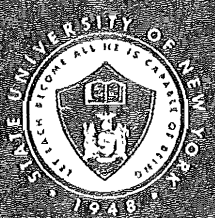
ALFRED UNIVERSITY
PUBLICATION



State University of New York

COLLEGE OF CERAMICS
at ALFRED UNIVERSITY

Catalog Number

1955-56

CALENDAR FOR 1955-1956 AND 1956-1957

	First Semester	*1955*	**1956*
Registration	Mon.-Thurs.	Sept. 19-22	Sept. 17-20
Instruction begins	Fri. 8:00 A.M.	Sept. 23	Sept. 21
Registration part time graduate students	Mon. 5 to 8 P.M.	Sept. 26	Sept. 24
Founders' Day	Thurs.	Oct. 20	Oct. 18
Mid-semester grades	Mon. 12:00 M.	Nov. 14	Nov. 12
Thanksgiving recess	Tues. 5:00 P.M.	Nov. 22	Nov. 20
Instruction resumed	Mon. 8:00 A.M.	Nov. 28	Nov. 26
Christmas recess begins	Fri. 5:00 P.M.	Dec. 16	Dec. 14
		1956	**1957*
Instruction resumed	Wed. 8:00 A.M.	Jan. 4	Jan. 3
Mid-year examinations	Wed.	Jan. 25	Jan. 23
Examinations end: Semester ends	Fri.	Feb. 3	Feb. 1
	Second Semester		
Registration new students	Wed.	Feb. 8	Feb. 6
Instruction begins	Thurs. 8:00 A.M.	Feb. 9	Feb. 7
Registration part time graduate students	Mon. 5 to 8 P.M.	Feb. 13	Feb. 11
St. Pat's Festival half holiday	Fri.	Mar. 16	Mar. 22
Spring recess begins	Thurs. 5:00 P.M.	Mar. 29	Apr. 12
Instruction resumed	Mon. 8:00 A.M.	Apr. 9	Apr. 23
Mid-semester grades	Wed. 12:00 M.	Apr. 18	May 1
Moving-Up Day	Thurs. No classes after 10:00 A.M.	May 3	May 2
Pre-registration	Week of	May 21-25	May 20-24
Final examinations	Tues.	May 29	May 28
Memorial Day half holiday	Wed.	May 30	May 30
Examinations end: Semester ends	Fri.	June 8	June 7
120th Anniversary Comm.	Sun.	June 10	June 9
	Intersession		
Term begins	Tues.	June 12	June 11
Term ends	Fri.	June 29	June 28
	Regular Summer Session		
Term begins	Mon.	July 2	July 1
Term ends	Fri.	Aug. 10	Aug. 9

* For 1956-1957 Calendar days of week not given.

STATE UNIVERSITY OF NEW YORK

Catalog of the College of Ceramics at Alfred University

ALFRED UNIVERSITY PUBLICATION

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TABLE OF CONTENTS

STATE UNIVERSITY OF NEW YORK

DESCRIPTION

The College of Ceramics at Alfred University is part of State University of New York which was established by the State Legislature in 1948. State University now comprises twenty-one colleges and six institutes. There are, in addition, ten community colleges which it supervises. While separated geographically, all are united in the purpose to improve and extend opportunities for youth to continue their education after high school.

State University offers cultural and professional four-year programs in liberal arts, home economics, industrial and labor relations, veterinary medicine, ceramics, agriculture, forestry, maritime service, medicine and teacher preparation, as well as two-year programs in a wide variety of fields, including technical courses in agricultural, industrial, health, and service areas. State University is accredited by the Middle States Association of Colleges and Secondary Schools.

Governed by a Board of Trustees appointed by the Governor, State University of New York plans for the total development of State-supported higher education. Each unit of State University is locally administered, and students apply directly to the institution for admission.

Although State University of New York is the second largest state university in the country, students attending most of its units have the advantages that accrue to small colleges, since only a few SUNY units enroll more than 1,500 full-time students.

The State University motto is: "Let Each Become All He Is Capable of Being."

