment; application of principles of heredity to human problems on both individual and social levels.  
*Prerequisite:* 115 or Botany 101. *Mr. Moody*
- G120 MODERN EVOLUTIONARY THEORY. (3-0) *Three hours. II*  
 Contributions of modern research in genetics, systematics, distribution, experimental embryology, serology, and related fields to problems of the means and methods of evolutionary change.  
*Prerequisite:* 21, and 115 or Botany 101. *Mr. Moody*
- G191, 192 SEMINAR. (1-0) *One hour. I, II*  
 Review and discussion of current zoological research. Required of graduate students and seniors concentrating in zoology; open to others by special permission only. *The Staff*
- G201, 202 ADVANCED READINGS. *Credit as arranged*  
 Readings, with conferences, on topics chosen to provide graduate students with background for, and specialized knowledge relating to, their research problems. Required of graduate students in zoology; not open to others.
- G203, 204 RESEARCH. *Credit as arranged*  
 Original investigation intended to culminate in a Master's thesis. Required of graduate students in zoology; not open to others.

# The College of Technology

The College of Technology includes the Departments of Chemistry, Economics, Civil Engineering, Electrical Engineering, Mechanical Engineering, and Mathematics and Mechanics. It offers a number of specialized professional curricula in these fields, leading to the degree of Bachelor of Science in the field of specialization. Details are given in the sections immediately following.

## THE CHEMISTRY CURRICULUM

The Department of Chemistry offers a specialized curriculum leading to the professional degree of Bachelor of Science in Chemistry. This curriculum is designed to give a sound basic training in Chemistry, to prepare the student for service in some branch of the chemical profession, and to qualify him adequately for advanced study in graduate school.

The department is accredited by the Committee for Professional Training of the American Chemical Society, which has established minimum requirements for the training of chemists at the bachelor's level. In accepting accreditation, the department has planned a curriculum which permits the student to reach these minimum objectives and will qualify the graduate for certification.

Those who wish a less intensive training in chemistry may take the Liberal Arts curriculum with a concentration in chemistry and receive the Bachelor of Arts degree. These students may also qualify for accreditation by satisfactorily completing certain courses beyond the minimum required for concentration, and *only those who so qualify will be recommended as chemists by the department*. A student can elect to concentrate in chemistry at the end of the freshman year or even as late as the end of the sophomore year and still qualify for accreditation. However, the department strongly recommends that the student choose before the start of his sophomore year. It will be glad to offer advice to any student interested in concentrating in chemistry.

In the first year, and to some degree in the second year, prescribed courses are such that a student can transfer into the curriculum from Liberal Arts, or vice versa.

# The Chemistry Curriculum

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Below are listed the courses of study included in the Chemistry Curriculum:

FIRST YEAR		SECOND YEAR	
	1st 2nd SEMESTER		1st 2nd SEMESTER
General Chemistry .....	5 5	Quantitative Analysis .....	4 4
*English Composition .....	3 3	Sophomore English .....	3 3
Algebra, Trig., Anal. Geom. ....	5 5	Calculus .....	3 3
Elementary German .....	3 3	Intermediate German .....	3 3
Hygiene (Women) .....	(1) (1)	General Physics .....	5 5
Military Science (Men) .....	(2) (2)	Military Science (Men) .....	(2) (2)
Physical Education .....	(1) (1)	Physical Education .....	(1) (1)
THIRD YEAR		FOURTH YEAR	
	1st 2nd SEMESTER		1st 2nd SEMESTER
Physical Chemistry .....	5 5	Qualitative Organic Anal. ....	5 ..
Organic Chemistry .....	5 5	Senior Research .....	2 4
Advanced Physics .....	3 3	†Advanced Organic Chem. ....	3 3
Approved Elective .....	3 3	†Advanced Physical Chem. ....	.. 3
Junior Seminar .....	1 1	†Chemical Thermodynamics .....	3 ..
		†Advanced Inorganic Chem. ....	3 3
		†Theoretical Qual. Anal. ....	3 ..
		†Theoretical Quant. Anal. ....	.. 3
		Senior Seminar .....	1 1
		Approved Elective .....	3 3
		‡Inorganic Preparations .....	.. 2

\* Students exempted from English Composition on the basis of the placement test must substitute another English course in its place.

† Six hours of courses chosen from these offerings are required each semester.

‡ Required of students deficient for accreditation in general chemistry laboratory.

**THE MASTER'S DEGREE IN CHEMISTRY.** The department offers work leading to the degree of Master of Science, the thesis problem being selected from the fields of inorganic, analytical, organic, or physical chemistry. Students who do not already have a reading knowledge of German must take German concurrently with their graduate work.

The normal outline of courses is as follows:

FIRST YEAR		SECOND YEAR	
	1st 2nd SEMESTER		1st 2nd SEMESTER
*Graduate Research .....	5 5	Graduate Research .....	5 5
*Advanced Chemistry .....	3 3	Advanced Chemistry .....	6 6
Minor subject .....	3 3	Seminar .....	1 1
Seminar .....	1 1		

\* Qualitative Organic Analysis and Chemical Thermodynamics required unless included in undergraduate training.

## THE COMMERCE AND ECONOMICS CURRICULUM

The Department of Commerce and Economics offers a specialized curriculum, leading to the degree of Bachelor of Science in Commerce and Economics. Those who wish a less intensive or less specialized training in economics may take the Liberal Arts curriculum, with a concentration in economics, and receive the Bachelor of Arts degree. An advisor from the Economics faculty will assist students in building programs to meet their individual needs and plans.

The Commerce Curriculum is recommended for those who are preparing for a business career. It is intended to provide sound basic training in the various phases of business activity. The several options enable students to emphasize such specialized studies as accounting, banking, finance, insurance, government service, personnel management, production, sales management, and secretarial studies.

The normal program for the first two years in the Commerce and Economics Curriculum is as follows:

THE FRESHMAN YEAR	1st 2nd SEMESTER	THE SOPHOMORE YEAR	1st 2nd SEMESTER
Ec. Geography or History .....	3 3	English or American or World Lit. ....	3 3
Social Framework of Cap. ....	3 ..	Prin. of Economics .....	3 3
Entrepreneurial Problems .....	.. 3	Prin. of Accounting .....	3 3
‡English Composition .....	3 3	General Psychology .....	3 3
Algebra, Math. of Finance .....	3 3	Foreign Language, Calculus or	
*Foreign Language .....	3 3	†American Government .....	3 3
Military Science (Men) .....	(2) (2)	Military Science (Men) .....	(2) (2)
Physical Education .....	(1) (1)	Physical Education .....	(1) (1)
Hygiene (Women) .....	(1) (1)		

\* In place of the foreign language students may choose Mathematics 11-12 and Calculus.  
† American Government should be elected by students who have completed the intermediate language requirement.

‡ Students exempted from English Composition on the basis of the placement test must substitute another English course in its place.

During the junior and senior years, Commerce and Economic students normally choose one of the following options:

## ACCOUNTING

THE JUNIOR YEAR	1st 2nd SEMESTER	THE SENIOR YEAR	1st 2nd SEMESTER
Advanced Accounting .....	3 3	Auditing .....	3 ..
Financial Statement Anal. ....	3 ..	Cost Accounting .....	.. 3
Tax Accounting .....	.. 3	Labor Economics .....	3 ..
Money and Banking .....	3 3	C.P.A. Problems .....	.. 3
†American Govt. ....	3 3	Corp. Finance & Invest. ....	3 3
Business Law .....	3 3	Laboratory Science .....	4-5 4-5
Non-professional Electives .....	3 3	Electives .....	3 3

† Students who have completed this course will enroll in an approved elective.

## BANKING, FINANCE, AND INSURANCE

THE JUNIOR YEAR	1st 2nd SEMESTER	THE SENIOR YEAR	1st 2nd SEMESTER
Money and Banking .....	3 3	Laboratory Science .....	4-5 4-5
Corp. Finance & Invest. ....	3 3	Life Insurance .....	3 ...
Economic Statistics .....	3 3	Property and Casualty Ins. ....	... 3
*American Govt. ....	3 3	Public Finance and Tax. ....	3 3
Professional Electives .....	3 3	Business Law .....	3 3
Non-professional Electives .....	3 3	Electives .....	3 3

## BUSINESS ADMINISTRATION

THE JUNIOR YEAR	1st 2nd SEMESTER	THE SENIOR YEAR *	1st 2nd SEMESTER
Money and Banking .....	3 3	Laboratory Science .....	4-5 4-5
Corp. Finance & Invest. ....	3 3	Business Law .....	3 3
Economic Statistics .....	3 3	Business Cycles .....	3 3
*American Govt. ....	3 3	Public Finance and Tax. ....	3 3
Professional Electives .....	3 3	Electives .....	3 3
Non-professional Electives .....	3 3		

## INDUSTRIAL MANAGEMENT

THE JUNIOR YEAR	1st 2nd SEMESTER	THE SENIOR YEAR	1st 2nd SEMESTER
Labor Economics .....	3 ...	Laboratory Science .....	4-5 4-5
Collective Bargaining .....	... 3	Time and Motion Study .....	4 ...
Industrial Organization .....	3 ...	Plant Organization .....	... 4
Personnel Management .....	... 3	Business Law .....	3 3
Economic Statistics .....	3 3	Professional Electives .....	3 3
*American Govt. ....	3 3	Non-professional Electives .....	3 3
Professional Electives .....	3 3		
Non-professional Electives .....	3 3		

## MARKETING AND MERCHANDISING

THE JUNIOR YEAR	1st 2nd SEMESTER	THE SENIOR YEAR	1st 2nd SEMESTER
Principles of Marketing .....	3 ...	Laboratory Science .....	4-5 4-5
Marketing Pol. and Prob. ....	... 3	Salesmanship .....	3 ...
Money and Banking .....	3 3	Credits and Collections .....	... 3
Economic Statistics .....	3 3	Sales Management .....	3 ...
*American Govt. ....	3 3	Advertising Prin. & Procedure... ..	3 3
Professional Electives .....	3 3	Business Law .....	3 3
Non-professional Electives .....	3 3	Electives .....	3 3

\* Students who have completed this course will enroll in an approved elective.

## PERSONNEL MANAGEMENT

THE JUNIOR YEAR	1st 2nd SEMESTER	THE SENIOR YEAR	1st 2nd SEMESTER
Applied Psychology .....	3 ...	Personnel Administration .....	3 3
Economic Statistics .....	3 3	Laboratory Science .....	4-5 4-5
Labor Economics .....	3 ...	Business Law .....	3 3
Collective Bargaining .....	3	Life Insurance .....	3 ...
*American Govt. ....	3 3	Consumption Economics .....	... 3
Industrial Organization .....	3 ...	Time and Motion Study .....	4 ...
Personnel Management .....	3	Electives .....	... 3
Non-professional Electives .....	3 6		

## SECRETARIAL STUDIES

THE JUNIOR YEAR	1st 2nd SEMESTER	THE SENIOR YEAR	1st 2nd SEMESTER
Business Correspondence .....	3 3	Advanced Typing .....	3 3
Elementary Typing .....	3 3	Advanced Shorthand .....	4 4
Elementary Shorthand .....	4 4	Office Tech. & Machines .....	3 ...
*American Govt. ....	3 3	Office Management .....	... 3
Business Law .....	3 3	Sec. Principles & Practice .....	3 3
Non-professional Electives .....	3 3	Professional Electives .....	3 3
		Non-professional Electives .....	3 3

\* Students who have completed this course will enroll in an approved elective.

## THE ENGINEERING CURRICULA

The Departments of Engineering offer instruction in three curricula, Civil, Electrical, and Mechanical Engineering, each leading to the degree of Bachelor of Science in the field of specialization. Each curriculum includes the general subjects: mathematics, chemistry, physics, mechanical drawing, elements of electrical engineering, mechanics, hydraulics, economics, English, and contracts.

All freshman and sophomore men are required to complete the two basic courses in Military Science for a total credit of eight semester hours, which become an integral part of the record and are counted toward graduation. Two years of Physical Education are required of all students.

An inspection trip is required of all engineering students in the junior year. This trip requires several days, and visits are made to plants in industrial centers in New England. The trip is required for graduation, but does not carry credit. The expense is borne by the student.

Students enrolled in these curricula may become affiliated with their respective national professional engineering societies, the American Society of Civil Engineers, the American Institute of Electrical Engineers, and

the American Society of Mechanical Engineers, as each of these organizations has authorized a student chapter at the University of Vermont. These student organizations sponsor frequent meetings, the purpose of which is to present an opportunity for students to conduct activities similar to those conducted by members of the national societies. These activities include meetings at which technical papers are presented by students and by engineers who are actively engaged in the profession, attendance at conventions, and inspection trips, all of which provide helpful contact with engineering practice and also assist in the development of the qualities of leadership which are so essential for success in the engineering profession.

## THE FRESHMAN YEAR

(For All Curricula)

	1st	2nd
	SEMESTER	
Freshman Math. (M.M. 11-12) .....	5	5
Gen'l Chemistry (Chem. 1-2) .....	5	5
Engrg. Drawing (M.E. 1-2) .....	3	3
*English Comp. (Engl. 1-2) .....	3	3
Military Science 1-2 .....	(2)	(2)
Physical Education 1-2 .....	(1)	(1)
	—	—
	19	19

\* Students exempted from English Composition on the basis of the placement test must substitute another English course in its place.

## CIVIL ENGINEERING

THE SOPHOMORE YEAR

	1st	2nd
	SEMESTER	
Calculus (M.M. 21-22) .....	3	3
Gen'l Physics (Phys. 11-12) .....	5	5
Expository Writing (Engl. 16) .....	3	...
Statics (M.M. 24) .....	...	3
Surveying (C. E. 51-52) .....	4	4
Military Science 3-4 .....	(2)	(2)
Physical Education 11-12 .....	(1)	(1)
	—	—
	18	18
Summer, Engineering Camp, 6 wks. 4		

## ELECTRICAL ENGINEERING

THE SOPHOMORE YEAR

	1st	2nd
	SEMESTER	
Calculus (M.M. 21-22) .....	3	3
Gen'l Physics (Phys. 11-12) .....	5	5
Expository Writing (Engl. 16) .....	3	...
Elec. & Mag. Ccts. (E.E. 21) .....	5	...
D. C. Machines (E.E. 22) .....	...	5
Elect. Lab. I (E.E. 24) .....	...	1
Statics (M.M. 24) .....	...	3
Military Science 3-4 .....	(2)	(2)
Physical Education 11-12 .....	(1)	(1)
	—	—
	19	20

## MECHANICAL ENGINEERING

THE SOPHOMORE YEAR

	1st	2nd
	SEMESTER	
Calculus (M.M. 21-22) .....	3	3
Gen'l Physics (Phys. 11-12) .....	5	5
Mfg. Processes (M.E. 51-52) .....	2	2
Expository Writing (Engl. 16) .....	3	...
Public Speaking (Speech 11) .....	...	3
Elements of M. E. (M.E. 81) .....	3	...
Statics (M.M. 24) .....	...	3
Military Science 3-4 .....	(2)	(2)
Physical Education 11-12 .....	(1)	(1)
	—	—
	19	19

## CIVIL ENGINEERING

## THE JUNIOR YEAR

	1st	2nd
SEMESTER		
Kinetics (M.M. 25) .....	3	...
Mech. of Materials (M.M. 131) .....	3	...
Prin. of Econ. (Econ. 11-12) .....	3	3
Elec. Ccts. & Mach. (E.E. 101-2) .....	4	4
Graphic Statics (C.E. 103) .....	3	...
Bridge Stresses (C.E. 104) .....	3	...
Engrg. Geology (Geol. 21) .....	3	...
Materials Lab. (C.E. 112) .....	2	...
Approved Elective .....	3	3
	19	18

## THE SENIOR YEAR

	1st	2nd
SEMESTER		
Hydraulics (C.E. 161) .....	3	...
Hydraulics Lab. (C.E. 163) .....	1	...
Struct. Design (C.E. 181-182) .....	3	3
Sanitary Engrg. (C.E. 165, 166) .....	3	3
Contracts (C.E. 151) .....	2	...
Highways Engrg. (C.E. 174) .....	3	...
Engrg. Constr. (C.E. 184) .....	3	...
Reinforced Concrete (C.E. 155) .....	3	...
Masonry Constr. (C.E. 156) .....	3	...
Approved Elective .....	3	3
	18	18

## ELECTRICAL ENGINEERING

## THE JUNIOR YEAR

	1st	2nd
SEMESTER		
Diff. Equations (M.M. 110) .....	3	...
Kinetics (M.M. 25) .....	3	...
Mech. of Materials (M.M. 131) .....	3	...
A. C. Circuits (E.E. 103-104) .....	5	3
Electronics (E.E. 110) .....	4	...
Elect. Lab. II (E.E. 105-106) .....	1	1
*Prin. of Econ. (Econ. 11-12) .....	3	3
Thermodynamics (M.E. 113) .....	3	...
Power Engrg. (M.E. 116) .....	4	...
	18	18

## THE SENIOR YEAR

	1st	2nd
SEMESTER		
A. C. Machines (E.E. 107-108) .....	4	4
Communication Ccts. (E.E. 115) .....	4	...
Power Transmission (E.E. 113) .....	3	...
Elec. Lab. III (E.E. 111-112) .....	2	2
Public Speaking (Speech 11) .....	3	...
Metallurgy (M.E. 101) or Hydraulics (C.E. 161 & 163) .....	4	...
Contracts (C.E. 151) .....	2	...
Approved Electives .....	4	5
	19	18

## MECHANICAL ENGINEERING

## THE JUNIOR YEAR

	1st	2nd
SEMESTER		
Kinetics (M.M. 25) .....	3	...
Mechanics of Mat'ls (M.M. 131) .....	3	...
Materials Lab. (C.E. 114) .....	1	...
Elec. Ccts. & Mach. (E.E. 101-2) .....	4	4
Indus. Metallurgy (M.E. 101) .....	4	...
Kinematics (M.E. 132) .....	4	...
Thermodynamics (M.E. 111) .....	4	...
Fluid Mechanics (M.E. 142) .....	4	...
*Prin. of Econ. (Econ. 11-12) .....	3	3
M. E. Lab. (M.E. 143) .....	1	...
	19	19

## THE SENIOR YEAR

	1st	2nd
SEMESTER		
Machine Design (M.E. 151, 152) .....	4	4
Power Plants (M.E. 161) .....	4	...
Intern. Comb. Eng. (M.E. 164) .....	4	...
Indust. Engrg. (M.E. 171) or Air Conditioning (M.E. 181) .....	4	...
Factory Plan. (M.E. 172) or Aerodynamics (M.E. 182) .....	3	...
Contracts (C.E. 151) .....	2	...
Seminar (M.E. 192) .....	2	...
Electives .....	6	6
	19-20	19

\* This course may be deferred until the Senior year for those students electing Advanced Military Science.



## COURSES OF INSTRUCTION

## CHEMISTRY

*Professor Braun; Associate Professors Crooks, Gregg and Smith;  
Assistant Professor Brown; Messrs. Lucarini, Merritt and Rousseau*

**SPECIAL REQUIREMENTS FOR CONCENTRATION (LIBERAL ARTS CURRICULUM):** Satisfactory completion of General Chemistry, Elementary Quantitative Analysis, Organic Chemistry, Physical Chemistry, and the junior and senior seminars. No advanced related course is required. Those who wish to qualify for accreditation by the American Chemical Society must take additional courses, and only those who so qualify will be recommended by the department as chemists.

**FEES.** The tuition fees cover ordinary breakage and the cost of reagents used. For extraordinary breakage, such as Beckmann thermometers, and damage to instruments, separate charges are made.

**1-2 GENERAL CHEMISTRY. (3-6)\*** *\*Five hours. I, II*

Lectures, recitations, and laboratory, including general experiments and elementary qualitative analysis.

*Prerequisite:* one year of high school mathematics. *The Staff*

**4 OUTLINE OF INORGANIC CHEMISTRY. (3-4)** *Five hours. II*

An introduction to inorganic chemistry, primarily for students in Agriculture, Home Economics, and Nursing, as a foundation for Chemistry 35. Lectures, recitation, laboratory.

*Prerequisite:* one year of high school mathematics. *Mr. Crooks*

**21-22 ELEMENTARY QUANTITATIVE ANALYSIS. (2-6)\*** *Four hours. I, II*

Introduction to the theory and practice of quantitative methods, both gravimetric and volumetric, including also a theoretical discussion of indicators, buffers, and pH.

*Prerequisite:* 1-2. *Mr. Merritt*

**31-32 ORGANIC CHEMISTRY. (3-6)\*** *\*Five hours. I, II*

Basic organic chemistry for chemistry majors, premedical students, and those concentrating in the biological and physical sciences.

*Prerequisite:* 1-2; 21-22 recommended. *Messrs. Braun and Gregg*

\* May be taken by certain students for four hours credit, with only one three-hour laboratory period.

**35 OUTLINE OF ORGANIC CHEMISTRY. (3-4)** *Five hours. I*

An introduction to organic chemistry, primarily for students in Agriculture, Home Economics, and Nursing.

*Prerequisite:* 1-2 or 4.

*Mr. Crooks*

**41-42 PHYSICAL CHEMISTRY. (3-6)\*** *\*Five hours. I, II*

Introduction to the kinetic theory and its application to gases; thermodynamics and the application to liquids and solutions; chemical equilibria; fundamentals of electrochemistry and atomic structure.

*Prerequisite:* 21-22; General Physics; Calculus.

*Mr. Smith*

**ADVANCED INORGANIC CHEMISTRY****G101 NON-AQUEOUS SYSTEMS. (3-0)** *Three hours. I*

Study of solvents other than water, with special emphasis on the ammonia system.

*Prerequisite:* 41-42.

*Mr. Gregg*

**G102 LESS FAMILIAR ELEMENTS. (3-0)** *Three hours. II*

A detailed study of the rarer elements and their significance.

*Prerequisite:* 41-42.

*Mr. Gregg*

**G108 INORGANIC PREPARATIONS. (0-6)** *Two hours. II*

Laboratory preparations of inorganic compounds.

*Prerequisite:* 1-2.

*Mr. Crooks*

**ADVANCED ANALYTICAL CHEMISTRY****G121 THEORETICAL QUALITATIVE ANALYSIS. (3-0)** *Three hours. I*

Brief reviews of the usual qualitative cation-anion scheme, mass action, followed by consideration of various other procedures. Emphasis throughout is on application and theoretical implications.

*Prerequisite:* 41-42.

**G122 THEORETICAL QUANTITATIVE ANALYSIS. (3-0)** *Three hours. II*

Elaboration of the theoretical principles underlying volumetric and gravimetric methods. Detailed discussion of acidimetry and alkalimetry, oxidation-reduction titrations, electrometric titrations, buffers, pH, solubility product considerations and some material on physicochemical methods.

*Prerequisite:* 41-42.

\* May be taken without the laboratory work for three hours credit by permission of the department.

## ADVANCED ORGANIC CHEMISTRY

## G131, 132 SPECIAL TOPICS. (3-0)

*Three hours. I, II*

Detailed discussion of specific groups of organic compounds, *i.e.* steroids, heterocyclic compounds, terpenes, proteins, carbohydrates, vitamins, hormones, etc. (Offered in alternate years, 1948-49.)

*Prerequisite:* 31-32; credit or concurrent enrollment in 41-42.

*Mr. Gregg*

## G133, 134 PHYSICAL ORGANIC. (3-0)

*Three hours. I, II*

Physical organic chemistry, with emphasis on structural aspects and reaction mechanisms. (Offered in alternate years, 1949-50.)

*Prerequisite:* 31-32; 41-42.

*Mr. Gregg*

## G137 QUALITATIVE ORGANIC ANALYSIS. (3-8)

*Five hours. I*

Characterization and identification of organic compounds, including compounds in mixtures.

*Prerequisite:* 31-32; credit or concurrent enrollment in 41-42.

*Mr. Braun*

## G138 ORGANIC REACTIONS. (3-0)

*Three hours. II*

Detailed discussion, presented from the preparative viewpoint, of applications, limitations, and experimental conditions of the more important reactions of organic chemistry.

*Prerequisite:* 31-32; credit or concurrent enrollment in 41-42.

*Mr. Braun*

## ADVANCED PHYSICAL CHEMISTRY

## G141 CHEMICAL THERMODYNAMICS. (3-0)

*Three hours. I*

A systematic study of the application of thermodynamics in the solution of chemical problems.

*Prerequisite:* 31-32; 41-42.

*Mr. Smith*

## G142 CHEMICAL KINETICS. (3-0)

*Three hours. II*

The velocity of chemical reactions in both homogeneous and heterogeneous systems. (Offered in alternate years, 1948-49.)

*Prerequisite:* 41-42.

*Mr. Smith*

## G144 PHASE RULE. (3-0)

*Three hours. II*

Heterogeneous equilibrium in one, two, and three component systems. (Offered in alternate years, 1949-50.)

*Prerequisite:* 41-42.

*Mr. Smith*

## 151-152 JUNIOR SEMINAR. (2-0)

*One hour. I, II*

## 153-154 SENIOR SEMINAR. (2-0)

*One hour. I, II*

## G251-252 GRADUATE SEMINAR. (2-0)

*One hour. I, II*

Student reports on current research papers appearing in English and German. Required of graduate students in chemistry and of juniors and seniors concentrating in chemistry.

*The Staff*197-198 SENIOR RESEARCH. (0-6, 0-12) *Two hours. I. Four hours. II*

The students elect a field for special study in organic, analytical, physical, or organic chemistry, works under the direction of a staff member, and submits his findings in written form, suitably bound, to the department to be filed. Required of seniors in the Chemistry Curriculum.

*The Staff*

## G297-298 GRADUATE RESEARCH.

*Five hours. I, II*

Graduate students complete a research problem and submit the results in written form to the department. Three copies, suitably bound, are required.

*The Staff*

For AGRICULTURAL BIOCHEMISTRY, see the College of Agriculture.

## COMMERCE AND ECONOMICS

*Professor Lohman; Associate Professors Briggs, Grosscup, Nulty, and Woodard; Assistant Professors Gary, Knollmeyer, and \*Maybury; Messrs. Baranoff, Carse, Escolas, Fortune; Miss Raissi; Messrs. Ricciardi, and Shedko*

SPECIAL REQUIREMENTS FOR CONCENTRATION (LIBERAL ARTS CURRICULUM): Courses in economics totalling at least twenty-four semester hours, including twelve or more of advanced grade. The related courses are chosen in consultation with the departmental advisor on the basis of the student's individual needs and plans.

## \*1-2 ECONOMIC GEOGRAPHY.

*Three hours. I, II*

Geography as a basis for economic development; importance of resources to production, exchange, consumption, population, and national economies.

*Miss Woodard*\*5, 6 ECONOMIC HISTORY OF THE UNITED STATES. *Three hours. I, II*

The economic development of the United States from colonial times to the present as a basis for an understanding of our present economic problems.

*Miss Woodard*

## 9 SOCIAL FRAMEWORK OF CAPITALISM.

*Three hours. I*

The institutional framework of the American economy with emphasis upon private property, competition, the price regulatory system, free enterprise, and their relationship to the national product.

*Mr. Gary*

\* On leave of absence, 1948-49.

## 10 ENTREPRENEURIAL PROBLEMS.

*Three hours. II*

Entrepreneurial behavior within the institutional framework of capitalism with emphasis upon business policies, organization, facilities, and techniques.

*Prerequisite: 9.*

*Mr. Ricciardi*

## \*11-12 PRINCIPLES OF ECONOMICS.

*Three hours. I, II*

Fundamental economic principles as an aid to the understanding of modern economic society.

*Prerequisite: sophomore standing.*

*The Staff*

## \*13-14 PRINCIPLES OF ACCOUNTING.

*Three hours. I, II*

An elementary course in the problems of the financial control of business, with the necessary practice work.

*Prerequisite: sophomore standing.*

*Messrs. Briggs and Fortune*

## 31 ENGINEERING ACCOUNTING.

*Three hours. II*

A course emphasizing cost and depreciation accounting, designed primarily to meet the needs of the engineer.

*Mr. Briggs*

## 65-66 BUSINESS CORRESPONDENCE.

*Three hours. I, II*

Instruction and practice in writing business letters and reports.

*Miss Raissi*

## 49-50 GENERAL TYPING.

*Two hours. I, II*

Instruction in correct technique; mastery of the keyboard; practice to attain typing proficiency. Fee \$22.50 per semester. *Not open to secretarial or business education students.*

*Miss Raissi*

## BANKING, FINANCE, AND INSURANCE

## \*G101-102 MONEY AND BANKING.

*Three hours. I, II*

The functions of money, credit, and banking in modern economic society. The theory of the internal and external value of money; the control of the money market; interrelationship of monetary and fiscal policies and their effects upon national and international price movements.

*Prerequisite: 11-12.*

*Mr. Lobman*

## \*G103-104 PUBLIC FINANCE AND TAXATION.

*Three hours. I, II*

Revenues, expenditures, and debt policies of federal, state, and local governments and their effects upon individuals, business institutions, and the national economy.

*Prerequisite: 11-12.*

*Mr. Knollmeyer*

\* Courses accepted for credit in the College of Arts and Sciences.

- \*105 INTERNATIONAL TRADE AND FINANCE. *Three hours. I*  
 Theory of international values, mechanism of adjustment of international balances, foreign exchange-theory, the international aspects of monetary and banking theory, and tariff theory.  
*Prerequisite:* 101-102. *Mr. Gary*
- G107 CORPORATION FINANCE. *Three hours. I*  
 A comparison of the various types of business forms with chief attention to the financing of corporations.  
*Prerequisite:* 11-12 and 13-14. *Mr. Ricciardi*
- G108 INVESTMENTS. *Three hours. II*  
 Characteristics and analysis of various types of investment with major emphasis on corporate securities, real estate equities, and mortgages.  
*Prerequisite:* 107. *Mr. Ricciardi*
- 109-110 BUSINESS LAW. *Three hours. I, II*  
 First semester: a survey of the American system of law with particular reference to some of the fundamental legal concepts relating to business, especially as found in the law of contracts, sales, bailments, and negotiable instruments. Second semester: a continuation of the study of the legal aspects of business with specific reference to the law of agency, partnerships, and corporations.  
*Prerequisite:* 11-12. *Mr. Carse*
- 111 ECONOMICS OF LIFE INSURANCE. *Three hours. I*  
 Mortality tables, premium rates, reserves, policy form, investments, legal principles, and government supervision.  
*Prerequisite:* 11-12 and 13-14. *Mr. Ricciardi*
- 112 PROPERTY AND CASUALTY INSURANCE. *Three hours. II*  
 The principles underlying property and casualty insurance.  
*Prerequisite:* 11-12 and 13-14. *Mr. Ricciardi*
- 113 URBAN AND INDUSTRIAL LAND ECONOMICS. *Three hours. I*  
 Economic principles underlying the utilization and conservation of urban and industrial land resources.  
*Prerequisite:* 11-12. *Mr. Shedko*
- 114 REAL ESTATE. *Three hours. II*  
 The principles underlying the leasing, purchasing, selling, valuation, and financing of real estate for personal and business uses.  
*Prerequisite:* 11-12 and 13-14. *Mr. Shedko*

\* Courses accepted for credit in the College of Arts and Sciences.

## MARKETING AND MERCHANDISING

- 121 PRINCIPLES OF MARKETING. *Three hours. I*  
Distribution channels, marketing institutions, and functions performed for producers and consumers.  
*Prerequisite:* 11-12. *Mr. Baranoff*
- 122 MARKETING POLICIES AND PROBLEMS. *Three hours. II*  
Merchandising policy, sales management, brands and trade marks, advertising, sales promotion, pricing, and market research.  
*Prerequisite:* 121. *Mr. Baranoff*
- 123 SALESMANSHIP. *Three hours. I*  
The philosophy and technique underlying personal selling.  
*Prerequisite:* 121. *Mr. Baranoff*
- 124 CREDITS AND COLLECTIONS. *Three hours. II*  
Business and consumer credit; risk determination, collection policy, procedure, and control; legal aspects.  
*Prerequisite:* 121. *Mr. Baranoff*
- 126 RETAIL MERCHANDISING. *Three hours. II*  
An analysis of the problems daily encountered in retail merchandising. Subject matter includes: purchase planning; mark-up; inventories; turnover.  
*Prerequisite:* 121. *Mr. Baranoff*
- 131 SALES MANAGEMENT. *Three hours. I*  
Problems confronting the sales executive in the selection, training, and supervision of his sales organization.  
*Prerequisite:* 122. *Mr. Baranoff*
- 132 ADVERTISING. *Three hours. II*  
Principles of advertising which underlie the preparation of copy, choosing media, and analyzing specialized agencies.  
*Prerequisite:* 122. *Mr. Baranoff*

## INDUSTRIAL AND PERSONNEL MANAGEMENT

- \*141 LABOR ECONOMICS. *Three hours. I*  
History of the American labor movement; objectives, policies, and tactics of labor unions; public policy with respect to labor organizations.  
*Prerequisite:* 11-12. *Mr. Escolas*

\* Courses accepted for credit in the College of Arts and Sciences.

**\*G142 COLLECTIVE BARGAINING.***Three hours. II*

The collective labor agreement; techniques of the bargaining process; arbitration; the administration of the labor contract.

*Prerequisite:* 141.

*Mr. Escolas*

**143 INDUSTRIAL ORGANIZATION AND MANAGEMENT.***Three hours. I*

Organization of manufacturing plant and plant managerial problems. Types of operation, use of standards, plant location and layout. Survey of production control; routing, scheduling, methods analysis, and quality control. Field trips to factories.

*Prerequisite:* 11-12.

*Mr. Carse*

**144 PERSONNEL MANAGEMENT.***Three hours. II*

The human factor in production; evaluation of means of attaining worker-management cooperation; the influence of social groups and human attitudes at the work level; the nature and functioning of collective bargaining.

*Prerequisite:* 143.

*Mr. Carse*

**G151-152 PERSONNEL ADMINISTRATION.***Three hours. I, II*

Functions and objectives of a personnel department; instruments of control testing, and safety; incentive plans; placement, selection, and interviewing techniques. Field trips to factories, stores, and offices.

*Prerequisite:* 142 and 144.

Students in Industrial and Personnel Management also take in the senior year the two following courses given in the department of Mechanical Engineering. For descriptions see "Engineering, Mechanical."

**175 TIME AND MOTION STUDY.***Four hours. I***176 PLANT ORGANIZATION.***Four hours. II***ACCOUNTING****161-162 ADVANCED ACCOUNTING.***Three hours. I, II*

Advanced valuation problems in the financial control of business.

*Prerequisite:* 13-14.

*Mr. Briggs*

**163 FINANCIAL STATEMENT ANALYSIS.***Three hours. I*

Preparation and analysis of the more common types of accounting statements.

*Prerequisite:* 13-14.

*Mr. Briggs*

\* Courses accepted for credit in the College of Arts and Sciences.



- 164 TAX ACCOUNTING. *Three hours. II*  
The technical and accounting aspects of the income, estate, gift, and excise tax laws.  
*Prerequisite:* 13-14. *Mr. Briggs*
- G171 AUDITING. *Three hours. I*  
The theory and practice of auditing, types of audits, audit procedures, working papers, and reports.  
*Prerequisite:* 161-162. *Mr. Briggs*
- G172 COST ACCOUNTING. *Three hours. II*  
A thorough consideration of the basic principles of cost accounting and their practical application.  
*Prerequisite:* 161-162. *Mr. Briggs*
- G176 C. P. A. PROBLEMS. *Three hours. II*  
Accounting theory and practice for those interested in professional accounting.  
*Prerequisite:* 161-162. *Mr. Briggs*

## ECONOMICS

- \*181 TRANSPORTATION. *Three hours. I*  
Social and economic aspects of the transportation problem as revealed by an analysis of the nature, history, and problems of the various transportation agencies of the United States.  
*Prerequisite:* 11-12; Political Science 1-2. *Mr. Lobman*
- \*182 PUBLIC UTILITIES. *Three hours. II*  
The economics of public utility enterprise with special reference to franchises, capital structure, valuation, rate making, and governmental regulation.  
*Prerequisite:* 11-12; Political Science 1-2. *Mr. Lobman*
- \*183 GOVERNMENT AND ECONOMIC LIFE. *Three hours. I*  
Government regulation of business with respect to trade associations, price maintenance, patents, trade barriers, bankruptcy, and government competition.  
*Prerequisite:* 11-12; Political Science 1-2. *Mr. Gary*
- \*184 THE ECONOMICS OF CONSUMPTION. *Three hours. II*  
Consumption and consumers' choice; their relationship to the modern exchange economy; measurements of consumption; methods proposed for the increase and diversification of consumption.  
*Prerequisite:* 11-12.

\* Courses accepted for credit in the College of Arts and Sciences.

- \*G185-186 INTERMEDIATE ECONOMIC ANALYSIS. *Three hours. I, II*  
An analysis of consumer demand, imperfect and monopolistic competition, equilibrium theory, and the determination of distributive shares.

*Prerequisite:* 11-12.

*Mr. Grosscup*

- \*187-188 ECONOMIC STATISTICS. *Three hours. I, II*

The theory and interpretation of statistics; laboratory exercises in the uses of statistical techniques and in the application of statistical tools to economic problems.

*Prerequisite:* 11-12; Math. 1 and 4. *Messrs. Grosscup and Knollmeyer*

- \*G192 INTERNATIONAL PROBLEMS AND POLICIES. *Three hours. II*

Important aspects of international cooperation and conflict in the economic sphere; the quest for foreign markets, raw materials, investment opportunities, and population outlets.

*Prerequisite:* 105.

*Mr. Gary*

- \*G193-194 BUSINESS CYCLE THEORY. *Three hours. I, II*

The pattern of cyclical fluctuations; analysis of the major theories of business cycles and of the proposals for their control.

*Prerequisite:* 101-102 and 187-188.

*Mr. Knollmeyer*

- \*G195 HISTORY OF ECONOMIC THOUGHT. *Three hours. I*

The development of economic ideas from classical antiquity to modern times, with emphasis on the Classical, Historical, Socialist, Optimist, Marginalist, and Neoclassical Schools.

*Prerequisite:* 185-186 or consent of instructor.

*Mr. Grosscup*

- \*G196 MODERN ECONOMIC THOUGHT. *Three hours. II*

A survey of the leading 20th Century economists and their doctrines, including studies of J. B. Clark, Thorstein Veblen, Alfred Marshall, W. C. Mitchell, J. A. Hobson, J. M. Keynes, J. R. Hicks, and others.

*Prerequisite:* 195.

*Mr. Grosscup*

- \*G197, 198 SEMINAR. *Three hours. I, II*

Designed for students concentrating in the department. Review of recent books and periodical literature; discussions of topics of contemporaneous interest; student reports based upon personal investigation.

*Prerequisite:* senior standing; consent of the chairman. *Mr. Lobman*

#### G201-202 RESEARCH.

*I, II*

A course designed to meet the special research problems of advanced undergraduate and graduate students. Consent of the department required.

*The Staff*

- \* Courses accepted for credit in the College of Arts and Sciences,

## SECRETARIAL STUDIES

## 53-54 ELEMENTARY SHORTHAND.

*Four hours. I, II*

Instruction in the fundamental principles of Gregg Shorthand.  
Dictation and transcription of business letters.

*Miss Nulty*

## 55-56 ADVANCED SHORTHAND.

*Four hours. I, II*

Dictation covering a broad business vocabulary and a variety of literary and technical subject-matter. Emphasis on speed in taking dictation and transcribing.

*Prerequisite: 53-54.**Miss Nulty*

## 59-60 ELEMENTARY TYPEWRITING.

*Three hours. I, II*

Instruction in the care of the typewriter; correct technique; mastery of the keyboard; practice in variety of forms of material.

*Miss Nulty*

## 61-62 ADVANCED TYPEWRITING.

*Three hours. I, II*

Development of typing speed; projects covering the different kinds of commercial typing; transcription of shorthand notes.

*Prerequisite: 59-60.**Miss Raissi*

## 69 OFFICE TECHNIQUES AND MACHINES.

*Three hours. I*

Use, care, and operation of office machines with emphasis on dictating and transcribing, duplicating, and calculating machines. Modern filing systems are studied with actual practice in business filing.

*Prerequisite: senior standing.**Miss Raissi*

## 70 OFFICE MANAGEMENT.

*Three hours. II*

Organization and supervision of office activities from the standpoint of the office manager; selection and training of personnel, production standards, as well as office forms, systems, equipment and supplies, office manuals, and physical aspects of office planning and layout.

*Prerequisite: senior standing.**Miss Raissi*

## 71-72 SECRETARIAL PRINCIPLES AND PRACTICE.

*Three hours. I, II*

Qualifications and practical training in the duties required of a secretary, including use of business and legal forms, interviewing business callers, reporting conferences, and keeping business calendars. Practical dictation and transcription are included.

*Prerequisite: senior standing.**Miss Raissi*

## ENGINEERING, CIVIL

*Professor Puffer; Assistant Professor Koerner; Messrs. Johnson and Root*

- 51-52 SURVEYING. (3-4) *Four hours. I, II*  
 51 Plane and topographic surveying.  
 52 Route surveying; theory of curves, earthwork calculations.  
*Prerequisite:* Trigonometry.
- 54 ENGINEERING CAMP. *Four hours. Summer*  
 Six weeks summer field practice in practical surveying between sophomore and junior years.
- 103 GRAPHIC STATICS. (0-6) *Three hours. I*  
 Graphic determination of stresses in framed structures.  
*Prerequisite:* Statics (M.M. 24).
- 104 BRIDGE STRESSES. (3-0) *Three hours. II*  
 Theory of stresses in framed structures.  
*Prerequisite:* 103 and Mechanics of Materials (M.M. 131).
- 112 MATERIALS LABORATORY. (0-4) *Two hours. II*  
 Testing of engineering materials and soils.  
*Prerequisite:* Mechanics of Materials (M.M. 131).
- 114 MATERIALS LABORATORY FOR MECHANICAL ENGINEERING STUDENTS. (0-2) *One hour. II*  
 Testing of engineering materials.  
*Prerequisite:* Mechanics of Materials (M.M. 131).
- 151 CONTRACTS. (2-0) *Two hours. I*  
 Study of contract law from the engineering point of view.
- 155 REINFORCED CONCRETE. (2-2) *Three hours. I*  
 Theory and design.  
*Prerequisite:* Mechanics of Materials (M.M. 131).
- 156 MASONRY CONSTRUCTION. (0-6) *Three hours. II*  
 Practical design of masonry structures.  
*Prerequisite:* 155.
- 161 HYDRAULICS. (3-0) *Three hours. I*  
 The mechanics of liquids; hydraulic machinery.  
*Prerequisite:* Statics and Kinetics (M.M. 24, 25).
- 163 HYDRAULICS LABORATORY. (0-3) *One hour. I*  
 Given in conjunction with 161.

- G164 WATER POWER ENGINEERING. (3-0) *Three hours. I or II*  
The study of water power development. Elective course.  
*Prerequisite:* 161.
- 165, 166 SANITARY ENGINEERING. (3-0) *Three hours. I, II*  
165 Design, construction, maintenance and operation of public water supplies.  
166 Design, construction, maintenance and operation of sewerage systems and sewage treatment plants.
- 174 HIGHWAY ENGINEERING. (3-0) *Three hours. II*  
Design, construction, and maintenance of modern highways.  
*Prerequisite:* Mechanics of Materials (M.M. 131).
- 181-182 STRUCTURAL DESIGN. (0-6) *Three hours. I, II*  
Practical design of steel framed structures.  
*Prerequisite:* 104.
- 184 ENGINEERING CONSTRUCTION. (3-0) *Three hours. II*  
Foundations of structures, characteristics of soils, tunnelling, and construction methods.  
*Prerequisite:* Mechanics of Materials (M.M. 131).