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GENERAL INFORMATION

CERAMICS

THE WORD CERAMICS is derived from the Greek word *keramos*, which means fired earth. To know ceramics fifty years ago was to know clays, shales, flints and feldspars, and to understand the methods involved in the manufacture of brick, tile, sewer pipe, terra cotta, pottery, and fire-clay refractories. During the years, ceramic technology has advanced greatly and with the advance has come a truer understanding of the principles involved in the manufacture of ceramic products and a fuller appreciation of the range of products made from "fired earth". There is a continuing demand for ever better products and for items unheard of fifty years ago. In order to make refractories that would permit steel furnaces to operate at higher temperatures, glasses for special radio tubes, more durable cements, dielectrics for ultra-high-frequency currents, spark plugs for faster airplanes, linings for jet engines, and numerous other articles of timely importance, the ceramist has had to go back to nature and concern himself with all non-metallic minerals. He has to learn not only the geology and physical characteristics of minerals but also how minerals can be concentrated, freed from their impurities and/or purified so as to produce a material that can be economically and satisfactorily used in his product. The knowledge gained from studies of nature are leading him to an understanding of how to make artificial minerals. It is his concern to understand how to fabricate articles from non-metallic minerals, to understand the reactions that take place as such minerals and mixtures of such minerals are heated to increasingly higher temperatures, and to know the properties of the finished products.

The most durable products surrounding or in the home are usually ceramic products: the brick on the outside; the mortar in which the brick are laid; the insulation in the wall; the cement in the foundation; the plaster on the wall; the tile on the roof or the granules on the roofing shingles; the glass in the windows; the porcelain electric insulators; the tiles on the bathroom floor and wall; the enamel on the stove, refrigerators, or washing machines; the sinks in the kitchen and bathroom; the bath tub; the dishes and glassware on the table; the refractory lining in the chimney; the tile on the base-

ment floor; and the knife sharpener. Many ceramic products are basic to other industries: refractories to the metallurgical industry; electric porcelain to the automotive, airplane, electrical and radio industries; abrasives to the manufacturing industries; procelain and glass to the chemical industry. All these items and many more are produced by the ceramic industry.

A person may study to be a ceramic engineer, a ceramic technologist, a glass technologist, or a ceramic designer. All have their particular places in the field and each brings something particular to the industry. The specific course to follow can be determined by a person's aptitudes and desires. Each course is described in detail under the Departments of Instruction.

POLICIES

The policies of the College have been developed with reference to its principal function, the education of youth. Although students come to the institution for specialized training in ceramics, it is considered the duty of the College to make certain that the education received is one which prepares them for life as well as for a profession in ceramics. Courses are set up in such a manner as to present in logical sequence not only those fundamental and applied subjects so important to the ceramic engineer, ceramic designer, ceramic technologist or glass technologist, but also those subjects in the realm of humanistic-social studies which will aid the student in his association with society, will point out to him the important role he will be expected to play in society as well as in his profession, and will make him a better citizen.

CAMPUS FACILITIES

The College of Ceramics is an integral part of Alfred University, and its students are students of Alfred University. In view of this, students of the College have available to them all the facilities provided by Alfred University. Among the most important of these facilities are Alumni Hall, an assembly hall used for dramatic production, student assemblies, moving pictures, commemorative exercises, concerts and Forum series; the Carnegie Library, containing over 80,000 volumes and providing reading and seminar rooms; the Clawson Infirmary, providing facilities for the treatment of student illnesses and staffed by two University doctors and by registered nurses; Kenyon Memorial Hall, providing a chapel and rooms for special meetings; Merrill Athletic Field, equipped with large bleachers, floodlights and a field house; South Hall, containing a gymnasium for women and adjacent to tennis courts and archery range and flats for outdoor activities for women; Howell Hall, providing kitchen, dining rooms and reception rooms, and available for special meeting purposes; the Track and Field House, containing an indoor track, a basketball court and a jumping and vaulting pit, training quarters, team rooms, showers, and used for large dances; and the Campus Union, a place to eat, relax and meet friends.

ORIENTATION WEEK

The first week of the College year is devoted to orienting the entering students to university life and to their scholastic work. Attendance by all freshmen and transfers is required. Instructional programs are provided by upper classmen and members of the faculty. Intelligence and aptitude tests are given. Private conferences with individual members of the faculty are provided. These more formal parts of the week's program are supplemented by amusements and "get-acquainted" meetings. The result is that by the end of the week, the "new" students are informed on what the College has to offer, what is expected of them, and how to go about getting adjusted to their new environment and bridging the gap between high school and college.

PLACEMENT

The College does not guarantee employment of its graduates, but members of the staff assist graduates in finding positions for which they are qualified. The wide industrial contacts which the College and its staff enjoy and the records made by graduates result in the receipt of many inquiries for qualified persons. Graduating students who are considered qualified for an open position are placed in direct contact with the interested persons.

Most of the positions which the graduates fill have to do with plant production, control of operations, research, industrial ceramic design, sales engineering, teaching and testing. All students are aided in finding the field of work for which they are particularly suited.

Salaries of graduates are on a par with those received in similar fields and vary greatly depending upon the individual and the position. Advancement on the job depends upon the ability to produce.

GRADUATE STUDY

In cooperation with the Graduate School of Alfred University the College of Ceramics offers advanced courses leading to the following degrees: Master of Science in Ceramic Engineering, Master of Science in Ceramics, Master of Science in Ceramic Technology, Master of Science in Glass Technology, Master of Fine Arts and Doctor of Philosophy in Ceramics.

Requests for information and formal application for admission to the Graduate School should be addressed to the Dean of the Graduate School, Alfred University, Alfred, New York.

TEACHING AND RESEARCH ASSISTANTSHIPS

Several graduate assistantships are available to worthy candidates. The holder of an assistantship must be a candidate for an advanced degree and he is expected to set up a program which will permit him to obtain his degree in two years. A graduate assistant is called upon to assist the members of the particular department with which he is associated in carrying on the work of that department.

VETERANS

The benefits obtainable under the G. I. Bill of Rights and the Korean Benefits Bill are open to both men and women students according to degree of eligibility and amount of service. A veteran's adviser makes frequent visits to the campus for consultation.

THE FIELD OF CERAMICS

THE CERAMIC PROFESSION is one of the oldest and one of the most challenging. It has need for qualified persons who are willing to develop it further. Great advancements are possible, and these will be made by well-trained, imaginative persons. Nearly 1,000 are registered in American schools and colleges preparing themselves for careers in the ceramic profession while approximately 3500 ceramic graduates are gainfully engaged in it. In normal times approximately 200 are graduated into the profession, one-third of them being graduated from the New York State College of Ceramics. It is significant that normally only 200 are graduated yearly to enter a highly technical industry comprised of hundreds of plants and turning out products valued in billions each year. The opportunities for ceramic graduates are great.

Contact with the industries of the State is maintained through the splendid cooperation afforded the College by the Ceramic Association of New York State. Special committees of this Association assist college authorities in evaluating the teaching and research programs. Contact with other State agencies is maintained through active cooperation with the New York State Science Service and the New York State Department of Commerce.

Encouragement is given to participation in extra-curricular activities because it is known that through such participation a student has the opportunity to learn the effectiveness of cooperative work and to develop talents not brought out by regular course work. The value of a student's participation in religious fellowship, dramatics, athletics, and journalism is difficult to evaluate, but experience has shown that such activities not only add much to the student's outlook on life but also serve to develop understanding and confidence in areas outside his chosen field.

Staff proficiency is kept high by the encouragement given to participation in the affairs of educational and scientific societies, the establishment of direct contact with industry, direct association with research work, plant visitations, and advanced study.

Research is kept timely and alive by an active research and development program and the availability of exceptionally good equipment. Involving as it does studies of a fundamental scientific nature,

studies in applied research, and studies concerning the utilization of New York State minerals, the program affords the student an opportunity to become acquainted with practically all types of ceramic research. Projects sponsored by the College, by industry, federal agencies and associations, bring to the campus leading industrialists and outstanding research workers. Research carried on by undergraduate and graduate students links the teacher, the researcher, and student in a valuable educational experience.

THE INSTITUTION

OBJECTIVES

CHAPTER 383 of the Laws of New York of 1900 stated that the purpose of the new institution at Alfred was "to give scientific, technical, art and practical training for the manufacture of all kinds of ceramic products and to conduct experiments in reference to the value for commercial purposes of clays and shales of New York State."

During the fifty-five years of its existence, the institution has kept its sights high. Its principal desire has been, and is, to afford students a program of progressive education and stimulating research which will prepare them to be good citizens and capable ceramists.