## ENGINEERING, ELECTRICAL

*Professor McKee; Associate Professors Buchanan and Mosher; Assistant Professors, Reader, Shorey, and Smith; Messrs. Ksiazek and Hayles*

- 21 ELECTRIC AND MAGNETIC CIRCUITS. (5-0) *Five hours. I*  
*Prerequisite:* credit or enrollment in Math. 21.
- 22 DIRECT CURRENT MACHINES. (5-0) *Five hours. II*  
*Prerequisite:* 21.
- 24 ELECTRICAL LABORATORY I. (0-3) *One hour. II*  
*Prerequisite:* 21.
- 101-102 ELECTRICAL CIRCUITS AND MACHINES. (3-3) *Four hours. I, II*  
*Prerequisite:* Math. 22; Physics 11-12.
- 103-104 ALTERNATING CURRENT CIRCUITS. (5-0, 3-0) *Five hours. I. Three hours. II*  
*Prerequisite:* 21; Math. 22.
- 105-106 ELECTRICAL LABORATORY II. (0-3) *One hour. I, II*  
*Prerequisite:* 22, 24; credit or enrollment in 104 for 106.
- 107-108 ALTERNATING CURRENT MACHINES. (4-0) *Four hours. I, II*  
*Prerequisite:* 104.

- 110 ELECTRONICS. (3-3) *Four hours. II*  
*Prerequisite:* 102 or 103.
- 111-112 ELECTRICAL LABORATORY III. (0-6) *Two hours. I, II*  
*Prerequisite:* 106 and credit or enrollment in 107-108.
- 113 POWER TRANSMISSION. (3-0) *Three hours. I*  
*Prerequisite:* 104.
- 115 COMMUNICATION CIRCUITS. (3-3) *Four hours. I*  
Long lines in steady state, networks, and loading.  
*Prerequisite:* 104.
- G117 INDUSTRIAL ELECTRONICS. (3-3) *Four hours. I*  
A continuation of 110, with emphasis on control and power applications.  
*Prerequisite:* 110.
- 118 POWER STATIONS. (3-0) *Three hours. II*  
The electrical engineering features of steam, water, and oil engine power plants.  
*Prerequisite:* 107 or 102.
- G120 TRANSIENT PHENOMENA. (3-3) *Four hours. II*  
The mathematical development of common voltage and current transients with experimental check by means of the oscillograph.  
*Prerequisite:* 104.
- 121-122 RADIO COMMUNICATION. (3-3) *Four hours. I, II*  
Fundamental principles of radio transmitting and receiving systems.  
*Prerequisite:* 104, 110.
- G123, 124 SPECIAL TOPICS. (2-3) *Three hours. I, II*  
Formulation and solution of theoretical and practical problems dealing with electrical circuits, apparatus, machines, or systems.  
*Prerequisite:* 22, 104.
- G126 POWER SYSTEMS. (3-0) *Three hours. II*  
Machine transients, transient stability of power systems, wave propagation, lightning, and relaying.  
*Prerequisite:* 113.
- G128 U. H. F. CIRCUITS. (3-3) *Four hours. II*  
Circuits and techniques for use at ultra-high frequencies.  
*Prerequisite:* 121.
- 129-130 GENERAL ELECTRICAL ENGINEERING. (3-3) *Four hours. I, II*  
Courses in circuits and machines adapted to the needs of Agricultural Engineers.  
*Prerequisite:* Physics 11-12; Math. 11-12.

## ENGINEERING, MECHANICAL

*Associate Professor Sidle; Assistant Professors Hooper and Tutbill;  
Messrs. Barberian, Carpenter, Hopkinson, F. R. Johnson, Kenfield,  
Marshall, Thomson and Wright*

1-2 ENGINEERING DRAWING. (0-9) *Three hours. I, II*

- 1 Principles and practice in the use of drawing instruments; lettering, geometric construction, orthographic projection, elementary descriptive geometry, sections and pictorial drawing.
- 2 Principles and practice in auxiliary projection, dimensioning, development and intersections, working drawings.

51-52 MANUFACTURING PROCESSES. (0-6) *Two hours. I, II*

- 51 Principles of metal machining.
- 52 Advanced machining; casting; welding; methods, jigs, fixtures, tooling, and gauges for interchangeable manufacturing.

*Prerequisite: 2.*

81 ELEMENTS OF MECHANICAL ENGINEERING. (2-3) *Three hours. I*

A descriptive course on power generation machinery. Laboratory work on mechanical measurements.

*Prerequisite: Chemistry 2.*

101 INDUSTRIAL METALLURGY. (3-3) *Four hours. I, II*

The fundamentals of ferrous and non-ferrous physical metallurgy; correlation of metallographic structure and physical properties with heat-treatment and with the uses of alloys.

*Prerequisite: Chemistry 2; Physics 12.*

111 THERMODYNAMICS. (3-3) *Four hours. I*

The fundamental principles of engineering thermodynamics and the application of these principles to thermodynamic cycles, prime movers, compressors, refrigeration, and heat transfer. Primarily for mechanical engineering students.

*Prerequisite: 81; Physics 12; Math.-Mech. 22, and concurrent enrollment in Math.-Mech. 25.*

113 THERMODYNAMICS FOR ELECTRICAL ENGINEERING STUDENTS. (3-0) *Three hours. I*

The fundamental principles of engineering thermodynamics and the application of these principles to thermodynamic cycles, prime movers, compressors, and heat transfer. Primarily for electrical engineering students.

*Prerequisite: Physics 12; Math. 22, and concurrent enrollment in Math.-Mech. 25.*

**116 POWER ENGINEERING. (3-3)** *Four hours. II*

A short course in the fields of steam and internal combustion engine power. Mechanical, thermodynamic, and economic analysis of the design, operation, and performance of characteristic equipment and stations.

*Prerequisite:* 111 or 113.

**132 KINEMATICS. (3-3)** *Four hours. II*

The analysis of displacements, velocities, and acceleration in machines and the application of such analysis to cams, gears, and other mechanisms.

*Prerequisite:* 2; Math.-Mech. 25.

**142 FLUID MECHANICS. (3-3)** *Four hours. II*

The mechanics of fluids at rest and in motion.

*Prerequisite:* 111 or 113; Math.-Mech. 25.

**143 MECHANICAL ENGINEERING LABORATORY. (0-3)** *One hour. I*

Experiments to verify thermodynamic principles. Lubricant tests, and calorific tests of fuels and steam.

*Prerequisite:* 111 concurrently.

**151, 152 MACHINE DESIGN. (3-3)** *Four hours. I, II*

151 Analysis of stresses in machine parts and design of machine elements considering stresses, deflections, and wear.

152 Continuation of 151 with applications to the design of a complete machine.

*Prerequisite:* 132 and Math.-Mech. 131 for 151; 151 for 152.

**G155 MECHANICAL VIBRATIONS.** *Three hours. I or II*

An advanced course in the field of machine design with special emphasis on problems of vibrations. Topics include causes of vibrations, methods of study of vibratory motion, determination of vibration stresses, and methods of balancing and damping. Elective (M.E.) seniors by permission.

*Prerequisite:* 151.

**161 POWER PLANTS. (3-3)** *Four hours. I*

Principles of the design, installation, operation, and performance of power plant equipment.

*Prerequisite:* 111.

**164 INTERNAL COMBUSTION ENGINES. (3-3)** *Four hours. II*

The thermodynamic and mechanical principles of the design, operation, and performance of internal combustion engines.

*Prerequisite:* 111.



**G165 ADVANCED HEAT ENGINES.***Three hours. I or II*

Advanced study in theoretical thermodynamics with applications in specific types of heat engines according to the interests of the students. Elective (M.E.) seniors by permission.

*Prerequisite:* 111.

**171 INDUSTRIAL ENGINEERING. (2-3)***Three hours. I*

The principles of management and their applications to industrial organizations and operations.

*Prerequisite:* 52.

**172 FACTORY PLANNING. (1-6)***Three hours. II*

The systematic analysis of the requirements of a factory for a specific purpose. Work includes the consideration of such items as location, plant design, equipment requirements, general layout, and production planning.

*Prerequisite:* 171.

**175 TIME AND MOTION STUDY. (3-3)***Four hours. I*

Principles and methods of making time and motion studies and time formula construction. For students in the Commerce Curriculum only.

*Prerequisite:* Economics 144.

**176 PLANT ORGANIZATION. (2-6)***Four hours. II*

Analysis of plant requirements as to location, equipment, layout, and production scheduling. For students in the Commerce Curriculum only.

*Prerequisite:* Economics 143.

**181 AIR CONDITIONING. (3-3)***Four hours. I*

The applications of the fundamental principles of thermodynamics to the design and performance of air conditioning equipment and systems for residences, public buildings, and industrial plants.

*Prerequisite:* 111 or 113.

**182 AERODYNAMICS. (3-0)***Three hours. II*

The application of the principles of fluid mechanics to the design and performance of aircraft.

*Prerequisite:* 142.

**G185 HYDRAULIC MACHINES.***Three hours. I or II*

An advanced study in fluid mechanics applied to hydraulic machines. Elective (M.E.) seniors by permission.

*Prerequisite:* 142.

## 192 SEMINAR. (2-0)

*Two hours. II*

Discussions of the Mechanical Engineering profession, the ethics, responsibilities, and status of members of the profession, and timely activities of present-day practice. Current issues of pertinent publications are used as collateral reading and as guides in the study and discussion of contemporary progress in the field.

*Prerequisite:* senior standing.

## 195 SPECIAL PROBLEMS.

*Three hours. I or II*

A study and investigation on a topic or problem of special interest to the student. Formal submission of results in thesis form required. Problems must be approved by the Chairman of the Department before election of the course. Elective (M.E.) seniors by permission.

## G201 ADVANCED MACHINE DESIGN.

*Three hours. I or II*

Advanced mechanics of materials and applications to mechanical design according to the interests of the student.

*Prerequisite:* 152.

## G203 BALANCING OF MACHINERY.

*Three hours. I or II*

A theoretical study of balancing problems and discussion of balancing machines.

*Prerequisite:* 152.

## G205 NOMOGRAPHY.

*Three hours. I or II*

Graphical and mechanical computing methods, alinement charts, and nomographs.

*Prerequisite:* Calculus.

## G221 THESIS RESEARCH.

*Credit as arranged. I, II*

For graduate students in Mechanical Engineering. Results of research must be submitted in triplicate in bound form.

**\* MATHEMATICS AND MECHANICS**

*Professors Bullard and Fraleigh; Assistant Professors McClay, Milington, Nicholson and Simond; Messrs. Browne, Bielli, Powers, Sherman and Wilson*

SPECIAL REQUIREMENTS FOR CONCENTRATION (LIBERAL ARTS CURRICULUM): 21-22 and two advanced courses in mathematics. The related courses are chosen in consultation with the department.

\* Not all courses are offered every year. Students who plan to elect any course beyond 21-22 should consult the department in advance as to when such courses will be offered. Students who wish to take either 1, 2 or 11, 12 may be required to demonstrate their proficiency by a qualifying test.

A ALGEBRA REVIEW. *No credit.* I  
An intensive review of algebra for returning veterans and others.

B SOLID GEOMETRY. *No credit.* I  
Required of those enrolling in engineering who do not present solid geometry for entrance. Elective to others.

1, 2 FRESHMAN MATHEMATICS. *Three hours.* I, II  
Elementary college algebra, plane trigonometry, plane analytical geometry. For students who do not intend to concentrate in science or mathematics. (See also 11, 12.)  
*Prerequisite:* 1 for 2.

Effective February, 1949:

Mathematics 1 will include College Algebra only. *Three hours*

Effective September, 1949:

Mathematics 2 will include Plane Trigonometry only. *Three hours.*

Mathematics 3 will include Plane Analytical Geometry only. *Three hours.*

4 MATHEMATICS OF FINANCE. *Three hours.* II  
The mathematical theory of finance applied to interest and investments, annuities, and life insurance.  
*Prerequisite:* 1.

7 ANALYTICAL GEOMETRY OF THREE DIMENSIONS. *Three hours.* I  
A first course in three dimensional geometry, intended to acquaint the student with the analytics of lines, planes, and quadric surfaces.  
*Prerequisite:* 1, 2.

11, 12 FRESHMAN MATHEMATICS. *Five hours.* I, II  
For students who intend to concentrate in science or mathematics.  
11 College algebra, plane trigonometry.  
12 Spherical trigonometry, plane and solid analytical geometry.  
*Prerequisite:* 11 for 12.

14-15 MODERN GEOMETRY. *Three hours.* I, II  
Continuation of the study of Euclidean geometry, introducing many recent theorems.  
*Prerequisite:* 1, 2 or 11, 12.

21-22 CALCULUS. *Three hours.* I, II  
The fundamentals of differential and integral calculus and applications to other sciences, with emphasis on the technique of differentiation

and integration and the use of calculus in problems of mathematics and physics.

*Prerequisite:* 11, 12; or 1, 2 and concurrent enrollment in 7 and 21.

24 THEORETICAL MECHANICS (STATICS). *Three hours. II*

The fundamental concepts, the resultant of a force system by graphical and analytical methods, conditions of equilibrium with application to cranes, trusses, and flexible cables, center of gravity, moment of inertia.

*Prerequisite:* 21.

25 THEORETICAL MECHANICS (KINETICS). *Three hours. I*

The equations of motion of a body under the action of a force system, the principles of work and energy, impulse and momentum.

*Prerequisite:* 22, 24.

101 HIGHER ALGEBRA. *Three hours. II*

Linear dependence, matrices, properties of polynomials, etc.

*Prerequisite:* 1, 2 or 11, 12.

G104-105 PROJECTIVE GEOMETRY. *Three hours. I, II*

Study of the projective transformations and the associated geometries by both synthetic and analytic methods.

*Prerequisite:* 21-22.

G107-108 ADVANCED CALCULUS. *Three hours. I, II*

A critical study of the calculus beginning with limits, continuity, differentiation, and Riemann integrals, together with a treatment of those topics not included in the earlier course as a foundation for more advanced courses in analysis and applied mathematics.

*Prerequisite:* 21-22.

G111, 112 DIFFERENTIAL EQUATIONS. *Three hours. I, II*

111 Solution of ordinary differential equations, introducing operational methods.

112 Solution of partial differential equations; series solutions; topics of analysis especially useful in mathematical physics and engineering.

*Prerequisite:* 21-22; 111 for 112.

G113-114 FUNCTIONS OF A COMPLEX VARIABLE. *Three hours. I, II*

An elementary study of one complex variable, differentiation and integration, singularities, Riemann surfaces, analytic continuation, etc.

*Prerequisite:* 107-108.

G116 INFINITE SERIES. *Three hours. I*

Convergent series of constant and of variable terms, uniform convergence, continuity of the sum function, differentiation and integration, and theory of summability.

*Prerequisite:* credit or concurrent enrollment in 107-108.

## G118 MATHEMATICAL STATISTICS.

*Three hours. II**Prerequisite:* 21-22.

## G131 MECHANICS OF MATERIALS.

*Three hours. II*

The behavior of elastic bodies, with particular attention to the beam, shaft and column, including simple stress and strain, combined stresses, the elastic curve and strain energy.

*Prerequisite:* 22, 24.

## G201-202 THEORY OF FUNCTIONS.

*Three hours. I, II*

The functions of real variables, including such topics as point sets and measure, transfinite numbers, Riemann and Lebesgue integrals, sequences of functions. Considerable outside reading is assigned.

*Prerequisite:* 107-108.

## G203-204 RESEARCH.

*Credit as arranged*

Original investigation intended to culminate in a Master's thesis. Required of graduate students in mathematics seeking the Master's degree.

## The College of Agriculture

The College of Agriculture performs four public functions: it teaches resident students; it investigates problems; it disseminates information; it renders related services. These four lines of work are carried out respectively by the resident teaching division; the research division, or Vermont Agricultural Experiment Station; the extension division, or Vermont Agricultural Extension Service; and the related services division.

The resident teaching division offers professional curricula in Agriculture and Home Economics. It aims to provide for young men and women educative experiences which will enable them to become successful farmers or homemakers, teachers in secondary schools or agricultural extension workers, or specialists engaged in teaching, research, or industrial or professional work in their chosen fields.

The Agricultural Experiment Station has as its essential functions to conduct research in Agriculture and Home Economics, to administer certain regulatory statutes, and to publish the results of such work.

The Vermont Agricultural Extension Service is a cooperative undertaking of the State of Vermont, the College of Agriculture, the United States Department of Agriculture, and the several counties of the State. It has a State staff, with headquarters at the University, and a staff of

county extension agents in each county. Its purpose is "to aid in diffusing among the people . . . useful and practical information on subjects relating to agriculture and home economics, and to encourage the application of the same." It works primarily with the rural people of the State, including both adults and children.

The related services division renders various services in the fields of agriculture and home economics, such as inspection of feed, seeds, and fertilizer; analysis of soils, milk, and other agricultural products on request; diagnosis of diseases of plants, poultry, and other livestock; and conduct of short courses and educational conferences.

## AGRICULTURE

### THE CURRICULA IN AGRICULTURE

In Agriculture there are the General Agricultural and Agricultural Engineering Curricula and the Pre-Forestry and Pre-Veterinary programs. Each freshman on entering the college must choose one of these. Each includes required and elective courses. Basic courses are required in the sciences, literature, and subjects essential in providing a broad educational foundation for the more technical courses. Courses required in the major field are largely in applied science and technology. The electives may be chosen from courses offered throughout the University.

### THE GENERAL AGRICULTURAL CURRICULUM

The General Agricultural Curriculum, leading to the degree of Bachelor of Science in Agriculture, requires 130 semester hours of required and elective courses, exclusive of those in Military Science and Physical Education. The courses in Agriculture are designed to provide training of a general nature as preparation for farming, secondary school teaching, or county extension work, as well as concentrated study, as preparation for industrial and professional positions or for advanced training, in one of the following fields: agricultural economics, agricultural education and extension, agronomy, botany, dairy manufacturing, dairy production, horticulture, or poultry husbandry.

In each of these fields, to provide a well-balanced and integrated educational program and to insure reasonable concentration, a sequence of courses is prescribed which includes a minimum of required courses and makes allowance for the election of additional subjects. The faculty advisor for each major sequence will counsel the student in the selection

of these elective courses. A total of eighteen credit hours is normally considered a maximum enrollment.

As part of the preliminary registration program, a mathematics placement test is required of each student entering the College, to determine whether a non-credit course, "Algebra Review," should be taken during the first semester of the freshman year. An English placement test is also given, on the basis of which a few students are excused from "English Composition."

All students in the General Agricultural Curriculum take a uniform program during the first year, and in addition one year of English (American Literature, English Literature, or Journalism and Expository Writing), one year of Principles of Economics, and one semester of Public Speaking.

Before the end of the freshman year each student files with the Dean a statement indicating the major sequence which he expects to follow in completing the requirements for his degree.

## OUTLINE OF GENERAL AGRICULTURAL CURRICULUM

### FRESHMAN YEAR

	1st	2nd
	SEMESTER	
English Composition .....	3	3
Mathematics A, 1 .....	*(3)	3
Introductory Botany .....	4	...
Introduction to Zoology .....	4	...
Outline of Inorganic Chemistry .....	...	5
Agriculture Survey .....	1	1
Electives .....	0-6	3-6
Physical Education .....	(1)	(1)
Military Science (Men) .....	(2)	(2)
Hygiene (Women) .....	(1)	(1)

Students exempted from English Composition on the basis of the placement test substitute another course, normally in English.

The courses in chemistry and mathematics prescribed above, and the course in physics required in the sophomore year in some of the sequences, are less intensive than the basic courses which are prerequisite for advanced courses in the respective departments. On recommendation of his enrolling officer and approval of the Dean, a student may substitute Mathematics 1, 2 or 11, 12 for Mathematics A, 1, or General Chemistry 1-2 for Outlines of Inorganic Chemistry, deferring Introductory Botany or Introduction to Zoology to the sophomore year, and taking an adjusted program for the remainder of the course.

\* Credit hours in parentheses do not count toward the 130 credit hours required for graduation. Mathematics A is not required if the placement test is passed.

# AGRICULTURAL ECONOMICS AND FARM MANAGEMENT

## SOPHOMORE YEAR

	1st	2nd
SEMESTER		
Agricultural Cooperation .....	2	...
English .....	3	3
*General Dairying .....	...	3
General Field Crops .....	3	...
Livestock .....	2	2
General Poultry Husbandry .....	3	...
General Soils .....	...	3
Principles of Economics .....	3	3
Electives .....	0-2	1-4
Military Science (Men) .....	(2)	(2)
Physical Education .....	(1)	(1)

\* Usually taken second semester of freshman year.

## JUNIOR YEAR

	1st	2nd
SEMESTER		
Farm Shop .....	2	...
General Horticulture .....	3	...
Marketing Farm Products .....	...	3
Public Speaking .....	...	3
Rural Sociology .....	3	...
Woodland Management .....	3	3
Electives .....	4-7	6-9

## SENIOR YEAR

	1st	2nd
SEMESTER		
Farm Credit .....	...	3
Farm Management .....	3	3
Public Problems of Agriculture .....	...	3
Electives .....	12-15	6-9

# AGRICULTURAL EDUCATION AND EXTENSION

## SOPHOMORE YEAR

	1st	2nd
SEMESTER		
English .....	3	3
General Farm Engineering .....	3	3
General Horticulture .....	3	...
Livestock .....	2	2
General Soils .....	...	3
Principles of Economics .....	3	3
Electives .....	1-4	1-4
Military Science (Men) .....	(2)	(2)
Physical Education .....	(1)	(1)

## JUNIOR YEAR

	1st	2nd
SEMESTER		
*Extension Methods .....	...	2
Farm Management .....	3	3
General Dairying .....	...	3
General Field Crops .....	3	...
General Psychology .....	3	3
Marketing Farm Products .....	...	3
Rural Education .....	3	...
Woodland Management .....	3	3
Electives .....	0-3	0-3

## SENIOR YEAR

	1st	2nd
SEMESTER		
†Adult Education .....	...	3
*Extension Methods .....	...	2
Feeds and Feedings .....	3	...
General Poultry .....	3	...
Public Speaking .....	3	...
Phil. of Amer. Agriculture .....	3	...
†Vocational Methods and Practice Teaching .....	...	10
*Electives .....	3-6	0-16

\* For Agricultural Extension only.

† For Agricultural Education only.



## AGRONOMY, BOTANY AND HORTICULTURE

SOPHOMORE YEAR  
(For All Three Sequences)

	1st	2nd
SEMESTER		
Sophomore English .....	3	3
Principles of Economics .....	3	3
Introductory Physics .....	3	3
Outline of Organic Chem. ....	5	...
General Bacteriology .....	...	3
Horticulture Sci. (Hort.) .....	...	3
or General Soils (Agron.) .....	...	3
or Morphology (Botany) .....	3	3
Electives .....	0-3	0-3
Physical Education .....	(1)	(1)
Military Science (Men) .....	(2)	(2)

## \*BOTANY, JUNIOR YEAR

	1st	2nd
SEMESTER		
Genetics .....	4	...
Plant Physiology .....	5	...
Public Speaking .....	...	3
Electives .....	6-9	12-15

## \*BOTANY, SENIOR YEAR

	1st	2nd
SEMESTER		
Fungi .....	4	...
Taxonomy .....	...	3
Electives .....	11-14	12-15

\* Education in Botany depends on the discipline of other sciences. The student is expected to broaden his scientific experiences with courses in other departments.

## AGRONOMY, JUNIOR YEAR

	1st	2nd
SEMESTER		
Biological Statistics .....	...	3
Fertilizers or Gen. Entom. ....	3-4	...
Forage & Pasture Crops .....	...	3
Plant Pathology .....	4	...
Plant Physiology .....	5	...
Public Speaking .....	...	3
Soils and Soils Management .....	3	3
Electives .....	0-3	3-6

## †HORTICULTURE, JUNIOR YEAR

	1st	2nd
SEMESTER		
Horticulture Seminar .....	...	1
Horticulture Special Study .....	3	3
Plant Pathology .....	4	...
Plant Physiology .....	5	...
Public Speaking .....	...	3
Soils and Soils Management .....	3	3
Electives .....	3	8

## AGRONOMY, SENIOR YEAR

	1st	2nd
SEMESTER		
Advanced Field Crops .....	3	...
Farm Management .....	3	3
Gen. Entom. or Fertilizers .....	4-3	...
Genetics .....	4	...
Phil. of Amer. Agriculture .....	3	...
Soil Conservation .....	...	3
Electives .....	...	9-12

## HORTICULTURE, SENIOR YEAR

	1st	2nd
SEMESTER		
Advanced Hort. Sem. ....	...	1
Farm Management .....	3	3
General Entomology .....	4	...
Genetics .....	4	...
Horticulture Special Study .....	4	4
Electives .....	3	10

† Students in Horticulture are required to take Plant Propagation, General Horticulture, Plant Breeding, and Review of Experimental Literature. Three fields of specialization are possible during the junior and senior years: Fruit Growing, Vegetable Growing, and Ornamental Horticulture. Those specializing in Fruit Growing study Tree Fruits, Commercial Fruit Growing, and Systematic Pomology. Those specializing in Vegetable Growing study Vegetable Culture, Commercial Vegetable Production, and Systematic Survey of Vegetables. Those specializing in Ornamental Horticulture study Esthetic Horticulture, Commercial Floriculture, and Plant Materials. Such of these courses as are not listed as numbered courses in the department are taught as Special Study courses.

## DAIRY MANUFACTURING

## SOPHOMORE YEAR

	1st	2nd
	SEMESTER	
Dairy Bacteriology .....	3	
Dairy Livestock .....	2	...
English .....	3	3
General Bacteriology .....	3	...
Outline of Organic Chem. ....	5	...
Principles of Economics .....	3	3
Public Speaking .....	3	
Electives .....	0-2	3-6
Military Science (Men) .....	(2)	(2)
Physical Education .....	(1)	(1)

## JUNIOR YEAR

	1st	2nd
	SEMESTER	
Chem. and Test. of Dairy Products .....	4	...
Dairy Plant Engineering <i>or</i> Public Prob. of Agriculture .....	2-3	
Ice Cream .....	3	...
Introductory Physics .....	3	3
Judging Dairy Products .....	2	
Market Milk .....	2	2
Principles of Accounting .....	3	3
Electives .....	0-3	5-6

## SENIOR YEAR

	1st	2nd
	SEMESTER	
Agricultural Cooperation .....	2	...
Butter, Condensed Milk, etc. ....	3	
Cheese and Casein .....	3	...
Marketing Farm Products .....	3	
Milk Production .....	3	...
Public Prob. of Agriculture <i>or</i> Dairy Plant Engineering .....	3-2	
Electives .....	6-10	9

## DAIRY PRODUCTION

## SOPHOMORE YEAR

	1st	2nd
	SEMESTER	
Dairy Bacteriology .....	3	
Dairy Livestock .....	2	2
English .....	3	3
General Bacteriology .....	3	...
Outline of Organic Chem. ....	5	...
Principles of Economics .....	3	3
Public Speaking .....	3	
Electives .....	0-2	1-4
Military Science (Men) .....	(2)	(2)
Physical Education .....	(1)	(1)

## JUNIOR YEAR

	1st	2nd
	SEMESTER	
Anatomy and Physiology .....	2	...
Animal Breeding <i>or</i> Forage and Pasture Crops .....	3	
Animal Nutrition .....	2	
Chem. and Test. of Dairy Products .....	4	...
Diseases of Farm Animals .....	2	
Feeds and Feeding .....	3	...
General Field Crops .....	3	...
General Soils .....	3	
Introductory Physics .....	3	3
Electives .....	0-3	2-5

## SENIOR YEAR

	1st	2nd
	SEMESTER	
Agricultural Cooperation .....	2	...
Farm Management .....	3	3
Forage and Pasture Crops <i>or</i> Animal Breeding .....	3	
General Farm Engineering .....	3	3
Livestock Production .....	3	...
Marketing Farm Products .....	3	
Milk Production .....	3	...
Electives .....	1-4	3-6

## POULTRY HUSBANDRY

SOPHOMORE YEAR	1st	2nd
	SEMESTER	
English .....	3	3
General Poultry Husbandry .....	3	...
Incubation and Brooding .....	...	4
Introductory Physics .....	3	3
Outline of Organic Chem. ....	5	...
Poultry Sanitation and Disease Control .....	...	4
Principles of Economics .....	3	3
Military Science (Men) .....	(2)	(2)
Physical Education .....	(1)	(1)

JUNIOR YEAR	1st	2nd
	SEMESTER	
Farm Shop .....	2	...
General Bacteriology .....	...	3
Pasture and Forage Crops .....	...	3
Poultry Feeding .....	4	...
Poultry Housing .....	...	2
Public Speaking .....	...	3
Electives .....	9-12	4-7

SENIOR YEAR	1st	2nd
	SEMESTER	
Anatomy and Physiology .....	2	...
Farm Management .....	3	3
Processing and Packaging Poultry Products .....	3	...
Electives .....	7-10	12-15

## THE AGRICULTURAL ENGINEERING CURRICULUM

The Agricultural Engineering Curriculum, leading to the degree of Bachelor of Science in Agricultural Engineering, requires 130 semester credit hours of work, exclusive of courses required in Physical Education and Military Science, and includes elective courses. It provides students with an educative experience in engineering, particularly as applied to the rural field. The curriculum, the instructional staff, and the course content are jointly approved by the Dean of the College of Technology and the Dean of the College of Agriculture.

## OUTLINE OF AGRICULTURAL ENGINEERING CURRICULUM

THE FRESHMAN YEAR	1st	2nd
	SEMESTER	
*English Composition .....	3	3
Freshman Mathematics .....	5	5
General Poultry Husbandry .....	3	...
Mechanical Drawing .....	3	3
Outline of Inorganic Chem. ....	...	5
Electives .....	0-4	0-2
Military Science (Men) .....	(2)	(2)
Physical Education .....	(1)	(1)
Hygiene (Women) .....	(1)	(1)

THE SOPHOMORE YEAR	1st	2nd
	SEMESTER	
Calculus .....	3	3
Expository Writing .....	3	...
Farm Shop .....	2	...
General Physics .....	5	5
General Soils .....	...	3
Outline of Organic Chem. ....	5	...
Speech .....	...	3
Statics .....	...	3
Electives .....	0-1	...
Military Science (Men) .....	(2)	(2)
Physical Education .....	(1)	(1)

THE JUNIOR YEAR		1st	2nd	THE SENIOR YEAR		1st	2nd
		SEMESTER				SEMESTER	
Elements of Mech. Engrg. ....	3	...		Agricultural Elec. Engrg. ....	4	4	
Farm Structures or				Farm Management .....	3	3	
Farm Power Machinery .....		3		Farm Structures or			
Field Machinery or				Farm Power Machinery .....		3	
Farm Utilities .....	3	...		Field Machinery or			
General Dairying .....		3		Farm Utilities .....	3	...	
Hydraulics .....		3		Hydraulics Lab. ....		1	
Kinetics .....	3	...		Seminar .....	1	1	
Mechanics of Materials .....		3		Soil and Water Engrg. ....		3	
Principles of Economics .....	3	3		Surveying .....	4	...	
Thermodynamics .....	4	0		Electives .....	0-3	0-3	
Electives .....	0-2	0-3					

\* Students exempted from this course on the basis of the placement test may substitute another course, normally in English.

## THE PRE-FORESTRY PROGRAM

The Pre-Forestry Program provides the first two years of a four-year professional forestry curriculum leading to the degree of Bachelor of Science in Forestry. The last two years of course work must be taken at some institution which confers this degree. The program may be adjusted to meet the requirements of different Forestry schools.

In order to complete the required courses in two years, Freshman Mathematics (Elementary College Algebra, Plane Trigonometry, and Plane Analytical Geometry) will be taken the first year and not Mathematics A, "Algebra Review," a non-credit course. English composition for one year is required for transfer to a professional school. Exemption from English Composition on the basis of the English Placement test cannot be granted for this program.

## OUTLINE OF PRE-FORESTRY PROGRAM

FRESHMAN YEAR		1st	2nd	THE SOPHOMORE YEAR		1st	2nd
		SEMESTER				SEMESTER	
Algebra, Plain Trigonometry				Dendrology .....	3	3	
and Analytic Geometry .....	3	3		Expository Writing .....		3	
Elements of Forestry .....		3		Introductory Geology .....	4	4	
English Composition .....	3	3		Introductory Physics .....	3	3	
Introduction to Zoology .....	4	...		Principles of Economics .....	3	3	
Introductory Botany .....	4	...		Surveying .....	4	...	
Mechanical Drawing .....	3	...		Military Science (Men) .....	(2)	(2)	
Outline of Inorganic Chem. ....		5		Physical Education .....	(1)	(1)	
Elective .....		3					
Military Science (Men) .....	(2)	(2)					
Physical Education .....	(1)	(1)					
Hygiene (Women) .....	(1)	(1)					

## THE PRE-VETERINARY PROGRAM

The Pre-Veterinary Program provides preparation for entrance to veterinary colleges. The program may be adjusted to meet the requirements of different veterinary colleges.

### OUTLINE OF PRE-VETERINARY PROGRAM

FRESHMAN YEAR	1st 2nd SEMESTER		SOPHOMORE YEAR	1st 2nd SEMESTER	
Agriculture Survey .....	1	1	General Entomology .....	4	...
*English Composition .....	3	3	Introductory Physics .....	3	3
General Chemistry .....	4	4	Organic Chemistry .....	4	4
Introduction to Zoology .....	4	...	Public Speaking .....	...	3
Introductory Botany .....	4	...	Survey of American History or American Government .....	3	3
Mathematics I .....	...	3	Elective .....	1-4	2-5
Vertebrate Zoology .....	...	4	Military Science (Men) .....	(2)	(2)
Elective .....	0-2	0-3	Physical Education .....	(1)	(1)
Military Science (Men) .....	(2)	(2)			
Physical Education .....	(1)	(1)			
Hygiene (Women) .....	(1)	(1)			

\* Students exempted from this course on the basis of the placement test may substitute another course, normally in English.

## COURSES OF INSTRUCTION

### AGRICULTURE

#### 1-2 AGRICULTURE SURVEY. (1-0)

*One hour. I, II*

Designed to develop a broad concept of the field of agriculture. The organization and functioning of the College of Agriculture; history and status of Vermont agriculture; nature, content, and interrelation of different pursuits in the agricultural field and agricultural industries.

*The Dean and the Staff*

### AGRICULTURAL BIOCHEMISTRY

*Assistant Professors Little and Johnstone; Mr. Foote*

#### 71 CHEMISTRY OF FOODS. (2-2)

*Three hours. I*

General discussion of foodstuffs with quantitative chemical analysis of milk, edible fats and oils, carbohydrate foods, proteins, and tests for preservatives and adulterants.

*Prerequisite:* Chemistry 31-32 or 35.

*Mr. Little*

72 ELEMENTARY BIOCHEMISTRY. (2-2) *Three hours. II*

Introduction to the chemistry of living matter. Chemistry and metabolism of essential constituents of food: carbohydrates, proteins, fats, vitamins.

*Prerequisite:* Chemistry 31-32 or 35.

*Mr. Little*

## SPECIAL STUDY

G191 to 199. An additional course or courses, supplementary to those listed in the department, designed to meet special needs of students. Each course that meets the requirements of the Graduate Council will carry graduate credit.

*Prerequisite:* junior standing and permission of the department.

*The Staff*

## AGRICULTURAL ECONOMICS

*Professor T. M. Adams; Associate Professor Carter; Mr. Story*

21 AGRICULTURE COOPERATION. (2-0) *Two hours. I*

The nature and development of cooperative business enterprises, their organization, financing, and business management.

*Prerequisite:* sophomore standing.

*Mr. Adams*

G101-102 FARM MANAGEMENT. (2-2) *Three hours. I, II*

The organization and operation of a successful farm business.

*Prerequisite:* Economics 11-12.

*Mr. Story*

G103 RURAL SOCIOLOGY. (3-0) *Three hours. I*

A survey of rural organization in terms of social grouping and of the physical, psychological, and social controls. Considerable time is given to problems of the rural community.

*Prerequisite:* Economics 11-12.

*Mr. Carter*

G104 MARKETING FARM PRODUCTS. (2-2) *Three hours. II*

The distribution of Vermont farm products and the problems involved.

*Prerequisite:* Economics 11-12.

*Mr. Adams*

G106 PUBLIC PROBLEMS OF AGRICULTURE. (3-0) *Three hours. II*

Price fluctuations as they affect farming, agricultural legislation, land use, costs of local government, and other problems of contemporary interest to farmers.

*Prerequisite:* Economics 11-12.

*Mr. Carter*

## Agricultural Economics, Agricultural Education 107

### 108 FARM CREDIT. (2-2) *Three hours. II*

The types and sources of credit used by farmers, and the lending practices and problems of credit agencies. Appraisal of farm real estate and personal property.

*Prerequisite: Economics 11-12.*

*Mr. Story*

### G151-152 RESEARCH METHODS. (3-0) *Three hours. I, II*

Efficient procedures for students engaged in scientific research.

*Prerequisites: Economics 11-12; senior standing and permission of the department.*

*The Staff*

### SPECIAL STUDY

G191 to 199. An additional course or courses, supplementary to those listed in the department, designed to meet special needs of students. Each course that meets the requirements of the Graduate Council will carry graduate credit.

*Prerequisite: junior standing and permission of the department.*

*The Staff*

## AGRICULTURAL EDUCATION

*Assistant Professor Luce; Mr. Woodbull*

### 101 RURAL EDUCATION. (2-2) *Three hours. I*

The organization of rural education with consideration of the duties and responsibilities of the rural teacher.

*Prerequisite: junior standing.*

*Mr. Woodbull*

### 102 EXTENSION METHODS. (1-2) *Two hours. II*

Methods and technique of extension teaching. (Offered in 1949-50.)

*Prerequisite: junior standing.*

*Miss Luce*

### 150 VOCATIONAL METHODS AND PRACTICE TEACHING. *Ten hours. II*

Methods of teaching vocational agriculture, with consideration of program planning and organization. Part of the semester will be devoted to practice teaching in an approved high school department under the supervision of a critic teacher.

*Prerequisite: 101; senior standing.*

*Mr. Woodbull*

### 152 ADULT EDUCATION. (2-2) *Three hours. II*

The principles underlying successful programs of adult education. Determination of needs, program planning, and organization of units on selected programs.

*Prerequisite: 101; senior standing.*

*Mr. Woodbull*

## SPECIAL STUDY

G191 to 199. An additional course or courses, supplementary to those listed in the department, designed to meet special needs of students. Each course that meets the requirements of the Graduate Council will carry graduate credit.

*Prerequisite:* junior standing and permission of the department.

*The Staff*

## AGRICULTURAL ENGINEERING

*Assistant Professor Schneider; Mr. Loupo*

1, 2 GENERAL FARM ENGINEERING. (3-0) *Three hours. I, II*

An introductory course including units on gas engines, farm structures, concrete, farm water supply, electricity, refrigeration, and farm machines.

*Mr. Schneider*

22 POULTRY HOUSING. (1-2) *Two hours. II*

The principles and practices of poultry house construction and utilization. (Offered 1949-50.)

*Prerequisite:* sophomore standing. *Mr. Schneider*

41 FARM SHOP. (0-6) *Two hours. I*

Instruction in woodworking, hot and cold metal working, sheet metal, welding, and tool fitting.

*Prerequisite:* junior standing except Agricultural Engineers. *Mr. Schneider*

42 DAIRY PLANT ENGINEERING. (2-0) *Two hours. II*

The theory and practical problems of selecting, installing, and servicing equipment in dairy processing plants. (Offered 1950-51.)

*Prerequisite:* junior standing. *Mr. Schneider*

101 FARM UTILITIES. (2-2) *Three hours. I*

Water systems and plumbing; sewage disposal, refrigeration. (Offered 1950-51.)

*Prerequisite:* Physics 11-12. *Mr. Loupo*

102 FARM POWER MACHINERY. (2-2) *Three hours. II*

The theory, design, operation, and maintenance of tractors and their engines. (Offered 1949-50.)

*Prerequisite:* M. E. 111. *Mr. Loupo*



103 FIELD MACHINERY. (2-2)

*Three hours. I*

The theory, design, operation and maintenance of field machinery. (Offered 1949-50.)

*Prerequisite:* Physics 11-12, Math. 25.

*Mr. Loupo*

104 FARM STRUCTURES. (2-2)

*Three hours. II*

The design of farm structures; materials, structural requirements, functional requirements; insulating, heating, and ventilating. (Offered 1950-51.)

*Prerequisite:* Math. 131.

*Mr. Loupo*

152 SOIL AND WATER ENGINEERING. (2-2)

*Three hours. II*

Principles and methods of land drainage, soil and water conservation, and irrigation.

*Prerequisite:* Agronomy 2, Civ. Engrg. 161, Physics 11-12. *Mr. Loupo*

153-154 SEMINAR. (1-0)

*One hour. I, II*

Review and discussion of current agricultural engineering research and student reports and studies of agricultural engineering problems.

*Prerequisite:* Civ. Engrg. 161, Mech. Engrg. 111, Math. G131; senior standing.

*The Staff*

SPECIAL STUDY

G191 to 199. An additional course or courses, supplementary to those listed in the department, designed to meet special needs of students. Each course that meets the requirements of the Graduate Council will carry graduate credit.

*Prerequisite:* junior standing and permission of the department.

*The Staff*

AGRONOMY

*Assistant Professors Kelly and Varney*

1 GENERAL FIELD CROPS. (2-2)

*Three hours. I*

Introduction to field crops common in Vermont and throughout the United States, including science, practice, and uses. *Mr. Varney*

2 GENERAL SOILS. (2-2)

*Three hours. II*

Elementary principles of soil fertility and management. *Mr. Kelly*

- 21 ADVANCED FIELD CROPS. (2-2) *Three hours. I*  
 Field crops other than forage and pasture crops; their use, importance, fertilization, and management.  
*Prerequisite:* sophomore standing. *Mr. Varney*
- 22 FORAGE AND PASTURE CROPS. (2-2) *Three hours. II*  
 Hay and pasture grasses, legumes, seeding mixtures, fertilization, and management.  
*Prerequisite:* sophomore standing. *Mr. Varney*
- 23-24 SOILS AND SOILS MANAGEMENT. (2-2) *Three hours. I, II*  
 The geology, physics, chemistry, and biology of soils.  
*Prerequisite:* sophomore standing. *Mr. Kelly*
- 101 FERTILIZERS. (2-2) *Three hours. I*  
 Principles of plant nutrition, nutrient deficiency symptoms, grade formulation, rates, and ratios for specific crops. (Offered 1950-51.)  
*Prerequisite:* 2 or 23-24; junior standing. *Mr. Kelly*
- G151 SOIL CONSERVATION. (2-2) *Three hours. II*  
 Types of erosion and control; effect on general welfare; farm drainage.  
*Prerequisite:* senior or graduate standing. *Mr. Kelly*

### SPECIAL STUDY

G191 to 199. An additional course or courses, supplementary to those listed in the department, designed to meet special needs of students. Each course that meets the requirements of the Graduate Council will carry graduate credit.

*Prerequisite:* junior standing and permission of the department.

*The Staff*

## ANIMAL AND DAIRY HUSBANDRY

*Professor Riddell; Associate Professors Bradfield and Newlander;  
 Mr. Reed*

- 1, 2 LIVESTOCK. (1-3) *Two hours. I, II*  
 Types, breeds, market classes, and fundamentals of judging.  
 1 Dairy livestock.  
 2 Livestock other than dairy.
- 4 GENERAL DAIRYING. (2-2) *Three hours. II*  
 An introductory course dealing with the production and handling of milk.  
*Messrs. Newlander and Bradfield*

- 22 JUDGING DAIRY PRODUCTS. (0-4) *Two hours. II*  
 Quality, market standards, and scoring.  
*Prerequisite:* sophomore standing. *Mr. Bradfield*
- 24 DAIRY BACTERIOLOGY. (1-4) *Three hours. II*  
 Relation of micro-organisms to milk and milk products, methods of examination and control.  
*Prerequisite:* sophomore standing. *Mr. Newlander*
- G101, 102 MARKET MILK. (1-3) *Two hours. I, II*  
 Quality production, processing, and distribution.  
*Prerequisite:* 24, 26; G101 for G102; junior standing  
*Messrs. Bradfield and Reed*
- 103 LIVESTOCK PRODUCTION. (2-3) *Three hours. I*  
 Production and management of horses, sheep, swine, and beef cattle.  
*Prerequisite:* 2.
- 105 FEEDS AND FEEDING. (2-3) *Three hours. I*  
 Feeds, rations, and feeding practice.  
*Prerequisite:* junior standing. *Mr. Newlander*
- G106 ANIMAL NUTRITION. (2-0) *Two hours. II*  
 Nutrients, their function and utilization, and requirements for growth, reproduction, lactation, etc.  
*Prerequisite:* 105; Chem. 31-32 or 35. *Mr. Newlander*
- 107 CHEMISTRY AND TESTING OF DAIRY PRODUCTS. (2-4) *Four hours. I*  
 Chemical and physical properties of milk and milk products. Standard methods of analysis.  
*Prerequisite:* Chem. 35; junior standing *Mr. Newlander*
- G108 ANIMAL BREEDING. (3-0) *Three hours. II*  
 Practical applications of the principles of genetics to the breeding of farm animals.  
*Prerequisite:* junior standing. *Mr. Riddell*
- 110 ADVANCED STOCK JUDGING. (1-6) *Three hours. II*  
 Instruction and practice in judging, with emphasis on dairy cattle.  
*Prerequisite:* 1; junior standing.
- G111 ICE CREAM. (1-6) *Three hours. I*  
 Theory and practice.  
*Prerequisite:* 24, 26; junior standing. *Messrs. Bradfield and Reed*

- G113 CHEESE AND CASEIN. (1-6) *Three hours. I*  
 Theory and practice.  
*Prerequisite:* 24, 26; junior standing. *Messrs. Bradfield and Reed*
- G114 BUTTER; CONDENSED, EVAPORATED, AND DRIED MILK. (2-3) *Three hours. II*  
 Theory and practice.  
*Prerequisite:* 24, 26; junior standing. *Messrs. Bradfield and Reed*
- G151 MILK PRODUCTION. (3-0) *Three hours. I*  
 Feeding and management of the dairy herd with emphasis on profitable milk production.  
*Prerequisite:* 1; senior standing. *Mr. Riddell*

#### SPECIAL STUDY

G191 to 199. An additional course or courses, supplementary to those listed in the department, designed to meet special needs of students. Each course that meets the requirements of the Graduate Council will carry graduate credit.

*Prerequisite:* junior standing and permission of the department.

*The Staff*

#### ANIMAL PATHOLOGY

*Professor Waller*

- 105 ANATOMY AND PHYSIOLOGY. (2-0) *Two hours. I*  
 The various anatomical structures and their physiological functions.  
*Prerequisite:* Bot. 107; sophomore standing.
- 106 DISEASES OF FARM ANIMALS. (2-0) *Two hours. II*  
 The causes, symptoms, and prevention of diseases of farm animals.  
*Prerequisite:* 105; sophomore standing.
- 116 POULTRY SANITATION AND DISEASE CONTROL. (3-2) *Four hours. II*  
 The causes, symptoms, and prevention of parasitic, infectious, and nutritional diseases of poultry. A discussion of the hygienic and sanitary measures used in incubation, breeding, and rearing poultry will be given as indicated. Demonstrations and necropsies.  
*Prerequisite:* Bot. 107; sophomore standing.

#### SPECIAL STUDY

G191 to 199. An additional course or courses, supplementary to those listed in the department, designed to meet special needs of students.

Each course that meets the requirements of the Graduate Council will carry graduate credit.

*Prerequisite:* junior standing and permission of the department.

*The Staff*

## BOTANY

*Professor Gersbohy; Associate Professors Dole and Marvin; Assistant Professors Johnstone, Sproston and Taylor; Misses Lane and Raynor*

### 1 INTRODUCTORY BOTANY. (2-4)

*Four hours. I*

For science students. Fundamental principles of biology illustrated by morphology, physiology, and reproduction of vascular plants. A study of forms and functions, leading to an understanding of the plant as a dynamic unit. *Messrs. Taylor and Marvin; Miss Raynor*

### 3-4 GENERAL BOTANY. (2-4)

*Four hours. I, II*

An introductory course, primarily for general arts students. Structures and phenomena of growth and reproduction; origins and relationships of major plant groups; biological principles in relation to human culture and civilization. *Mr. Dole*

### 101 GENETICS. (2-4)

*Four hours. I*

Basic principles and theory of modern plant and animal breeding; elementary concepts of variation, inheritance, biometry, and cytogenetics.

*Prerequisites:* 1 or 3-4; Zool. 1; junior standing.

*Mr. Gersbohy*

### 103, 104 MORPHOLOGY. (2-2)

*Three hours. I, II*

Comparative study of the structures, reproductive activities, and phytogenetic relationships of the major groups of plants. (Offered 1950-51.)

103 Algae, fungi, liverworts and mosses.

104 Ferns and seed plants.

*Prerequisite:* 1 or 3-4.

*The Staff*

### 105 ECONOMIC BOTANY. (2-4)

*Four hours. I*

The relation of plants to human history and contemporary life. Botanical and economic aspects of plants used as sources of foods, drugs, and other products of importance in everyday living. (Offered 1949-50.)

*Prerequisite:* 1 or 3-4.

*Mr. Taylor*

- 107 GENERAL BACTERIOLOGY. (2-2) *Three hours. I, II*  
Principles and techniques employed in the study of micro-organisms, their isolation and cultural aspects with reference to human disease and public health work, their importance to agriculture, industry and foods.  
*Prerequisite:* 1 or 3-4; Chem. 1-2 or 4. *Mr. Johnstone, Miss Lane*
- 109 INTRODUCTORY PLANT PATHOLOGY. (2-4) *Four hours. I*  
Diagnosis, life history, and control of plant diseases caused by fungi, viruses, bacteria, and nematodes.  
*Prerequisite:* 1 or 3-4. *Mr. Sproston*
- 111 PLANT PHYSIOLOGY. (2-6) *Five hours. I*  
Mechanisms of absorption, translocation, synthesis, and utilization of materials; role of internal and external factors in growth.  
*Prerequisite:* 1 or 3-4; Chem. 1-2 or 4. *Mr. Marvin*
- 112 MICROTECHNIQUE. (1-6) *Four hours. II*  
Preparation and study of microscopic biological material with emphasis on somatic and reproductive cells and their modifications. Slide making techniques; optics in relation to the microscope.  
*Prerequisite:* 1 or 3-4; Zool. 1. *Miss Raynor*
- 114 ECOLOGY. (2-1) *Three hours. II*  
The concept of vegetation as an organism; the plant formation; endemism; invasion and succession in climax formations. Meteorological, edaphic, and biotic factors of the habitat. Life forms. Ecological classification and nomenclature. (Offered 1950-51.)  
*Prerequisite:* 111. *Mr. Dole*
- 116 TAXONOMY. (1-4) *Three hours. II*  
Principles of taxonomy as exemplified in living plants and herbarium material. Historical survey of significant phylogenetic schemes and modern systems of classification; the species concept; variation and discontinuity; speciation. (Offered 1949-50.)  
*Prerequisite:* 1 or 3-4; junior standing. *Mr. Dole*
- G151 PLANT ANATOMY AND HISTOLOGY. (2-4) *Four hours. I*  
Development of the plant body and accompanying integration of cellular tissues. Ontogeny of the conducting, supporting, and protective tissues; modifications of the cell wall. (Offered 1950-51.)  
*Prerequisite:* 103-104; senior standing. *Mr. Taylor*

G152 CYTOLOGY. (2-4)

*Four hours. II*

The protoplast; somatic and meiotic divisions, gametogenesis, syngamy, and substitute methods of reproduction; interrelation of chromosomal and genetic phenomena. (Offered 1949-50.)

*Prerequisite:* 101 or Zool. 115; Chem. 35; senior standing. *Mr. Gershoy*

G153 FUNGI. (2-4)

*Four hours. I*

Classification and reproductive processes of the common molds, yeasts, and actinomycetes. Physiological studies and antibiosis. (Offered 1949-50.)

*Prerequisite:* 111.

*Messrs. Sproston and Johnstone*

SPECIAL STUDY

G191 to 199. An additional course or courses, supplementary to those listed in the department, designed to meet special needs of students. Each course that meets the requirements of the Graduate Council will carry graduate credit.

*Prerequisite:* junior standing and permission of the department.

*The Staff*

FORESTRY

*Professor W. R. Adams*

1 ELEMENTS OF FORESTRY. (3-0)

*Three hours. II*

Introduction to specialization in forestry and conservation. Open to Pre-Forestry students only.

101-102 DENDROLOGY. (2-2)

*Three hours. I, II*

Identification, taxonomy, and silvical characteristics of woody plants of the important forest regions of the United States.

*Prerequisite:* Bot. 1.

103-104 WOODLAND MANAGEMENT. (2-2)

*Three hours. I, II*

Establishment, protection, and management of farm woodlands and small forest areas.

*Prerequisite:* Bot. 1 or 3-4; junior standing.

G105 MENSURATION. (1-2)

*Two hours. I*

Timberland surveying, timber estimating, log scaling, and growth determinations of trees and stands.

*Prerequisite:* 103-104.

**G106 UTILIZATION OF WOODLAND PRODUCTS. (1-2)** *Two hours. II*

Sawmilling, wood products manufacture, maple products, wood preservation, and private and cooperative marketing practices.

*Prerequisite:* 103.

**G108 BIOLOGICAL STATISTICS. (3-0)** *Three hours. II*

The application of statistics to the analysis of biological data. Field plot technique. Interpretation of statistical analysis.

*Prerequisite:* Math. 1; junior standing.

**SPECIAL STUDY**

G191 to 199. An additional course or courses, supplementary to those listed in the department, designed to meet special needs of students. Each course that meets the requirements of the Graduate Council will carry graduate credit.

*Prerequisite:* junior standing and permission of the department.

*The Staff*

**HORTICULTURE**

*\* Associate Professor Blasberg; Messrs. Calahan and Hopp*

**1 GENERAL HORTICULTURE. (2-2)** *Three hours. I*

An introductory course dealing with materials and practices in the field of horticulture.

*Mr. Hopp*

**2 SMALL FRUIT CULTURE. (2-2)** *Three hours. II*

The fundamental principles underlying plant growth and fruit production and the relation of these principles to practice.

**3 VEGETABLE CULTURE. (2-2)** *Three hours. I*

The characteristics of some more important crops and their responses to various conditions of environment.

*Mr. Hopp*

**4 ESTHETIC HORTICULTURE. (2-2)** *Three hours. II*

An introduction to the possible uses of ornamental plant materials in beautifying the home and its surroundings, designed to develop an appreciation of the part which ornamental plants have in the culture of today.

*The Staff*

\* Absent on leave, 1948-49.



## Horticulture, Poultry Husbandry

117

- 101 TREE FRUITS. (2-2) *Three hours. I*  
The principles and facts involved in modern production of tree fruits.  
*Prerequisite:* Bot. 1 or 3-4; sophomore standing. *Mr. Calaban*
- 102 PLANT PROPAGATION. (1-2) *Two hours. II*  
The theory and practice of multiplying plants by various methods.  
*Prerequisite:* Bot. 1 or 3-4. *Mr. Hopp*
- 104 HORTICULTURE SCIENCE. (2-2) *Three hours. II*  
The principles of growth of horticulture plants and their relation to horticultural practices.  
*Prerequisite:* Bot. 1 or 3-4; Chem. 35.
- 110 HORTICULTURE SEMINAR. (1-0) *One hour. II*  
Discussion of horticultural topics. Students required to prepare and present papers on selected subjects.  
*Prerequisite:* 1; junior standing. *The Staff*
- G150 ADVANCED HORTICULTURE SEMINAR. (1-0) *One hour. II*  
*Prerequisite:* 110; senior standing. *The Staff*

### SPECIAL STUDY

G191 to 199. An additional course or courses, supplementary to those listed in the department, designed to meet special needs of students. Each course that meets the requirements of the Graduate Council will carry graduate credit.

*Prerequisite:* junior standing and permission of the department.

*The Staff*

## POULTRY HUSBANDRY

*Associate Professor Henderson*

- 1 GENERAL POULTRY HUSBANDRY. (2-2) *Three hours. I*  
The principles of poultry husbandry and their application to general farm conditions.
- 101 POULTRY FEEDING. (3-2) *Four hours. I*  
Feeding poultry for egg production, growth, and fattening. Practice in compounding rations. Experimental work and feeding problems.  
*Prerequisite:* Chem. 35; junior standing.

## 102 INCUBATION AND BROODING. (2-4)

*Four hours. II*

General biology as applied to incubation and the fundamental principles underlying incubation practices. The theory and practice of breeding chickens and other poultry. (Offered 1950-51.)

*Prerequisite:* 1; sophomore standing.

## 103 PROCESSING AND PACKAGING POULTRY PRODUCTS. (2-2)

*Three hours. I*

The principles of marketing as they apply to eggs and poultry meat. Candling, grading, and packing eggs for market. Preparation of poultry for market. A one-week inspection trip to the Boston market is required. Charge to cover expenses of trip to Boston, \$25.00. (Offered 1949-50.)

*Prerequisite:* junior standing.

## SPECIAL STUDY

G191 to 199. An additional course or courses, supplementary to those listed in the department, designed to meet special needs of students. Each course that meets the requirements of the Graduate Council will carry graduate credit.

*Prerequisite:* junior standing and permission of the department.

*The Staff*

## HOME ECONOMICS

## THE CURRICULUM IN HOME ECONOMICS

The purpose of this department is to provide an education in those phases of learning that relate to home and family life. The curriculum provides a liberal program based on the needs of women and training for a variety of professions. To permit specialization for the various professions or for the development of a special interest field for the homemaker the subject matter is divided into four major sequences.

The program of the freshman year is uniform for all students, but at the beginning of the sophomore year the student may either select a "major" within one of the professional sequences or enter the General Home Economics sequence. The courses required for each particular student are planned so far as is possible to meet her particular interests.

The General Home Economics sequence supplies a background which will enable students to become more effective homemakers. The Home Economics Education sequence prepares students to teach Home Economics on the secondary level in Vermont and some other states or to become home demonstration or 4-H club agents. The Clothing, Textiles and Related Art sequence is planned for students who are interested in the fields of textile testing, costume designing, fashion illustrating, fashion merchandizing, interior decorating, and the teaching of textiles and clothing. This sequence provides background upon which a talented student may with additional study or apprentice training build a career. The Food and Nutrition sequence is planned to prepare students for positions as dietitians, both administrative and practising, in hospitals, colleges, industry, or other institutions, as nutrition or food specialists, or in utilities or commercial food firms, or teaching food and nutrition.

Every candidate for the degree must present a total of 130 semester hours of credit, exclusive of courses required in Physical Education. Students in Home Economics Education must have a 75 average in their Home Economics subjects to be eligible for student teaching in the state during their senior year.

As a part of the preliminary registration program, a mathematics placement test is required of each student to determine whether she should take the non-credit course, "Algebra Review," during the first semester of her freshman year. An English placement test is also given, on the basis of which a few students are excused from "English Composition."

## OUTLINE OF HOME ECONOMICS CURRICULUM

### UNIFORM FRESHMAN YEAR

	1st	2nd
	SEMESTER	
Design .....	3	...
*English Composition .....	3	3
European History or American Government .....	3	3
Food Selection .....	3	...
*Basic Speech .....	3	...
Orientation .....	1	1
Outline of Inorganic Chemistry .....	...	5
Textiles and Clothing Selection .....	...	3
Physical Education .....	(1)	(1)
Hygiene .....	(1)	(1)

\* Students exempted from English Composition on the basis of the placement test may substitute another course, normally in English. Those who do not pass the Mathematics placement test take a non-credit course, Algebra Review, in place of Basic Speech.

## CLOTHING AND TEXTILES

## SOPHOMORE YEAR

	1st	2nd
SEMESTER		
Principles of Economics .....	3	3
*English or Surv. Food Prep. and Food Buying & Service .....	3	3
Household Technology .....	2	2
Outline of Organic Chem. ....	5	...
Costume Design .....	2	...
Clothing Construction I .....	3	...
House Planning .....	2	...
Elective .....	3	0-3
Physical Education .....	(1)	(1)

\* One year of either English or American or World Literature, or one semester of Journalism and one semester of Expository Writing.

## JUNIOR YEAR

	1st	2nd
SEMESTER		
Buying Textiles & Clothing .....	3	...
Clothing Construction II .....	3	...
Elementary Botany or Introduction to Zoology .....	4	...
*English or Surv. Food Prep. and Food Buying & Service .....	3	3
General Psychology .....	3	3
Family Living .....	3	...
General Bacteriology or Physiology .....	3	...
Home Management .....	3	...
History of Furniture or Costume Design and Construction .....	3	...

## SENIOR YEAR

	1st	2nd
SEMESTER		
Child Care and Development .....	3	...
Home Furnishing .....	3	...
Home Management House .....	3	...
Hist. of Costume or Textiles .....	3	...
Problems in Home Furnishing .....	2	...
Electives .....	7-9	11-13

\* One year of either English or American or World Literature, or one semester of Journalism and one semester of Expository Writing.

## HOME ECONOMICS

## EDUCATION

## SOPHOMORE YEAR

	1st	2nd
SEMESTER		
Food Preparation .....	3	3
Household Technology .....	2	2
Introduction to Zoology .....	4	...
Outline of Organic Chem. ....	5	...
Principles of Economics .....	3	3
Clothing Construction I .....	3	...
Expository Writing .....	3	...
House Planning .....	2	...
Physical Education .....	(1)	(1)

## JUNIOR YEAR

	1st	2nd
SEMESTER		
American Literature .....	3	...
Buying Textiles & Clothing .....	3	...
Clothing Construction II .....	3	...
Food Preservation and Econ. ....	3	...
General Psychology .....	3	3
Rural Education .....	3	...
*Extension Methods .....	3	...
Family Living .....	3	...
Home Management .....	3	...
Meal Planning and Service .....	3	...
Physiology .....	3	...

## SENIOR YEAR

	1st	2nd
SEMESTER		
Child Care and Development .....	3	...
Demonstration Techniques .....	2	...
Home Furnishing .....	3	...
Home Nursing .....	1	...
Nutrition and Diet .....	4	...
School Lunch Management .....	3	...
Methods of Teaching .....	2	1
Special Problems .....	2-3	...
Student Teaching .....	7	...
Home Management House .....	3	...
Problems in Home Furnishing .....	2	...

\* Required of Extension Education students.

## FOOD AND NUTRITION

SOPHOMORE YEAR	1st SEMESTER	2nd SEMESTER
Elementary Botany .....	4	...
Food Preparation .....	3	3
Household Technology .....	2	2
Outlines of Organic Chem. ....	5	...
Principles of Economics .....	3	3
Biochemistry .....	...	3
General Bacteriology .....	...	3
Elective .....	...	3
Physical Education .....	(1)	(1)

JUNIOR YEAR	1st SEMESTER	2nd SEMESTER
Buying Textiles & Clothing .....	3	...
Food Chemistry .....	3	...
Food Preservation and Econ. ....	3	...
General Psychology .....	3	3
Introduction to Zoology .....	4	...
Family Living .....	...	3
Home Management .....	...	3
Meal Planning and Service .....	...	3
Physiology .....	...	3
Quantity Cookery .....	...	3

SENIOR YEAR	1st SEMESTER	2nd SEMESTER
Child Care and Development .....	3	...
Educational Psychology .....	3	...
*English .....	3	3
Nutrition and Diet .....	4	...
Experimental Foods or Diet Therapy .....	...	3
Home Management House .....	...	3
Institution Administration .....	...	3
Electives .....	3	3

## GENERAL HOME ECONOMICS

SOPHOMORE YEAR	1st SEMESTER	2nd SEMESTER
Elementary Botany .....	4	...
Food Preparation .....	3	3
Household Technology .....	2	2
Outlines of Organic Chem. ....	5	...
Principles of Economics .....	3	3
Clothing Construction I .....	...	3
General Bacteriology .....	...	3
House Planning .....	...	2
Physical Education .....	(1)	(1)

JUNIOR YEAR	1st SEMESTER	2nd SEMESTER
Buying Textiles & Clothing .....	3	...
Clothing Construction II .....	3	...
Food Preservation and Econ. ....	3	...
General Psychology .....	3	3
Introductory Zoology .....	4	...
Family Living .....	...	3
Home Management .....	...	3
Meal Planning and Service .....	...	3
Physiology .....	...	3
Elective .....	...	3

SENIOR YEAR	1st SEMESTER	2nd SEMESTER
Child Care and Development .....	3	...
*English .....	3	3
Home Furnishing .....	3	...
Home Nursing .....	1	...
Nutrition and Diet .....	4	...
Home Management House .....	...	3
Problems in Home Furnishing .....	...	2
Electives .....	3	9-12

## COURSES OF INSTRUCTION

## CLOTHING AND TEXTILES

*Associate Professor Beresford; Miss Williams*

## 1 DESIGN. (1-4)

The fundamentals of color and design.

*Three hours. 1*

*Miss Beresford*

\* One year of either American or English or World Literature or one semester of Journalism and one semester of Expository Writing.

- 2 TEXTILES AND CLOTHING SELECTION. (2-2) *Three hours. II*  
Textiles, their selection and care, as a basis for appropriate personal apparel.  
*Prerequisite:* 1. *Misses Beresford and Williams*
- 101 BUYING TEXTILES AND CLOTHING. (1-4) *Three hours. I*  
The factors of production, distribution, and consumption governing the buying of apparel and household and institutional textiles.  
*Prerequisite:* 2. *Miss Williams*
- 102 COSTUME DESIGN. (0-4) *Two hours. II*  
Color and design fundamentals and principles applied to costume planning.  
*Prerequisite:* 1. *Miss Beresford*
- 103 CLOTHING CONSTRUCTION I. (0-6) *Three hours. II*  
The development of techniques of clothing construction with the ease of fabric manipulation and previous construction experience as the basis for the selection of the class problems.  
*Prerequisite:* 1 and 2. *Miss Williams*
- 104 CLOTHING CONSTRUCTION II. (0-6) *Three hours. I*  
The further development of construction techniques with emphasis on tailoring problems.  
*Prerequisite:* 102. *Miss Williams*
- 106 COSTUME DESIGN AND CONSTRUCTION. (0-6) *Three hours. II*  
The development of original costume plans by draping and flat pattern design. (Offered in alternate years, 1948-49.)  
*Prerequisite:* 102, 103, 104. *Miss Beresford*
- 152 HISTORY OF COSTUME. (1-4) *Three hours. II*  
History of costume as a source of inspiration for modern costume design. (Offered in alternate years, 1950-51.)  
*Prerequisite:* 102 and 103. *Miss Beresford*
- 154 TEXTILES. (1-4) *Three hours. II*  
Textile testing and the chemical and physical properties of materials used as fabrics. (Offered in alternate years, 1948-49.)  
*Prerequisite:* 101 and Chem. 35. *Miss Williams*
- 157, 158 SPECIAL PROBLEMS. (2 or 3-0) *Two or three hours. I, II*  
Individual investigation of theoretical and practical problems in the field.

## EDUCATION

*Assistant Professor Brown*

## 151-152 METHODS OF TEACHING. (2-0) (1-0)

*Two hours, I; One hour, II*

Methods of teaching homemaking in the junior and senior high school, including program planning and administration of homemaking departments.

*Prerequisite:* Agricultural Education 101.

## 154 STUDENT TEACHING.

*Seven hours. II*

Observation and teaching in approved junior and senior schools under supervision.

*Prerequisite:* 151.

## 156 SPECIAL PROBLEMS.

*Two or three hours. n*

Individual investigation on selected study designed to meet special needs of students.

## FAMILY LIVING

*Dr. Russell; Miss Scholl and Mrs. Kirkness*

## 41 HOME NURSING. (0-2)

*One hour. I*

The care of the family during illness.

*Prerequisite:* junior standing.

*Miss Scholl*

## 152 FAMILY LIVING. (3-0)

*Three hours. II*

Factors entering into adjustments within the modern family group.

*Prerequisite:* Psychology 1; junior standing.

*Dr. Russell*

## 153 CHILD CARE AND DEVELOPMENT. (2-2)

*Three hours. I*

Growth, development, and care of the young child; opportunity for observation and participation with children of pre-school age.

*Prerequisite:* Psychology 2; junior standing.

*Dr. Russell and Mrs. Kirkness*

## FOOD AND NUTRITION

*Professor King; Associate Professor Bailey; Assistant Professor Knowles; Miss Selke*

## 1 FOOD SELECTION. (3-0)

*Three hours. I*

The essential dietary requirements for growth and health with applications to individual and family groups.

*Miss Bailey*

- 2 FOOD AND NUTRITION. (1-4) *Three hours. II*  
The principles of food preparation with laboratory application and the fundamentals of normal nutrition. For students in Nursing Education. *Miss Selke*
- 21 SURVEY OF FOOD PREPARATION. (2-2) *Three hours. I*  
Basic principles of food preparation, with some laboratory application. (Offered in alternate years, 1949-50.) *Miss King*
- 22 FOOD BUYING AND SERVICE. (1-4) *Three hours. II*  
Factors involved in consumer purchase of foods, the planning and service of meals. (Offered in alternate years, 1949-50.)  
*Prerequisite: 21. Miss Selke*
- 101-102 FOOD PREPARATION. (2-6) *Three hours. I, II*  
The scientific principles and fundamental processes underlying food preparation, with practical applications.  
*Prerequisite: Chemistry 4. Misses King and Selke*
- 103 FOOD PRESERVATION AND ECONOMICS. (2-2) *Three hours. I.*  
The scientific principles and methods involved in the preservation of food. The factors of production, processing and distribution governing the buying of foods.  
*Prerequisite: 102. Miss Bailey*
- 104 MEAL PLANNING AND SERVICE. (1-6) *Three hours. II*  
The principles involved and practise in planning, preparing, and serving family meals at different cost levels.  
*Prerequisite: 102. Miss Bailey*
- 151 NUTRITION AND DIET. (3-2) *Four hours. I*  
The principles of human nutrition; the nutritive value of foods with application in calculating food requirements and diets for children, adults, and family groups.  
*Prerequisite: Zoology 52. Miss Bailey*
- 152 DIET THERAPY. (2-2) *Three hours. II*  
The adaptations of the normal diet in conditions affected by or affecting the utilization of food. (Offered in alternate years, 1950-51.)  
*Prerequisite: 151, Chemistry 71. Miss Bailey*
- 153 READINGS IN FOOD OR IN NUTRITION. *Two or three hours. II*  
A critical survey of the literature on recent developments in food or in nutrition.  
*Prerequisite: 151, 101. Miss King; Miss Bailey*



## General Home Economics, Home Management 125

- 154 EXPERIMENTAL FOOD PREPARATION. (1-4) *Three hours. II*  
Methods and techniques used in experimental work in foods. Independent laboratory study of problems in food preparation. (Offered in alternate years, 1949-50.)  
*Prerequisite:* 102. *Miss King*
- 155 DEMONSTRATION TECHNIQUES. (0-6) *Two hours. I*  
Practice in the presentation of information and the teaching of skills by visual methods. (Offered in alternate years, 1948-49.)  
*Prerequisite:* 102. *Miss Knowles*
- 157, 158 SPECIAL PROBLEMS. (2 or 3-0) *Two or three hours. I, II*  
Individual investigation of theoretical and practical problems in the field.

## GENERAL HOME ECONOMICS

*Miss King and Staff*

- 1 ORIENTATION TO COLLEGE. (1-0) *One hour. I*  
The problems of adjustment to college life.
- 2 ORIENTATION TO HOME ECONOMICS. (1-0) *One hour. II*  
Survey and evaluation of professional opportunities in Home Economics.

## HOME MANAGEMENT

*Assistant Professor Knowles*

- 102 HOME MANAGEMENT. (2-2) *Three hours. II*  
The utilization of family resources, human and material, in terms of family living.  
*Prerequisite:* Economics 12.
- 151, 152 HOME MANAGEMENT HOUSE RESIDENCE. *Three hours*  
Practical application of homemaking and group living in the Home Management Residence. A charge of \$9.00 per week is made to cover cost of board and operating expenses.  
*Prerequisite:* 102.

## HOUSING

*Associate Professor Beresford; Assistant Professor Knowles*

- 21-22 HOUSEHOLD TECHNOLOGY. (1-2) *Two hours. I, II*  
Household equipment, its selection, operation, and care. *Miss Knowles*
- 23 HOUSE PLANNING. (1-2) *Two hours. I*  
Functional housing, including problems of financing, site location, utilization of space. *Miss Knowles*
- 102 HOME FURNISHING. (1-4) *Three hours. I*  
The application of the fundamental elements of color and design to the problems involved in furnishing the home.  
*Prerequisite: C. & T. 101. Miss Beresford*
- 104 HISTORY OF FURNITURE. (0-4) *Two hours. II*  
Studies in home decorating with special emphasis given to period furnishing, its present use and influence upon modern furnishings. (Offered in alternate years, 1949-50.)  
*Prerequisite: 102. Miss Beresford*
- 152 PROBLEMS IN HOME FURNISHING. (0-4) *Two hours. II*  
*Prerequisite: 102. Miss Beresford*

## INSTITUTIONAL MANAGEMENT

*Associate Professor Godfrey*

- 101 SCHOOL LUNCH MANAGEMENT. (1-6) *Three hours. I*  
The organization, operation, and control of different types of school lunches. Opportunities for some practical training in menu planning, and in the buying, preparation, and serving of food in quantities.  
*Prerequisite: F. & N. 102. Miss Godfrey*
- 102 QUANTITY COOKERY. (1-6) *Three hours. II*  
Practical application of principles, methods, and techniques used in large quantity food preparation.  
*Prerequisite: F. & N. 102. Miss Godfrey*
- 152 INSTITUTION ADMINISTRATION. (3-0) *Three hours. II*  
The organization and personnel management of various types of food service units.  
*Prerequisite: 102. Miss Godfrey*

- 153 INSTITUTION MARKETING. (2-0) *Two hours. I*  
Present day food markets, and problems in institutional buying, with some training in buying techniques and procedures.  
*Prerequisite:* 102. *Miss Godfrey*
- 154 INSTITUTION EQUIPMENT. (2-0) *Two hours. II*  
Institution kitchen, serving room, dining room layouts, including materials, fabrication, construction, installation, operation, and care of institution equipment.  
*Prerequisite:* 102. *Miss Godfrey*
- 155 FOOD COST CONTROL. (1-4) *Three hours. I*  
The fundamental principles of accounting and a study of adequate systems of food control for various types of food service.  
*Prerequisite:* 102. *Miss Godfrey*

## School of Education and Nursing

The School of Education and Nursing includes the following curricula: Elementary Education, Junior High School Education, Industrial Education, Secondary Education, Music Education, Business Education, Basic Nursing, and (for graduate nurses) Nursing Education. Each curriculum includes as much general education as is compatible with its professional objectives.

The professional objectives are indicated by the names of the curricula. The professional courses which are included are based upon the general courses and are planned to provide the background and skills essential to professional efficiency.

Ideals of personal growth and social service are kept in view as the chief objectives.

### THE EDUCATION CURRICULA

#### THE ELEMENTARY EDUCATION CURRICULUM

This curriculum is offered by the University in cooperation with the Vermont State Board of Education. It is intended to provide an excellent preparation for teaching in the elementary schools. The degree of Bachelor of Science in Education is given by the University of Vermont and State Agricultural College on recommendation of the Director of the School of Education and Nursing and the University Senate.

Students of good moral character who have been graduated from an approved high school and who satisfy the entrance requirements specified by the State Board of Education are eligible for admission if recommended by the school principal.

A student who has satisfactorily completed one year of elementary teacher preparation in this State or the first year in a standard teachers college or its full equivalent, may be admitted to sophomore standing, provided the entrance requirements have been met and a satisfactory record presented.

Graduates of the former two-year curriculum, if found qualified, may be admitted to the Elementary Education curriculum in junior standing. Such students will be given a special enrollment supplementing the courses accepted for advanced credit and will be eligible to receive the degree of Bachelor of Science in Education after satisfactory completion of two years of resident work.

Beginning with the fall of 1949 no students may enroll for less than the full four-year course.

A student who transfers from this curriculum to another in the University will receive credit for work done, varying with the curriculum to which he transfers.

## ADMISSION

Graduates of secondary schools who wish to enter the curriculum in Elementary Education should obtain application forms from the Director of Admissions at the University. A transcript of record must be obtained from the secondary school for use as one of the bases of action on the application. The recommendation of the principal and the approval of a representative of the University, resulting from a personal interview, will be required.

Students who are to be admitted to this curriculum will be chosen on evidence of ability and aptitude for becoming efficient teachers. Admission will be granted on the basis of:

1. Health and physical fitness.
2. Probable ability to do college work.
3. Personality and character.
4. Special aptitude for teaching.

**HEALTH REQUIREMENTS.** A certificate of good health and physical fitness from a practicing physician must be furnished by each applicant. In addition, a physical examination is required of the applicant by the University.

**PROBABLE ABILITY TO DO COLLEGE WORK.** This is determined by means of a transcript of the student's scholastic record in the secondary school and the recommendation of the principal. In addition, tests of scholastic aptitude and of achievement in English are given at the University.

**CHARACTER AND PERSONALITY REQUIREMENTS.** The high school principal submits an estimate of the applicant's character and personality based on the following traits: seriousness of purpose, industry, initiative, influence, concern for others, responsibility, emotional stability.

**APTITUDE FOR TEACHING.** The recommendation of the principal of the high school which the applicant attended, the opinions of instructors, and psychological and achievement tests will receive consideration in judging aptitude for teaching.

**ADMISSION TO ADVANCED STANDING.** Candidates who apply for advanced standing will be admitted on the basis of a transcript of college work done elsewhere and the recommendation of the institution where work has been completed. No course work will be approved for transfer of credit which carries a grade of less than C or 70 per cent.

Candidates who hold a diploma from an approved high school and have completed a year of professional study as the fourth year of their high school course, may have the options of (a) entering as freshmen or (b) completing their high school credits for graduation by the substitution of satisfactory courses to replace their professional study as high school seniors. Then the professional study which they completed during the senior year in high school may be allowed toward advanced standing in the curriculum in Elementary Education.

## TRANSFER OF CREDIT

**STUDENTS WHO HAVE COMPLETED TWO YEARS OF A TEACHERS COLLEGE PROGRAM.** Students who have completed satisfactorily two years of study in a state normal school or teachers college may transfer with full credit to the third year of the curriculum in Elementary Education. Their admission is conditioned upon a transcript of their record, the recommendations of the president of the teachers college, and the approval of the State Department of Education and the Director of Admissions at the University.

**STUDENTS WHO HAVE COMPLETED THREE YEARS OF A TEACHERS COLLEGE PROGRAM.** Students who have completed satisfactorily three years of study in a state normal school or teachers college may be admitted to the fourth year of the curriculum in Elementary Education. Their admission is conditioned upon a transcript of their record, the recommendations of the president of the teachers college and the State Department of Educa-

tion, and the passing of appropriate performance tests showing ability to do satisfactory work of senior grade. Unless waived by reason of teaching experience the student is asked to take courses in the summer session totalling not less than six semester hours, chosen under the direction of the Director of the School of Education and Nursing. Thirty-six semester hours of credit, chosen under the guidance of the Director are required to complete the curriculum in Elementary Education, unless the transcript shows that the full equivalent of the first three years of the curriculum has been completed with satisfactory attainment. In such cases a normal enrolment of thirty semester hours will enable one to meet the requirements for the degree.

STUDENTS WHO HAVE COMPLETED TWO YEARS OF A TEACHERS COLLEGE PROGRAM TO THE CURRICULUM IN SECONDARY EDUCATION. Students who have completed two years of study in a state normal school or teachers college may transfer to the curriculum in Secondary Education. Their admission is conditioned upon their scholastic attainment in normal school or teachers college, the recommendations of the president of the teachers college and the State Department of Education, and the passing of examinations in English and mathematics.

To become eligible for the degree of Bachelor of Science in Education, such students must complete at least 72 semester hours of course work, chosen under the guidance of the Director.

STUDENTS WHO HAVE COMPLETED TWO OR THREE YEARS OF A TEACHERS COLLEGE PROGRAM TO THE CURRICULUM IN JUNIOR HIGH SCHOOL EDUCATION. Students who have completed two or three years of study in a state normal school or teachers college may transfer to the curriculum in Junior High School Education upon the same conditions as those required of students who transfer to the curriculum in Elementary Education. Their advanced standing will depend upon the degree to which their previous study correlates with the curriculum in Junior High School Education at the University.

## TUITION

FOR VERMONT STUDENTS. The Vermont State Board of Education pays the tuition of a specified number of qualified Vermont students who sign, on a form prescribed by the State Department of Education, a declaration of intention to teach in Vermont for as long a time as that for which tuition is provided. As the purpose of this tuition payment is to provide a more adequate supply of well qualified teachers for the elementary schools of Vermont, students whose tuition is paid by the State Board of Education are under obligation to discharge this responsibility.

FOR STUDENTS FROM OTHER STATES. Students from other states who meet the entrance requirements may be admitted into the curriculum in Elementary Education or in Junior High School Education. Such students will be required to pay the regular tuition charges.

FOR STUDENTS WHO DO NOT PLAN TO TEACH IN VERMONT. Students from Vermont or from other states who are properly qualified, but do not plan to teach in Vermont, may be admitted to the curriculum in Elementary Education or to the curriculum in Junior High School Education at the regular tuition rate of the University.

## OUTLINE OF THE ELEMENTARY EDUCATION CURRICULUM

THE FRESHMAN YEAR		1st SEMESTER	2nd SEMESTER	THE SOPHOMORE YEAR		1st SEMESTER	2nd SEMESTER
English Composition .....		3	3	Sophomore English .....		3	3
Intro. to Education .....		3	...	Teaching English .....		3	...
Child Development .....		...	3	Lit. for the Elem. School .....		...	3
Economic Geography .....		3	3	Music Fundamentals .....		3	3
Art Education .....		3	3	General Psychology .....		3	3
Approved Elective .....		3	3	Laboratory Science .....		4	4
Physical Education .....		(1)	(1)	Teaching Physical Education I.....		1	1
Hygiene (Women) .....		(1)	(1)	Military Science (Men) .....		(2)	(2)
Military Science (Men) .....		(2)	(2)				
THE JUNIOR YEAR		1st SEMESTER	2nd SEMESTER	THE SENIOR YEAR		1st SEMESTER	2nd SEMESTER
English Elective or Speech .....		3	3	English Elective .....		3	3
American History .....		3	3	Teaching Art .....		3	..
Teaching Arithmetic .....		...	3	Philosophy of Education or			
Teaching Reading .....		3	...	Psychology of Adol. ....		...	3
Teaching Music .....		3	3	Teaching Physical Ed. II .....		1	1
Teaching Soc. Stud. and Sci. ....		3	...	Practicum in El. Ed. ....		6	6
Audio-Visual Aids .....		...	3	Approved Elective .....		3	...
Child and the Curric. ....		2	2				
Health Education .....		...	2				

A total of 129 semester hours is required for the degree, of which 67 semester hours shall be professional and 62 semester hours shall be general.

## THE JUNIOR HIGH SCHOOL EDUCATION CURRICULUM

The Junior High School Education Curriculum is offered by the University in cooperation with the Vermont State Board of Education. It is intended to prepare teachers for the upper grades of the elementary school and for the Junior High School.

The conditions regarding admission and tuition which are stated in the section above entitled The Elementary Education Curriculum apply to students who are accepted in the Junior High School Curriculum.

The degree Bachelor of Science in Education is awarded by the University of Vermont and State Agricultural College on recommendation of the Director of the School of Education and Nursing and the University Senate.

## OUTLINE OF THE JR. H. S. EDUCATION CURRICULUM

THE FRESHMAN YEAR		1st SEMESTER	2nd SEMESTER	THE SOPHOMORE YEAR		1st SEMESTER	2nd SEMESTER
English Composition .....		3	3	Sophomore English .....		3	3
Mathematics I .....		3	...	Biological Science .....		4	4
Jr. High School Math. ....		...	3	American History .....		3	3
Economic Geography .....		3	3	General Psychology .....		3	3
Educational Survey .....		3	...	Approved Electives .....		3	3
Approved Electives .....		3	6	Physical Education .....		(1)	(1)
Physical Education .....		(1)	(1)	Military Science (Men) .....		(2)	(2)
Hygiene (Women) .....		(1)	(1)				
Military Science (Men) .....		(2)	(2)				
THE JUNIOR YEAR		1st SEMESTER	2nd SEMESTER	THE SENIOR YEAR		1st SEMESTER	2nd SEMESTER
English or Intermediate .....				Psychology of Adolescence .....		3	...
Foreign Language .....		3	3	Guidance .....		...	3
Physical Science .....		3	3	Vermont History .....		3	...
Political Science .....		3	3	Organization and Management .....			
Principles of Education or .....				Jr. H. S. ....		3	...
Educational Psychology .....		3	...	Philosophy of Education .....		...	3
Teaching Jr. H. S. Subjects .....		3	3	Secondary Methods and .....			
Health Education .....		...	2	Procedures .....		3	...
Approved Elective .....		...	3	Observation, Participation, and .....			
				Teaching .....		...	6
				Approved Elective .....		3	...

A total of 121 semester hours is required for the degree, of which 35 semester hours shall be professional and 86 semester hours shall be general.



## THE INDUSTRIAL EDUCATION CURRICULUM

The curriculum in industrial education, leading to the degree of Bachelor of Science in Education, is designed for those students who wish to prepare to teach Industrial Arts in junior and senior high schools.

To give general education and to serve as a basis for the study and teaching of industrial education, it provides courses in English, mathematics, psychology, and science. General courses in education, as well as special courses in the teaching of industrial arts and in trade and industrial education, are included. Required courses in mechanical drawing, wood-working, general shop, automobile shop, and machine shop provide the knowledge and skill essential to the teacher of these subjects. Through courses in mathematics, science, and mechanical drawing the student gains command of subjects which qualify him as a teacher of related subjects in trade and industrial schools.

Those who enroll in this curriculum are required to gain twenty-four or more weeks of work experience in industry, previously approved, during the summer vacations preceding the senior year.