LOCATION

The College is at Alfred University, Alfred, N. Y. The village of Alfred is in Allegany County, 74 miles south of Rochester, 12 miles southwest of Hornell, and 14 miles northeast of Wellsville. It is located on state highway 244, which, two miles east at Alfred Station, connects with state highway 21 and the main line of the Erie Railroad. Alfred, with a population of 2000, is situated at an elevation of 1800 feet.

HISTORY

The College had its beginning as the New York State School of Clay Working and Ceramics, which was established at Alfred University in 1900. Two men, Boothe C. Davis and John J. Merrill, visioning the promising position ceramic education was to take in the professional and industrial life of the nation, labored unceasingly for its establishment.

At the time the school was established there was only one other University offering specialized courses in ceramics; together these institutions pioneered in the fields of ceramic education.

It was under the guidance of its first director, Charles Fergus Binns, and the then president of Alfred University, Boothe C. Davis, that the philosophy of the school was developed and the foundation laid for further growth. During the administration of Dr. Binns (1900-1931), the first school building (Binns Hall) was erected and enlarged,

courses of instruction were developed, student registration increased from five to one hundred sixty-nine, the importance of ceramic education was proved, and plans for expansion of the school were developed.

In 1932, the school was renamed the New York State College of Ceramics, and its program expanded. A new building (Merrill Hall) was built and equipped.

Dr. Major Edward Holmes was appointed the first Dean of the College and served in that capacity from 1932 to 1946. During those years Dean Holmes worked with Presidents Davis and Norwood in carrying the work of the College forward. Under the direction of Dean Holmes, the engineering and technology courses were strengthened and broadened, the interest of state manufacturers was attracted to the College, the Ceramic Experiment Station was established (1936), and ground was laid for the development of a research program. The engineering curriculum was accredited by the Engineers' Council for Professional Development.

During the years of World War II, registration decreased but the research work of the College increased rapidly. The staff readjusted its efforts to care for the demands being placed on the College and made numerous contributions to the war effort.

Under the guidance of Dr. Samuel R. Scholes, who served as Dean from 1946 to 1948, provisions were made for handling the heavy research program and the record registration stemming from World War II, the engineering and technology courses were revicwed and reconstituted to include strengthened basic courses and courses in humanistic-social studies, impetus was given to further development in the ceramic design program, a reference library was established, appropriations were obtained for the erection of a grinding and clay-storage building, and positions were established for the purpose of strengthening work at the graduate level.

Binns Hall was torn down in 1950 and on its site a new class-room and laboratory building, which was tied in with Merrill Hall, was built. Classes were held in the new building for the first time in September of 1953. This building was the outcome of plans laid in 1943, and is one of the finest and best equipped of its kind. The completed Ceramic Building is known as Binns-Merrill Hall.

Since its beginning, the College, while contributing greatly to ceramic education, has been keenly aware of the developments taking place in education and of the advancements being made in science. Its administrators have been eager to bring to the students the benefits of the most progressive thinking in all phases of ceramics. As a consequence of this progressive attitude, the College, with its well qualified staff and exceptionally well-equipped laboratories, offers outstanding undergraduate and graduate courses in Ceramic Engineering, Ceramic Technology, Glass Technology and Design.

CONTROL

The College of Ceramics is a unit of the State University of New York and as such is under the general direction of the officers and Board of Trustees of that University. It is supported by annual appropriations of the Legislature. Because of the law which established the College in which certain powers were granted to Alfred University, it is known as one of the "contract" or "statutory" colleges within the State University.

The trustees of Alfred University have been entrusted with the responsibility of operating the College of Ceramics and they appoint annually a committee which acts in an advisory capacity in carrying on the affairs of the College. This committee is known as the Advisory Council of the College and the President of Alfred University serves as Chairman.

The immediate direction of the affairs of the College is carried out by the Dean.

BUILDINGS AND EQUIPMENT

The "Ceramics" building, in which most of the work of the College is carried on, is one of which the College is justly proud. This building, which was dedicated in June 1953, is known as "Binns-Merrill Hall." It is quadrangular in shape containing 70,000 square feet of working space especially designed and laid out to serve the particular needs of the College. Three-fourths of the building is new and the other fourth is "Old Merrill Hall," to which the new portion has been connected. The building and its equipment represent an outlay of approximately two million dollars and provide the finest and most complete facilities for ceramic education.