## OUTLINE OF THE INDUSTRIAL EDUCATION CURRICULUM

THE FRESHMAN YEAR		1st SEMESTER	2nd SEMESTER	THE SOPHOMORE YEAR		1st SEMESTER	2nd SEMESTER
English Composition .....		3	3	Public Speaking .....		3	...
Mathematics 1, 2 or 11, 12 .....		3-5	3-5	Group Discussion .....		...	3
Educational Survey .....		3	...	General Psychology .....		3	3
Mechanical Drawing .....		3	3	Introductory Physics .....		3	3
Woodworking Shop .....		3	3	General Shop .....		3	3
Elective .....		...	3	Industrial Education 1, 2 .....		3	3
Physical Education .....	(1)	(1)		Physical Education .....	(1)	(1)	
Military Science .....	(2)	(2)		Military Science .....	(2)	(2)	
THE JUNIOR YEAR		1st SEMESTER	2nd SEMESTER	THE SENIOR YEAR		1st SEMESTER	2nd SEMESTER
Principles of Economics .....		3	3	Secondary Methods .....		3	...
Educational Measurements .....		3	...	Student Teaching .....		...	3
Industrial Education 3, 4 .....		3	3	Industrial Management .....		3	...
General Chemistry .....		5	5	Personnel Management .....		...	3
Automobile Shop .....		3	3	Machine Shop .....		3	3
Approved Elective .....		...	3	Approved Electives .....		6	6

## THE SECONDARY EDUCATION CURRICULUM

This curriculum, leading to the degree of Bachelor of Science in Education, is designed to prepare teachers for junior and senior high schools. Students who plan to teach in secondary schools should consult the Director of the School of Education and Nursing with reference to the selection of courses.

During the first two years students take courses in English, foreign language, mathematics, science, and social science. They choose their fields

of specialization from those which they have pursued during the first two years.

Candidates for the degree in secondary education are required to complete a course in General Psychology and to attain a high standard of scholarship in eighteen semester hours of course work in professional education. They are required also to complete two "teaching majors" or one "major" and two "minors," preferably in related fields, so chosen as to correlate with subjects generally taught in high schools. The recommended fields are English, speech, foreign language, mathematics, history, social science, biological sciences, and physical sciences.

A "teaching major" includes at least twenty-four semester hours in one subject and a "teaching minor," at least eighteen semester hours. In meeting the major and minor requirements, subjects should be chosen with the approval of the student's advisor or the Director, which will give a relatively complete knowledge of each field. Students who elect speech as a major are required to take two minors, one of which must be English. Each student is required to take not less than two advanced courses in his major subject and one advanced course in the minors. During his senior year he should take at least one advanced course in each field. Students are expected to maintain a high standard of scholarship in their major and minor fields.

## OUTLINE OF THE SECONDARY EDUCATION CURRICULUM

THE FRESHMAN YEAR		1st	2nd	THE SOPHOMORE YEAR		1st	2nd
		SEMESTER				SEMESTER	
English Composition .....	3	3		Sophomore English .....	3	3	
Foreign Language .....	3	3		Foreign Language .....	3	3	
History or Political Science .....	3	3		General Psychology .....	3	3	
Laboratory Science .....	4	4		Approved Electives .....	6	6	
Approved Elective .....	3	3		Physical Education .....	(1)	(1)	
Physical Education .....	(1)	(1)		Military Science (Men) .....	(2)	(2)	
Hygiene (Women) .....	(1)	(1)					
Military Science (Men) .....	(2)	(2)					
THE JUNIOR YEAR		1st	2nd	THE SENIOR YEAR		1st	2nd
		SEMESTER				SEMESTER	
Principles of Educ. or				Education Elective .....	3	...	
Educ. Psychology .....	3	...		Sec. Meth. & Stu. Tchg. ....	3	6	
Philosophy of Education				English Elective .....	3	3	
or Psych. of Adol. ....	...	3		Approved Electives .....	6	3	
History of Education or							
Educational Measure .....	3	...					
English Elective .....	3	3					
Approved Electives .....	9	9					

A total of 122 semester hours is required for the degree; from 48 to 60 semester hours shall be devoted to teaching majors and minors.

## THE MUSIC EDUCATION CURRICULUM

The University of Vermont and State Agricultural College offers this four-year curriculum in Music Education leading to the degree of Bachelor of Science in Music Education. It is recommended to students who have sufficient training and natural musical ability to justify a career in music. Graduates are qualified for positions as instructors and supervisors of music in the public schools of Vermont. The curriculum may be adapted to meet requirements elsewhere.

Students must pass the aptitude tests given by the Department of Music and must satisfy the general admission requirements of the University.

## THE FRESHMAN YEAR

	1st	2nd
SEMESTER		
Survey of Musical Literature.....	3	3
Elementary Sight-Singing .....	2	2
Applied Music (two courses)...	2-3	2-3
English Composition .....	3	3
Elementary German .....	3	3
Laboratory Science .....	3-5	3-5
Choir or Orchestra .....	1	1
Physical Education .....	(1)	(1)
Military Science (Men) .....	(2)	(2)
Hygiene (Women) .....	(1)	(1)

## THE SOPHOMORE YEAR

	1st	2nd
SEMESTER		
Elementary Harmony .....	3	3
Advanced Sight-Singing .....	2	2
Applied Music (two courses)...	2-3	2-3
Sophomore English Elective .....	3	3
Intermediate German .....	3	3
General Psychology .....	3	3
Choir or Orchestra .....	1	1
Physical Education .....	(1)	(1)
Military Science (Men) .....	(2)	(2)

## THE JUNIOR YEAR

	1st	2nd
SEMESTER		
Advanced Harmony .....	3	3
Methods & Practice Teaching .....	3	3
Applied Music (two courses)...	2-3	2-3
Greek Art: European Painting.....	3	3
Education, Brin. & Phil. ....	3	3
Choir or Orchestra .....	1	1

## THE SENIOR YEAR

	1st	2nd
SEMESTER		
Orchestration and Conducting...	3	3
Sec. Meth. & Prac. Teaching.....	3	3
Applied Music Methods .....	1	1
History of Music .....	3	3
Applied Music (two courses)...	2-3	2-3
Elementary Italian .....	3	3
Choir or Orchestra .....	0	0

## THE CURRICULUM IN BUSINESS EDUCATION

The curriculum in Business Education is intended to prepare for the secondary schools (1) teachers of accounting and business practice, (2) teachers of general business subjects, (3) teachers of merchandising and salesmanship, and (4) teachers of secretarial subjects. Students who are preparing to teach in small high schools will find the sequence in General Business Education most appropriate.

During the first two years all students follow the program of study outlined for the first two years of the Business Curriculum. Differentiated programs are followed in the junior and senior years as shown below. Upon the completion of any one of these sequences students are entitled to the degree of Bachelor of Science in Education.

THE FRESHMAN YEAR		1st SEMESTER	2nd SEMESTER	THE SOPHOMORE YEAR		1st SEMESTER	2nd SEMESTER
Ec. Geography or History .....		3	3	English or American Lit. ....		3	3
Social Framework of Cap. ....		3	...	Prin. of Economics .....		3	3
Entrepreneurial Problems .....		3	3	Prin. of Accounting .....		3	3
English Composition .....		3	3	General Psychology .....		3	3
Algebra, Math. of Finance .....		3	3	Foreign Language, Calculus or			
*Foreign Language .....		3	3	†American Government .....		3	3
Military Science (Men) .....		(2)	(2)	Military Science (Men) .....		(2)	(2)
Physical Education .....		(1)	(1)	Physical Education .....		(1)	(1)
Hygiene (Women) .....		(1)	(1)				

\* In place of the foreign language students may choose Mathematics 11-12. and Calculus.

† Students who have completed the Intermediate language requirement elect American Government.

### ACCOUNTING AND BUSINESS PRACTICE EDUCATION

THE JUNIOR YEAR		1st SEMESTER	2nd SEMESTER	THE SENIOR YEAR		1st SEMESTER	2nd SEMESTER
Advanced Accounting .....		3	3	Auditing .....		3	...
Money and Banking .....		3	3	Financial Statement Analysis .....		...	3
Business Law .....		3	3	Office Techniques and Machines .....		3	...
Prin. & Phil. of Education .....		3	3	Teaching Accounting and			
Principles of Business Ed. ....		...	3	Business Practice .....		3	...
Elective .....		3	...	Observation and Student			
				Teaching .....		...	4
				Corporation Finance .....		3	...
				Investments .....		3	...
				Electives .....		3	6

### GENERAL BUSINESS EDUCATION

THE JUNIOR YEAR		1st SEMESTER	2nd SEMESTER	THE SENIOR YEAR		1st SEMESTER	2nd SEMESTER
Advanced Accounting .....		3	3	Advanced Shorthand .....		4	4
Business Correspondence .....		3	3	Advanced Typewriting .....		3	3
Elementary Shorthand .....		4	4	Secretarial Prin. and Prac. ....		3	3
Elementary Typewriting .....		3	3	Office Techniques and Machines .....		3	...
Principles of Education .....		3	...	Teaching Business Subjects .....		3	...
Principles of Business Ed. ....		...	3	Observation and Student			
Business Law .....		3	3	Teaching .....		...	4
				Philosophy of Education .....		3	...
				Elective .....		3	3

### MERCHANDISING AND SALESMANSHIP EDUCATION

THE JUNIOR YEAR		1st SEMESTER	2nd SEMESTER	THE SENIOR YEAR		1st SEMESTER	2nd SEMESTER
Principles of Marketing .....		3	...	Salesmanship .....		3	...
Retail Store Operation .....		...	3	Advertising .....		...	3
Business Law .....		3	3	Teaching Merchandising and			
Money and Banking .....		3	3	Salesmanship .....		3	...
Principles of Education .....		3	...	Retail Store Merchandising .....		3	...
Principles of Business Ed. ....		...	3	Observation and Student			
Business Correspondence .....		3	3	Teaching .....		...	4
				Philosophy of Education .....		3	...
				Electives .....		6	6

## SECRETARIAL EDUCATION

THE JUNIOR YEAR		1st	2nd	THE SENIOR YEAR		1st	2nd
		SEMESTER				SEMESTER	
Advanced Accounting .....	3	3		Advanced Shorthand .....	4	4	
Business Correspondence .....	3	3		Advanced Typewriting .....	3	3	
Elementary Shorthand .....	4	4		Secretarial Prin. and Prac. ....	3	3	
Elementary Typewriting .....	3	3		Office Techniques and Machines	3	...	
Principles of Education .....	3	...		Teaching Secretarial Subjects ....	3	...	
Principles of Business Ed. ....	...	3		Observation and Student			
Business Law .....	3	3		Teaching .....	...	4	
				Philosophy of Education .....	...	3	
				Elective .....	3	3	

## AGRICULTURAL EDUCATION

The curriculum in Agricultural Education, designed to prepare teachers of vocational agriculture for the secondary schools, is offered in the College of Agriculture.

## HOME ECONOMICS EDUCATION

An Home Economics Education sequence is offered by the Department of Home Economics in the College of Agriculture. Students who take this course are qualified to teach Home Economics in the secondary schools of Vermont and certain other states, or to become home demonstration or 4-H Club agents.

## COURSES OF INSTRUCTION

*Professor Douglass; Associate Professors Nulty and Reuter; Assistant Professors Adams, Marston, Pappoutsakis, Pearl, and Sullivan; Mrs. Mills; Messrs. Bogue, Caswell, Duncan, Graeme, Patterson, and Tracey*

## ELEMENTARY EDUCATION

## 1 INTRODUCTION TO EDUCATION.

*Three hours. I*

A survey of American education; the aims and underlying principles; the elements of psychology as applied to the learning process. Observation in elementary demonstration schools. *Mrs. Adams*

## 2 CHILD DEVELOPMENT AND BEHAVIOR.

*Three hours. II*

The physical, mental, social, and emotional development of the child; a study of methods of guiding this development. Observation in elementary schools. *Mrs. Adams*

## 5-6 ART EDUCATION.

*Three hours. I, II*

The development of creative ability and art appreciation through drawing, painting, lettering, and crafts. Two double periods.

*Mrs. Mills*

For ARTS AND CRAFTS see Art 11, 12.

## 7, 8 ADVANCED ARTS AND CRAFTS

*Three hours. I, II*

Advanced arts and crafts, with emphasis on educational and therapeutic values.

*Prerequisite:* Art 11, 12

*Mrs. Mills*

## 11-12 SCHOOL MUSIC I.

*Three hours. I, II*

Ear training, music reading, and writing; elementary theory; history and appreciation.

*Mr. Pappoutsakis*

## 13-14 SCHOOL MUSIC II.

*Three hours. I, II*

Basic principles in elementary school music teaching.

*Prerequisite:* School Music I.

*Mr. Pappoutsakis*

## 31 TEACHING READING.

*Three hours. I*

Principles underlying the teaching of reading, including reading readiness, remedial reading, phonetics; the cultivation of correct study habits; the use of standard tests for purposes of diagnosis and improvement; observation in the demonstration schools.

*Mrs. Adams*

## 32 TEACHING ARITHMETIC.

*Three hours. II*

Subject matter and modern methods of presentation; the aims and principles of teaching arithmetic; the use of standard tests in arithmetic; observation in the demonstration schools.

*Mrs. Adams*

## 33 TEACHING ENGLISH.

*Three hours. I*

An analysis of modern trends in teaching the language arts; oral and written expression, spelling, handwriting, and literature; a study of the principles and techniques of teaching them. Observation in the demonstration school.

*Miss Sullivan*

## 34 LITERATURE FOR THE ELEMENTARY SCHOOL.

*Three hours. II*

Literature "old and new" for children. The course aims to acquaint students with the great body of both traditional and modern literature in prose and poetry, to help them to appreciate literature suitable for children at different age levels, and to establish some criteria for judging books for children. The principles and techniques of story telling, as well as practice in this art, are an integral part of this course.

*Miss Sullivan*

## 41 TEACHING SOCIAL STUDIES AND SCIENCE.

*Three hours. I*

Subject matter and procedures applicable to the teaching of social studies including geography, history, and topics of current importance; the teaching of elementary science; the integration of social science and elementary science with other subjects of the elementary school; observation in the demonstration schools.

*Mrs. Adams*

## 42 AUDIO-VISUAL AIDS.

*Three hours. II*

A study of audio-visual aids in instruction and learning; sources of materials; development of skill in using motion pictures and other audio-visual aids.

## 43-44 THE CHILD AND THE CURRICULUM.

*Two hours. I, II*

The organization and management of the school and the application of principles and techniques in the various areas of the curriculum. The aim is to familiarize students, through observation and participation, with the objectives and practices in the elementary school and with some instructional materials used in these practices.

*Miss Sullivan*

## 45-46 ELEMENTARY CURRICULUM AND STUDENT TEACHING.

(For two and three year students.)

*Six hours. I, II*

The curriculum content of the elementary school and appropriate grade placement; school organization and procedures of instruction in relation to child growth and development; the teacher's responsibilities to the school and the community. Observation, participation, and directed teaching in rural and graded schools.

*Miss Sullivan*

## 61-62 TEACHING PHYSICAL EDUCATION I.

*One hour. I, II*

The theory of play, the contribution of physical activities to the mental and physical well-being of children; a repertoire of recreational activities for each elementary grade; preparation in methods of teaching; evaluation of results.

*Miss Cummings*

## 101 TEACHING ART.

*Three hours. I*

Purposes, methods, and problems of modern art education are studied and discussed. Students explore the possibilities of various media and processes.

*Mrs. Mills*

## 105-106 PRACTICUM IN ELEMENTARY EDUCATION.

*Six hours. I, II*

Designed to develop competence in teaching, through applying the principles and techniques previously studied. Guided practice teaching under skilled critic teachers; a review of the curriculum, including materials of instruction, organization and management of the elementary school, and professional and community relationships.

*Prerequisite: senior standing.*

*Miss Sullivan and Staff*

## 111-112 TEACHING PHYSICAL EDUCATION II.

*One hour. I, II*

The development of a program of physical activities to promote the best physical development of pupils in the elementary schools; the teaching of physical activities including games and folk dances; the organization of school and playground activities, including supervised and pupil initiated games; observation, participation, and student teaching.

*Miss Cummings*

## 116 HEALTH EDUCATION.

*Two hours. II*

The development of a program of health education for the elementary school including health appraisal, health needs, health adjustments, and conservation based upon scientific knowledge of the developing human body and its functioning.

*Miss Scholl*

## JUNIOR HIGH SCHOOL EDUCATION

## 2 JUNIOR HIGH SCHOOL MATHEMATICS.

*Three hours. II*

A review of arithmetic and elementary algebra from the viewpoint of the prospective junior high school teacher; the aims and objectives determining the selection and presentation of subject matter; selected advanced topics in arithmetic; development of skill in computation and in solving problems; use of computing devices; graphs and scale drawings.

*Prerequisite: Mathematics 1.**Mrs. Adams and Mr. Duncan*

## 3 EDUCATION SURVEY.

*Three hours. I*

An introduction to the professional study of education; its aims and objectives; the place of the junior high school in the educational system; the principal characteristics of the junior high school contributing to the realization of its purposes.

*Mrs. Adams*

## 50 GUIDANCE.

*Three hours. II*

The underlying principles of guidance and the development of a guidance program for the school; the organization of the school program to meet individual needs of pupils; the use of tests in guidance; ways of meeting personality and behavior problems; the guidance function of the home room; the development and use of cumulative records; counseling pupils with reference to ethical and health problems; leisure time activities, educational programs and vocational goals.

*Prerequisite: Sec. Education 1 or 7.**Mr. Pearl*



61-62 TEACHING JUNIOR HIGH SCHOOL SUBJECTS. *Three hours. 1, 11*

The basic principles of teaching junior high school pupils; units of study, the content of the various subjects in the curriculum of the junior high school, and their proper grade placement; teaching procedures; observation, participation, and directed student teaching.

*Prerequisite:* Psychology 1-2; Adolescent Psychology. *Mr. Pearl*

101 ORGANIZATION AND MANAGEMENT. *Three hours. 1*

The organization, administration, and management of the junior high school for the efficient attainment of educational objectives; the establishment of desirable routine; the practice of democratic procedures; the attainment of individual and group self-discipline.

*Prerequisite:* Psychology 1; Jr .H. S. Ed. 50. *Mr. Pearl*

108 OBSERVATION AND STUDENT TEACHING. *Six hours. 11*

The integration of the various subjects in the junior high school education curriculum on the operative level through directed experience; the development of teaching competence and efficient school and class control, leading to individual and group self-discipline and good citizenship on the part of pupils; experience in discharging the responsibilities of the teacher to the school and the community; instructional planning; observation, participation, and directed teaching leading to responsible student teaching.

*Prerequisite:* 61-62; 101 *Mr. Pearl*

111 VERMONT HISTORY. *Three hours. 1*

The political, industrial, economic and social development of Vermont from the period of settlement to the present; the influence of Vermont in the federal union; the part played by the State in national emergencies and enterprises. (Omitted 1949-50.)

*Prerequisite:* senior standing; History 11-12. *Mr. Dean*

\*SECONDARY EDUCATION

1 PRINCIPLES OF EDUCATION. *Three hours. 1*

The aims and principles of American education; the organization of the public school system; enrollments; qualifications of teachers; study of the curriculum; principles of learning.

*Prerequisite:* junior standing; Psychology 1.

*Mrs. Adams and Mr. Duncan*

**3 HISTORY OF EDUCATION.***Three hours. 1*

The historical development of educational theory and practice as influenced by the leading educational theorists and by the most significant social movements.

*Prerequisite:* junior standing; Psychology 1.

*Mr. Douglass*

**7 EDUCATIONAL PSYCHOLOGY.***Three hours. 1*

The application of psychological principles and the results of experiments and investigations to the instructional process; the influence of heredity, growth, learning, and the physical and social environments upon the individual; the measurement of intelligence and achievement.

*Prerequisite:* junior standing; Psychology 1.

*Mr. Reuter*

**8 PSYCHOLOGY OF ADOLESCENCE.***Three hours. 11*

The growth of youth from the close of childhood to the threshold of adulthood; the physical, emotional, social, moral, and intellectual development of boys and girls.

*Prerequisite:* junior standing; Psychology 1.

*Mr. Reuter*

**G102 PHILOSOPHY OF EDUCATION.***Three hours. 11*

Educational theory based upon psychological principles, the contributions of leading educational philosophers, and present day social needs; the relationships of education to social welfare and the demands made upon education by a democratic society.

*Prerequisite:* junior standing; one course in Education.

*Mr. Douglass and Mrs. Adams*

**G104 HIGH SCHOOL ADMINISTRATION.***Three hours. 11*

The objectives, administration, and supervision of the secondary school with particular reference to community and professional relationships; pupil guidance; curricular and extra-curricular activities.

*Prerequisite:* junior standing; Sec. Ed. 1 or 2.

*Mr. Douglass*

**G107 SECONDARY METHODS AND PROCEDURES.***Three hours. 1*

General methods of secondary school instruction; problems of classroom management; pupil diagnosis and guidance; observation and participation in selected secondary schools of the State.

*Prerequisite:* satisfactory completion of Sec. Ed. 1; senior standing; approval by the department of Secondary Education and the department in which the student is specializing.

*Mr. Reuter*

\* Students who plan to teach in secondary schools are referred to the following courses in other departments: Agricultural Education; Advanced English Composition; Composition and Conversation in French, German, and Spanish; Home Economics Education; Latin Composition; and Music Education.

G108 STUDENT TEACHING IN SECONDARY SCHOOLS.

*Three to six hours. II*

Students are assigned to observe, participate in classroom work, and teach in junior or senior high school classes in or near Burlington. Their teaching is directed, observed, and criticized by critic teachers, the supervisors of student teaching, and the principals of the schools. Class conferences are held each week. Individual conferences with critic teachers, the supervisors of student teaching, and the principals occur at frequent intervals.

*Prerequisite:* 107.

*Messrs. Reuter, Pearl, and Tracey*

G111 EDUCATIONAL MEASUREMENTS.

*Three hours. I*

An introductory course dealing with the essential principles of measurement in education. Topics include statistics applied to education; improvement of teacher-made measures of achievement; construction of objective tests and inventories; analysis of standard tests.

*Prerequisite:* junior standing; Psychology 1.

*Mr. Reuter*

G115 SCHOOL ADMINISTRATION.

(Omitted 1949-50)

116 SCHOOL AND CLASS MANAGEMENT.

(Omitted 1949-50)

G125 TEACHING SOCIAL STUDIES IN SECONDARY SCHOOLS.

*Three hours. I*

Special methods in the field of social studies; aims and objectives; motivation; individual differences; selection of teaching material and visual aids.

*Prerequisite:* 107 or concurrent enrollment in 107; 18 semester hours in social studies.

*Mr. Reuter*

G127 TEACHING SCIENCE IN SECONDARY SCHOOLS.

*Three hours. II*

A broad view of modern teaching philosophy and how it may be applied in teaching science through methods proved by experience to be workable and effective.

*Prerequisite:* 107; 18 semester hours in science.

*Mr. Reuter*

G152 TEACHING LATIN IN SECONDARY SCHOOLS.

*Three hours. II*

The place of Latin in the curriculum; the aims of Latin teaching; ways of studying vocabulary, syntax, and derivatives; the selection and use of textbooks and illustrative material. Required for recommendation to teach Latin. (Not offered 1949-50.)

*Prerequisite:* Latin 102.

*Mr. Kidder*

## 156 TEACHING MATHEMATICS.

*Three hours. II*

The place of mathematics in the curriculum, organization of subject matter, aims and practices in teaching.

*Prerequisite:* junior standing; Calculus.

## G157 TEACHING MODERN LANGUAGES.

*Three hours. I*

A survey of past and present-day methods and procedures, including those sponsored by the Army and Navy. Readings in textbooks, periodicals, and other publications.

*Prerequisite:* junior standing; concentration in modern language.

*Mr. Carpenter*

## G201, 202 EDUCATIONAL SEMINAR.

*Three hours. I, II*

Problems in present-day education studied by individuals and the class; methods of investigation and standards for the presentation of material; thesis writing; presentation of individual and committee reports.

*Prerequisite:* graduate standing.

*Mr. Douglass and Staff*

## BUSINESS EDUCATION

## 102 PRINCIPLES OF BUSINESS EDUCATION.

*Three hours. II*

Basic principles, practices, and problems of and trends in business education.

*Prerequisite:* Psychology 1; Secondary Education 1.

*Miss Nulty*

103 TEACHING ACCOUNTING AND BUSINESS PRACTICE. *Three hours. I*

Principles and techniques in the organization and the teaching of bookkeeping, accounting, business arithmetic, and office practice courses in secondary schools.

*Prerequisite:* 102.

## 105 TEACHING BUSINESS SUBJECTS.

*Three hours. I*

Principles and techniques in the organization and the teaching of business subjects in the high school.

*Prerequisite:* 102.

*Miss Nulty*

107 TEACHING MERCHANDISING AND SALESMANSHIP. *Three hours. I*

Principles and techniques in the organization and the teaching of distributive education courses.

*Prerequisite:* 102.

- 109 TEACHING SECRETARIAL SUBJECTS. *Three hours. I*  
Principles and techniques in the organization and the teaching of shorthand, typewriting, business correspondence, and secretarial practice in the secondary school.  
*Prerequisite: 102.*
- 110 OBSERVATION AND STUDENT TEACHING. *Three or four hours. II*  
Directed observation and supervised practice in teaching business subjects in a junior or senior high school in or near Burlington. General conference once a week; individual conferences with supervisors and training teacher. Continuation of the study of special methods.  
*Miss Nulty*

## INDUSTRIAL EDUCATION

- 1 PRINCIPLES OF VOCATIONAL EDUCATION. *Three hours. I*  
The history, principles, and problems, including the early apprenticeship system; state and federal legislation and aid; modern trends in industrial education.  
*Mr. Graeme*
- 2 METHODS IN VOCATIONAL EDUCATION. *Three hours. II*  
The basic methods of industrial education; an integration of general and special methods of instruction effective in industrial education with the procedures used in analyzing a trade or occupation for determining the instructional content and arrangement of trade content into courses of instruction.  
*Mr. Graeme*
- 3 DEVELOPMENT OF INSTRUCTIONAL MATERIAL. *Three hours. I*  
Factors underlying appropriate selection and preparation of material, the material available from various industrial companies, and the development of plans for effective presentation.  
*Mr. Graeme*
- 4 TEACHING INDUSTRIAL AND RELATED SUBJECTS. *Three hours. II*  
Making the necessary connections between the more general courses in education and the specific teaching of industrial subjects, based upon psychological aspects of learning as applied to shop and related subjects, lesson plans, textbooks, notes, demonstration, conference, testing, and audio-visual aids.  
*Mr. Graeme*
- 7 INDUSTRIAL EDUCATION SURVEY. *Three hours. I, II*  
An introduction to the problems and procedures of teaching industrial arts and trade and industrial subjects. The course includes trips to various high schools for the observation of shop organization and teaching methods, and during class time, the students' observations are analyzed and discussed.  
*Mr. Graeme*

- 31-32 SHOP (WOODWORKING). (0-9) *Three hours. I, II*  
 Designed to give familiarity with the different types of material, experience in the use of machinery and hand tools while producing various practical articles of craftsmanship. *Mr. Caswell*
- 33-34 SHOP (GENERAL). (0-9) *Three hours. I, II*  
 Designed to aid the prospective teacher to plan and conduct classes in shop work using modern materials and methods.
- 37-38 SHOP (AUTOMOBILE). (0-9) *Three hours. I, II*  
 Practical work on the repair and maintenance of automobiles and internal combustion engines. Laboratory and conference periods according to the needs of the student. *Mr. Bogue*
- 39-40 SHOP (MACHINE). (0-9) *Three hours. I, II*  
 Machine practice, operating standard machine tools, producing various machines and small tools to be used later as projects in courses in the schools. *Staff*

## NURSING

### BASIC NURSING CURRICULUM

This five-year curriculum is designed to provide the elements of a general college education together with the professional training for nursing. On completion of the program the student receives the degree of Bachelor of Science in Nursing and is eligible to take the State examinations for qualification as a registered nurse.

The first two years are spent in the University. Following each of these years there is a summer session of six weeks, during which the student has an introduction to nursing arts, with supervised practice in the Mary Fletcher Hospital.

The third and fourth years are spent in hospitals which are cooperating with the University in providing clinical instruction and nursing experience. During these years there are in general six hours a day for professional work in hospitals and two hours a day for class work.

The fifth year is spent in the University, with further study in academic and professional subjects. Part of this time may be spent in supervised experience in the field of public health, with electives in the hospital schools of nursing.

There are no special requirements for admission to this curriculum. High school courses in biology and chemistry, however, are highly desirable.

Following is an outline of the course of study.

FIRST YEAR	1st SEMESTER	2nd SEMESTER	SECOND YEAR	1st SEMESTER	2nd SEMESTER
English Composition .....	3	3	Sophomore English .....	3	3
Zoology, Intro. & Vert. ....	4	4	General Psychology .....	3	3
Human Anatomy .....	4	4	Physiology (Zool. 52) .....	3	3
History of Amer. Govt. ....	3	3	Nutrition .....	3	3
Outline of Inorganic Chem. ....	5	5	Outline of Organic Chemistry .....	5	5
Nursing Orientation .....	2	2	Bacteriology .....	4	4
Approved Elective .....	3	3	Pharmacology 1 .....	2	2
Physical Education .....	(1)	(1)	Sociology .....	3	3
Hygiene .....	1	(1)	Physical Education .....	(1)	(1)
FIRST SUMMER SESSION			SECOND SUMMER SESSION		
Elementary Nursing Arts .....	6	6	Intermediate Nursing Arts .....	6	6
			Professional Ethics .....	1	1
THIRD YEAR			FOURTH YEAR		
Gynecology .....			Obstetrical Nursing .....		
Pharmacology II .....			Pediatric Nursing .....		
Dietotherapy .....			Psychiatric Nursing .....		
Medical Nursing .....			Communicable Disease Nursing .....		
Surgical Nursing .....			Public Health Nursing .....		
FIFTH YEAR					

Courses of study may include Philosophy, Economics, Principles of Education, Science Seminar, Family Relations, Child Psychology, Abnormal Psychology, Introduction of Community Health, Management of the Hospital Nursing Unit, Clinical Teaching, Trends in American Nursing, Social and Health Aspects of Nursing. Field experience may be offered as Assistant Head Nurse, Assistant Instructor, or Junior Public Health Worker.

## NURSING EDUCATION CURRICULUM FOR GRADUATE NURSES

The University offers a curriculum in Nursing Education for nurses who meet its entrance requirements and are graduates of accredited schools of nursing, leading to the degree of Bachelor of Science in Nursing Education. There are three fields of concentration: Teaching Nursing Arts, Teaching a Basic Science, and Management of the Hospital Nursing Unit and Clinical Teaching.

Credit toward this degree, up to a maximum of forty-five semester hours, is allowed for work completed at an approved hospital school of nursing. The amount of credit to be allowed is determined by an examination which is given during the preliminary orientation days in September. The test is administered in cooperation with and scored by the Department of Measurement of the National League of Nursing Schools. A fee of \$5.00 is charged for this examination.

As candidates for the degree, students are required to complete the following: English, 12 hours; History, 6 hours; Biological Science, 8 hours;

Psychology, 6 hours; Economics, 6 hours; Sociology, 6 hours; courses in Anatomy and Physiology, Bacteriology, and Pharmacology; and the professional courses. Other courses in science and education may be advised, depending on the field of concentration.

The following professional courses are recommended in all programs: Foundations of Nursing, Trends in American Nursing, Principles of Teaching, Social and Health Aspects of Nursing, Principles of Public Health Nursing, and Curriculum in Nursing. In addition, students who wish to prepare for teaching Nursing Arts are expected to carry the following: Evaluation and Reconstruction of Nursing Arts, Comparative Nursing Practice, Management of the Hospital Nursing Unit, Clinical Teaching, and supervised field experience in teaching Nursing Arts. Students who wish to prepare for positions as supervisors, head nurses, and clinical instructors are expected to take courses in Management of the Hospital Nursing Unit and Clinical Teaching. All students may be required to complete six credit hours of field experience in their field of concentration. Students who wish to prepare to teach a basic science will have additional courses in Chemistry, Anatomy and Physiology, and Bacteriology with experience in student teaching in one of these.

## COURSES OF INSTRUCTION

*Associate Professor Crabbe; Assistant Professor Oakley; Misses Fox, Ichter, and Scholl; Associate Professor Reuter; Assistant Professors J. W. King, Lamden, and Schein*

### BASIC NURSING COURSES

#### 1 ELEMENTARY NURSING ARTS.

*Six hours. Sum.*

Basic principles, techniques, and skills of nursing, with emphasis on an approach to the patient as an individual. The principles of hygienic measures, hospital housekeeping, and the role of the nurse as teacher. Class instruction, demonstrations, and supervised hospital practice. Freshman year.

*Miss Fox*

#### 2 INTERMEDIATE NURSING ARTS.

*Six hours. Sum.*

Principles underlying more advanced nursing measures and skills, including the principles and practice of medical and surgical aseptic technique, administration of medications and irrigations, application of heat and cold, care of the acutely and chronically ill, bandaging, and emergency nursing. Class instruction, demonstrations, and supervised hospital practice. Sophomore year.

*Prerequisite: 1.*

*Miss Fox*



## 5 NURSING ORIENTATION.

*Two hours. I*

The historical development of nursing from the Christian era to the present, tracing the rise of nursing as an educational system.

*Miss Oakley*

## 10 PHARMACOLOGY I.

*Two hours. II*

Methods of making solutions and calculating dosages; the nurse's responsibility in the administration of medicines; the physiological action, therapeutic uses, dosages, and toxicology of commonly used drugs.

*Miss Crabbe*

## 12 PROFESSIONAL ADJUSTMENTS.

*One hour. Sum.*

An orientation to the personal and professional adjustments inherent in a career in nursing.

*Miss Crabbe*

## 14 BACTERIOLOGY.

*Four hours. II*

Principles of bacteriology as applied to nursing; sources of infection, resistance to disease, and production of immunity. Lectures, demonstrations, laboratory.

*Dr. King*

## 20 HUMAN ANATOMY.

*Four hours. II*

A survey of the gross and microscopic structure of the human body.

## 91 SCIENCE SEMINAR.

*Three hours. I*

An integration of scientific principles of chemistry, physiology, and microbiology in total nursing situations. Typical disease conditions are presented and nursing care plans are analyzed. Open to basic students in the fifth year and to a limited number of graduate nurses by permission.

*Miss Crabbe*

The following unnumbered courses are taught during the third and fourth years in the schools affiliated with the following hospitals: Children's Hospital of Philadelphia, Butler Hospital of Providence, and Mary Fletcher Hospital.

**MEDICAL DISEASES AND MEDICAL NURSING INCLUDING MEDICAL SPECIALTIES:** The development of medical science, causes and manifestations of disease; etiology, symptoms, clinical signs, treatment and prevention of medical diseases, discussions and demonstrations of nursing procedures and nursing care studies. Three months' experience in the care of medical patients on the hospital wards is correlated with the instruction.

**SURGICAL NURSING INCLUDING SURGICAL SPECIALTIES:** Causes, symptoms, treatment, and prevention of surgical conditions. The principles and methods of surgical asepsis, nursing care of surgical patients, including social, emotional, and mental aspects. Along with the class instruction and clinics the students are assigned for four months to the care of a wide variety of patients with surgical conditions.

**PSYCHIATRIC NURSING:** The more common psychiatric disorders; problems surrounding hospitalization, special therapeutics. The course is taught in a psychiatric hospital during a three months' affiliation in experience in the care of the mentally ill.

**PEDIATRIC NURSING:** The growth and development of the child; principles in the care of well and sick infants and children; lectures and clinical presentation of the etiology, symptoms, and treatment of diseases of infancy and childhood; given during a three months' affiliation in a hospital for children.

**PHARMACOLOGY II:** The more commonly used drugs, their relation to the treatment of disease, dosage, administration, physiological and therapeutic actions, idiosyncrasies, cumulative and minor toxic symptoms, antidotes and emergency treatments.

**ADVANCED NURSING ARTS:** The more comprehensive nursing techniques and skills in the care of the patient. Demonstrations and discussions of complete nursing care.

**OBSTETRIC AND GYNECOLOGICAL NURSING:** Deals with anatomical, physiological, and pathological aspects of pregnancy and care of the newborn; emphasis is placed on nutritional and emotional needs and family relationships.

**DIET THERAPY:** Deals with principles and methods of handling special dietaries in the treatment of disease; includes practice in teaching patients and their families to adjust to dietary needs.

#### NURSING EDUCATION (FOR GRADUATE NURSES)

##### 101 COMPARATIVE NURSING PRACTICE.

*Three hours. I*

The analysis and evaluation of nursing methods; laboratory and library investigation, demonstration of selected nursing procedures, class discussion, and criticism. Open only to graduate nurses.

*Miss Fox*

##### 103, 104 TEACHING NURSING ARTS.

*Three hours. I, II*

The objectives of the course in nursing arts, the subject matter and methods of presentation, demonstration of nursing methods and techniques, methods of supervision in the classroom and hospital, the development of an adequate outline of instruction to meet the needs of the student.

*Miss Fox*

##### 106 EVALUATION AND RECONSTRUCTION OF NURSING ARTS.

*Three hours. II*

The use of scientific principles and methods in analyzing, comparing, and reconstructing nursing procedures. Opportunity for criticism and revision.

*Miss Fox*

- 109 THE CURRICULUM IN NURSING. *Three hours. I, II*  
Principles and methods of curriculum making; philosophy, aims, sources, and techniques in planning the program of study. Problems of installing the curriculum; selection and use of textbooks; arrangement and general content of course of study.  
*Prerequisite:* Principles of Teaching, Educational Psychology, permission of the instructor. *Miss Crabbe*
- 113 MANAGEMENT OF THE HOSPITAL NURSING UNIT. *Three hours. I, II*  
The nursing service, principles of management, organization and management of the personnel, teaching responsibilities of the head nurse.  
*Prerequisite:* Educational Psychology, permission of the instructor. *Miss Oakley*
- 114 CLINICAL TEACHING. *Three hours. I, II*  
The organization of clinical teaching; evaluation of the results.  
*Prerequisite:* Educational Psychology, Principles of Teaching, Management of the Hospital Nursing Unit, clinical experience as head nurse, permission of the instructor. *Miss Oakley*
- 116 SOCIAL AND HEALTH ASPECTS OF NURSING. *Three hours. I, II*  
Major social and health problems and the related responsibilities of the nursing profession; analysis of complete patient care in the home and community; methods for integration of social and health aspects in the nursing school curriculum. *Miss Scholl*
- 118 TRENDS IN AMERICAN NURSING. *Three hours. I, II*  
Developments in professional nursing, including post-war adjustments in nursing care and nursing education; related problems in economics and public relations. *Miss Crabbe*
- 120 PRINCIPLES OF PUBLIC HEALTH NURSING. *Three hours. II*  
Analysis of the fundamental responsibilities of the community nurse and the principles which guide the development of effective community nursing service.  
*Prerequisite:* 116. *Miss Scholl*
- 125 MODERN DEVELOPMENTS IN CARE OF THE SICK. *Two hours. I, II*  
Recent developments in applications of modern science in the care of the sick. Separate units on orthopedics, obstetrics, common circulatory diseases, drug therapy, and nutrition. The course is taught in the medical college, with observation and demonstration in the Mary Fletcher Hospital. *Dr. Amidon, Miss Scholl, and others*

## 127-128 CHEMISTRY FOR NURSES.

*Four hours. I, II*

Inorganic, organic, and biological chemistry with special emphasis on the integration of the principles of chemistry in situations dealing with sickness and health. The course is taught in the medical college.

*Messrs. Schein and Lamden*

## 130 APPLIED BACTERIOLOGY.

*Four hours. II*

The fundamental principles of bacteriology as applied to prevention and control of disease.

*Dr. King*

## 131 MEASUREMENTS IN NURSING EDUCATION.

*Three hours. I*

Principles of informal test construction; analysis of standardized tests; survey of common measures of central tendency and variability in field of educational measurements. Application in evaluating and constructing tests in nursing.

*Mr. Reuter, Miss Crabbe*

## 132 PRINCIPLES OF TEACHING.

*Three hours. II*

The development of sound educational procedures and principles for effective and successful classroom teaching, the guidance and fostering of learning; management techniques; the qualities of the effective teacher; evaluating teaching.

*Mr. Reuter*134 LEGISLATION AND PRINCIPLES OF ACCREDITATION. *Three hours. II*

Legislation which controls nursing education and practice in various states; essentials of a sound nurse practice act, the organization and carrying on of legislative programs; principles of accreditation and major accrediting groups.

*Miss Oakley*

## 136 ADMINISTRATION IN SCHOOLS OF NURSING.

*Three hours. II*

Administrative problems in the hospital school of nursing relative to nursing service and nursing education; preparation of faculty; organizing and planning curriculum.

*Prerequisite:* graduation from accredited school of nursing, senior standing, and experience in teaching or supervision.

*Miss Crabbe*

## 138 STUDENT TEACHING.

*Three to six hours. I, II*

Teaching a unit or course under guidance of a faculty adviser. The science teaching is given in the basic program of the University curriculum, the clinical teaching in the school of nursing of the Mary Fletcher Hospital.

*Misses Crabbe, Fox, Ichter, Oakley, and Scholl*

## 140 FOUNDATIONS OF NURSING.

*Three hours. II*

Consideration of the foundations already laid with emphasis on the present demand in relation to current concepts of education.

*Miss Crabbe*

# The College of Medicine

## REQUIREMENTS FOR ADMISSION

The minimum requirements for admission to the College of Medicine are three years of college work done in an institution listed among the "Approved Colleges of Arts and Sciences," compiled and published by the Council on Medical Education and Hospitals of the American Medical Association. The College of Medicine requires one year each of English, general chemistry, organic chemistry, physics, and biology, but recommends other courses in English, at least one year of mathematics, and work of such grade in a foreign language that the student will have conversational use and reading knowledge of the language. These should be regarded by the student as minimum basic requirements. Additional broad and well-planned courses of study should include work in the fields of history, economics, sociology, psychology, philosophy, music, and the arts.

A course in Quantitative Chemistry will be required of students entering the College of Medicine in the fall of 1950 and thereafter. It is recommended for students entering in the fall of 1949. Since so much of the laboratory work in Biochemistry is quantitative, it is felt that adequate training in quantitative procedures is essential.

The Admissions Committee expects applicants to have completed a program equivalent to that outlined but reserves the privilege, at its discretion, to give favorable consideration to applicants with three years of college work of a different type, provided it includes acceptable credits in the required courses.

Eligibility for admission to the College of Medicine of an applicant, who has fulfilled the entrance requirements as stated, is determined by the Admissions Committee of the College of Medicine on the basis of the following:

1. Personality and general fitness of the applicant for the study and practice of medicine. This is determined by recommendations and especially by personal interview with the Admissions Committee. Dates for these interviews are announced by the Committee.
2. The scholastic record of the applicant in his premedical work, as well as the score earned in the Medical College Admission Test adopted by the Association of American Medical Colleges.

Because of limited teaching facilities, a maximum of forty students is admitted to the entering class. In the selection of eligible applicants for admission, the following preferences are, in general, observed by the Admissions Committee.

First preference is given to residents of the State of Vermont. Second preference is given to sons and daughters of alumni. Third preference is given to residents of the northeast New England area outside of the State of Vermont, and to graduates of land-grant colleges in New England.

Individuals selected by the Admissions Committee as eligible for admission, will be given personal interviews. The Dean's Office will notify such applicants of the appointments for interviews.

Application blanks may be secured from the Dean's Office, College of Medicine, University of Vermont, Burlington, Vermont.

Applications for admission to the class entering in September of any year will close on the 15th of April preceding the September admission. Applications postmarked up until midnight of the 14th of April will be considered. An application fee of ten dollars, payable to the University of Vermont and State Agricultural College, must accompany all applications.

## OUTLINE OF THE FOUR-YEAR CURRICULUM

The curriculum of the College of Medicine is designed to train general practitioners of medicine. Courses of instruction are so planned as to enable the student to fit himself for general practice and he is encouraged to enter this very important field. This helps to meet the urgent need for an increase in the number of general practitioners. It also supplies the best background of medical training for such students as may later elect to enter fields of specialization.

The basic plan of the curriculum centers about clinical teaching. Effort is made to correlate instruction in every year with clinical medicine. By using the clinical approach in laboratory and classroom early in his career, the student is brought into contact with the patient.

The student studies first the general structure of the body, its embryological development, the functions of the various organs, the chemical processes taking place in the body and the minute structure of the tissues and organs in health.

Then follows consideration of the changes in gross and microscopic anatomy, the variations in the chemical processes and in the functions of organs and tissues under the influence of disease and how such changes give rise to different symptoms and physical signs. The methods of interpreting such findings in arriving at a diagnosis are considered.

The student then studies the methods of investigating diseases, their causes and prevention, as well as the remedies used in treatment. The various surgical conditions are considered along with the indications for treatment or operation. Reproduction and development are studied, together with the management of normal and abnormal labor.

Instruction is given by lectures, demonstrations, recitations, library work, practical courses, laboratory work, clinics and clinical teaching, at the bedside and in the Dispensary. For clinical work the class is divided into small sections. Each student, therefore, receives the personal attention of the instructor and is given every opportunity for the full use of assigned material.

*In the First Year*, the usual courses in anatomy, physiology, biochemistry, histology, embryology, neuro-anatomy and bacteriology are given.

In addition, short orientation courses in psychiatry, chemistry, and the use of the library are given in the first semester of the first year. These courses have a twofold purpose. They are primarily designed to maintain continuity between premedical school work and that given in medical school. Secondly, through these courses the student learns the need for and the proper use of certain important tools in the field of medicine.

The introductory course in psychiatry emphasizes the basic principles of psychology. It discusses the emotional response of the individual to his environment. It helps the student early in his medical career to recognize and establish causal relationship between psychological factors in the patient's life and disease manifestations.

The short course in chemistry focusses the attention of the student on that subject as a science related in a practical manner to the processes of growth and development, health and sickness, life and death. It emphasizes the basic importance of his already acquired knowledge of chemistry and the practical use of it in the qualitative and quantitative aspects of vital phenomena.

The course of instruction in the use of the library and its facilities aims to make the student aware of the library, the important part it plays in all medical work and the necessity to understand its proper use. The course includes lectures on library organization, administration and services. These are given by members of the library department. Practical exercises in the library are given by faculty members to students so they may become familiar with medical literature, its sources and the proper techniques employed in bibliography.

*In the Second Year* courses are given in pharmacology, pathology and public health. Anatomy, physiology and psychiatry are continued in this year. Courses in medicine, surgery, obstetrics, pediatrics and physical diagnosis are also given. As part of the plan to integrate the student's work in all courses, a two-hour correlation conference is held each week during the second semester. This conference is designed to emphasize interdepartmental relationships. Selected cases are presented and all department members take part in the presentation and discussion.

*The work of the Third Year* includes continued work in medicine, surgery, obstetrics, pediatrics, and pathology. The third year course in pathology is a continuation of the general course in the second year. Surgical pathology is also included in the work of this year. Radiology and physical medicine are taught throughout the year. The students are also given work in eye, ear, nose and throat, with clinic and ward instruction.

The course in physical diagnosis is continued in the third year. Students are assigned in small sections to the hospital wards, where they take histories and do physical examinations under supervision. This work includes case presentation. The weekly correlation conferences of the second year are continued throughout the third year. In this year, the conference again serves the important role of keeping the basic sciences integrated with clinical teaching. Members of all departments take part in the presentations, and all discussions include material from the laboratory and classroom work of the first two years.

*The work of the Fourth Year* is given on a twelve-month basis. Upon the completion of the work of the third year, the students begin clinical work in the teaching hospitals in rotation. The services are so arranged that sections of one to five students can be assigned to hospitals for periods of one month, allowing each student to have one month of vacation during the year. Such services include medicine, surgery, obstetrics, surgical specialties, and general services. These services are given at the Mary Fletcher Hospital, the Bishop DeGoesbriand Hospital, the Fanny Allen Hospital, the Burlington Dispensary with the City Service under the City Physician.

Rotating services of a month each are given at the Worcester City Hospital where clinical work in urology and neurology is given; at the Vermont State Hospital for Mental Diseases at Waterbury where clinical work in psychiatry and psychosomatic medicine is given; at the Vermont Sanatorium in Pittsford and at the Trudeau Sanatorium in Trudeau, N. Y., where clinical instruction is given in tuberculosis and other diseases of the chest; and at the Rutland, Springfield, St. Albans, and Brightlook (St. Johnsbury) Hospitals, where individuals in the sections are given a month of general service in residence.

During the year students attend autopsies under the instruction of the Department of Pathology. Students are given opportunity to follow these cases through with study of the gross specimens and microscopic sections.

All fourth-year students attend ward rounds, grand ward rounds, inter-departmental diagnostic conferences and the clinical-pathological conferences. In this manner the student not only receives clinical instruction, but he is constantly kept in touch with the basic work of his first two years in the College of Medicine.



## CLINICAL FACILITIES

The normal capacity of the general hospitals in Burlington used by the Medical College is 430 beds. More than 200 additional beds will become available from hospital additions already under construction or planned for the immediate future. At least four hundred of these beds will be used without restriction by the College for clinical teaching. Services in urology and neurology at the Worcester City Hospitals as well as general services at the Rutland, Springfield, St. Albans and Brightlook (St. Johnsbury) Hospitals, increase the number and variety of clinical material.

Other clinical facilities available for student teaching are the outpatient and dispensary services in Burlington, with over 20,000 patients a year; the services of the Vermont State Hospital for Mental Disease at Waterbury, Vermont, with more than 1,100 beds; the Vermont Sanatorium for tuberculosis and the Caverly Preventorium at Pittsford, 85 and 48 beds respectively; the Trudeau Sanatorium in Trudeau, N. Y.; the Children's Home, the Elizabeth Lund Home; and St. Joseph's Orphanage, all in Burlington. The number of children in the three Burlington institutions is more than five hundred. Admissions to the medical, surgical, obstetrical, and specialty services used for teaching purposes approximate 12,000 annually exclusive of the special facilities just described. This amount of clinical material is adequate for the limited enrollment of forty students in each of the two classes doing clinical work.

# Departments of Physical Education

## PHYSICAL EDUCATION FOR MEN

*Assistant Professors Post, Evans, and Gardner; Messrs. Strassburg, Kasap, and Searles*

This department aims to train the men students of the University to be healthy, physically and morally fit members of society. It is a required course for all academic freshmen and sophomores. Every new student is given a thorough physical examination. Men who have physical or health defects are given restricted work, with stress on corrective exercises. Follow-up examinations are given as need is indicated.

A chapter of Sigma Delta Psi, honorary national athletic society, is maintained. Any student is eligible for membership provided he can meet the performance standards in both athletics and scholarship.

## COURSES OF INSTRUCTION

### \*1-2 PHYSICAL EDUCATION (Basic).

*One hour. I, II*

Training in posture, marching, calisthenics, and body-building exercises, the fundamentals and skills of various sports and physical activities, planned to develop and improve skill, coordination, and endurance, to establish regular habits of exercise, and to inculcate intelligent attitudes toward and interest in athletic activities.

Supplemental to this course are the required personal hygiene lectures, giving the student an understanding and appreciation of the factors necessary for health and healthful living.

Two hours weekly required academic freshman men.

### \*11-12 PHYSICAL EDUCATION (Intermediate).

*One hour. I, II*

This course is based on a seasonal sports program.

*Fall*—Football, touch football, cross-country, obstacle course running, and calisthenics.

*Winter*—Basketball, volleyball, indoor track, boxing, wrestling, apparatus and tumbling, handball, swimming, skiing, and calisthenics.

*Spring*—Baseball, volleyball, track, softball, tennis, handball, obstacle course running, and calisthenics.

Two hours weekly required academic sophomore men.

\* The semester hours listed for Basic and Intermediate Physical Education are in addition to the total number of hours required for a degree in a specific curriculum.

21 ADMINISTRATION AND FOOTBALL COACHING. *Two hours. I*

*Football Coaching.* The history of the game, its educational implications. Analysis of various systems of play. Instruction in individual and team fundamentals. Strategy, techniques, and generalship. Both theoretical and practical requirements. *Mr. Evans*

*Administration.* Philosophical and psychological backgrounds of athletics and physical education in educational procedure. The educational recreational, and health significance of physical education. Organization of athletics, including interscholastic, intramural, etc., problems of finance, equipment, officials, facilities, and schedules. *Mr. Post*

Elective for juniors and seniors enrolled in Education Curricula. Elective for seniors in other curricula by special permission.

*Prerequisite:* Physical Education 1-2, and 11-12.

22 HUMAN MECHANICS AND COACHING (BASKETBALL, BASEBALL, AND TRACK). *Two hours. II*

*Athletic Injuries.* Understanding of the structure and functions of the body. Diagnosis and treatment of athletic injuries. Problems of hygiene and sanitation. Training and first aid. Practical work in massage, taping, and bandaging. *Mr. Kasap*

*Basketball.* History and development of the game. Theory and practice. Technique of fundamentals. Individual and team offense and defense. Analysis of various styles and systems of play. *Mr. Evans*

*Baseball.* History and development of the game. Fundamentals and strategy. Individual and team offense and defense tactics. *Mr. Gardner*

*Track and Field.* History, traditions, and rules of the sport. Class and individual instruction in the fundamentals and techniques of the various events of the track and field program. Care and conditioning of competitors. *Mr. Post*

Elective for juniors and seniors enrolled in Education Curricula. Elective for seniors in other curricula by special permission.

*Prerequisite:* Physical Education 1-2, and 11-12.

## INTRAMURAL SPORTS

This program, administered by the Department of Physical Education for Men and directed by Professor Post, enjoys a heavy voluntary participation by the students. Competitions are between classes, fraternities, dormitories, independent groups, and individuals. An Intramural Committee of Student Government aids the director in determining content and

policy, making schedules, and assigning officials. Contest winners receive suitable awards. The contests include:

*Fall*—Touch football, tennis.

*Winter*—Basketball, skiing, wrestling, handball, badminton, basketball free throw, indoor relays, track, and bowling.

*Spring*—Softball, horseshoe pitching, hexathlon.

Interfraternity athletic competition carries points for both winner and runner-up toward the Traynor Trophy, all-year all-round fraternity championship award.

## PHYSICAL EDUCATION FOR WOMEN

*Professor Cummings; Assistant Professor Hoffman; Miss Euler; Drs. Harwood and Kingsbury*

At the opening of college a health examination is required of all entering students. On the basis of this examination, the student receives advice concerning the correction of health defects, and direction as to her physical education program. For all students taking the required course, the examination is supplemented by periodic health conferences.

The courses and training of the Department are given at the Women's Gymnasium in the Southwick Building.

*Fall*—All sports out of doors. Archery, Field Hockey, Tennis, and Horseback Riding. The last carries a small fee and requires written permission from parents.

*Winter*—Fundamental Gymnastics, Corrective Work, Dancing (Folk, and Square Dancing, Modern Dance Technique), Basketball, Volleyball, Deck Tennis, Shuffleboard, Badminton, Fencing, Archery, Swimming, Life Saving, Bowling, Recreational Leadership, Skating, and Skiing.

*Spring*—Camp Craft, Softball, Archery, Tennis, and Horseback Riding. The last carries a small fee.

Elective courses for juniors and seniors are offered in Modern Dance Technique, Dance Composition, and Methods of Teaching Tennis, Field Hockey, Basketball, Badminton, and Softball.

Interdormitory and interclass tournaments in many sports, and clubs, in *all* sports, are open to all women students. These are conducted under the direction of the Department instructors and the Women's Athletic Association.

TWO YEARS OF PHYSICAL EDUCATION FOR TWO PERIODS WEEKLY ARE REQUIRED OF ALL COLLEGE WOMEN. THIS REQUIREMENT SHOULD BE COMPLETED DURING THE FRESHMAN AND SOPHOMORE YEARS. SUPPLEMENTARY FOR FRESHMEN IS A COURSE IN HYGIENE, ONE HOUR PER WEEK. TRANSFERS WHO HAVE NOT ALREADY PASSED A COURSE IN HYGIENE ARE REQUIRED TO TAKE THIS COURSE.

ENROLLMENT IN THE ADVANCED COURSES, WHICH ARE ELECTIVE, IS SUBJECT TO THE APPROVAL OF THE HEAD OF THE DEPARTMENT.

\*1-2 FRESHMAN PHYSICAL EDUCATION. *One hour.* I, II

\*11-12 SOPHOMORE PHYSICAL EDUCATION. *One hour.* I, II

\*41-42 HYGIENE. *One hour.* I, II

\* The semester hours listed for Freshman and Sophomore Physical Education and for Hygiene are in addition to the total number of hours required for a degree in a specific curriculum.

# The Department of Military Science and Tactics

*Major WILLIAM O. WITHERSPOON, INFANTRY, U. S. ARMY*

*Acting Professor of Military Science and Tactics*

*Lt. Colonel WILLARD F. ANGEN, MEDICAL CORPS, U. S. ARMY*

*Major WILLIAM EVANS-SMITH, INFANTRY, U. S. ARMY*

*Major JOHN P. MOSS, INFANTRY, U. S. ARMY*

*Captain EARLE A. JOHNSON, JR., INFANTRY, U. S. ARMY*

*Captain JOHN S. SOLLOSI, INFANTRY, U. S. ARMY*

*Assistant Professors of Military Science and Tactics*

*Master Sergeant MAURICE A. PRESTON, MC, U. S. ARMY*

*Master Sergeant MAX L. DELP, MC, U. S. ARMY*

*Master Sergeant RALPH W. STARK, INFANTRY, U. S. ARMY*

*Master Sergeant THOMAS G. GOSS, FIELD ARTILLERY, U. S. ARMY*

*Master Sergeant LEON H. BAKER, INFANTRY, U. S. ARMY*

*First Sergeant HARRY J. BANAN, CAC, U. S. ARMY*

*Instructors in Military Science and Tactics*

A senior unit ROTC, organized under the provisions of the National Defense Act of 1916 and amendments thereto, aims to prepare students for a commission in the Regular Army and the Organized Reserve Corps of the United States Army in the arm or service selected. A two-year basic and a two-year advanced course are offered.

## THE BASIC COURSE

A two-year course required of all male students except the following:

### a. Veterans

(1) A student who has served on active duty in the Armed Forces for six months will be excused from the Freshman Basic Course.

(2) A student who has served on active duty in the Armed Forces for one year will be excused from the entire Basic Course.

### b. Former ROTC Students

A student who has successfully completed three or more years of the Junior ROTC program at an accredited ROTC institution will be excused from the Freshman Basic Course upon presentation of a military training certificate.

## c. Transfers from other institutions

A student who transfers to this institution in his junior or senior year will be excused from the entire Basic Course provided:

- (1) No ROTC training was offered at former institution;
- (2) He has successfully completed the Basic Course if offered at the former institution.

## d. Non-citizens.

## e. Those excused by the University physician for medical reasons.

The class meets at least three periods each week, with a minimum of 96 hours in each academic year. Uniforms, arms, and equipment are furnished the student by the Department of the Army.

### \*1-2 FRESHMAN BASIC.

*Two hours. I, II*

Military organization; hygiene and first aid; leadership, drill, and exercise of command; individual weapons and marksmanship; maps and aerial photographs; the National Defense Act and ROTC.

### \*3-4 SOPHOMORE BASIC.

*Two hours. I, II*

Leadership, drill, and exercise of command; physical development methods; maps and aerial photographs; military administration; evolution of warfare; military law and boards.

*Prerequisite:* 1-2 or equivalent armed service credit.

## THE ADVANCED COURSE

This is a two-year course elective to juniors, and carries three hours credit per semester or twelve hours for the full four semesters. Members of this course are selected by the Professor of Military Science and Tactics and the President of the University. Ex-service personnel at any level may apply, with the approval of the Dean of the College concerned. Their selection is dependent upon the approval of the officers named above.

Students enrolled in this course will receive a uniform allowance of \$83.91 for the course, and a daily subsistence allowance not to exceed the value of the garrison ration for the period that classes are scheduled. This subsistence allowance is paid monthly and is established each fiscal year. During 1948 it averaged approximately \$27.00 per month. The class meets at least five periods per week with a minimum of one hundred sixty hours per academic year.

Attendance at a summer camp of six weeks duration is mandatory. During such attendance the student is paid at the pay scale of an enlisted man of the Army in the seventh grade. Mileage at five cents per mile is

\* The semester hours listed for Freshman and Sophomore Basic Military Science are in addition to the total number of hours required for a degree in a specific curriculum.

## 164 The Department of Military Science and Tactics

paid to and from camp. Students usually attend camp between the junior and senior academic years, but deferment may be made, for cogent reason, when approved by the Professor of Military Science and Tactics and the Commanding General, First Army.

On successful completion of the course, the student is normally commissioned as a Second Lieutenant, Infantry Branch, Officers Reserve Corps. Outstanding military students are eligible for direct commission in the Regular Army upon graduation. Students who pursue appropriate academic courses may qualify for a commission in a Technical Service, such as Ordnance, Signal Corps, Chemical Corps, or Corps of Engineers. Students interested in this provision should consult the Professor of Military Science and Tactics.

### 21-22 ADVANCED COURSE I.

*Three hours. I, II*

Military leadership, psychology, and personnel management; leadership, drill, and exercise of command; geographical foundations of national power; military law and boards; tactics and techniques of infantry.

*Prerequisite:* 3-4 or equivalent service credit.

### 23-24 ADVANCED COURSE II.

*Three hours. I, II*

Command and staff; military teaching methods; psychological warfare; military problems of the United States; leadership, drill, and exercise of command; military mobilization and demobilization; tactics and technique of infantry, combat intelligence.

*Prerequisite:* 21-22.



# Division of Graduate Study

The Graduate Council and Director of Graduate Study supervise graduate instruction. The degrees of Master of Arts, Master of Science, and Master of Education may be earned by qualified students in regular or summer sessions of the University. Graduate study is offered in most of the departments of the College of Agriculture and of the College of Arts and Sciences, in the Department of Education of the School of Education and Nursing, in the Departments of Chemistry, Commerce and Economics, and Mathematics of the College of Technology, in the Departments of Anatomy, Bacteriology, Biochemistry, Experimental Medicine, Pathology, Pharmacology, and Physiology of the College of Medicine. Professional degrees, awarded only to graduates of the Engineering curricula of this University, require evidence of high professional achievement for at least four years, supplemented by an approved thesis.

## ADMISSION TO GRADUATE STUDY

Applicants for admission must hold a Bachelor's degree from an approved college or university.

New students should apply for admission to the Director of Graduate Study, submitting transcripts of their undergraduate records and, if possible, reports of attainment in the Graduate Record Examination. The latter forms a valuable supplemental means of judging an applicant's preparation for graduate study. The Examination may be taken in any region of the United States. Inquiries may be addressed to the Director of Graduate Study or directly to The Graduate Record Examination, 437 West 59th Street, New York 19, N. Y.

Because of the individual nature of most graduate study, the number of candidates selected to specialize in any one department must be limited. Only applicants who desire to work along lines in which the University offers advantages will be accepted.

Candidates must register with the Director at the beginning of each University session spent in residence. The program of graduate work proposed by each student must be approved by the departments in which the work is to be done, by the Director of Graduate Study and, in the case of work pursued in summer sessions, by the Director of the Summer Session.

## RESIDENCE

Each candidate for a Master's degree must study in residence at the University of Vermont at least two semesters, or five summer sessions, except that a thesis written under the supervision of a faculty member may be accepted in lieu of one summer of residence. Transfer of credit

for courses taken in residence in other institutions can not reduce the residence requirement below the minima specified.

Individual departments may require a longer period of residence than the minima stated above; the departments of Biochemistry, Chemistry, and Physics normally require a minimum of two years. Inadequate preparation in the field in which the student elects to specialize may necessitate the taking of undergraduate courses and the consequent prolongation of the period of residence. Holders of fellowships or assistantships requiring that a substantial portion of time be devoted to teaching or other duties must expect that at least two academic years will be necessary to complete requirements for the degree.

### TIME LIMIT

Study for the Master's degree must be completed (1) within a span of three years if pursued during the regular academic year (in special cases credits earned outside this limit may be re-evaluated, and accepted or rejected, by the Executive Committee of the Graduate Council), (2) within a span of seven years if pursued during summer sessions. For students who began graduate study prior to World War II and who subsequently served in the armed forces the time limit may be extended by the length of time of such service in the armed forces. This time limit applies to study at the University of Vermont and to courses taken in other institutions and presented for transfer of credit.

### TRANSFER OF CREDIT

Not more than eight semester hours of credit (or the equivalent thereof) for graduate courses taken in other institutions can be transferred for credit toward the Master's degree. Such courses must have been taken in an accredited college or university offering graduate study and must be acceptable toward graduate degrees in that institution. Credit cannot be transferred for (1) courses which would not, if taken at the University of Vermont, receive graduate credit, (2) courses in which a grade lower than eighty percent (B—) was received, (3) extension courses given by institutions other than the University of Vermont and State Agricultural College, (4) correspondence courses.

### EXTENSION COURSES

Not more than eight semester hours of credit toward the Master's degree may be earned by taking extension or adult education courses offered by the University of Vermont. Such courses must meet specifications established by the Graduate Council; information as to these specifications may be obtained from the Director of Graduate Study.

## APPROVAL OF CANDIDACY FOR DEGREES

The student is considered a candidate for a degree only after the department in which he elects to specialize and the Director of Graduate Study have ascertained that he is qualified to pursue graduate study leading to that degree.

## MASTERS' EXAMINATIONS

The examinations culminating the program of graduate study are as follows: (1) a written examination (two-hour minimum) in the field of specialization; (2) a written examination (two-hour minimum) in the field of related study; (3) an oral examination on the thesis, or, for candidates for the Master of Education degree, in the field of Education in which the candidate has special competence.

Success in the written examinations is prerequisite to the taking of the oral examination. The written examinations must precede the oral examination by at least two weeks. It is recommended that the interval be longer, and that students working for the degree in summer sessions plan their work so that the written examinations can be taken during the summer prior to that in which the oral examination is to be taken.

## FEES

For information concerning fees, see Index.

## UNIVERSITY TEACHING FELLOWSHIPS

The University offers a number of teaching fellowships with stipends varying from \$400 to \$800, with exemption from tuition charges. These fellowships are provided to encourage students whose undergraduate records and personal qualities give promise of success in research or in the profession of teaching.

The recipient of a fellowship is required to work for the Master's degree and to assist in the work of the department in which he holds the fellowship. Such duties will vary with the size of the stipend, a maximum of half-time service being expected of recipients of the larger amounts.

Applications for fellowships should be addressed to the Director of Graduate Study and should be filed not later than March 15 of the academic year preceding that for which the application is made.

## GRADUATE ASSISTANTSHIPS

Assistantships are available in several departments, enabling students to devote half time to graduate study and half time to the work of the department. Information concerning these may be obtained directly from the chairmen of the departments.

## EXPERIMENT STATION FELLOWSHIPS

Several fellowships of \$900 to \$1,400, without exemption from the tuition fee, are awarded each year to research assistants in the Experiment Station who are working for the Master's degree. The recipient of a fellowship is expected to devote half-time each year to study for his degree, paying one-half of the regular tuition, and half-time to work for the station. All such awards are made on recommendation of the Station Director.

## THE GEORGE H. WALKER DAIRY FELLOWSHIP

This fellowship provides a stipend of not less than \$700, with exemption from the tuition fee. It is available to graduate students who during their undergraduate course have studied "agriculture, chemistry, and bacteriology" and who desire to study the problems relating to the production of a sanitary milk supply on comparatively small plants and farms. The endowment of ten thousand dollars is sufficient to provide a fellowship every third year.

## SCHOLARSHIP AID

Graduate students may receive scholarship aid on the same basis as undergraduate students. Details are given under "Student Aid," for which see Index.

## REQUIREMENTS FOR DEGREES

### MASTER OF ARTS AND MASTER OF SCIENCE

**FIELD OF SPECIALIZATION.** In judging the attainments of candidates, the Graduate Council places greatest emphasis upon ability to do original research in the chosen field of specialization. Hence, the number of undergraduate and graduate courses required will vary with the preparation and needs of the individual student. Each department will require of its students such courses and assigned readings as may be deemed necessary to their graduate education.

Each student will undertake a problem of original research under the direction of a member of the department in which he is specializing. At the conclusion of the investigation the student must present a thesis embodying the results obtained and demonstrating his capacity for independent research. The thesis must be presented not less than two weeks prior to the commencement at which it is hoped the degree may be conferred. One copy of the thesis must be bound for deposit in the Uni-

versity library; some departments require that a second copy be bound for deposit with the department.

Certain departments have established requirements in addition to those stated here; students seeking to specialize in these departments will be furnished information concerning such requirements.

**FIELD OF RELATED STUDY.** In consultation with the supervisor of his field of specialization, each student must select a field of related study in a department other than that in which he is specializing. A member of the department in this related field will supervise this aspect of the program. In this field students will be required to take at least six semester hours of courses approved for graduate credit.

## MASTER OF EDUCATION

The degree Master of Education is offered to students who wish to specialize in Education and whose undergraduate records indicate capacity for graduate study.

The Department of Education will plan for each student a systematic course of study, supervised by the head of the Department and subject to the approval of the Director of Graduate Study. At least thirty semester hours of approved graduate work must be taken and passed with distinction. Not less than six of the thirty semester hours must be devoted to a field of related study in departments other than the Department of Education. The course entitled, "The Intellectual Background of Modern Life" is required of all candidates for this degree.

The Department of Education will assign each candidate a course of readings examination on which will form part of the written examination in the field of specialization.

If a student's preparation in Psychology or Education is insufficient, additional undergraduate courses in these fields may be required.

A thesis may be accepted in lieu of six semester hours of graduate courses. The thesis must be developed under the direction of the Department of Education and must be approved by the Director of Graduate Study.

## PROFESSIONAL DEGREES

The advanced degrees of Civil Engineer, Mechanical Engineer, and Electrical Engineer may be conferred upon graduates in the Engineering curricula of the University of Vermont. At least four years must have elapsed since the candidate's graduation. For at least three years the candidate must have held positions of responsibility in his profession and have shown ability to design and execute important engineering work.

At least six months before the end of the year in which the degree is sought the candidate must present to the Director of Graduate Study a statement of his technical training and experience, together with the topic upon which he proposes to submit a thesis. The thesis must embody the results of original investigation upon some technical subject. The professional record and thesis topic must be approved by the College of Technology and by the Executive Committee of the Graduate Council.

The thesis must be presented to the Director of Graduate Study not later than three weeks prior to commencement. The thesis must be approved by the College of Technology and by the Executive Committee of the Graduate Council.

## The University Extension

The aim of the University Extension work is to broaden the horizon of those who have not attended college and afford an opportunity for those who have attended college to keep in touch with academic thought along their favorite lines, or to gain some information about subjects which they have not studied in college.

The Extension work of the University includes the following: the Agricultural Extension Service (see Index), the Summer Session, the Foreign Study Program, Adult Education, Conferences, and the Robert Hull Fleming Museum.

### THE SUMMER SESSION

A Summer Session is maintained each year for a minimum period of six weeks. Subjects offered include art, botany, chemistry, commercial subjects, dramatic art, economics, education, English, French, geography, German, history, home economics, industrial arts, Latin, mathematics, music (instrumental and vocal), philosophy, physical education, physics, political science, psychology, radio broadcasting, Russian, Spanish, speech, and zoology. The Summer Session is intended to meet the needs of various groups of students.

1. Students or teachers who have completed a four-year college course and who wish to take advanced work for credit toward the Master's degree.
2. Principals and superintendents of schools who desire to take fundamental or specialized courses in the fields of educational administration and supervision.

## Summer Session, Foreign Study, Adult Education 171

3. Students or teachers with adequate preparation who desire to take courses leading to a Bachelor's degree.
4. Teachers in elementary or secondary schools who desire to earn credit toward State teachers' certificates of higher grade or who desire to broaden their knowledge of special subjects.
5. Students who desire instruction in art, music, visual instruction, or physical education.
6. Persons who desire to take, without credit, courses for self-improvement.

There is an enrollment fee of \$5.00 and a tuition charge of \$12.50 per semester hour. For certain courses a major part of the tuition of Vermont teachers is paid by the State Board of Education.

A special bulletin giving a full description of courses will be sent upon application to the Director of the Summer Session.

## THE FOREIGN STUDY PROGRAM

The University believes that the economic, political, and cultural problems of a foreign country can be fully understood only by a study at first hand. Therefore, each summer a group of approximately 300 advanced students and teachers of the social sciences, together with a carefully selected faculty, spend several weeks of summer study at selected points in foreign countries.

During the summer of 1949, the group will have lectures on the campus in Burlington, at the University of Birmingham in England, and at the University of Leyden in Holland. Opportunities will also be provided for side trips in England and on the Continent. Transatlantic transportation will be by air. A total of eight semester hours credit may be earned which may be credited towards a graduate or undergraduate degree.

Men and women who are citizens of the United States of America are eligible. Each applicant must hold the Bachelor's degree from a recognized institution of higher learning or have senior standing. Applicants must have completed basic courses in the social sciences.

Further details may be obtained by writing the Director of Admissions, Foreign Study Program, University of Vermont and State Agricultural College.

## ADULT EDUCATION

Courses in a variety of subjects may be given in any town where a reasonable number of interested persons can be enrolled. On successful completion of such courses, limited credit will be given by the University

toward a degree, or by the State Board of Education toward a higher teacher's certificate. For further information address the Director of Adult Education.

## CONFERENCES

During the course of the year, many conferences are held on the campus. Every week one or more groups closely associated with some phase of the University's activities meet to discuss problems and to exchange ideas. Groups interested in arranging such conferences should write to the Director of Public Relations for details.

It has become the policy of the University to hold annually in March an educational conference with the schools of the State.

The project is a part of the University's contribution to the effort which is being made by the various educational forces of the State to improve our institutions of all grades, from the primary school to the college and the University. In selecting a topic for the conference an effort is made to look to the future and anticipate the problems which Vermont must consider. The aim is to bring to the teachers of the State, year by year, expert reports and opinions relating to some of our many serious educational problems. This conference is held in connection with the convention of the Champlain Valley Teachers' Association.

## THE ROBERT HULL FLEMING MUSEUM

The Museum offers a number of extension projects for clubs, libraries, and schools; makes exhibits available to city and rural schools; carries on the Classroom Film Pool with fifty member schools; and offers on Saturday mornings entertainment, moving pictures, and illustrated talks to school pupils. The Fleming Museum Association, with the staff, arranges addresses and special art exhibits, which are free to the public.



# Personnel

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ON THE PART OF THE UNIVERSITY OF VERMONT

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1948	ELIAS LYMAN, M.A. North Ferrisburg, Vt.	

## ON THE PART OF THE STATE AGRICULTURAL COLLEGE

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1941	CLEON ARTHUR PERKINS, B.S. Rutland, Vt.		
1947	FRANCIS WILLIAM BILLADO Rutland, Vt.	}	1947-53
1947	CARLETON GIBSON HOWE, B.S. Dorset, Vt.		
1947	FREDERICK PLYMPTON SMITH, A.B., LL.B. Burlington, Vt.		
1949	PAUL GOODHUE HARLOW, B.S. Westminster, Vt.	}	1949-55
1949	LAURENS WILLIAMS, B.A. Woodstock, Vt.		
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ARTHUR DEXTER BUTTERFIELD, D. ENG.	<i>Professor Emeritus of Mathematics and Geodesy</i>
LYMAN ALLEN, M.D.	<i>Professor Emeritus of Surgery</i>
GEORGE MILLAR SABIN, M.D.	<i>Professor Emeritus of Clinical Surgery</i>
ARTHUR BECKWITH MYRICK, Ph.D.	<i>Professor Emeritus of Romance Languages and Literatures</i>
HENRY FARNHAM PERKINS, Ph.D.	<i>Professor Emeritus of Zoology</i>
WELLINGTON ESTEY AIKEN, A.M.	<i>Professor Emeritus of English</i>
ELIZABETH VANDERPOOL COLBURN, M.A.	<i>Assistant Professor Emeritus of Education</i>
AMOS BUSH WILLMARTH, A.M., M.S.	<i>Assistant Professor Emeritus of Chemistry</i>
ASA RUSSELL GIFFORD, A.M.	<i>Professor Emeritus of Intellectual and Moral Philosophy</i>
CLARENCE HENRY BEECHER, M.D.	<i>Professor Emeritus of Medicine</i>
ERNEST HIRAM BUTTLES, M.D.	<i>Professor Emeritus of Pathology</i>
EMMUS GEORGE TWITCHELL, M.D.	<i>Professor Emeritus of Ophthalmology, Otolaryngology, and Rhinology</i>
SARA MOULTHROP HOLBROOK, A.M.	<i>Assistant Professor Emeritus of Education</i>
EDWARD JAMES ROGERS, M.D.	<i>Assistant Professor Emeritus of Clinical Medicine</i>
BENJAMIN DYER ADAMS, M.D.	<i>Assistant Professor Emeritus of Surgery</i>
MYRON ELLIS WITHAM, C.E.	<i>Assistant Professor Emeritus of Mathematics</i>
ALBERT EUGENE BATCHELDER	<i>Instructor Emeritus in Shop Practice</i>
MRS. ELIZABETH BRADISH	<i>Instructor Emeritus in Music</i>
ROY ORVILLE BUCHANAN, B.S.	<i>Associate Professor Emeritus of Electrical Engineering</i>
BENJAMIN FRANKLIN LADD, A.M.	<i>Assistant Professor Emeritus of German</i>
ELIJAH SWIFT, Ph.D.	<i>Professor Emeritus of Mathematics</i>
HOWARD BOWMAN ELLENBERGER, Ph.D.	<i>Professor Emeritus of Animal and Dairy Husbandry</i>

## The Faculty

*Dates after names represent the year of original appointment.*

- JOHN ABAJIAN, JR., M.D. (1940-42; 1945) *Associate Professor of Anesthesia*  
 MRS. NELLE ALEXANDER ADAMS, A.M. (1926) *Assistant Professor of Education*  
 THURSTON MADISON ADAMS, Ph.D. (1943) *Professor of Agricultural Economics*  
 WILLIAM RITCHIE ADAMS, Ph.D. (1926) *Professor of Forestry*  
 ROBERT BASCOM AIKEN, M.D. (1941) *Assistant Professor of Industrial Hygiene*  
 JOHN WATSON ALDRIDGE, A.B. (1948) *Lecturer in Creative Criticism (English)*  
 SINCLAIR TOUSEY ALLEN, JR., M.D. (1948) *Instructor in Medicine*  
 ELLSWORTH LYMAN AMIDON, M.D. (1933) *Professor of Medicine*  
 WILLARD FERGUSON ANGEN, Lt. Col., U.S. Army, M.D. (1947)  
*Assistant Professor of Military Science and Tactics*  
 HEINZ LUDWIG ANSBACHER, Ph.D. (1946) *Associate Professor of Psychology*  
 JESSE OGLEVEE ARNOLD, II, M.D. (1941) *Assistant Professor of Clinical Neurology*  
 ROBERT SHILLINGFORD BABCOCK, M.A. (1946)  
*Assistant Professor of Political Science (on leave, 1948-49)*  
 FLORENCE EMILY BAILEY, M.S. (1923) *Associate Professor of Home Economics*  
 LEON HENRY BAKER, Sgt., U. S. Army (1948)  
*Instructor in Military Science and Tactics*  
 HENRY JUNIOR BANAN, 1st Sgt., U. S. ARMY (1946)  
*Instructor in Military Science and Tactics*  
 BETTY BANDEL, M.A. (1947) *Instructor in English*  
 SEYMOUR BARANOFF, M.S. (1948) *Instructor in Economics*  
 JOHN FRYE BELL, M.D. (1947) *Associate Professor of Orthopedic Surgery*  
 HOWARD GORDON BENNETT, A.M. (1925) *Professor of Music*  
 LOUIS BENSON, M.D. (1936) *Assistant Professor of Preventive Medicine*  
 KARNIG ARAM BERBERIAN (1948)  
*Temporary Instructor in Mechanical Engineering*  
 HELEN ELIZABETH BERESFORD, M.A. (1947)  
*Associate Professor of Home Economics*  
 RONALD ROSSI BIELLI, M.A. (1948) *Instructor in Mathematics*  
 ANCEL USHER BLAUSTEIN, M.D. (1948) *Instructor in Pathology*  
 CHARLES HUGO BLASBERG, M.S. (1944)  
*Associate Professor of Horticulture (on leave, 1948-49)*  
 SAMUEL NATHANIEL BOGORAD, Ph.D. (1946)  
*Assistant Professor of English (on leave, 1948-49)*  
 DAVID MARSH BOSWORTH, M.D. (1922-25; 1942)  
*Visiting Professor of Orthopedic Surgery*  
 ALEX BRADFIELD, M.S. (1945) *Associate Professor of Dairy Manufacturing*  
 CHARLES ERNEST BRAUN, Ph.D. (1928) *Pomeroy Professor of Chemistry*



# The Faculty

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- LELAND LAWRENCE BRIGGS, M.B.A. (1927) *Associate Professor of Economics*  
 CONSTANCE LORRAINE BROWN, M.S. (1928) *Assistant Professor of Chemistry*  
 MARION HUNTINGTON BROWN, M.S. (1942) *Instructor in Home Economics*  
 WILLIAM EUSTIS BROWN, Ph.B., M.P.H., M.D. *Professor of Preventive Medicine*  
 HENRY NELSON BROWNE, JR., M.A. (1948) *Instructor in Mathematic*  
 JAMES ATKINS BULLARD, Ph.D. (1928) *Williams Professor of Mechanics and Mathematics*  
 LAWRENCE WHITNEY BURGESS, M.S. (1943-44; 1947) *Instructor in Physics*  
 CHARLES LYMAN CALAHAN, M.S. (1948) *Instructor in Horticulture*  
 THOMAS WRIGHT MOIR CAMERON, Ph.D., D.Sc. (1942) *Visiting Professor of Tropical Medicine*  
 GEORGE DOUGLAS CANATSEY, Ph.D. (1947) *Instructor in Bacteriology and Clinical Pathology*  
 FRED DONALD CARPENTER, Ph.D. (1918) *Professor of the German Language and Literature*  
 HOWARD JULIAN CARPENTER, B.S. (1947) *Instructor in Mechanical Engineering*  
 DANIEL BERNARD CARROLL, Ph.D. (1924) *Professor of Political Science*  
 HENRY HASLEHURST CARSE, M.B.A. (1947) *Instructor in Economics*  
 ROBERT McCRILLIS CARTER, JR., Ph.D. (1944) *Associate Professor of Agricultural Economics*  
 ALFRED HAYES CHAMBERS, Ph.D. (1948) *Assistant Professor of Physiology*  
 JAMES PATRICK CHAPLIN, Ph.D. (1947) *Assistant Professor of Psychology*  
 HUGH CLIFFORD GALLAGHER CHASE, M.A. (1948) *Instructor in English*  
 RUPERT ADDISON CHITTICK, M.D. (1944) *Professor of Psychiatry*  
 PAUL DENNISON CLARK, M.D. (1930) *Assistant Professor of Pediatrics*  
 FRANCIS PEABODY COLBURN, Ph.B. (1942) *Assistant Professor of Art*  
 MRS. NANCY RANKIN CONNELL, M.A. (1948) *Instructor in Speech (first semester)*  
 STUART STARNES CORBIN, M.D. (1940) *Assistant Professor of Pediatrics*  
 MARY ELIZABETH CORCORAN, A.M. (1948) *Instructor in Psychology*  
 ROY EDWARD CORLEY, M.D. (1937) *Associate Professor of Pediatrics*  
 FAYE CRABBE, A.M. (1943) *Associate Professor of Nursing*  
 ALBERT JAMES CRANDALL, M.D. (1939) *Instructor in Clinical Surgery*  
 EDWARD BYINGTON CRANE, M.D. (1948) *Instructor in Pharmacology*  
 GEORGE CHAPMAN CROOKS, Ph.D. (1930) *Associate Professor of Chemistry*  
 ELEANOR STENSON CUMMINGS, A.B. (1920) *Associate Professor of Physical Education for Women*  
 JOHN CHARLES CUNNINGHAM, M.D. (1946) *Professor of Ophthalmology*  
 CHARLOTTE CYERT, M.A. (1949) *Instructor in English (second semester)*  
 MALCOLM DANIEL DAGGETT, Ph.D. (1945) *Professor of Romance Languages*  
 LORE ROSE DAVID, Ph.D. (1948) *Assistant Professor of Zoology*  
 LEÓN W. DEAN, A.B. (1923) *Assistant Professor of English*

- VIRGINIA DE BLASIIS (1948) *Instructor in Music*  
 JOHN BELLOWS DEFOREST, Ph.D. (1921) *Professor of Romance Languages*  
 MAX LAYTON DELP, M/Sgt., U. S. Army (1947) *Instructor in Military Science and Tactics*  
 DOLORES DIRUBBO, A.M. (1948) *Instructor in Romance Languages*  
 ROLAND FREEMAN DOANE, D.U. (1925) *Associate Professor of Romance Languages*  
 ELEAZER JOHNSON DOLE, Ph.D. (1921) *Associate Professor of Botany*  
 CHARLES GEORGE DOLL, A.M. (1927) *Assistant Professor of Geology and Mineralogy*  
 RAYMOND MADIFORD PEARDON DONAGHY, M.D. (1946) *Associate Professor of Neurosurgery*  
 BENNETT COOPER DOUGLASS, Ph.D. (1921) *Professor of Education*  
 NICHOLAS BERNARD DREYER, M.R.C.S., L.R.C.P. (1945) *Professor of Pharmacology*  
 JAMES KELMAN DUNCAN, B.S. (1948) *Instructor in Mathematics and Education*  
 FRED WILLIAMS DUNIHUE, Ph.D. (1936) *Associate Professor of Histology and Embryology*  
 \*HERBERT ASHLEY DURFEE, M.D. (1920) *Professor of Obstetrics*  
 GEORGE DYKHUIZEN, Ph.D. (1926) *Professor of Philosophy*  
 OLIVER NEWELL EASTMAN, M.D. (1911) *Professor of Gynecology*  
 OLIVER ROLFE EASTMAN, M.D. (1948) *Instructor in Obstetrics and Gynecology*  
 DONALD M. ELDRED, M.D. (1949) *Instructor in Clinical Psychology*  
 EDMUND LEON ESCOLAS, M.A. (1947) *Instructor in Economics*  
 LOUIS WILLIAM ESPOSITO, M.D. (1944) *Instructor in Urology*  
 JOHN SEELEY ESTABROOK, M.D. (1940) *Instructor in Clinical Pediatrics*  
 JEANNE MARGARET EULER, B.S. (1943) *Instructor in Physical Education for Women*  
 JOHN CLIFFORD EVANS, B.S. (1937) *Assistant Professor of Physical Education for Men*  
 PAUL DEMUND EVANS, Ph.D. (1930) *Professor of History*  
 MRS. RUTH JORDAN EVANS, M.A. (1947) *Instructor in English (first semester)*  
 WILLIAM EVANS-SMITH, Major, U. S. Army, B.S. (1948) *Assistant Professor of Military Science and Tactics*  
 LESTER MAHAN FELTON, M.D. (1940) *Assistant Professor of Clinical Urology*  
 WINTHROP MAILLOT FLAGG, M.D. (1935) *Associate Professor of Urology*  
 MURRAY WILBUR FOOTE, B.S. (1947) *Instructor in Agricultural Biochemistry*  
 JOHN LOUIS PHILIPPE FOREST, M.D. (1942) *Instructor in Clinical Psychiatry*  
 GEORGE ALBERT FORTUNE, JR., A.B. (1948) *Instructor in Economics*  
 ERALD FAIRBANKS FOSTER, M.D. (1931) *Instructor in Public Health*  
 GRACE ROWAN FOX, B.S. (1948) *Instructor in Nursing (second semester 1948-49)*  
 PERCY AUSTIN FRALEIGH, Ph.D. (1927) *Professor of Mathematics*

\* Deceased, February 24, 1949.

- ALDO GINO FRANCESCHI, M.D. (1946) *Instructor in Surgery*  
 PAUL KENDRICK FRENCH, M.D. (1924) *Professor of Clinical Medicine*  
 FRED WILLIAM GALLAGHER, Ph.D. (1944) *Professor of Bacteriology and Clinical Pathology*  
 WILLIAM LAWRENCE GARDNER, B.S. (1929) *Assistant Professor of Physical Education for Men*  
 HOWARD CASPERT GARY, M.A. (1948) *Assistant Professor of Economics*  
 ALEXANDER GERSHOY, Ph.D. (1923) *Professor of Botany*  
 ARTHUR GLADSTONE, M.D. (1936) *Assistant Professor of Clinical Surgery*  
 RUTH LORETTA GODFREY, M.S. (1945) *Associate Professor of Home Economics*  
 THOMAS GERARD GOSS, M/Sgt., U. S. Army (1948) *Instructor in Military Science and Tactics*  
 DONALD CROWTHER GREGG, Ph.D. (1946) *Associate Professor of Chemistry*  
 GEORGE CHARLES GROSSCUP, JR., Ph.D. (1946) *Associate Professor of Economics*  
 AARON HINMAN GROUT, Ph.B. (1937) *Lecturer in Medical Jurisprudence*  
 RAYMOND AVERY HALL, A.M. (1923) *Assistant Professor of Religion*  
 THEODORE HENRY HARWOOD, M.D. (1938) *Associate Professor of Medicine*  
 ROLF NORDAHL BRUN HAUGEN, M.A. (1947) *Assistant Professor of Political Science*  
 OLIVER JOHN HAYLES, B.A. (1948) *Instructor in Electrical Engineering*  
 DONALD CEDRIC HENDERSON, M.S. (1944) *Associate Professor of Poultry Husbandry*  
 ETHEL PAULINE HOFFMAN, M.S. (1942) *Assistant Professor of Physical Education for Women*  
 ARTHUR RUSH HOGAN, M.D. (1939) *Assistant Professor of Clinical Surgery*  
 CARLETON LESLIE HOLMES, B.S. (1947) *Instructor in English*  
 RALPH MAYNARD HOLMES, Ph.D. (1925) *Professor of Physics*  
 IRVIN PLATT HOOPER, B.S. (1948) *Assistant Professor of Mechanical Engineering*  
 DAVID BRADFORD HOPKINSON, B.S. (1946) *Instructor in Mechanical Engineering*  
 RICHARD JOHN HOPP, M.S. (1947) *Instructor in Horticulture*  
 GEORGE RICHARD HOPWOOD, B. Ed. (1947) *Instructor in English*  
 ROBERT BRUCE HUBER, Ph.D. (1946) *Associate Professor of Speech*  
 MURIEL JOY HUGHES, Ph.D. (1942-44; 1945) *Assistant Professor of English*  
 RONALD HUGH HUMPHREY, M.A. (1946) *Instructor in Dramatics*  
 JEAN ELOISE ICHTER, B.S. (1948) *Instructor in Nursing*  
 DAVID EMANUEL JOHNSON, JR., B.S. (1947) *Instructor in Civil Engineering*  
 EARLE ALBIE JOHNSON, Capt., U. S. Army, B.S. (1947) *Assistant Professor of Military Science and Tactics*  
 FLOYD ROBERT JOHNSON, B.S. (1947) *Instructor in Mechanical Engineering*  
 STUART LYNDE JOHNSTON, Ph.D. (1940-44; 1946) *Assistant Professor of Romance Languages*

- DONALD BOYES JOHNSTONE, Ph.D. (1948) *Assistant Professor of Microbiology*  
 HOVEY JORDAN, M.S., A.M. (1913) *Professor of Histology and Embryology*  
 HARRY HELMUTH KAHN, B.A. (1948) *Temporary Instructor in German*  
 MIKE KASAP, B.S. (1948) *Instructor in Physical Education for Men*  
 FRANCIS WILLIAM KELLY, M.D. (1947) *Instructor in Psychiatry*  
 JOSEPH BURNHAM KELLY, M.S. (1946) *Assistant Professor of Agronomy*  
 MORRIS WELLESLEY KENFIELD, B.S. (1946) *Instructor in Mechanical Engineering*  
 GEORGE VINCENT KIDDER, Ph.D. (1922) *Professor of Classical Languages and Literatures*  
 FLORANCE BEESON KING, Ph.D. (1940) *Professor of Home Economics*  
 JOHN WEAVER KING, M.D. (1946) *Assistant Professor of Bacteriology and Clinical Pathology*  
 MRS. ELIZABETH KIRKNESS, A.M. (1938) *Instructor in Home Economics*  
 ESTHER LUCILE KNOWLES, M.S. (1945) *Assistant Professor of Home Economics*  
 LEWIS EDWARD KNOLLMAYER, M.A. (1947) *Assistant Professor of Economics*  
 FRED CARL KOERNER, JR., M.C.E. (1948) *Assistant Professor of Civil Engineering*  
 ARTHUR PAUL KRUSE, Ph.D. (1948) *Assistant Professor Political Science*  
 EDWARD KSIAZEK, B.S. (1948) *Instructor in Electrical Engineering*  
 ELIZABETH KUNDERT, M.D. (1942) *Instructor in Psychiatry*  
 MERTON PHILIP LAMDEN, Ph.D. (1947) *Assistant Professor of Biochemistry*  
 PETER PAUL LAWLOR, M.D. (1939) *Assistant Professor of Otolaryngology and Rhinology*  
 PAUL GREEN LEFEVRE, Ph.D. (1945) *Assistant Professor Physiology*  
 EUGENE LEPESCHKIN, M.D. (1947) *Assistant Professor of Experimental Medicine*  
 IHOR ALEXANDER LEVITSKY, Ph.D. (1947) *Assistant Professor of Philosophy*  
 JULIAN IRA LINDSAY, A.M. (1910) *Professor of English*  
 JOHN ERNEST LITTLE, Ph.D. (1945) *Assistant Professor of Biochemistry (Agr.)*  
 JOHN HUTCHISON LOCHHEAD, Ph.D. (1942) *Assistant Professor of Zoology*  
 PHILIPP HANS LOHMAN, Ph.D. (1945) *Professor of Economics*  
 ROBERT ELI LONG, Ph.D. (1941) *Associate Professor of Political Science (on leave, 1948-49)*  
 MARSHALL WILSON LOUPO, B.S. (1948) *Instructor in Agricultural Engineering*  
 CARL LUCARINI, A.M. (1928) *Instructor in Chemistry*  
 MARJORIE ELLINWOOD LUCE, B.S. (1946) *Assistant Professor of Agricultural Education*  
 ELEANOR MARRIFIELD LUSE, Ph.D. (1947) *Assistant Professor of Speech*  
 JOHN FREDERICK LYNCH, M.D. (1939) *Instructor in Clinical Surgery*  
 DOUGLAS TILLMAN McCLAY, Ph.D. (1941-42; 1946) *Assistant Professor of Mathematics*

- MRS. EILEEN GALVIN McGINLEY, M.Ed. (1947) *Instructor in English*
- EDD RUTHVEN McKEE, M.S., E.E. (1934) *Professor of Electrical Engineering*
- KARL CORNELIUS McMAHON, M.D. (1925)  
*Assistant Professor of Otolaryngology and Rhinology*
- EDWARD DOUGLAS McSWEENEY, M.D. (1923) *Assistant Professor of Gynecology*
- KATHERINE ELLA McSWEENEY, M.D. (1939) *Instructor in Clinical Medicine*
- ALBERT GEORGE MACKAY, M.D. (1933) *Professor of Surgery*
- JOHN VAN SICKLEN MAECK, M.D. (1948)  
*Instructor in Obstetrics and Gynecology*
- JAMES PATRICK MAHONEY, M.D. (1940) *Instructor in Clinical Medicine*
- GILBERT ADAMS MARSHALL, B.S. (1947) *Instructor in Mechanical Engineering*
- FREDERIC CARVER MARSTON, JR., Ph.D. (1948)  
*Visiting Assistant Professor of English*
- MIRIAM NATILEE MARSTON, A.M. (1926) *Assistant Professor of Music*
- JAMES WALLACE MARVIN, Ph.D. (1939) *Associate Professor of Botany*
- INA MAXSON, M.S. (1947) *Instructor in Medical Technology*
- MRS. SALLY BERRY MAYBURY, M.Ed. (1944)  
*Assistant Professor of Economics (on leave, 1948-49)*
- ROBERT LELAND MAYNARD, M.D. (1944)  
*Assistant Professor of Orthopedic Surgery*
- HAROLD EDWARD MEDIVETSKY, M.D. (1937) *Instructor in Clinical Medicine*
- CHARLES MERRITT, JR., M.S. (1946) *Instructor in Chemistry*
- JOHN TRUMBULL METCALF, Ph.D. (1921) *Professor of Psychology*
- HOWARD GUY MILLINGTON, C.E. (1920) *Assistant Professor of Mathematics*
- HENRY LEE MILLS, D.V.M. (1943) *Instructor in Public Health*
- MRS. ISABEL CLARK MILLS, A.M. (1932) *Instructor in Art*
- PAUL AMOS MOODY, Ph.D. (1927) *Professor of Zoology*
- RAYMOND FRED MOSHER, S.M. (1948)  
*Associate Professor of Electrical Engineering*
- JOHN PETER MOSS, Captain, U. S. Army, B.S. (1948)  
*Assistant Professor of Military Science and Tactics*
- CHESTER ALBERT NEWHALL, M.D. (1929)  
*Thayer Associate Professor of Anatomy*
- JOHN ALVIN NEWLANDER, Ph.D. (1919)  
*Associate Professor of Animal and Dairy Husbandry*
- GEORGE HUBERT NICHOLSON, A.M. (1923) *Assistant Professor of Mathematics*
- ALEX BENJAMIN NOVIKOFF, Ph.D. (1948)  
*Associate Professor of Experimental Pathology*
- CATHERINE FRANCES NULTY, Ed.M. (1920)  
*Associate Professor of Economics (Secretarial)*
- ANDREW EDGERTON NUQUIST, Ph.D. (1938)  
*Associate Professor of Political Science*

- LENA RAUB OAKLEY, M.A. (1947) *Assistant Professor of Nursing*  
 IPPOCRATES PAPPOUTSAKIS, Mus.B. (1940) *Associate Professor of Music*  
 SISTER CORONA PARENTEAU, R.N. (1945) *Laboratory Instructor in Clinical Pathology*  
 CARL TAYLOR PARSONS, Ph.D. (1948) *Assistant Professor of Zoology*  
 ELIZABETH PAULSEN, M.S. (1946) *Instructor in Zoology*  
 HERBERT DEAN PEARL, A.M. (1941-45; 1947) *Assistant Professor of Education*  
 BJARNE PEARSON, M.D. (1945) *Professor of Pathology*  
 OSCAR SYLVANDER PETERSON, JR., M.D. (1944) *Assistant Professor of Radiology*  
 HAROLD BARNARD PIERCE, Ph.D. (1937) *Professor of Biochemistry*  
 MRS. MARY KOHL PILLEPICH, B.S. (1948) *Instructor in Nursing*  
 FLORENCE IMOGENE PIZINGER, M.A. (1948) *Instructor in Psychology*  
 JAMES EUGENE POOLEY, A.M. (1928) *Assistant Professor of Classical Languages and History*  
 WILLARD BISSELL POPE, Ph.D. (1934) *Professor of English*  
 ARCHIBALD THOMPSON POST, Ed.M. (1929) *Assistant Professor of Physical Education for Men*  
 MERRILL DUSTIN POWERS, B.S. (1929-44; 1946) *Instructor in Mathematics*  
 MAURICE ALLONZO PRESTON, M/Sgt., U. S. Army (1948) *Instructor in Military Science and Tactics*  
 \*LESTER MARSH PRINDLE, Ph.D. (1921) *Roberts Professor of Classical Languages and Literatures*  
 LOUIS BLACKMER PUFFER, C.E. (1921) *Professor of Civil Engineering*  
 HERBERT EVERETT PUTNAM, Ph.D. (1931) *Associate Professor of History*  
 WILHELM RAAB, M.D. (1939) *Professor of Experimental Medicine*  
 MARY RAISSI, M.C.S. (1948) *Instructor in Economics*  
 LOUISE ADELE RAYNOR, Ph.D. (1946) *Instructor in Botany*  
 WILLIAM AUGUST READER, B.S. (1948) *Assistant Professor in Electrical Engineering*  
 ELMER MCCREADY REED, M.D. (1948) *Instructor in Otolaryngology*  
 RALPH EAVISON REED, B.S. (1947) *Instructor in Dairy Manufacturing*  
 WALFORD TUPPER REES, M.D. (1925) *Professor of Clinical Surgery*  
 WILLIAM LEO REUTER, D.Ed. (1946) *Associate Professor of Education*  
 FRANC MARIO RICCIARDI, A.B. (1947) *Instructor in Economics*  
 WILLIAM HUGH RIDDELL, Ph.D. (1948) *Professor of Animal and Dairy Husbandry*  
 JOHN WILLOUGHBY ROBINSON, M.A. (1948) *Instructor in Political Science*  
 WILLIAM VAN BOGAERT ROBERTSON, Ph.D. (1945) *Associate Professor of Experimental Medicine*  
 ALBAN BENNETT ROONEY, M.S. (1922) *Assistant Professor of Physics*  
 JAMES ALBERT ROOT, B.S. (1948) *Instructor in Civil Engineering*

\* Deceased February 14, 1949.

- LYMAN SMITH ROWELL, M.S. (1925) *Associate Professor of Zoology*  
 VIOLA RUSSELL, M.D. (1942) *Lecturer in Family Living*  
 CHARLES BRUSH RUST, M.D. (1948) *Instructor in Orthopedic Surgery*  
 AMBROSE SAINDON, A.B. (1947) *Instructor in Romance Languages*  
 NICHOLAS SALVATORE SCARCELLO, M.D. (1940) *Instructor in Clinical Urology*  
 ARNOLD HAROLD SCHEIN, Ph.D. (1947) *Assistant Professor of Biochemistry*  
 EDWIN CALVIN SCHNEIDER, M.S. (1946) *Assistant Professor of Agricultural Engineering*  
 ANNA CAROLYN SCHOLL, M.N. (1946) *Instructor in Nursing*  
 HAROLD SEESSEL SCHULTZ, Ph.D. (1946) *Assistant Professor of History*  
 ROBERT NELSON SEARLES, A.B. (1948) *Instructor in Physical Education for Men*  
 JANET EILEEN SELKE, M.S. (1948) *Instructor in Home Economics*  
 CHESTER FRANK SENTENEY, 1st Sgt., U. S. Army (1946) *Instructor in Military Science and Tactics*  
 VICTOR JOSEPH SHEDKO, B.A. (1948) *Instructor in Economics*  
 BERNARD SHERMAN, M.A. (1947) *Instructor in Mathematics*  
 JOHN HAROLD SHIELDS, M.A. (1948) *Instructor in Physics*  
 JANICE SHIVELY, Mus.B. (1946) *Instructor in Music*  
 LAURENCE FOREST SHOREY, M.S. (1926) *Assistant Professor of Electrical Engineering*  
 FERDINAND JACOB MORRIS SICHEL, Ph.D. (1937) *Professor of Physiology*  
 ROBERT GOODFELLOW SIDLE, M.M.E. (1945) *Associate Professor of Mechanical Engineering*  
 RUTH GERTRUDE SIMOND, Ph.D. (1948) *Assistant Professor of Mathematics*  
 WILLIAM JOSEPH SLAVIN, M.D. (1942) *Assistant Professor of Clinical Obstetrics and Gynecology*  
 DONALD FOSS SMITH, Ph.D. (1945) *Associate Professor of Chemistry*  
 HOWARD MARSHALL SMITH, JR., M.S. (1947) *Assistant Professor of Electrical Engineering*  
 JOHN STEVEN SOLLOSI, Captain, U. S. Army, B.S. (1948) *Assistant Professor of Military Science and Tactics*  
 ARTHUR BRADLEY SOULE, JR., M.D. (1928) *Professor of Radiology*  
 JOSEPH WORCESTER SPELMAN, M.D. (1948) *Instructor in Pathology*  
 THOMAS SPROSTON, JR., Ph.D. (1946) *Assistant Professor of Botany*  
 ERNEST STARK, M.D. (1945) *Assistant Professor of Pathology*  
 RALPH WENTWORTH STARK, M/Sgt., U. S. Army (1948) *Instructor in Military Science and Tactics*  
 CHARLES WATTLES STEPHENSON, M.D. (1948) *Assistant Professor of Psychiatry*  
 ROBERT FREDERICK STOEL, M.A. (1946) *Instructor in English*  
 ROBERT PRINDLE STORY, B.S. (1947) *Instructor in Agricultural Economics*

- NORMAN KENNETH STRASSBURG, B.S. (1946) *Instructor in Physical Education for Men*
- WALTER ALVA STULTZ, Ph.D. (1937) *Associate Professor of Anatomy*
- MARY BURKE SULLIVAN, A.M. (1934) *Assistant Professor of English and Supervisor of Student Teaching*
- RALPH DANIEL SUSSMAN, M.D. (1946) *Instructor in Pediatrics*
- CHARLES IVES TAGGART, D.M.D. (1942) *Instructor in Oral Hygiene and Dental Medicine*
- FRED HERBERT TAYLOR, Ph.D. (1943) *Assistant Professor of Botany*
- CHRISTOPHER MARLOWE TERRIEN, M.D. (1939) *Instructor in Clinical Medicine*
- LOUIS GEORGE THABAULT, M.D. (1939) *Instructor in Surgery*
- CHARLES MAIR THOMSON, B.S. (1948) *Instructor in Mechanical Engineering*
- FREDERICK CHARLES THORNE, Ph.D., M.D. (1939) *Assistant Professor of Psychiatry*
- RANDOLPH SHEPARDSON TOWNE, A.M. (1928) *Assistant Professor of Romance Languages*
- EARLE THURMAN TRACY (1948) *Assistant Supervisor of Student Teaching*
- EDWARD LAWRENCE TRACY, B.S. (1943) *Instructor in Public Health*
- EUGENE FREDERICK TRAUB, M.D. (1928) *Visiting Professor of Dermatology*
- JACK TREVITHICK, Ph.D. (1946) *Assistant Professor of English*
- KEITH FRANK TRUAX, M.D. (1932) *Assistant Professor of Surgery*
- GEORGE CHANDLER TULLY, M.D. (1939) *Instructor in Clinical Urology*
- JAMES HILTON TURNER, Ph.D. (1947) *Instructor in Classical Languages*
- ARTHUR FREDERICK TUTHILL, M.S. (1946) *Assistant Professor of Mechanical Engineering*
- MARSHALL COLEMAN TWITCHELL, JR., M.D. (1942) *Assistant Professor of Ophthalmology*
- HIRAM EUGENE UPTON, M.D. (1930) *Assistant Professor of Clinical Medicine*
- FREDERICK WILLIAM VAN BUSKIRK, M.D. (1946) *Assistant Professor of Radiology*
- KENNETH EVERSON VARNEY, M.S. (1946) *Assistant Professor of Agronomy*
- FOSTER LANE VIBBER, M.D. (1940) *Assistant Professor of Clinical Neurology*
- BENJAMIN BOOTH WAINWRIGHT, A.M. (1925) *Assistant Professor of English*
- NELSON LEE WALBRIDGE, Ph.D. (1924) *Professor of Physics*
- ERNEST FREDERICK WALLER, M.S. (1945) *Professor of Animal Pathology*
- LESTER JULIAN WALLMAN, M.D. (1948) *Instructor in Neurosurgery*
- TRUMAN MARION WEBSTER, A.B. (1945) *Assistant Professor of German*
- SUMNER WILLARD, Ph.D. (1947) *Assistant Professor of Romance Languages*
- SELINA WILLIAMS, M.S. (1948) *Instructor in Home Economics*
- ATHOLL LIVINGSTONE WILSON, M.A. (1948) *Instructor in Mathematics*
- WILLIAM OSCAR WITHERSPOON, Major, U. S. Army, B.A. (1946) *Assistant Professor of Military Science and Tactics*



EPHRAIM WOLL, M.D. (as of January 1, 1949)	<i>Assistant Professor of Pathology</i>
FLORENCE MAY WOODARD, Ph.D. (1923)	<i>Associate Professor of Economics</i>
LLOYD ABRAM WOODWARD, M.S. (1920)	<i>Assistant Professor of Physics</i>
WENDELL PHILIP WRIGHT, B.S. (1948)	<i>Temporary Instructor in Mechanical Engineering</i>
ALBERT W. WURTHMANN, M.A. (1947)	<i>Instructor in German</i>
DONALD CHARLES YELTON, A.B. (1947)	<i>Instructor in English</i>

## Associates and Assistants

MRS. CONCETTA V. ALBERGHINI, B.S.	<i>Research Assistant in Biochemistry</i>
ANN RUTH BAKER	<i>Assistant in Biochemistry</i>
JOHN HAROLD BROWE, M.D.	<i>Research Associate in Medicine</i>
MIGNON RUTH BURGGRAF, B.S.	<i>Graduate Assistant in Chemistry</i>
MRS. CAROL ROSE BURRITT, B.S.	<i>Research Assistant in Anatomy</i>
NANCY JOAN CANTON, A.B.	<i>Research Assistant in Physiology</i>
LORETTA AMELIA COLETTI, A.B.	<i>Graduate Assistant in Romance Languages</i>
MARY GLORIA CONROY, A.B.	<i>Graduate Assistant in Chemistry</i>
LOIS JEAN EIMER, B.S.	<i>Graduate Assistant in Chemistry</i>
OLIVE GRETA FERGUSON	<i>Research Assistant in Biochemistry</i>
DONALD EDWARD FORNWALT, B.S.	<i>Graduate Assistant in Chemistry</i>
WILDA ROMAYNE GIGEE, A.B.	<i>Research Assistant in Experimental Medicine</i>
WILLIAM HENRY HEININGER, M.D.	<i>Assistant in Medicine</i>
ROBERT JOHN HUBBARD, M.D.	<i>Assistant in Pathology</i>
ISABEL LUCY JACKSON, A.B.	<i>Graduate Assistant in Romance Languages</i>
BETHEL WYCKLIFFE JOHNSON, B.S.	<i>Graduate Assistant in Chemistry</i>
REGINALD FREDERICK KRAUSE, Ph.D.	<i>Research Associate in Biochemistry</i>
SUSAN ANN LANE, A.B.	<i>Assistant in Bacteriology</i>
JACQUELINE McCORMICK	<i>Research Assistant in Pharmacology</i>
JOHN HENRY McCREA, M.D.	<i>Assistant in Medicine</i>
SUSAN BREWSTER MERROW, M.Ed.	<i>Research Associate in Biochemistry</i>
BARBARA ALICE MOORE	<i>Assistant in Biochemistry</i>
PINCUS PEYSER, A.B.	<i>Research Assistant in Experimental Medicine</i>
WILLIAM JOSEPH PLANTE, B.S.	<i>Graduate Assistant in Chemistry</i>
MRS. EMILY FLANAGAN RICE, B.S.	<i>Assistant in Biochemistry</i>
ALICE LOOMIS ROBERTSON, A.B.	<i>Graduate Assistant in Chemistry</i>
JOSEPH EDWARD ROUSSEAU, M.S.	<i>Assistant in Chemistry</i>
LEGRAND HENDRY THOMAS, M.D.	<i>Assistant in Pathology</i>

FRANCES RUTH WATSON, A.B.  
 DONALD EDWARD WEIMAN, B.S.  
 HERBERT WHITE, A.B.

*Graduate Assistant in Zoology*  
*Graduate Assistant in Chemistry*  
*Graduate Assistant in Zoology*

## FELLOWS

RICHARD WALKER AMIDON, M.D.  
 WILLARD FERGUSON ANGEN, M.D.  
 JOHN HARDESTY BLAND, M.D.  
 GEORGE HENRY BRAY, M.D.  
 ROBERT NOLAN CAIN, M.D.  
 JOHN BARKER DeLONG, M.D.  
 GINO ALDO DENTE, M.D.  
 NELSON JOHN DENTE, M.D.  
 CARLETON RAYMOND HAINES, M.D.  
 DONALD HOLDEN HARWOOD, M.D.  
 DONALD WALTER HUMPHREYS, M.D.  
 CHARLES WILLIAM JONES, M.D.  
 JOHN WEAVER KING, M.D.  
 PAUL KINGSTON LARNER, M.D.  
 ARSEN MELKONIAN, M.D.  
 HENRI LOUIS PACHE, M.D.  
 HAROLD GORDON PAGE, M.D.  
 EDWARD JOSEPH SENNETT, M.D.  
 WILLIAM IRELAND SHEA, M.D.  
 ROBERT PEASE SMITH, M.D.  
 STEPHEN DAVIS SMITH, M.D.  
 DONALD WILLIAM SAMPSON STIFF, M.D.  
 HENRY THOMAS TULIP, M.D.  
 FLETCHER HOWARD WHITE, M.D.  
 FRANK EDWARD WOODRUFF, M.D.

*Medicine*  
*Pathology*  
*Experimental Medicine*  
*Pathology*  
*Surgery*  
*Obstetrics and Gynecology*  
*Anesthesia*  
*Pediatrics*  
*Surgery*  
*Anesthesia*  
*Radiology*  
*Pathology*  
*Medicine*  
*Urology*  
*Pathology*  
*Surgery*  
*Surgery*  
*Radiology*  
*Surgery*  
*Medicine*  
*Pediatrics*  
*Radiology*  
*Urology*  
*Urology*  
*Medicine*

## THE SENATE COMMITTEES, 1948-1949

- ADMISSIONS:** N. L. Walbridge (Chairman), T. M. Adams, P. A. Fraleigh, S. L. Johnston, H. B. Pierce, the Director of Admissions, the Deans.
- ADULT EDUCATION:** N. E. Lange (Chairman), F. P. Colburn, G. C. Crooks, B. C. Douglass, C. C. Grosscup, R. N. B. Haugen, M. J. Hughes, E. M. Luse, N. L. Walbridge, T. M. Webster.
- CEREMONIES:** H. G. Millington (Chairman), F. P. Colburn, F. W. Dunihue, D. C. Gregg, Isabel C. Mills, I. Pappoutsakis, L. F. Shorey, the University Marshal.
- LIBRARY:** P. D. Evans (Chairman), W. R. Adams, D. C. Gregg, S. L. Johnston, Florance B. King, D. T. McClay, L. M. Prindle, F. J. M. Sichel, S. Willard, the Director of Libraries, the Assistant Director of Libraries.
- MUSEUM:** W. B. Pope (Chairman), H. G. Bennett, F. P. Colburn, H. B. Eldred, J. H. Lochhead, Eleanor M. Luse, B. Pearson, L. M. Prindle.
- PUBLICATIONS:** J. W. Spaven (Chairman), L. W. Dean, F. W. Gallagher, G. C. Grosscup, L. B. Puffer, Dean of Administration.
- PUBLIC RELATIONS:** A. E. Nuquist (Chairman), E. L. Amidon, G. C. Crooks, P. H. Lohman, A. B. Soule, T. Sproston, the Dean of Administration, the Deans.
- RADIO:** R. B. Huber (Chairman), W. E. Brown, B. C. Douglass, W. L. Gardner, P. H. Lohman, I. Pappoutsakis, the Experiment Station Editor.
- RELIGIOUS LIFE:** G. V. Kidder (Chairman), R. A. Hall, A. Gladstone, Mary B. Sullivan, Constance L. Brown, Miriam N. Marston, E. J. Dole, J. T. Metcalf.
- STUDENT ADVISORY:** W. R. Adams (Chairman) Florence E. Bailey, W. L. Gardner, R. N. B. Haugen, Ethel Hoffman, A. G. Mackay, R. G. Sidle, T. M. Webster, Florence M. Woodard, the Dean of Administration.
- STUDENT AID:** The President (Chairman), Catherine F. Nulty, A. T. Post, A. F. Tuthill, the Deans, the Treasurer, the Director of Admissions.
- STUDENT HEALTH:** Director of Student Health Service (Chairman), Faye Crabbe, Eleanor S. Cummings, J. C. Evans, Ruth L. Godfrey, T. H. Harwood, C. W. Stephenson.
- STUDENT PERSONNEL:** B. C. Douglass (Chairman), N. B. Dreyer, G. Dykhuizen, Muriel J. Hughes, J. E. Pooley, D. F. Smith, the Deans, the Director of Student Personnel.

## Laboratory Demonstration and Practice Schools Elementary Education

### Demonstration Schools

#### Elihu B. Taft School—Burlington

CATHERINE C. CARTER  
CATHERINE M. O'BRIEN  
MRS. ANTOINETTE BURKE  
MRS. ERNA L. BENEDICT  
IVIS B. FLINT  
A. FERN SOUTHER  
FLORENCE M. FISHER  
MRS. RUTH P. INGERSOLL

Supervising Principal  
Grade 6  
Grade 5  
Grade 4  
Grade 3  
Grade 2  
Grade 1  
Kindergarten

## Colchester Point School—Colchester

MRS. MARION M. CROSBY  
BERYLE E. GARDNER

Grade 5-8  
Grade 1

## Muddy Brook School—Williston

MRS. GRACE B. CARR

Rural

## Practice Schools

## Adams School—Burlington

MARY K. McDERMOTT  
MRS. LILLIAN M. IVERSEN  
ELSIE A. TINKER  
HELEN M. RANSOM

Supervising Principal  
Grade 6  
Grade 5  
Grade 2

## Ira Allen School—Burlington

MARY K. McDERMOTT  
MRS. RUTH S. AINSWORTH  
SARA L. EDSON  
ETHEL P. SYMES  
NINA P. CRAM  
FLORENCE G. GREENE

Supervising Principal  
Grade 6  
Grade 5  
Grade 4  
Grade 2  
Grade 1

## Lawrence Barnes School—Burlington

MRS. MARGARET S. COTEY  
MRS. MARION K. WILKINSON  
KATHRYN E. HUBBARD

Supervising Principal  
Grade 6  
Grade 2

## Converse School—Burlington

MRS. MARGARET S. COTEY  
MRS. GRACE S. HARTWELL  
MRS. PEARL McGRATH  
MRS. BESSIE F. ROOT  
ROSEMARY LEWIS

Supervising Principal  
Grade 5  
Grade 4  
Grade 2  
Grade 1

## S. W. Thayer School—Burlington

MRS. DORIS A. SOMAINI  
MRS. MARY H. CORRIVEAU

Principal, Grade 1-2  
Grade 5-6

## H. O. Wheeler School—Burlington

CATHERINE C. CARTIER  
HELEN T. KEEFE  
MRS. THELMA B. LAFAYETTE

Supervising Principal  
Grade 3  
Grade 1

## Vocational Education

*Agricultural Education*

COLA DELMORE WATSON, B.S.  
JAMES EDWARD WOODHULL, M.S.

*State Supervisor*  
*State Teacher Trainer*

*Supervisors of Student Teaching*

CEDRIC LAFLEY  
J. ARTHUR PETERS  
HENRY ROSS  
EDWARD EATON  
RICHMOND YOUNG

Brandon High School  
Bradford Academy  
Lyndon Institute  
Newbury High School  
Middlebury High School

*Distributive Education*

JOHN M. MORROW, M.C.S.

*State Supervisor*

*Homemaking Education*

LOUISE KELLER, M.S.  
MARION H. BROWN, M.S.

*State Supervisor*  
*State Teacher Trainer*

*Trade and Industrial Education*

HARRY JAMES PATTERSON, B.S.  
HAROLD F. GRAEME, M.Ed.  
MAX E. BOGUE  
HENRY B. CASWELL, B.S.

*State Supervisor*  
*State Teacher Trainer*  
*Teacher Trainer*  
*Teacher Trainer*

AGRICULTURAL EXPERIMENT STATION  
STAFF

JOSEPH EDWARD CARRIGAN, A.M., LL.D.

*Director (On leave of absence, 1948-49)*

PAUL ROBERT MILLER, M.S.

*Associate Director (Acting Director, 1948-49)*

EDMUND MORTON ROOT, B.S.

*Assistant to the Director*

WILLIAM RITCHIE ADAMS, JR., Ph.D.

*Forester*

HENRY VERNON ATHERTON, B.S.

*Research Assistant in Animal and Dairy Husbandry*

HERBERT PATTERSON BEAM, B.A.

*Research Assistant in Botany*

CHARLES HUGO BLASBERG, M.S.

*Horticulturist (On leave, 1948-49)*

WESSON DUDLEY BOLTON, D.V.M.

*Assistant Animal Pathologist*

ALEC BRADFIELD, M.S.

*Associate in Dairy Manufactures*

KENNETH PIERPONT BRUNDAGE, B.S.

*Research Assistant in Agricultural Economics*

OSMAN MYRON CAMBURN, M.S.

*Associate Animal and Dairy Husbandman*

ROBERT McCRILLIS CARTER, JR., Ph.D.	Rural Sociologist
MARGUERITE JULIA DOHENY, B.S.	Administrative Assistant
MURRAY WILBUR FOOTE, B.S.	Assistant Chemist
JAMES MARSHALL FRAYER, M.S.	Associate Dairy Bacteriologist
ALEXANDER GERSHOY, Ph.D.	Geneticist
MARY THORNE GREENE, B.S.	Research Assistant in Botany
DONALD CEDRIC HENDERSON, M.S.	Poultryman
RICHARD JOHN HOPP, M.S.	Assistant Horticulturist
FLORANCE BEESON KING, Ph.D.	Nutritionist
RUTH GENEVIEVE JOHNSTON, B.S.	Research Assistant in Home Economics
DONALD BOYES JOHNSTONE, Ph.D.	Microbiologist
CHARLES HOWLAND JONES, M.S.	Chemist (Retired)
JOSEPH BURNHAM KELLY, M.S.	Assistant Agronomist
JOHN ERNEST LITTLE, Ph.D.	Biochemist
LEO RENNIE LORANGER	Administrative Clerk
MARSHALL WILSON LOUPO, B.S.	Assistant Agricultural Engineer
JAMES WALLACE MARVIN, Ph.D.	Plant Physiologist
ALVIN REES MIDGLEY, Ph.D.	Agronomist
MARIANNE MUSE, M.S.	Home Economist
JOHN ALVIN NEWLANDER, Ph.D.	Associate Animal and Dairy Husbandman
CARL TAYLOR PARSONS, Ph.D.	Entomologist
RALPH EAVISON REED, B.S.	Assistant in Dairy Manufactures
WILLIAM HUGH RIDDELL, Ph.D.	Animal and Dairy Husbandman
EDWIN CALVIN SCHNEIDER, M.S.	Agricultural Engineer
WILLIAM WALLACE SCOTT, B.A.	Research Assistant in Botany
ROBERT BRUCE SHANNON, B.S.	Research Assistant in Forestry
LESTER HURLIN SMITH, M.S.	Assistant Agronomist
JOHN WALLACE SPAVEN, B.S.	Editor
SHERMAN KEITH SPRAGUE, B.S.	Research Assistant in Agricultural Economics
THOMAS SPROSTON, JR., Ph.D.	Plant Pathologist
ROBERT PRINDLE STORY, M.S.	Assistant Agricultural Economist
EDWARD JOSEPH TADEJEWSKI, B.S.	Research Assistant in Agricultural Economics
FRED HERBERT TAYLOR, Ph.D.	Plant Morphologist
RAYMOND HERMAN TREMBLAY, M.S.	Assistant Agricultural Economist
KENNETH EVERSON VARNEY, M.S.	Assistant Agronomist
ERNEST FREDERICK WALLER, D.V.M., M.S.	Animal Pathologist
KATHLEEN BEAVINGTON WEBB, B.S.	Assistant Editor
HARRY CROSSMAN WHELDEN, JR., B.S.	Assistant Poultryman

## ENGINEERING EXPERIMENT STATION STAFF

EDD RUTHVEN McKEE, M.S., E.E.	<i>Director and Electrical Engineer</i>
LOUIS BLACKMER PUFFER, C.E.	<i>Civil Engineer</i>
ROBERT GOODFELLOW SIDLE, M.M.E.	<i>Mechanical Engineer</i>
MARION E. WILLIS	<i>Secretary</i>

## EXTENSION SERVICE STAFF

JOSEPH EDWARD CARRIGAN, A.M., LL.D.	<i>Director (On leave of absence, 1948-49)</i>
PAUL ROBERT MILLER, M.S.	<i>Associate Director (Acting Director, 1948-49)</i>
EDMUND MORTON ROOT, B.S.	<i>Assistant to the Director</i>
THURSTON MADISON ADAMS, Ph.D.	<i>Agricultural Economist</i>
CHARLOTTE ANNABEL BEATTY, B.S.	<i>Home Management Specialist</i>
CHARLES HUGO BLASBERG, M.S.	<i>Horticulturist (On leave, 1948-49)</i>
CHARLES LYMAN CALAHAN, M.S.	<i>Horticulturist</i>
ROBERT POWERS DAVISON, M.Ed.	<i>State Agricultural Agent Leader</i>
WARREN ALBERT DODGE, B.S.	<i>Dairyman</i>
MARGUERITE JULIA DOHENY, B.S.	<i>Administrative Assistant</i>
RAYMOND THOMAS FOULDS, JR., B.S.	<i>Forester</i>
DONALD CEDRIC HENDERSON, M.S.	<i>Poultryman</i>
VERLE RANDALL HOUGHABOOM, M.S.	<i>Assistant Agricultural Economist</i>
MRS. MARJORIE NELSON HUNT, A.B.	<i>Assistant Editor</i>
WILLIAM PATRICK LEAMY, B.S.	<i>Assistant Dairyman</i>
LEO RENNIE LORANGER	<i>Administrative Clerk</i>
MARSHALL WILSON LOUPO, B.S.	<i>Assistant Agricultural Engineer</i>
MARJORIE ELLINWOOD LUCE, B.S.	<i>State Home Demonstration Leader</i>
*JOHN DOTY MERCHANT, B.S.	<i>State 4-H Club Agent</i>
CARL TAYLOR PARSONS, Ph.D.	<i>Entomologist</i>
MARY PAULINE ROWE, B.S.	<i>Assistant State 4-H Club Agent Leader</i>
EDWIN CALVIN SCHNEIDER, M.S.	<i>Agricultural Engineer</i>
LESTER HURLIN SMITH, M.S.	<i>Assistant Agronomist</i>
JOHN WALLACE SPAVEN, B.S.	<i>Editor</i>
ERNEST FREDERICK WALLER, D.V.M., M.S.	<i>Animal Pathologist</i>
KATHLEEN BEAVINGTON WEBB, B.S.	<i>Assistant Editor</i>
HARRY CROSSMAN WHELDEN, JR., B.S.	<i>Assistant Poultryman</i>
ANNA MARIAN WILSON, M.S.	<i>Nutritionist</i>

\* Effective February 15, 1949.

## County Agricultural Agents

*Addison County*

<i>Agricultural:</i> LUCIEN DEMERS PAQUETTE, B.S.	Middlebury
<i>Home Demonstration:</i> MRS. LEONA WARREN THOMPSON, B.S.	Middlebury
<i>Club:</i> HARRIET ELLICE PROCTOR, B.S.	Middlebury

*Bennington County*

<i>Agricultural:</i> HARRY ROBERT MITIGUY, B.S.	Bennington
<i>Home Demonstration:</i> ARDIS JOYCE MOORE, B.S.	Bennington
<i>Club:</i> SEAVER DAVID WRIGHT, JR. B.S.	Bennington

*Caledonia County*

<i>Agricultural:</i> *WILLIAM MICHAEL COREY, B.S.	St. Johnsbury
<i>Home Demonstration:</i> MRS. EDNA BECK KENNELLY (Acting)	St. Johnsbury
<i>Club:</i> MRS. MARGARET TOWER BECK, B.S.	St. Johnsbury

*Chittenden County*

<i>Agricultural:</i> ROBERT LACKIE CARLSON, B.S.	Essex Junction
<i>Home Demonstration:</i> JENNIE MAY SWETT, B.S.	Essex Junction
<i>Club:</i> OSCAR ROMUALD MARTIN, B.S.	Essex Junction

*Essex County*

<i>Agricultural:</i> EARLE DRAKE CLARK, B.S.	Guildhall
<i>Home Demonstration:</i> MRS. FLORENCE MARY CURRIER (Acting)	Guildhall

*Franklin County*

<i>Agricultural:</i> RALPH CALDWELL McWILLIAMS, B.S.	St. Albans
<i>Home Demonstration:</i> RHODA ALETHA HYDE, A.M.	St. Albans
<i>Club:</i> LILLIAN ANDREWS, B.S.	St. Albans

*Grand Isle County*

<i>Agricultural:</i> ROBERT ELLIS WHITE, B.S.	North Hero
<i>Club:</i> †MRS. JESSIE NYE HAZEN, B.S.	North Hero

*Lamoille County*

<i>Agricultural:</i> FRANK DYER JONES, B.S.	Morrisville
<i>Home Demonstration:</i> MRS. ELIZABETH EMMONS ROBINS, B.S.	Morrisville
<i>Club:</i> LUCY WARREN BAGLEY, B.S.	Morrisville

*Orange County*

<i>Agricultural:</i> WILSON HOLLISTER BEEBE, B.S.	Chelsea
<i>Home Demonstration:</i> MRS. CLARADELLA SNOW BETTS, B.S.	Chelsea
<i>Club:</i> MRS. BETTY WALKER WILKINSON, B.S.	Chelsea



*Orleans County*

*Agricultural:* ROGER DAVIS WHITCOMB, B.S. Newport  
*Home Demonstration:* MRS. BARBARA FLETCHER TWOMBLY, B.S. Newport  
*Club:* MRS. ALICE MARGARET LEONARD (Acting) Newport

*Rutland County*

*Agricultural:* ROY ALLEN BURROUGHS, B.S. Rutland  
*Home Demonstration:* ALICE JANE PRATT, B.S. Rutland  
*Club:* EDWIN EMIL BERGSTROM Rutland

*Washington County*

*Agricultural:* ROBERT ORVILLE SINCLAIR, B.S. Montpelier  
*Home Demonstration:* FLORA ELIZABETH PERLEY, B.S. Montpelier  
*Club:* HELEN ANNA BJORKLUND, B.S. Montpelier

*Windham County*

*Agricultural:* RAYMOND IRVING PESTLE, JR., M.S. Brattleboro  
*Home Demonstration :* MURIEL GLORIA MCKEE, B.S. Brattleboro  
*Club:* BRUCE ROBERT BUCHANAN, B.S. Brattleboro

*Windsor County*

*Agricultural:* WILLIAM WILLARD STONE, B.S. Woodstock  
*Home Demonstration:* MRS. JENNIE ARMSTRONG HALL, B.S. Woodstock  
*Club:* MRS. ISABELLE PAIGE BARDEN, B.S. Woodstock

## RELATED SERVICES STAFF

JOSEPH EDWARD CARRIGAN, A.M., LL.D. *Director (On leave, 1948-49)*  
 PAUL ROBERT MILLER, M.S. *Associate Director (Acting Director, 1948-49)*  
 EDMUND MORTON ROOT, B.S. *Assistant to the Director and Farm Superintendent*  
 CHARLES HUGO BLASBERG, M.S. *Horticulturist (On leave, 1948-49)*  
 WESSON DUDLEY BOLTON, D.V.M. *Assistant Animal Pathologist*  
 EUGENE FIELD BOYCE, B.S. *Assistant Chemist*  
 ALEC BRADFIELD, M.S. *Associate in Dairy Manufactures*  
 OSMAN MYRON CAMBURN, M.S. *Director of Short Courses and Educational Conferences*  
 EARLE ROLAND CLOSE *State Inspector*  
 JAMES MARSHALL FRAYER, M.S. *Associate Dairy Bacteriologist*  
 RICHARD JOHN HOPP, M.S. *Assistant Horticulturist*  
 MRS. ANNA SHEPARD LUTMAN, Ph.D. *Seed Analyst*  
 JOHN ALVIN NEWLANDER, Ph.D. *Associate Animal and Dairy Husbandman*  
 RALPH EAVISON REED, B.S. *Assistant in Dairy Manufactures*  
 WILLIAM HUGH RIDDELL, Ph.D. *Animal and Dairy Husbandman*  
 LEWELL SETH WALKER, B.S. *Chemist (Retired)*  
 ERNEST FREDERICK WALLER, D.V.M., M.S. *Animal Pathologist*

\* On leave beginning December 1, 1948.

† Effective January 1, 1949.

## THE SUMMER SESSION, 1948

BENNETT C. DOUGLASS, Ph.D.

*Director of the Summer Session*

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# Register, 1948-1949

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 Ernest Raymond Stockwell, B.ED. (U. V. M.), *Education*, Burlington  
 Elvira Farman Sutor, PH.B. (U. V. M.), *Education*, Derby  
 Edward Joseph Tadejewski, B.S.AGR. (U. V. M.), *Agriculture*, Essex Junction  
 Chester Mace Taft, B.S. (U. V. M.), *Education*, Brandon  
 Anna Louise Thomas, B.S. (NEW YORK), *Education*, Southbury, Conn.  
 Sidney Hale Thomas, A.B. (MIDDLEBURY), *Education*, Hardwick  
 Alice Hayes Tranberry, A.B. (U. V. M.), *Education*, West Hartford, Conn.  
 Guy Thomas Trono, B.ED. (U. V. M.), *Education*, Mineville, N. Y.  
 Ruth True, A.B. (U. V. M.), *Education*, Lyndon Center  
 Dave Augustus Virzi, A.B. (COLLEGE OF CITY OF NEW YORK), *English*, Plattsburg  
 Ruth Thompson Visscher, A.B. (U. MICHIGAN), *Education*, Carmel, N. Y.  
 Willard Philip Walker, A.B. (MIDDLEBURY), *Education*, Rutland  
 Mildred Ward, B.S. (RUSSELL SAGE), *Education*, Wallingford  
 Merlin Jerome Wells, B.S. (U. V. M.), *Education*, Highgate Center  
 Fay Gleason Whitcomb, B.S. (SPRINGFIELD), *Education*, Bradford  
 Ruth Pearl Willard, B.ED. (U. V. M.), *English*, Burlington  
 Miles James Withington, B.S. (CASTLETON STATE TEACHERS), *Education*, Corinth  
 Stanley Allan Witt, B.S. (U. V. M.), *Education*, St. Johnsbury  
 Hazen Francis Wood, B.ED. (U. V. M.), *Education*, Essex Junction  
 Rudolph Orville Woodcock, A.B. (U. V. M.), *Education*, Plainfield  
 Richmond Alton Young, B.S. (U. CONNECTICUT), *Education*, Middlebury  
 Frederick Lewis Zins, A.B. (AMHERST), *Education*, Saxtons River



## STUDENTS IN RESIDENCE, FALL 1948

## COLLEGE OF ARTS AND SCIENCES:

	MEN	WOMEN	TOTAL
Class of 1949 .....	96	90	186
Class of 1950 .....	202	65	267
Class of 1951 .....	167	91	258
Class of 1952 .....	184	102	286
Total .....	649	348	997
In-state veterans .....	241	4	245
Out-state veterans .....	137	6	143
Total .....	378	10	388
In-state non-veterans .....	172	152	324
Out-state non-veterans .....	99	186	285
Total .....	271	338	609
In-state (veterans and non-veterans) .....	413	166	579
Out-state (veterans and non-veterans) .....	236	182	418
Total .....	649	348	997

## BY CURRICULA:

	MEN	WOMEN	TOTAL
(1) Liberal Arts			
Language and Literature .....	71	108	179
Music .....	4	3	7
Pre-dental .....	32	1	33
Pre-law .....	44	2	46
Pre-theology .....	4	0	4
Science and Mathematics .....	66	40	106
Social Sciences .....	155	69	224
Undecided .....	53	78	131
Totals (Liberal Arts) .....	429	301	730
(2) Medical Technology .....	4	31	35
(3) Pre-medical .....	216	16	232
Total .....	649	348	997

## COLLEGE OF TECHNOLOGY:

	MEN	WOMEN	TOTAL
Class of 1949 .....	184	6	190
Class of 1950 .....	299	12	311
Class of 1951 .....	208	10	218
Class of 1952 .....	219	21	240
Total .....	910	49	959
In-state veterans .....	461	4	465
Out-state veterans .....	204	0	204
Total .....	665	4	669

In-state non-veterans .....	142	26	168
Out-state non-veterans .....	103	19	122
Total .....	245	45	290
In-state (veterans and non-veterans) .....	603	30	633
Out-state (veterans and non-veterans) .....	307	19	326
Total .....	910	49	959

BY CURRICULA:	MEN	WOMEN	TOTAL
Commerce and Economics (Business Administration) .....	427	20	447
Commerce and Economics (Secretarial Practice) .....	0	24	24
Engineering—Civil .....	111	1	112
Engineering—Electrical .....	145	0	145
Engineering—Mechanical .....	166	0	166
Engineering—Undecided .....	9	0	9
Professional Chemistry .....	52	4	56
Totals .....	910	49	959

COLLEGE OF AGRICULTURE:	MEN	WOMEN	TOTAL
Class of 1949 .....	24	16	40
Class of 1950 .....	71	23	94
Class of 1951 .....	75	36	111
Class of 1952 .....	100	51	151
Total .....	270	126	396
In-state veterans .....	108	0	108
Out-state veterans .....	40	0	40
Total .....	148	0	148
In-state non-veterans .....	85	81	166
Out-state non-veterans .....	37	45	82
Total .....	122	126	248
In-state (veterans and non-veterans) .....	193	81	274
Out-state (veterans and non-veterans) .....	77	45	122
Total .....	270	126	396

BY CURRICULA:	MEN	WOMEN	TOTAL
Agriculture General .....	193	13	206
Agriculture Engineering .....	31	0	31
Pre-forestry .....	24	0	24
Pre-veterinary .....	22	1	23
Home Economics .....	0	112	112
Total .....	270	126	396

## SCHOOL OF EDUCATION AND NURSING:

	MEN	WOMEN	TOTAL
Class of 1949 .....	31	58	89
Class of 1950 .....	51	57	108
Class of 1951 .....	38	76	114
Class of 1952 .....	34	92	126
Class of 1953 .....	0	9	9
Total .....	154	292	446
In-state veterans .....	83	14	97
Out-state veterans .....	24	13	37
Total .....	107	27	134
In-state non-veterans .....	32	190	222
Out-state non-veterans .....	15	75	90
Total .....	47	265	312
In-state (veterans and non-veterans) .....	115	205	320
Out-state (veterans and non-veterans) .....	39	87	126
Total .....	154	292	446

## BY CURRICULA:

	MEN	WOMEN	TOTAL
Education—Business .....	4	16	20
Education—Elementary .....	0	99	99
Education—Industrial .....	11	0	11
Education—Junior High .....	9	23	32
Education—Music .....	4	17	21
Education—Secondary .....	126	73	199
Nursing—Basic .....	0	31	31
Nursing—Education .....	0	33	33
Total .....	154	292	446

## UNCLASSIFIED DIVISION:

	MEN	WOMEN	TOTAL
Special Students .....	19	18	37
In-state veterans .....	9	1	10
Out-state veterans .....	5	1	6
Total .....	14	2	16
In-state non-veterans .....	3	10	13
Out-state non-veterans .....	2	6	8
Total .....	5	16	21
In-state (veterans and non-veterans) .....	12	11	23
Out-state (veterans and non-veterans) .....	7	7	14
Total .....	19	18	37

## GRADUATE DIVISION:

	MEN	WOMEN	TOTAL
Graduate Students .....	59	23	82
In-state veterans .....	31	1	32
Out-state veterans .....	17	1	18
Total .....	48	2	50
In-state non-veterans .....	5	14	19
Out-state non-veterans .....	6	7	13
Total .....	11	21	32
In-state (veterans and non-veterans) .....	36	15	51
Out-state (veterans and non-veterans) .....	23	8	31
Total .....	59	23	82

## COLLEGE OF MEDICINE:

	MEN	WOMEN	TOTAL
Class of 1949 .....	29	6	35
Class of 1950 .....	29	8	37
Class of 1951 .....	33	4	37
Class of 1952 .....	40	0	40
Total .....	131	18	149
Medical Technology (4th year) .....	0	8	8
GRAND TOTAL .....	131	26	157
In-state veterans .....	55	0	55
Out-state veterans .....	43	1	44
Total .....	98	1	99
In-state non-veterans .....	8	7	15
Out-state non-veterans .....	25	18	43
Total .....	33	25	58
In-state (veterans and non-veterans) .....	63	7	70
Out-state (veterans and non-veterans) .....	68	19	87
Total .....	131	26	157

## SUMMARY OF RESIDENT ENROLLMENT

## FALL SEMESTER, 1948-1949

## THE UNDERGRADUATE COLLEGES:

	MEN	WOMEN	TOTAL
College of Arts & Sciences .....	649	348	997
College of Technology .....	910	49	959
College of Agriculture .....	270	126	396
School of Education and Nursing .....	154	292	446
Unclassified Division .....	19	18	37

Total .....	2002	833	2835
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THE GRADUATE DIVISION .....	59	23	82
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THE COLLEGE OF MEDICINE .....	131	18	149
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Medical Technology (4th Year) .....	0	8	8
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Total .....	2192	882	3074
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## THE UNDERGRADUATE COLLEGES BY CLASSES:

	MEN	WOMEN	TOTAL
Class of 1949 .....	335	170	505
Class of 1950 .....	623	157	780
Class of 1951 .....	488	213	701
Class of 1952 .....	537	266	803
Class of 1953 .....	0	9	9

Total .....	1983	815	2798
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## BREAKDOWN OF UNDERGRADUATES, GRADUATE STUDENTS AND MEDICAL STUDENTS:

	MEN	WOMEN	TOTAL
In-state veterans .....	988	24	1012
Out-state veterans .....	470	22	492

Total veterans .....	1458	46	1504
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In-state non-veterans .....	447	480	927
Out-state non-veterans .....	287	356	643

Total non-veterans .....	734	836	1570
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In-state (veterans and non-veterans) .....	1435	504	1939
Out-state (veterans and non-veterans) .....	757	378	1135

Total .....	2192	882	3074
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In addition to the above regularly enrolled students  
are the following:

	MEN	WOMEN	TOTAL
Refresher Medical Students (veterans) .....	0	0	0
Resident Fellows—Medical (veterans) .....	23	0	23
Resident Fellows—Medical (non-veterans) .....	3	0	3
Pre-clinic Nurses (non-veterans) .....	0	89	89

Total .....	26	89	115
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GRAND TOTAL—FALL SEMESTER 3189

## Degrees Awarded

### COMMENCEMENT — MONDAY, JUNE 21, 1948 SCHOOL OF EDUCATION AND NURSING

#### BACHELORS OF EDUCATION

†Ruth Sargent Ainsworth, Burlington  
Rose Mary Barry, Bellows Falls  
Barbara Joyce Beecher, Bennington  
Marion Ella Belville, *cum laude*, Barre  
Carol Millicent Clark, *magna cum laude*, Glover  
Gladys May Coates, Brandon  
Vivian Sylvia DuBrule, Burlington  
Diana Lolomi Griffis, Vergennes  
Audrey Elizabeth Gutterson, Ryegate  
Nancy Cadoret Jenkins, Burlington  
Patricia Marion Jones, Winchendon, Mass.

Rita Claire Keefe, Barre  
Priscilla Alden Klain, Stelton, N. J.  
†Bernice McKee, Morrisville  
‡Katharine Salome Martin, Hinesburg  
Elizabeth Jean Pierson, *cum laude*, Bradford  
Polly Woodbury Powers, St. Albans  
Phyllis Ann Prescott, Randolph Center  
§Patience Eleanor Rasell, Vergennes  
‡Mary Bernice Sennett, Poultney  
†Patricia Elizabeth Sheffert, Englewood, N. J.

#### BACHELORS OF SCIENCE IN NURSING

Nancy Louise Caswell, Burlington  
Rolande Lea Clouatre, St. Johnsbury  
Ann Therese Davis, Rutland

Barbara Louise Kilborn, Derby  
Evelyn Louise Olsen, Burlington

#### BACHELORS OF SCIENCE IN NURSING EDUCATION

Alta Jean Ferguson, Poultney  
Grace Rowan Fox, Paterson, N. J.  
Dorothy Jeanne Hoag, Burlington  
Jean Eloise Ichter, Burlington  
Mary Beatrice Kohl, Closter, N. J.

Mary Belknap McClelland, Amherst, Mass.  
†Irma Mandelin Olson, Rutland  
§Constance Miriam Pratt, Proctor  
Ruth Helene Reynolds, Alburg  
Joan Margaret Sheehy, Burlington

#### BACHELORS OF SCIENCE IN MUSIC EDUCATION

Deborah Ellen Cobb, Newbury

Alberta Campbell Fisher, New London, N. H.

#### BACHELORS OF SCIENCE IN EDUCATION

Isabel Maria Amor, Montpelier  
Jeanette Blanche Badger, Hardwick  
Richard Reuben Conrad, Morrisville  
Reno Joseph Conti, Barre  
Joyce Eleanor Emery, Burlington  
Clifton Dow Farrand, Hardwick  
Seward Frederick French, Jr., Wells River  
†Perley Joel Griswold, Johnson  
Jeanne Laura Howland, Brandon  
Margaret Waterman Hoyt, St. Albans  
Carolyn Elizabeth Kelley, Wallingford  
§Richard Hartt Marsh, Rockland, Me.

†June Meadows Peterson, Binghamton, N. Y.  
Robert Ellsworth Pratt, Swanton  
Margaret Mary Ryan, Fairfield  
‡Wendell James Ryan, Manchester, Conn.  
‡Cecil James Shapland, St. Albans  
Dennison Warren Shepardson, Fairfax  
†Arthur Edward Spaulding, Burlington  
Ernest Raymond Stockwell, Hartford  
Ida Mae Towne, Morrisville  
Phebe-Jane Wescott, Franklin  
David Bayley Wheeler, Morrisville  
Nelson Williams, Poultney

## COLLEGE OF AGRICULTURE

## BACHELORS OF SCIENCE IN AGRICULTURE

Everett Bertrand Andrews, Richmond	Martin Fitzgerald Garey, St. Albans
Henry Vernon Atherton, <i>cum laude</i> , Barton	Richard Francis Gowdey, Montpelier
Carroll Thomas Berry, Burlington	Gilbert Harold Parker, E. Wallingford
Dale Merton Conley, Windsor	*Edward Joseph Tadejewski, Trenton, N. J.
§Malcolm Niven Dana, N. Pomfret	Fred Clarence Webster, <i>cum laude</i> Randolph
Ruth Joan Esser, Washington, D. C.	Cynthia Wriston, Highgate Springs

## BACHELORS OF SCIENCE IN HOME ECONOMICS

Helen Elizabeth Boyd, Woodbury, Conn.	Barbara Brooks Hutchins, Union, Me.
Laura Mae Byington, Charlotte	*Lorraine Alberta Jaques, Huntington
Nancy Lee Church, Westfield, N. J.	Barbara Jean Newlander, Burlington
Mary Jean Cook, Burlington	Blanche Lena Parker, Norwich
Florence Lola Davis, Hardwick	Elaine Hattie Plumley, Bethel
Dorothy Mildred Dexter, Pearl River, N. Y.	Barbara Parrott Prior, Essex Junction
Ruth Margaret Erwin, Burlington	Gwendolyn Muriel Richardson, Montreal, P. Q., Can.
Inez Elizabeth Farrow, Groton	Aileen Nichols Smith, Averill Park, N. Y.
Leona Marie Farrow, Groton	Irene Frances Socinski, W. Rutland
Mary Elizabeth Hageman, Verona, N. J.	Ann Harley Tuttle, New Rochelle, N. Y.
Jaqueline Jeanne Hardgrove, Amityville, N. Y.	Catherine Lillian Wells, Jamaica, N. Y.
Florence Mueller Howes, Great Neck, L. I., N. Y.	*Betty Mae Whitney, Stamford

## COLLEGE OF TECHNOLOGY

## BACHELOR OF SCIENCE IN CHEMISTRY

John Clarence Wriston, Jr., Highgate Springs

## BACHELORS OF SCIENCE IN COMMERCE AND ECONOMICS

Edwin Harmon Blakely, Essex Junction	Harriet Lenore Levenson, Stamford, Conn.
Arthur Wilfred Camire, Barre	Bernard R. Lippman, Plainfield, N. J.
Torrey Case Carpenter, Burlington	*Frank Howard Livak, Rutland
Thomas Paul Clairmont, Burlington	John Walter McHugo, Barre
George Peter Cunavelis, St. Johnsbury	Donald Marburg, Montclair, N. J.
Mary Margaret Downey, Nashua, N. H.	Bruce Arden Milligan, Windsor
Harris Kenneth Drury, Jr., Essex Junction	Claire Rosemary Muldoon, <i>cum laude</i> , St. Albans
Albert Simpson Frank, Burlington	Harriet Dean Pearl, Burlington
Rodney Gordon Galbraith, Enfield, N. H.	John Albert Schwenker, Oradell, N. J.
Claire Shirley Glass, Burlington	Arthur Carl Sikora, Burlington
Irving D. Greene, Ellenville, N. Y.	Gwendolyn Mary Stiles, Burlington
Marion June Grody, W. Hartford, Conn.	§Karl Whitman Switzer, Jr., Waban, Mass.
George Harold Henderson, Pittsfield, Mass.	Saturnina Helena Szabolinski, Springfield
Philip Harold Hersey, Burlington	*Robert Stewart Warsaw, Allentown, Pa.
Glennon Benjamin Hill, Great Neck, L. I., N. Y.	Alan Cruett Weess, Hanover, Mass.
Robert Neal Hunziker, Stratford, Conn.	Nancy Dorman Weess, Delmar, N. Y.
Stanley Lionel Kaufman, Burlington	Mildred Norrie Williams, Barre

**BACHELORS OF SCIENCE IN CIVIL ENGINEERING**

- ‡Leroy Harrison Danyow, Jr., Enosburg Falls      Leo Bernard Spear, Essex Junction  
 Stearns Raymond Jenkins, Burlington      George Clifton Stanley, Jr., Burlington

**BACHELORS OF SCIENCE IN ELECTRICAL ENGINEERING**

- ‡Frederick Atwood Bosworth, Middlebury      George Besett Ruble, *cum laude*, Burlington  
 ‡Willard Hiram Buttles, Burlington      †Robert William Soule, Burlington  
 ‡Lewis Richard Fisher, Hardwick      \*Charles Mair Thomson, Jr., Ancram,  
 \*Norman John O'Grady, Essex Junction      N. Y.

**BACHELORS OF SCIENCE IN MECHANICAL ENGINEERING**

- §Lawrence Atwood Ambrose, Woodstock      §Frank Ward Hendee, Burlington  
 Richard Raymond Audette, St. Albans      Wilfred Guy Hill, Woodstock  
 §Charles Edgar Banghart, Burlington      Gardner Hopwood, Middletown Springs  
 Maurice Beliveau, Vergennes      ‡Robert Arthur Humphrey, Needham,  
 Ernest Eugene Benway, Burlington      Mass.  
 §Walter Gould Brown, W. Wardsboro      ‡John Leo Kotuby, Rutland  
 §John Wilbur Carter, Burlington      Leland Stanford Marshall, Burlington  
 §Gordon Sullivan Cochran, Quincy, Mass.      Ruth Wyeth Millington, Burlington  
 ‡Marcelino Diez, Barre      Harold Thomas O'Grady, Essex Junction  
 \*John Bard Durfee, Bethel      Martin Benjamin Paulsen, Danville  
 Howard Warner Edminster, Poultney      Carleton Whittimore Sprague, E. Middle-  
 §Roswell Farnham, Jr., Buffalo, N. Y.      bury  
 Stanley Harold Goldman, Brooklyn, N. Y.      Norman Herbert Sundby, Philadelphia, Pa.  
 \*John Winston Goodrich, Montpelier

**COLLEGE OF ARTS AND SCIENCES****BACHELORS OF ART**

- Betsey Cutler Alexander, St. Albans      Stanton Howard Bryden, Vineyard Haven,  
 Elizabeth Louise Allen, Mineola, N. Y.      Mass.  
 Alice McGill Annand, Darien, Conn.      Anne Veronica Burnham, Waterbury  
 ‡Harold Rodney Archambault, Ft. Ann,      Benjamin Bursten, Stamford, Conn.  
 N. Y.      Lucienne Virginia Cadorette, Barre  
 Charles John Arliss, Newark, N. J.      Helen Elizabeth Cayey, Burlington  
 Vincent John Astone, Beacon, N. Y.      Barbara Ann Clark, Burlington  
 Marjory Ellen Bagby, Concord, N. H.      ‡Paul William Carey, Ludlow  
 Elizabeth Helen Barber, Patchogue, L. L.      Dorothy Clark, E. Dover  
 N. Y.      Marjorie Flora Clark, Barre  
 John DeForest Barker, Jr., St. Albans      Loretta Amelia Coletti, Barre  
 Joan Grace Barrett, Burlington      Freda Lucille Corwin, S. Royalton  
 Theodore Evander Battles, Millington,      Jean Davis, Northfield  
 N. J.      \*Llewella Belle Day, W. Rutland  
 Barbara Beattie, Silver Bay, N. Y.      Mary Louise Delano, Shoreham  
 Irwin William Becker, Burlington      Marilyn Elizabeth Derrick, W. Hartford,  
 \*Beatrice Bickford, Grafton, Mass.      Conn.  
 Audrey Irene Bidwell, Wells River      Richard Herbert Dolloff, Peabody, Mass.  
 Joyce Emma Bingham, St. Albans      ‡Robert Ehrenbard, New York, N. Y.  
 Rosemary Bristol, Montpelier      Ruby Mary Ellsworth, *cum laude*, Lyn-  
 Marilyn Edith Brower, Keyport, N. J.      donville



- Richard McNair Evans, Burlington  
 Audrey Joyce Farnsworth, Barton  
 June Elizabeth Felix, Plainfield  
 Leona Cora Felix, *cum laude*, Brooklyn  
 Renee Wilma Finberg, Brooklyn, N. Y.  
 Mary Jane Fleming, Stroudsburg, Pa.  
 Iloene Flower, Hartland Four Corners  
 Richard Harold Flynn, N. Adams, Mass.  
 Sybil Bryant Gardner, Patchogue, L. I., N. Y.  
 Theresa Guzowski Gay, Florence, Mass.  
 Joanne Louise Goulart, New Bedford, Mass.  
 Beverley Grier, Birmingham, Mich.  
 Sarah Andrews Hackett, Gloucester, Mass.  
 Ruth Arnold Haigh, Burlington  
 Beverly Mina Hall, Burlington  
 Virginia Lou Hamel, S. Ryegate  
 David Sumner Harlow, S. Royalton  
 Richard Davis Harper, Albany, N. Y.  
 Walter Harold Hayes, Jr., Rutland  
 Roslyn Hecker, Springfield, Mass.  
 William Edward Hogan, Woburn, Mass.  
 Doris Leigh Holmberg, New Rochelle, N. Y.  
 Joanne Howard, Williamsville, N. Y.  
 Robert Jacob Hunziker, Poultney  
 Julia Lucy Hurley, *magna cum laude*, Spring Valley, N. Y.  
 Eleanor Hurwitz, Chelsea, Mass.  
 Audrey Jean Hutchins, Malone, N. Y.  
 Joan Bosworth Jackson, Bristol  
 Mary Harriet Joslyn, Orleans  
 \*Mary Elizabeth Kuruc, Bridgeport, Conn.  
 John Vincent Labate, Poultney  
 Margaret Beryle Larrabee, *summa cum laude*, Hardwick  
 Christobel Elaine Latham, Milton  
 Marie Elizabeth Lawlor, Burlington  
 Marilyn Alice Leathers, *cum laude*, Nashua, N. H.  
 Betty-Rose Levy, New York, N. Y.  
 Frank Laurence Ligenzowski, Passaic, N. J.  
 Doris Christie Macdonald, Barre  
 Alice May McNamara, Springfield, Mass.  
 Barbara Therese Magee, Sagaponack, L. I., N. Y.  
 Joyce Mildred Marx, Burlington  
 §Richard Sheldon Merriam, Rochester  
 Clare Upson Mickler, Jackson Heights, N. Y.  
 Audrey Ellen Miller, Burlington  
 Marilyn Mills, W. Hartford, Conn.  
 Roy Ohno, N. Branford, Conn.  
 Alex Ryan Page, Cleveland Heights, O.  
 Guy Milton Page, Jr., *cum laude*, Burlington  
 Phyllis Woodbury Page, Burlington  
 ‡Grace Brewster Parks, S. Burlington  
 Paul Pascal, *cum laude*, Brooklyn, N. Y.  
 Millis Priscilla Patton, Washington, D. C.  
 Leonard Paul, Hamden, Conn.  
 \*Marie Therese Perron, Holyoke, Mass.  
 Eschol Gladys Pixley, S. Strafford  
 \*Kenneth Francis Prendergast, Valley Stream, N. Y.  
 Paul Allan Prior, St. Albans  
 Karl Heinz Puechl, S. Londonderry  
 Lita Rappaport, Mt. Vernon, N. Y.  
 John Francis Reagan, Jr., Medford, Mass.  
 Jane Wolcott Robbins, Schenectady, N. Y.  
 Philip Edwin Robinson, Burlington  
 Kathleen Grace Rosoff, Morristown, N. J.  
 Margaret Anne Rowell, Newport  
 Dorothy Fisher Scott, Birmingham, Mich.  
 §William Wallace Scott, Barton  
 Martha Churchill Shaw, Verona, N. J.  
 Sydell Rose Sherman, Brooklyn, N. Y.  
 Louise Isabel Shopis, Nichols, Conn.  
 Barbara Smith, Westfield, N. J.  
 Mary Ann Smith, Hackettstown, N. J.  
 Robert Raymond Smith, Springfield  
 Jeannette Elizabeth Sorn, Bala-Cynwyd, Pa.  
 Jean Margaret Spalding, Wethersfield, Conn.  
 John Peter Stacy, Charlotte  
 Alison Celia Stead, Burlington  
 Edward William Steele, Jr., Burlington  
 Janet Heath Steenburn, *cum laude*, South-bridge, Mass.  
 Wendell Anthony Stimets, Highgate Center  
 Patricia Elaine Tatro, Worcester, Mass.  
 Barbara Mildred Tucker, Melrose, Mass.  
 Margaret Van Arsdale, Ozone Park, New York, N. Y.  
 Carolyn Verber, Forest Hills, N. Y.  
 Edris Rose Verrall, Saco, Me.  
 Concetta Nancy Virgona, Beacon, N. Y.  
 Frances Ruth Watson, S. Barre  
 Myra Joyce Weinberg, Springfield, Mass.  
 Katharine Joan Westwood, Elmira, N. Y.  
 Robert Bradley Winship, Wells River  
 Rudolph Orville Woodcock, Plainfield  
 Mary Elizabeth Young, Rutland  
 \*Alexander Zucker, *cum laude*, New York, N. Y.

## BACHELORS OF SCIENCE

Lawrence Bernard Ahrens, *cum laude*,  
 Burlington  
 Anthony Moymore Alberico, Burlington  
 Deal Tabor Aseltine, Essex Junction  
 Frank Lewis Bartlett, Burlington  
 James Paul Burke, Barre  
 Arnold Herbert Colodny, *magna cum laude*, Burlington  
 Howard David Frank, *magna cum laude*,  
 Burlington  
 \*Arthur Emanuel Gillman, Woodmere,  
 N. Y.  
 Fred Arthur Harrington, Rutland

Philip James Hincks, Middlebury  
 Edward William Jenkins, Burlington  
 John Clifford Lantman, Hinesburg  
 \*Julian Levine, Burlington  
 Murdo Glenn MacDonald, S. Ryegate  
 Thomas Maxwell McGarry, Rutland  
 Harley Grupe Shepard, S. Burlington  
 Robert Kirk Ward, *cum laude*, St. Albans  
 Seymour Paul Weissman, Budd Lake, N. J.  
 Edward Kenneth Welch, Winooski  
 John Selig Winston, *magna cum laude*,  
 Forest Hills, N. Y.

## BACHELORS OF SCIENCE IN MEDICAL TECHNOLOGY

\*Mary Evelyn Breen, Waterbury  
 \*Doris Isabelle Dwyer, Bristol

\*Dorothy Ella French, Loudonville, N. Y.  
 \*Jean Margaret Ryan, Brattleboro

## ADVANCED DEGREES

## MASTERS OF EDUCATION

\*John Edward Akey, PH.B. IN ENG., St.  
 Michael's College, 1940  
 \*Roy Edward Alberghini, B.S. IN ED., Uni-  
 versity of Vermont, 1943  
 Gladys Muriel Bayer, A.B., University of  
 Michigan, 1946  
 \*Ernest Conrad Leonard Bratt, Jr., A.B.,  
 Bowdoin College, 1939  
 Edward Joseph Coughlin, A.B., University  
 of Vermont, 1947  
 §Edward Joseph Curran, Jr., B.ED., Castle-  
 ton Normal School, 1944  
 \*Robert Powers Davison, B.S., University  
 of Vermont, 1935  
 \*David Tyler Goodell, A.B., Middlebury  
 College, 1940  
 \*Wilfred Thomason Grenfell, Jr., B.A.,  
 M.A., Oxford University, England  
 \*Alice Hastings Howe, B.E., University of  
 Vermont, 1942  
 \*Cora Alice Hutchins, B.S. IN ED., Univer-  
 sity of Vermont, 1931  
 Elinor Elizabeth Kimball, B.S. IN ED., Uni-  
 versity of Vermont, 1943

\*Richard Foster Kipp, B.S., University of  
 Vermont, 1942  
 Joseph Charles McCormack, B.ED., Castle-  
 ton Normal School, 1944  
 \*Elizabeth Mary McDonald, B.A., College of  
 New Rochelle, 1942  
 Donald Chester Pierce, B.S., University of  
 Vermont, 1931  
 Carroll Milton Pike, Jr., A.B., Middlebury  
 College, 1947  
 \*Ernest Benjamin Rand, B.S. IN ED., Uni-  
 versity of Vermont, 1931  
 \*Holland Lincoln Smith, A.B., Colgate Uni-  
 versity, 1928  
 \*Marion Louise Towle, B.ED., University of  
 Vermont, 1937  
 Howard Everett Wallbridge, B.ED., Lyndon  
 State Teachers' College, 1947  
 \*Andrew Chester Werner, B.S. IN ED., Uni-  
 versity of Vermont, 1936  
 \*Thomas Holman White, A.B., Pennsylvania  
 State College, 1936

## MASTERS OF ARTS

### ECONOMICS

- \*Thomas Patrick Bergin, B.S. in Commerce, Notre Dame University, 1945  
*Thesis:* Experiment in National Economy: The Corporate State of Salazar
- §Leonard Harrington, B.A., University of Vermont, 1943  
*Thesis:* A Suggested Foreign Economic Policy for the United States

### ENGLISH

- John Henry Sutor, PH.B., University of Vermont, 1938  
*Thesis:* Social Criticism in the Novels of Herman Melville

### HISTORY

- \*Carl Winfield Hathaway, B.S., University of Vermont, 1937  
*Thesis:* A History of the Slate Industry of The Vermont-New York District

### MATHEMATICS

- Helen Alvord Beardslee, A.B., Middlebury College, 1944  
*Thesis:* A Relationship between the Limits and the Bounds of Functions

### MUSIC

- William Taylor Lane, A.B., University of Vermont, 1947  
*Thesis:* The Contrapuntal Style of Bach's Two-Part Compositions for Clavier

### POLITICAL SCIENCE

- William Frederick Vassar, PH.B., University of Vermont, 1940  
*Thesis:* Ministerial Functions of a Town Clerk

## MASTERS OF SCIENCE

### AGRICULTURAL ECONOMICS

- \*Verle Randall Houghaboom, B.S., University of Vermont, 1947  
*Thesis:* Ten Years of Dairy Farming in Cabot and Marshfield, Vermont
- Raymond Herman Tremblay, B.S., University of Vermont, 1947  
*Thesis:* Cost of Producing Milk in Vermont, 1945-1946

### CHEMISTRY

- Clinton Dana Cook, Jr., B.S. in Chem., Massachusetts Institute of Technology, 1942  
*Thesis:* Experiments on Some Organic Compounds of Nitrogen
- Romuald Gerard Lesage, A.B., St. Michael's College, 1937  
*Thesis:* The Preparation of Some New Polysubstituted Guanidines of Possible Industrial Significance from the 2-Aminopicolines
- Charles Merritt, Jr., A.B., Dartmouth College, 1941  
*Thesis:* Some Meso Derivatives of Anthracene
- Joseph Edward Rousseau, B.S. in Chem., St. Michael's College, 1941  
*Thesis:* Guanido Amino Acids Containing the Peptide Linkage

## ZOOLOGY

Velma Anna Cochran, P.H.B. in Ed., University of Vermont, 1927

*Thesis:* Some Relationships among Mammals as Determined by Precipitin Technique Employing the Photronreflectometer

Mary Dennen Hartung, A.B., Radcliffe College, 1943

*Thesis:* Photronreflectometer Studies of Mammals Using Anti-Rodent Sera Produced in Chickens

## THE COLLEGE OF MEDICINE

## DOCTORS OF MEDICINE

Edwin Brown Adams, B.S., M.S., Burlington

Arthur Joseph Barker, Somerville, Mass.

Seymour James Baum, A.B., Bridgeport, Conn.

Alexander Eli Bayer, B.S., New Britain, Conn.

John Douglas Boardman, B.A., Burlington

Shirley Rose Boulanger, B.S., M.S., Hanson, Mass.

Heath Douglas Bourdon, Claremont, N. H.

Edward Stillman Bundy, A.B., Southington, Conn.

Wallace Frederick Buttrick, A.B., Burlington

Eugene Robert Chisholm, A.B., Montpelier

Winston Earle Cochran, B.S., *cum laude*, Morrisville

Cleveland Ray Denton, B.S., *cum laude*, Burlington

Herbert Ashley Durfee, Jr., B.S., Burlington

Karl Wayne Erwin, B.S., Burlington

William Thomas Fagan, Jr., B.S., Rutland

Stanley Samuel Fieber, B.S., Brooklyn, N. Y.

Leo Paul Giardi, B.S., Hartford, Conn.

Julian John Goodman, B.S., Boston, Mass.

Paul Edward Griffin, Herkimer, N. Y.

Don Allen Guinan, B.A., Northampton, Mass.

Anne Weld Hebblethwaite, B.A., Burlington

\* Degree voted October 18, 1947.

† Degree voted November 22, 1947.

‡ Degree voted February 21, 1948.

§ Degree voted April 17, 1948.

Raymond Dyer Higgins, Jr., B.A., Dennyville, Me.

Lloyd Malcolm Horlick, B.S., Everett, Mass.

Roderick Julius Humphreys, B.S., Bennington

Edwin Francis Jones, Oakland, Calif.

Milton Reuben Kaufman, A.B., Mountindale, N. Y.

Cecil Harry Kimball, Burlington

James Andrew Long, A.B., Brandon

Donald Jude MacPherson, Lynn, Mass.

Michael G. Marra, B.S., *cum laude*, Burlington

Edwin David Meyers, B.S., Manchester Depot

John Robert Morris, Youngstown, O.

Edward Brian Nolan, Newton Highland, Mass.

Malcolm Jack Paulsen, B.S., Danville

George Lewis Saiger, B.S., Burlington

Paul Leonard Schoenberg, A.B., *cum laude*, New York, N. Y.

James William Tierney, B.S., Norwalk, Conn.

William Loren West, B.S., Shelton, Conn.

Royce Ernest Whittier, B.S., Concord, N. H.

Thomas Wyckoff Williams, B.S., *cum laude*, N. Sutton, N. H.

Betty May Young, B.S., Baltimore, Md.

## DEGREES HONORIS CAUSA

### MASTER OF ARTS

Stella M. Brooks, B.A.

### DOCTOR OF LAWS

Emil Schram

### DOCTOR OF SCIENCE

Frank Ober, M.D.

## SPECIAL HONORS

### PSYCHOLOGY

Ben Bursten

*Thesis:* Shrinkage in the Perception of the Real Movement of an Illuminated Arc

### COMMISSIONS OF SECOND LIEUTENANT IN THE OFFICERS RESERVE CORPS, ARMY OF THE UNITED STATES

DAVID BAYLEY WHEELER '48, Infantry

*Awarded June 11, 1948:*

ROBERT BEHRENS CONDON '50, Infantry

JOHN GRANT JOSEPH GILMORE, Jr. '49,  
Infantry

WINSTON RICHMOND JACOBS '49, Infantry

GLENHAM JONES, JR. '50, Cavalry

HAROLD LEROY LONEY '50, Cavalry

LUTON RAYMOND REED '49, Infantry

## PRIZES

### THE GEORGE H. WALKER DAIRY PRIZE

*For Conspicuous Merit in Dairy Husbandry  
Studies and Character*

Henry Vernon Atherton '48

### THE SEYMOUR HORTICULTURAL PRIZE

*For the best work in Original Horticultural  
Research by a Member of the Senior Class*

Malcolm Niven Dana '48

### THE ELWIN L. INGALLS 4-H PRIZE

*In Honor of Elwin L. Ingalls, for Out-  
standing Merit in 4-H Club Work, Char-  
acter, and Scholarship*

Leona Marie Farrow '48

### THE GERMAN LITERARY PRIZE

*Awarded by the Goethe Lodge of Burling-  
ton for General Excellence in German*

Robert Andrew Russell '49

THE KIRBY FLOWER SMITH LATIN  
PRIZE

Carolyn May Cross '51

THE EDWARD PAGE BUTLER  
DEBATING PRIZES

*Awarded for Proficiency in Debate*

*First:* Phyllis Woodbury Page '48

*Second:* Morris Joseph Levin '50

*Third:* Edward Joseph Costello '51

THE ROBERT ASHTON LAWRENCE  
DEBATING PRIZES

*Awarded for Proficiency in Debate*

*First:* John Bacon Harrington '49

*Second:* Guy Milton Page, Jr., '48

*Third:* Thomas Lawlor Hayes '50

THE ROBERT ASHTON LAWRENCE  
AND GEORGE EDWIN LAWRENCE  
DEBATING PRIZES

*Awarded for Proficiency in Debate*

*First:* Leona Cora Felix '48

*Third:* Barbara Ann Clark '48

THE HANNAH G. SOLOMON PRIZE

*Awarded by the Burlington Section of the National Council of Jewish Women to the Senior Woman who has Exhibited in the Highest Degree the Qualities of Scholarship, Leadership, and Service*

Marilyn Elizabeth Derrick '48

THE A. ATWATER KENT PRIZE

*Given in Electrical Engineering for Progress in Judgment, Development of Personality and Promise of Success*

Clarence Frederic Burke '48

THE FRED T. KIDDER MEDAL

*Awarded for Character, Leadership, and Scholarship*

Robert Raymond Smith '48

THE WASSON ATHLETIC PRIZE

*In memory of Dr. Watson L. Wasson '01 for Scholarship and Athletic Attainment*

Richard McNair Evans '48

THE ATHLETIC COUNCIL  
MANAGERIAL PRIZE

*Awarded to that Major Sport Manager Deemed Most Proficient*

Alan Cruett Weess '48

CARBEE MEDICAL PRIZE

*To the Student in the College of Medicine who Shows the Greatest Proficiency in the Subject of Obstetrics*

Michael G. Marra, B.S.

WOODBURY PRIZES IN MEDICINE

*For the Greatest Proficiency in Clinical Work in Senior Year*

Winston Earle Cochran, B.S.

*To the Sophomore Having the Highest Standing for Two Years of Medical Work*

Elizabeth Fannie Drake, B.S.

NU SIGMA NU MERIT AWARD

*To the Outstanding Student in the Junior Class of the Medical College*

Richard Emile Bouchard

EMERSON PRIZE IN HISTORY

*In memory of Professor Samuel Franklin Emerson*

George Raymond Pynn '48

CONVERSE PRIZE IN COMMERCE  
AND ECONOMICS

John Peter Stacy '48

EDMUND F. LITTLE CUP

*Awarded for Excellence in Mechanic Arts*

Leland Stanford Marshall '48

# The Alumni Council

This organization was formed May 1, 1920.

The object of the Council is to advance the interest, influence, and efficiency of the University of Vermont; to strengthen the relations between the alumni and the University; to encourage sufficient class organization; to keep the public informed in regard to the University; to keep before the various preparatory schools of the country the advantages of the University of Vermont as an educational institution; to aid and assist in the establishment of alumni associations and promote their interests; to report from time to time to the Board of Trustees of the University any facts and recommendations by the Council deemed material or for the interests of the University; to act as a medium that may make known the ideas of the alumni to the University, and wishes of the University to the alumni; to keep in touch with the undergraduate activities, and to act in an advisory capacity through the Executive Committee and office of Alumni Council to such of the undergraduates as may desire to consult it in reference to their occupations after graduation, and for that purpose to keep in as close a touch as possible with the demands of the country's professional, business and industrial needs.

The Alumni Council is composed of one member from each of the fifty classes last graduated, one member from each active alumni club and twenty members at large, one-half of such members at large being women.

PRESIDENT—Frederick S. Harris, '22, 29 Colony St., Meriden, Conn.

SECRETARY—Isabelle Y. Gallup, 530 North St., Burlington, Vt.

ALUMNI OFFICE—Waterman Building, Burlington, Vt.

HONORARY MEMBERS—President John S. Millis, Dr. Clarence H. Beecher, Proctor H. Page.

Chairman of Finance Committee, Wm. H. Lockwood, '27, 273 S. Prospect St., Burlington, Vt.

Chairman of Publicity and Athletic Council, Lawrence F. Killick, '22, 10 Greene St., Burlington, Vt.

Chairman of Commencement, Olney W. Hill, '26, 539 St. Paul St., Burlington, Vt.

Chairman of Undergraduate Activities, Lyman S. Rowell, '25, 38 Cliff St., Burlington, Vt.

Athletic Council: Lawrence F. Killick, '22; John W. Goss, '10; Loren F. Palmer, '29; Robert P. Lawton, '37.

## CLASS REPRESENTATIVES

- 1899 Carl B. Brownell, 70 Robinson Pkwy., Burlington, Vt.  
1900 Henry B. Oatley, 33 Arleigh Rd., Great Neck, N. Y.  
1901 Samuel S. Dennis, 129 Corey Ave., West Roxbury, Mass.  
1902 Harry P. Hudson, 1128 Longmount Ave., San Gabriel, Calif.  
1903 Harold J. Adams, 705 Walbridge Bldg., Buffalo, N. Y.  
1904 Elmer E. Gove, Shelburne Rd., Burlington, Vt.  
1905 Kathryn M. Coventry, 312 So. Winooski Ave., Burlington, Vt.  
1906 Dr. Sidney Mitchell, 71 Court St., Plattsburg, N. Y.  
1907 Martin Hervev Rice, 77 Ledge Rd., Burlington, Vt.  
1908 William L. Blanchard, 89 Walton Park, Melrose Highlands, Mass.  
1909 William L. Gardner, 17 Overlake Park, Burlington, Vt.  
1910 Albert Valentine Kieslich, 167 North Ave., Burlington, Vt.  
1911 Dr. Robert Leland Maynard, 289 College St., Burlington, Vt.  
1912 Albert L. Gutterson, 49 Cherry Hill, Springfield, Vt.  
1913 Charles P. Smith, Jr., Appletree Point, Burlington, Vt.  
1914 Harold F. Johnson, 60 Hopkins Pl., Longmeadow, Mass.  
1915 Louis F. Dow, 155 Cliff St., Burlington, Vt.  
1916 Morris R. Wilcox, 152 Lyman Ave., Burlington, Vt.  
1917 Henry T. Way, Porter Screen Co., Winooski, Vt.  
1918 George C. Stanley, 86 Loomis St., Burlington, Vt.  
1919 Herbert D. Pearl, 154 Summit St., Burlington, Vt.  
1920 Mrs. Elizabeth Howe Putney, 409 So. Union St., Burlington, Vt.  
1921 Mrs. Ruth Harrington Lane, 47 Hillcrest Rd., Burlington, Vt.  
1922 Lawrence F. Killick, 10 Greene St., Burlington, Vt.  
1923 Wesley W. Smith, Jr., Middlebury, Vt.  
1924 Richard D. Aplin, 121 Winslow Rd., Waban, Mass.  
1925 Thomas D. Cook, 101 Robinson Parkway, Burlington, Vt.  
1926 Olney W. Hill, 539 St. Paul St., Burlington, Vt.  
1927 Charles B. Finnegan, 213 Shelburne Rd., Burlington, Vt.  
1928 Kenneth H. Gurney, 50 Hillcrest Rd., Burlington, Vt.  
1929 Constans M. Holden, 257 So. Union St., Burlington, Vt.  
1930 Mrs. Julia Waterman Jay, 441 So. Union St., Burlington, Vt.  
1931 John A. Bradish, Williston, Vt.  
1932 James W. Marvin, South Burlington, Vt.  
1933 James E. Bigelow, Bellows Falls, Vt.  
1934 Donald J. Tobin, 910 Highland Ave., Bellefonte, Wilmington, Del.  
1935 Donald C. Gregg, Shelburne, Vt.  
1936 Mrs. Mary Whitney Rowe, Wells River, Vt.  
1937 Donald H. Tetzlaff, 30 Park St., Barre, Vt.  
1938 Albert C. Spaulding, III, East O'Lake, Burlington, Vt.



- 1939 Mrs. Martha Douglass Peterson, 20 Bilodeau Ct., Burlington, Vt.
- 1940 Mary C. Nelson, Dana Hall, Wellesley, Mass.
- 1941 Mrs. Dorothea Smith Hanna, Appletree Point, Burlington, Vt.
- 1942 William P. Leamy, 91 Mansfield Ave., Burlington, Vt.
- 1943 Paul N. Sutton, 140 Summit St., Burlington, Vt.
- 1944 Elizabeth A. White, Pittsford, Vt.
- 1945 Mrs. Harriet Pearl Grant, 156 Summit St., Burlington, Vt.
- 1946 Frances M. Witham, Apt. 2, 4846 No. Knight St., Arlington, Va.
- 1947 Keith W. Calkins, 198 Gilbert Ave., Winsted, Conn.
- 1948 Philip E. Robinson, 59 No. Prospect St., Burlington, Vt.

### MEMBERS-AT-LARGE

#### *Term Expires 1949*

- Willis R. Buck, '19, 414 Colchester Ave., Burlington, Vt.
- Raymond E. Holway, '25, 311 Gryphon Bldg., Rutland, Vt.
- Mrs. Eleanor Lockwood Nowlin, '28, 242 So. Winooski Ave., Burlington, Vt.
- Frederick W. Shepardson, '12, 101 Ledge Rd., Burlington, Vt.

#### *Term Expires 1950*

- David W. Howe, '14, 385 So. Prospect St., Burlington, Vt.
- J. Hervey Macomber, Jr., '24, 94 Church St., Burlington, Vt.
- Philip J. Ross, '95, Manhattan Life Bldg., 120 West 57th St., New York City.
- Mary Jean Simpson, '15, 61 No. Prospect St., Burlington, Vt.

#### *Term Expires 1951*

- Mrs. Gwynneth Jones Aiken, '37, 44 University Terr., Burlington, Vt.
- Thomas J. Mulcare, '09, 414 Mt. Auburn St., Cambridge, Mass.
- Mrs. Carolyn Chamberlain Briggs, '18, 82 Overlake Pk., Burlington, Vt.
- Fred B. Wright, '05, 195 Broadway, New York City.

#### *Term Expires 1952*

- Leon W. Dean, '15, 308 So. Prospect St., Burlington, Vt.
- H. Marian Way, '23, 115 Summit St., Burlington, Vt.
- Jerome H. Farwell, '33, 370 Maple St., Burlington, Vt.
- James R. Jennings, 56 No. Winooski Ave., Burlington, Vt.

#### *Term Expires 1953*

- Dr. W. Andrew R. Chapin, 40 Riverview Terr., Springfield 8, Mass.
- John W. Goss, 77 Ledge Rd., Burlington, Vt.
- Rev. Robert F. Joyce, St. Peter's Church, Rutland, Vt.
- Lyman S. Rowell, 38 Cliff St., Burlington, Vt.

## CLUB REPRESENTATIVES

*Out-of-State*

Boston, Mass.—Henry Semans, '24, 227 Callendar St., Dorchester, Mass.  
Buffalo (Western N. Y.)—Chas. F. Blair, '99, 810 White Bldg., Buffalo, N. Y.

California—Mrs. Blanche Montgomery Corley, '17, 501 North Citrus Ave., Los Angeles, Calif.

Chicago, Ill.—Harold C. Carter, '25, 242 Columbia Ave., Park Ridge, Ill.

Cleveland, Ohio—Earle W. Brailey, '14, 19201 So. Moreland Blvd., USSN Sta., Cleveland 22, Ohio.

Detroit, Mich.—Edward D. Trowbridge, '26, 722 Notre Dame, Grosse Point 30, Mich.

Hartford, Conn., Alumnae—Mrs. Lucy Eaton Ellis, 263 Brimfield St., Wethersfield, Conn.

Hartford, Conn., Alumni—Jas. H. Naylor, Jr., '37, Ellington, Conn.

Hampshire County, Mass.—James P. Reed, '10, 125 Russell St., Hadley, Mass.

New York Alumni—George L. Best, '21, 20 Orrandale Rd., Rockville Ctr., L. I., N. Y.

New York Medical Alumni—Dr. Allen M. Margold, '25, 148 East Ave., So. Norwalk, Conn.

Philadelphia, Pa.—Benjamin F. Butterfield, '24, 17 Ellis Rd., Upper Darby, Pa.

Pittsburgh, Pa.—Harold E. Hazen, '24, 435 Avenue D, Pittsburgh 21, Pa.

Rochester, N. Y.—Arthur B. Corey, 155 Summit Dr., Rochester, N. Y.

Springfield, Mass.—Raymond G. Kinsler, 317 Wwight St., Springfield, Mass.

Washington, D. C.—William Stuart, 411 Aspen St., Tacoma Park, D. C.

Worcester, Mass.—G. Stanley Flagg, '32, 4 Robert Ave., Auburn, Mass.

*Vermont*

Addison County—Arthur B. Delano, '11, Shoreham, Vt.

Burlington Alumni—Lemuel J. Peet, '28, 14 Brewer Pkwy., Burlington, Vt.

Burlington Alumnae—Mary O. Boynton, '94, 31 So. Prospect St., Burlington, Vt.

U. V. M. Medical—Dr. Peter P. Lawlor, '20, 65 Pine St., Burlington, Vt.

Caledonia County—James B. Campbell, '09, 15 Summer St., St. Johnsbury, Vt.

Bennington County—Walter C. Wood, '16, 317 Washington Ave., Bennington, Vt.

Franklin and Grand Isle Counties—Robert W. Ready, '24, Franklin Co. Savings Bank Bldg., St. Albans, Vt.

Lamoille County—Mrs. Priscilla S. Davison, '23, Morrisville, Vt.

Orleans and Essex Counties—Roger D. Whitcomb, '38, P. O. Bldg., Newport, Vt.

Rutland County—Chester B. Eaton, '34, 141 Ash St., Rutland, Vt.

Springfield—Dr. Paul C. T. Bacon, '33, 108 Summer St., Springfield, Vt.

Washington County (Orange, Williamstown and Washington), Fletcher B. Joslin, '34, Waitsfield, Vt.

Windsor County—Robert M. Bent, '35, Windsor, Vt.

# Appendix

## Established Loan Funds, Scholarships, and Prizes

### \*LOAN FUNDS

THE AMERICAN AGRICULTURIST RESEARCH FOUNDATION LOAN FUND, amounting to three hundred dollars, is available to Juniors and Seniors in Home Economics on recommendation of the Dean of the College of Agriculture.

THE BARNES FUND, established by bequest of Rev. Stephen G. Barnes, provides limited assistance to needy students who wish to attend inspirational religious conferences. The income of the one thousand dollar endowment is available as a loan or gift.

THE CHARLES H. BAYLEY LOAN FUND, amounting to ten thousand dollars, was established in 1937 and increased in 1939 by gifts of Laura Morse Bayley in memory of her husband.

THE JOHN H. AND MARY A. BLODGETT LOAN FUND, amounting to forty-five thousand dollars, was established in 1938 by bequest of Mary A. Blodgett of Bellows Falls. It is loaned to worthy Vermont boys and girls, enrolled in any curriculum offered by the University. Preference is given to graduates of the Kurn Hattin and Warner Memorial Homes of Westminster and Saxtons River and to students who are residents of the town of Rockingham. The interest rate is four per cent during college residence and for one year after leaving, and five per cent thereafter until the loan is repaid, subject, however, to modification in particular instances at the discretion of the Student Aid Committee.

THE CARBEE LOAN FUND of four thousand dollars was established by Mrs. May D. Carbee of Haverhill, N. H., in memory of her husband, Moses Dyer Carbee, M.D., of the Class of 1873. This fund is for the benefit of deserving students of the College of Medicine.

\* Only those funds are here listed of which the administration is vested solely in the University. Some other funds are available for Vermont students, and information about them may be obtained from the office of the Treasurer.

THE CLASS OF 1923 LOAN FUND, amounting to four hundred dollars, is available to students in the academic colleges.

THE CLASS OF 1929 LOAN FUND, established in 1936, is loaned to students of the academic colleges. The fund amounts to more than seven hundred dollars.

THE CONSOLIDATED LOAN FUND is made up of the Class of 1924 Fund, the Class of 1925 Fund, the Emergency Loan Fund, the Julia I. Bates Fund, the Student Loan Fund, the B. F. Taylor Fund, the New York Alumni Fund of November, 1927, the Edmund Seymour Fund, the Kidder Loan Fund and the Lydia M. Blood Loan Fund. These consolidated funds amount to more than twenty thousand dollars.

THE ANNETTE FISKE MERENESS LOAN FUND is for the benefit of women students. The fund amounts to more than twelve thousand seven hundred dollars.

THE ASA FISKE LOAN FUND was established by Annette Fiske Mereness in memory of her father. It amounts to seven thousand two hundred dollars and is available to young women.

THE MARY GRAVES LOAN FUND amounting to seven thousand two hundred dollars is available as a loan fund for women. It is the gift of Annette Fiske Mereness, in memory of her mother.

THE JOSEPH LAWRENCE HILLS LOAN FUND, established by friends of Dean Hills, who completed fifty years of service to the University in 1937, now amounts to over two thousand dollars.

THE JUDEVINE FUND was established by Allen E. Judevine as a memorial to his son, Cornelius A. Judevine, who died before his plan of entering college was realized. This fund is to aid poor and deserving young men in Vermont in obtaining a liberal education. The fund now amounts to more than thirty-one thousand dollars.

THE LADIES OF THE FACULTY LOAN FUND, amounting to eight hundred sixty dollars, is available to deserving and needy girls. The awards are made by a committee of the Ladies of the Faculty. Not more than fifty dollars is loaned to any one girl.

THE LANDON FUND was established by Susan W. Landon in memory of her brother, Sealand W. Landon of the Class of 1874, for many years a well-known school principal. This fund, amounting to ten thousand dollars, is loaned to deserving men and women.

THE DR. JOSEPH E. LUMBARD LOAN FUND was established in 1946 by the gift of Mr. J. Edward Lumbard, Jr. Loans are made to needy and deserving students in the College of Medicine.

THE MEDICAL COLLEGE LOAN FUND, established in 1933 by Medical College alumni and amounting to thirty-three hundred dollars, is available for loans to students enrolled in the College of Medicine.

THE CHARLES D. AND CARRIE D. ORDWAY LOAN FUND was received as a bequest from Charles D. Ordway in 1933. It amounts to more than twenty-six thousand dollars.

THE MARY MAUD PATRICK LOAN FUND, amounting to two hundred eighty-five dollars, was established by Epsilon Sigma as a memorial to Mary Maud Patrick for the benefit of students in elementary education.

THE PHI BETA KAPPA LOAN FUND of six hundred dollars is available to members of the senior class, preference being shown to applicants who are members of the society.

THE RIXFORD MANUFACTURING COMPANY LOAN FUND of five hundred dollars is available for students who are residents of the town of Highgate.

THE HENRY BIGELOW SHAW LOAN FUND, amounting to three thousand dollars, was established in 1938 by Mrs. Willard Pope in memory of her brother, Henry Bigelow Shaw of the class of 1896. The fund is loaned, under certain restrictions, to young men who have been graduated from the University and who wish to study at Harvard University Law School.

THE MARY A. SHAW AND FANNY E. SHAW LOAN FUND was established by Mrs. Willard Pope, daughter of Mary A. Shaw, for the benefit of women students of the University. The fund amounts to three thousand five hundred dollars.

THE STEVENS LOAN FUND, given in 1926 by relatives of Horace E. Stevens of the Class of 1870 in his memory, is available to students in Engineering. The fund amounts to two thousand dollars.

THE EMILY AND THOMAS TELFER LOAN FUND, established by Mrs. Thomas Telfer of Berkeley, California, amounts to twenty thousand dollars.

THE TERRILL-HOLBROOK LOAN FUND of about five hundred dollars is available for loan to women students, preference being shown to those registered in the Home Economics curriculum.

THE WOMEN'S STUDENT HEALTH COUNCIL LOAN FUND, amounting to about one thousand dollars, is loaned to women designated by the Dean of

Women and the Director of the Department of Physical Education for Women, under special regulations as to interest and repayment.

## SCHOLARSHIPS

THE LIZZIE P. ALLEN SCHOLARSHIPS, four in number, were founded in 1900 by Lizzie P. Allen, a descendant of Ira Allen, founder of the University.

THE ALUMNI MEMORIAL SCHOLARSHIP FUND, appropriated annually by the Executive Committee of the Alumni Council, provides scholarships for male students of the University who are deemed worthy, who are in need, and who meet the qualifications of sound scholarship, good character, outstanding leadership, and participation in student activities. The award is made on an annual basis upon the recommendation of the Alumni Council or a committee of the Alumni Council designated for that purpose. Each scholarship is named in memory of an outstanding alumnus.

THE FRANKLIN BALDWIN SCHOLARSHIP FUND of more than five hundred dollars, established in 1915 by bequest of Mr. Baldwin, is available to students from Putney. The award is made on the basis of character and scholastic record.

THE BARNARD SCHOLARSHIPS, six in number, were founded in 1903 by the bequest of Rev. Lucius E. Barnard of the Class of 1853.

THE REUBEN CLARK BENTON SCHOLARSHIPS, two in number, established under the will of Reuben Clark Benton, '54, of Minneapolis, Minnesota, native of Waterford, and a boyhood resident of Lunenburg, for the benefit of students from Waterford, Lunenburg, or Minneapolis.

THE ADA S. BLAIR FUND of two thousand five hundred dollars, was established in 1926 by a bequest from Miss Blair.

THE BORDEN AGRICULTURAL SCHOLARSHIP of three hundred dollars is awarded annually to that eligible student in the College of Agriculture who on entering his senior year has the highest average grade of all eligible students in all preceding college work. Students who have included in their courses of study two or more dairy subjects are eligible for the award.

THE ELIZABETH F. BRIGHAM SCHOLARSHIPS, four in number, founded in 1910 by a bequest from Miss Brigham, are available first for students from Brigham Academy.

THE MARCIA P. BROWN SCHOLARSHIP FUND, established by a bequest from Miss Brown, amounts to eighteen thousand, nine hundred dollars, the income of which is "to be used and expended for the education of a young woman, who, so far as can be judged, promises to become a woman whose life will be of more than usual benefit to humanity and a credit to the University." If the young woman chosen does not need the entire income of the fund, the remainder may be used for another young woman, "who needs and merits it." It is stated in the terms of the gift that "this income is not to be given as a charity or a premium for poverty, but as an honor for ability and strength and elevation of character." The selection of the beneficiary or beneficiaries of this fund is left to a committee of awards consisting of the President of the University, the Dean of Women, and one trustee to be elected by the Board of Trustees.

THE EMEROY N. BURRITT SCHOLARSHIP, the income from a fund of two thousand five hundred dollars, a bequest from Miss Burritt, is used toward paying the tuition of a deserving young woman student.

THE SARAH L. BURRITT SCHOLARSHIP, the income from a fund of two thousand five hundred dollars, a bequest from Miss Burritt, is used toward paying the tuition of a deserving young woman student.

THE EZRA HOYT BYINGTON SCHOLARSHIP, eighty dollars annually, founded in 1905 in memory of Mr. Byington by a gift from Mrs. Louisa J. Byington, is for the benefit of students from Hinesburg or students bearing the name of Byington, Boynton, Hoyt, or Wortman, or in some way related to these families.

THE MERSE D. CARBEE SCHOLARSHIP is awarded to a deserving student in the College of Medicine. This scholarship was established by a bequest of three thousand dollars from Mrs. May D. Carbee, of Haverhill, N. H., in memory of her husband, Moses Dyer Carbee, M.D., of the Class of 1873.

THE WALTER CARPENTER SCHOLARSHIP was established by a bequest of one thousand dollars from Dr. Walter Carpenter of Burlington. Preference is given to sons of clergymen and physicians.

THE CLASS OF 1861 SCHOLARSHIP, endowed and made available in 1891.

THE CLASS OF 1881 SCHOLARSHIP, endowed in 1937 by William H. Rice, a member of that class.

THE JOHN H. CONVERSE SCHOLARSHIP, founded in 1882, by John H. Converse, '61, of Philadelphia.



THE LIZZIE S. CONVERSE SCHOLARSHIP, founded by bequest of Sarah Elizabeth Converse, of Burlington, for poor and deserving students in the Classical Department.

THE CRAFTSBURY SCHOLARSHIP, founded in 1900, for the benefit of relatives of Mr. and Mrs. Nathan S. Hill, or residents of Craftsbury or Isle La Motte.

THE PHILIP HENRY CREER SCHOLARSHIP, founded by Ex-Gov. Redfield Proctor for the benefit of students from Proctor, is awarded by the donor.

THE EDWARD EVERETT HAWES FUND, founded in 1946 by bequest of Dr. Edward Everett Hawes of Hyannis, Mass., provides scholarship aid for "needy and deserving medical students."

THE FRANCIS WHELPLEY HICKOK SCHOLARSHIPS, three in number, founded in 1902 by Mrs. Julia F. Hickok, widow of James W. Hickok of the Class of 1837, in memory of their son, a member of the Class of 1871.

THE CHARLES H. HOOD SCHOLARSHIPS of two hundred dollars each are given by the Charles H. Hood Dairy Foundation established by Dr. Charles H. Hood of Boston. The number available each year is announced by the Dean of the College of Agriculture, who awards them in accordance with definite restrictions suggested by the donor to students who are candidates for a degree in agriculture. High scholastic standing is essential.

THE LOUISA H. HOWARD SCHOLARSHIPS, five in number, founded in 1882, by Miss Louisa H. Howard, of Burlington.

THE CHARLES A. HOYT SCHOLARSHIPS, two in number, founded in 1904 by a bequest from Mr. Hoyt, of the Class of 1858.

THE ISLE LA MOTTE SCHOLARSHIP, founded in 1884, by Nathan S. Hill, of Burlington, for the benefit of students from Isle La Motte and, failing such, from Craftsbury.

THE SARAH B. JACOBS SCHOLARSHIPS, seven in number, founded in 1882, by Mrs. Sarah B. Jacobs, of Boston, for the benefit of graduates of Brigham Academy only.

THE EDITH BLANCHE KIDDER SCHOLARSHIPS, five in number, were established by Joseph W. Kidder, of Port Chester, N. Y., and became available in 1936. These scholarships are for students in the College of Medicine, preference being shown to legal residents of Barre.

THE ROBERT J. KIMBALL SCHOLARSHIP, founded in 1900 by Hon. Robert J. Kimball of Randolph, is for the benefit of the students from Randolph. The Trustees of Randolph High School may make nominations for this scholarship.

THE CELINDA A. B. LILLEY SCHOLARSHIPS, ten in number, were founded in 1880 by gifts from Mrs. Lilley for the benefit of women students.

THE LYNDON INSTITUTE SCHOLARSHIP, endowed by George E. P. Smith of the Class of 1897, is awarded annually to a graduate of Lyndon Institute of high character and promise. The selection is made by the faculty of Lyndon Institute and is renewed annually through the senior year if good progress is made by the recipient.

THE CHARLES MUNSON MARSH SCHOLARSHIP was founded in 1893 for the benefit of students from Woodstock, by bequest of Charles P. Marsh in memory of his son.

THE CHARLES P. MARSH SCHOLARSHIPS, five in number, were founded in 1893 by bequest of Mr. Marsh for the benefit of worthy young men and women from Windsor county.

THE EDWIN WRIGHT MARSH SCHOLARSHIP, founded in 1883 by Charles P. Marsh of the Class of 1839, of Woodstock, in memory of his son of the Class of 1872, for the benefit, in the first instance, of students from the town of Weathersfield or from Windsor county.

THE MARGARET PATTERSON MCDANIELS SCHOLARSHIP FUND was established in 1941 by a bequest of George N. McDaniels of Los Angeles, California, in memory of his mother. The scholarships derived from the income are for needy and deserving students, preference being shown to applicants who reside in the towns of Craftsbury and Greensboro. The fund amounts to more than ninety-three thousand dollars.

THE MINER FUND was established in 1943 by a bequest from Daniel Pitkin Miner amounting to more than sixty-two thousand dollars, the income to be used to provide for native-born students, not over twenty-one years of age and in need of aid, assistance in meeting tuition fees and other educational expenses in the University.

THE MORETOWN AND MIDDLESEX SCHOLARSHIPS, two in number, were founded by the Rev. E. C. Bass, '59.

THE JUSTIN S. MORRILL SCHOLARSHIP, founded in 1900 by Senator Justin S. Morrill of Strafford, is for the benefit of students from Strafford.

THE NEW YORK ALUMNI ASSOCIATION SCHOLARSHIP of five hundred dollars is awarded to a male student from New York or vicinity. Three hundred dollars of this sum is given for tuition, the balance is loaned and bears a low rate of interest after the recipient has left College. This scholarship is awarded by a committee of the New York Alumni Association.

THE JOHN ORDRONAUX SCHOLARSHIPS, nine in number, were founded in 1909 for the benefit of students in the Academic and Medical Colleges.

THE PARKER SCHOLARSHIP, founded in 1880, by Rev. Charles C. Parker, D.D., of the Class of 1841, in memory of himself and his son, Charles Edmund Parker, '67.

THE ARTHUR W. AND LOUISE S. PERKINS SCHOLARSHIP FUND of seven thousand dollars was established in their memory in 1947 by their son and daughters. The income provides aid for a needy boy or girl of high character and reasonably good scholarship who is a graduate of a secondary school in Rutland. School authorities in Rutland are to be consulted regarding the qualifications of candidates who are not already enrolled in the University.

THE MINNIE A. PICKERING SCHOLARSHIPS, six in number were established in 1938 by a gift from Mrs. Minnie E. Pickering in memory of her daughter.

THE CHARLES W. RICH SCHOLARSHIP, founded in 1883, by Charles W. Rich of the Class of 1836, of St. Albans, for the benefit of students in the College of Arts and Sciences.

RUSSELL MILLER MILLING COMPANY SCHOLARSHIPS. Two annual educational scholarships of \$100 each, known as the "Occident Flour 4-H Club Scholarships" are available to 4-H Club girls who have done high quality work in Home Economics projects for three years or more.

SEARS, ROEBUCK SCHOLARSHIPS, five of \$150 each, are awarded annually to incoming freshmen in Agriculture on the basis of need, character, and scholastic ability.

THE WILLIAM G. SHAW SCHOLARSHIP, originally founded in 1892 by bequest of one thousand dollars by Hon. William G. Shaw of Burlington, of the Class of 1849, has since been increased to six thousand dollars by Mr. Shaw's daughter, Mrs. Willard Pope of Detroit, Mich., who awards the scholarship.

THE CHARLES D. SIAS SCHOLARSHIP FUND was established in 1943 by a bequest of \$15,000 from the estate of Charles D. Sias of Wenham, Mass., for the benefit of deserving young men.

THE SAMUEL SIDNEY SMITH SCHOLARSHIP was founded in 1896 by bequest of Mrs. Elisa Smith of Burlington in memory of her husband.

THE SOLDIERS' SCHOLARSHIP FUND was founded in 1913 by a group of Civil War veterans for the benefit of students who are descendants of soldiers in the Civil War.

THE SOPHIA STOW SCHOLARSHIPS, two in number, endowed in 1937 by bequest of George L. Stow, '73, in memory of his mother, are available to students of both Latin and Greek.

THE DANIEL WASHBURN SCHOLARSHIPS, nine in number, were founded in 1853 by Daniel Washburn, M.D., of Stowe, for the benefit of young men studying for the Christian ministry, or, in default of such applicants, of other deserving young men.

THE JOHN AND MARY WATERMAN SCHOLARSHIP of two hundred dollars annually, endowed in 1923 by Charles W. Waterman of the Class of 1885 in memory of his father and mother, is available under special restrictions to residents of Waitsfield or Denver, Colorado. The scholarship is awarded by the President of the University.

THE WESTFORD SCHOLARSHIP, founded in 1882 by Luke P. Poland of St. Johnsbury, is available first to students from the town of Westford.

THE HATTIE LAURA WETHERBY WESTON SCHOLARSHIP FUNDS consist of a five thousand dollar endowment for men and an equal one for women. They became available in 1936 by bequest of Mrs. Hattie Laura Wetherby Weston. The income is awarded to one or more deserving men; an equal amount, under similar conditions, to women.

THE JOHN A. S. WHITE SCHOLARSHIP FUND, now yielding three scholarships, was established by a bequest from John A. S. White of Northfield for the benefit of needy students from Washington county or from the State of Vermont.

WILBUR SCHOLARSHIPS. The University of Vermont Trust Fund, amounting to over one million dollars, was established by James B. Wilbur of Manchester as an endowment for scholarships for Vermont students who are in need of assistance to undertake college work and who have earned entrance or college records that indicate extraordinary scho-

lastic ability. From the data presented in annual applications, tentative awards for the ensuing college year are made, in accordance with the conditions of the trust by the Committee on Student Aid. Allotments are reviewed at mid-year and confirmed or denied on the basis of the scholastic record of the previous semester. Preliminary statements concerning scholastic ability must be submitted with the request for an application blank.

## PRIZES

THE AMERICAN LEGION TROPHY, a mounted silver shield, is annually awarded to the Reserve Officers' Training Corps company which shows itself to be the most proficient in attendance, neatness, set-up, and drill. The designation of the winning organization and the name of the company commander of that organization are annually inscribed upon the shield. The shield was presented by Burlington Post, No. 2, of the American Legion.

THE ATHLETIC COUNCIL MANAGERIAL PRIZE of twenty-five dollars is awarded annually at Commencement to the senior sports manager who, in the judgment of the Athletic Council, has shown the greatest proficiency in performing the work of his office.

THE BENEDICT ESSAY PRIZE was established by Robert Dewey Benedict of the Class of 1848, who gave three hundred dollars, the income of which is offered as a prize yearly to the member of the Senior class presenting the best essay on the subject of "International Arbitration." The prize is awarded following examination.

THE BENNETT ESSAY PRIZE was endowed by Philo Sherman Bennett of New Haven, Connecticut. The fund of four hundred dollars yields an annual prize which is awarded at Commencement for the best essay "discussing the principles of free government."

THE BIRNBAUM PRIZE of twenty-five dollars, given by Bernard A. Birnbaum of Cedarhurst, N. Y., is awarded annually by the University Council, acting on the nomination of the student body, to that senior who during his college course has best exemplified the University traditions as to democracy and friendliness.

THE B'NAI B'RITH PRIZE of twenty-five dollars is given annually by the Joseph Frank Lodge of Burlington to that student who in the opinion of the Committee on Religious Life has done most to encourage inter-faith cooperation and activities.

THE BURPEE AWARD IN HORTICULTURE, an annual award of one hundred dollars made possible by a grant from the W. Atlee Burpee Company, Seed Growers, of Philadelphia, Pa., and Clinton, Iowa, is made on the basis of scholarship, practical experience, and interest in flower and vegetable growing.

THE BUTLER DEBATING PRIZES were endowed by Edward Page Butler of the Class of 1870, who left one thousand two hundred dollars, the income to be used for the promotion of extemporaneous debate. From the income of this fund three prizes may be awarded annually, on recommendation of the head of the Department of Speech, to the three women students who have shown the greatest ability in debate. The balance of the income, together with the amounts of any prizes that are not awarded, will be expended in furthering debating.

THE CARBEE MEDICAL PRIZE of three thousand dollars was established by Mrs. May D. Carbee, of Haverhill, N. H., in memory of her husband, Moses Dyer Carbee, M.D., of the Class of 1873. The income from the fund is given annually at Commencement to the student in the College of Medicine who shows the greatest proficiency in the subject of obstetrics.

THE CONVERSE PRIZES IN COMMERCE AND ECONOMICS were established by John Heman Converse of the Class of 1861, by gift of a fund of one thousand dollars, the income from which may be used in whole or in part for one, two, or three prizes. Any amount not awarded will be used for books and magazines for the Department of Commerce and Economics. The prizes are awarded on recommendation of the head of the department following presentation of a thesis of merit on some approved subject in the field of commerce and economics.

THE CRAIG TROPHY was donated to the University of Vermont by Major M. E. Craig, in honor of the 1936-1937 Rifle Team of the University of Vermont. Upon it is engraved each year the name of the man making the highest cumulative score throughout the year in the principal matches in which the University rifle team is a competitor. These competitions are The Hearst Trophy Match, The Corps Area Match and the matches in the New England League of the National Rifle Association. The award is announced annually by the Military Department. The trophy remains the property of the University of Vermont.

THE EMERSON PRIZE IN HISTORY is offered annually at Commencement in memory of Samuel Franklin Emerson, Professor of History for forty-two years. The prize is awarded to an undergraduate for the best original essay on any topic chosen from any field of history. Essays are not

limited as to length but must be typewritten, double space, on white paper 8½ by 11 inches in size. Each essay is to be signed by a fictitious name, the identification of which must be given in an accompanying sealed envelope bearing on the outside the fictitious name which was used. All essays considered in the competition must reach the Department of History by April 15. The department will submit the best essays for a selection for award, to an outside judge, who may withhold the prize if no essay submitted reaches a sufficiently high standard.

THE GERMAN LITERARY PRIZE is awarded annually by the Goethe Lodge of Burlington for general excellence in German.

THE HOWARD PRIZES were provided by a bequest of one thousand two hundred dollars from Mrs. Hannah T. Howard of Burlington, the income of which is awarded in prizes to students in the College of Arts and Sciences for excellence in the work of the freshman year.

THE ELWIN LEROY INGALLS PRIZE is provided from a fund established in 1934 to honor Elwin Leroy Ingalls of the Class of 1896, who had then completed twenty years of continuous service as State 4-H Club Leader. It is awarded annually by the 4-H Club Department of the Vermont Extension Service to a University student of outstanding merit as shown in character, 4-H Club record, and scholastic attainment in college.

THE MABEL NELSON JACOBS SCHOLARSHIP CUP is annually awarded to the custody of that sorority, the members of which have won the highest scholastic standing for the preceding year. The cup was provided by Mrs. H. J. Nelson in memory of her daughter, Mrs. Mabel Nelson Jacobs of the Class of 1899.

THE KENT PRIZE IN ELECTRICAL ENGINEERING was established by A. Atwater Kent, of Philadelphia. The fund of five thousand dollars provides an income which is "awarded as a prize each year at Commencement to that member of the senior class in Electrical Engineering who, during his junior and senior years, in the opinion of the faculty teaching Electrical Engineering, has shown the greatest progress in judgment and general grasp of the broad principles of Electrical Engineering and in development of personality, and who shows the greatest promise of success in this field."

The names of the winners of this prize are placed on a tablet given by Mr. Kent and which is located in the Waterman Building.

THE KIDDER MEDAL is provided by the income of a fund of four hundred dollars, established in memory of Dr. F. T. Kidder of Woodstock, an

alumnus of the Class of 1880 and a trustee of the University. The specially engraved gold medal is awarded at Commencement to the male student ranking first in character, leadership, and scholarship. The selection is made by a committee representing all the faculties.

THE LAWRENCE DEBATING PRIZES were established by Edwin Winship Lawrence, of the Class of 1901. The first group of prizes is established in memory of the donor's brother, Robert Ashton Lawrence, '99, and is offered annually to students who in the judgment of the Department of Speech exhibit the greatest proficiency in debate. The one thousand dollar fund provides three annual prizes.

The second group of prizes, established in memory of the donor's brother, Robert Ashton Lawrence, '99, and his father, George Edwin Lawrence (Middlebury College '67), will be awarded to the three students participating in a joint debate between representatives of the University of Vermont and Middlebury College, who in the opinion of the judges chosen show the greatest proficiency in this debate. These prizes are derived from an endowment of one thousand dollars.

If debating ceases at the University, the income from these funds may be used to assist worthy students.

THE EDMUND F. LITTLE CUP is provided by the income from a fund established by Arlington P. Little, Class of 1901. It is awarded annually for meritorious work in mechanic arts.

THE LOYAL LEGION MEDAL is presented annually at Federal Inspection by the Vermont Commandery of the Military Order of the Loyal Legion to the most proficient junior cadet of the Reserve Officers' Training Corps.

THE NU SIGMA NU AWARDS are given annually in the College of Medicine to the outstanding students in the freshman and junior classes.

THE PHELPS PRIZE IN CIVIL ENGINEERING is derived from a fund of more than nine hundred dollars. It was endowed in memory of Edward Haight Phelps of the Class of 1872, by his father, Edward J. Phelps. The prize may be awarded by the Department of Civil Engineering each year at Commencement to a graduate of that year in Civil Engineering who has exhibited conspicuous merit in professional studies, and high and noble traits of personal character. A special certificate will accompany the prize, indicating the conditions upon which it has been awarded. In the event that no award is made in any year, the same amount of money will be expended in the purchase of books on the subject of Civil Engineering for the Library.



THE WADSWORTH RAMSEY-SMITH TROPHY AND PRIZE, in the amount of ten dollars, are awarded annually on Founder's Day to the outstanding senior cadet of the Reserve Officers' Training Corps. The name of the senior is inscribed on the trophy, a saber, which is maintained by the Military Department. This award is presented by Mrs. Wadsworth Ramsey-Smith, in honor of her husband, Colonel Ramsey-Smith.

THE SEYMOUR HORTICULTURAL FUND, amounting to twenty-five hundred dollars, was given by William W. Seymour in memory of his father, Henry E. Seymour of the Class of 1835. The income from the fund is used for the library and other expenses of the Horticultural Department, and for a prize to that member of the senior class who has done the best work in original horticultural research.

THE KIRBY FLOWER SMITH LATIN PRIZE is derived from a three thousand dollar fund established by his wife as a memorial to Kirby Flower Smith of the Class of 1884. An award is made annually to the student having the highest standing in second-year college Latin.

THE HANNAH G. SOLOMON PRIZE is awarded by the Burlington Section of the National Council of Jewish Women to the senior woman who has exhibited in the highest degree the qualities of scholarship, leadership, and service.

THE SONS OF THE AMERICAN REVOLUTION MEDALS have been presented annually since 1933 by the Vermont Society, Sons of the American Revolution, one to the member of each class in the Reserve Officers' Training Corps who is outstanding in character, conduct, leadership, and in theoretical and practical knowledge of the year's course. These medals are of nation-wide standard pattern. The stated purpose of the award is to keep before the minds of the young men of today, in order that they may be encouraged to exemplify them in practice, those qualities and characteristics upon which our nation was founded and has been perpetuated.

THE RUSSELL O. SUNDERLAND MEMORIAL TROPHY is awarded annually at Founder's Day to that man of the senior class who throughout his college course has best exemplified those qualities of character, leadership and persistence in overcoming obstacles, which were outstanding traits in the life of the late Russell O. Sunderland of the class of 1938. This is a permanent trophy upon which the name of the recipient is engraved annually. The Boulder Society gives a suitable personal trophy to each student who receives the Sunderland Award.

THE VETERANS OF FOREIGN WARS PLAQUE AND MEDAL are awarded annually at the Federal Inspection to the freshman cadet of the Reserve Officers' Training Corps who demonstrates the highest proficiency in leadership, drill, and military science. His name is inscribed upon the Veterans of Foreign Wars Plaque, which is maintained by the Military Department. The medal and plaque are presented by the Howard Plant Post 782 of the Veterans of Foreign Wars.

THE GEORGE H. WALKER DAIRY PRIZE is derived from a permanent fund of two thousand dollars, donated by George H. Walker, Boston, Mass., one of the founders of the Walker-Gordon Milk Company. It is awarded annually by faculty vote to a member of the graduating class of the College of Agriculture who has pursued a course either in Dairy Production or Dairy Manufactures, and who has shown conspicuous ability in the studies pertaining to Dairy Husbandry, and especially in milk production and marketing, and who furthermore exhibits high and noble traits of character.

In the event that no award is made by the faculty in any given year this income is spent for apparatus to be used for instructional purposes in market milk making or distribution, or for books dealing with Animal or Dairy Husbandry. The apparatus or books are marked as being derived from the George H. Walker Prize Fund.

THE WASSON ATHLETIC PRIZE is derived from an endowment of two hundred and fifty dollars, given by Mrs. Pearl Randall Wasson in memory of her husband, Dr. Watson L. Wasson, '01. The income of the fund is used for the purpose of giving a prize "to the member of Senior class who has maintained the highest standard of academic scholarship and athletic attainment," as determined annually by the University Council.

THE WOODBURY MEDICAL PRIZES are derived from a fund of one thousand dollars created by Mrs. Pauline S. Woodbury in memory of her husband, Dr. Urban A. Woodbury of the Class of 1859. The first prize is awarded annually to the student who, upon graduation, has shown the greatest proficiency in the clinical subjects in his senior year. The second prize is awarded to that member of the sophomore class who has received the highest standing of the class in all subjects of the freshman and sophomore years.

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PERSONNEL SERVICES

STUDENT LIFE

ADMISSION

EXPENSES & STUDENT AID

GENERAL INFORMATION

ARTS & SCIENCES

TECHNOLOGY

AGRICULTURE

EDUCATION & NURSING

MEDICINE

PHYS.ED. & MIL.SCI.

GRADUATE STUDY

UNIVERSITY EXTENSION

PERSONNEL

REGISTER

## CALENDAR

### SPRING SEMESTER, 1949

Enrollment .....	February 11-12
Classes begin .....	February 14
Kake Walk (no classes) .....	February 25, 26
Spring Recess .....	April 10 through April 18
Founder's Day Convocation .....	May 2
Memorial Day (holiday) .....	May 30
Examinations .....	June 7-15
Commencement .....	June 20

### FOREIGN STUDY PROGRAM, 1949

June 27 - September 4

### SUMMER SESSION, 1949

July 6 - August 16

### FALL SEMESTER, 1949

Preliminary Days .....	September 10-13
Enrollment (new students) .....	September 14
Enrollment (all others) .....	September 15
Classes begin .....	September 16
Thanksgiving Recess .....	Noon, November 23 through November 27
Christmas Recess .....	December 21 through January 3
Examinations .....	January 13 through January 25

### SPRING SEMESTER, 1950

Enrollment .....	January 30, 31
Classes begin .....	February 1
Kake Walk (no classes) .....	February 24, 25
Spring Recess .....	April 2 through April 10
Founder's Day Convocation .....	May 1
Memorial Day (holiday) .....	May 30
Examinations .....	May 24 through June 6
Commencement .....	June 12



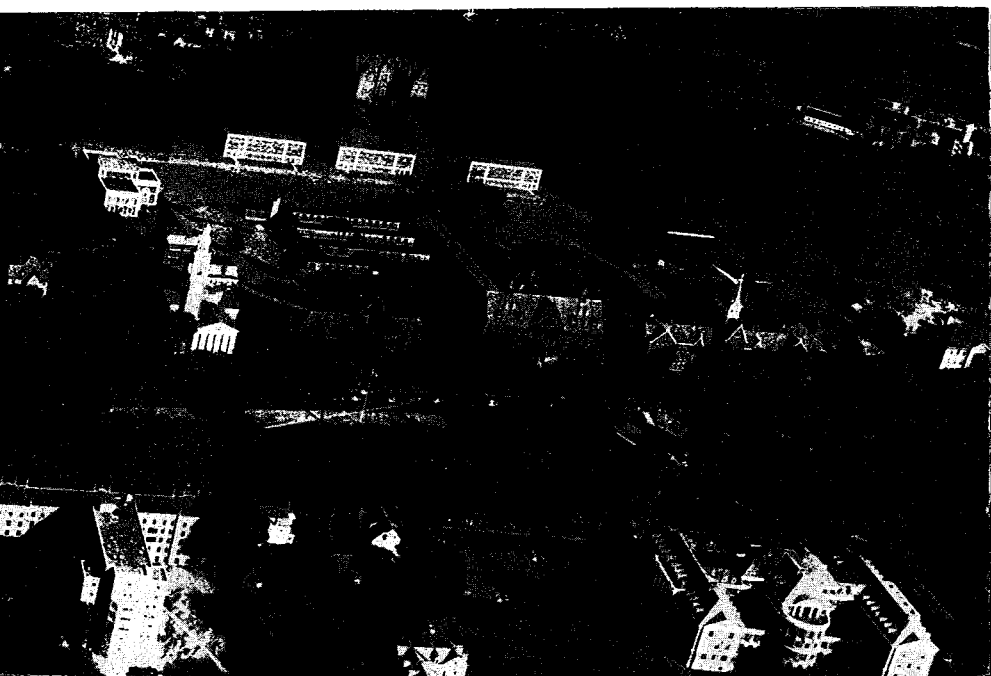


THE IRA ALLEN CHAPEL AND BILLINGS LIBRARY



THE REDSTONE CAMPUS FOR WOMEN

THE COLLEGE GREEN AND EAST CAMPUS



# CALENDAR

1949

## JANUARY

S	M	T	W	T	F	S
.....	.....	.....	.....	.....	.....	1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
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## FEBRUARY

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## MARCH

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## APRIL

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1950

## JANUARY

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## FEBRUARY

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## MARCH

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## JUNE

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