Among many features possessed by this building are a well equipped library, excellent mineralogy laboratories, airy chemistry laboratories, special facilities for research and development, air-conditioned lecture rooms, bright drawing rooms and a 194-foot long kiln room two stories high.

A grinding and clay storage building was constructed in 1949. This concrete block building has been used for grinding and clay storage, but it is planned, with the moving of the grinding equipment to the new building, to use this building for a freshman plaster shop and as a laboratory in which pilot-plant work may be carried out.

The ceramic laboratories are equipped with modern apparatus and machinery needed for clay and mineral processing, body mixing and body preparation, shaping and forming of ware, drying and firing of samples, the testing of products and the analysis of minerals. The special laboratories such as those for chemistry, petrography, spectroscopy, and x-ray have excellent and adequate equipment. Besides the stationary equipment there are available the many small items of equipment and apparatus essential to special studies and research.

Some of the research work which is under the direction of the College staff is cared for in buildings owned by Alfred University.

LIBRARY

A highly important facility of the College is the ceramic reference library. Under the guidance of trained librarians, the students find here a wealth of published material in all phases of ceramic engineering, technology, art, and design, as well as in the related sciences. The library is open five days, five evenings during the week and at prescribed times over week-ends.

The number of bound volumes of art and technical books approximates 11,000. In addition the library has many unbound bulletins, reprints, pamphlets, and student theses. More than 240 periodicals are currently received on subscription.

The facilities of the Alfred University library containing 80,000 volumes, are also available to ceramic students. This collection supplements effectively the ceramic library, particularly in humanistic-social subjects.

ADMISSION

IT IS THE RESPONSIBILITY of the Committee on Admissions to select those candidates who have character, intelligence and purpose and who will profit most by the program offered by the College.

The Committee on Admissions meets at frequent intervals to consider applications and to review the scholastic records of candidates. Soon after a candidate's application has been considered, he or she is notified of the committee's action. Ordinarily the candidate is definitely accepted or rejected but in border-line cases decisions may be deferred until nearer the time of the opening of College.

Enrollment is limited and it is not possible to accommodate all qualified applicants. It is advantageous therefore to make application early, preferably before April 15.

PROCEDURE

Catalogs and application blanks may be secured by writing to the Director of Admissions, Alfred University, Alfred, New York. The application blanks consist of two forms:

Form I, application for admission, should be completed by the candidate in full and returned to the Director with a $5 application fee. This fee will not be refunded.

Form II, the official secondary-school transcript, is to be filled out by the secondary-school principal or counselor and mailed directly to the Director.

All candidates are required to take the Scholastic Aptitude Test of the College Entrance Examination Board. These tests are given at convenient locations throughout the world in December, January, March, April, May and August of each year. For full information as to location of tests, fees, sample examinations and scheduling for the examination, write The College Entrance Examination Board, Box 592, Princeton, New Jersey. It is preferred that the December or January tests be taken to facilitate early completion of the candidate's application for admission.

Should a personal interview be desired an applicant may apply to the Director of Admissions for an appointment to visit the campus, discuss his educational aims and see the facilities of the College.

ENTRANCE REQUIREMENTS

GENERAL

The basic requirement for admission to the College is graduation from an accredited secondary school. The candidate is expected to rank in the upper half of his class and to present a total of 16 units.

The unit represents a course of five recitations per week throughout the school year. Since, in the total of 16 units, four years of English are counted as four units, a total of 15 units will be accepted from states in which four years of English are counted as only three units.

The majority of applicants comply in full with the unit requirements. In exceptional cases where evidence of high scholarship is presented, applicants may be given the opportunity to make up certain deficiencies in summer sessions or by taking entrance examinations. Application for such an examination, which is given only during the first week of the fall semester, must be made not later than July 1.

For more specific course requirements, see below:

ENTRANCE REQUIREMENTS—Engineering and Technology

ENGLISH — 4 units.

The candidate must be familiar with elementary rhetoric, both as a science and an art, and must be proficient in spelling, punctuation, idiom, and division into paragraphs. Preparation must include the work in English prescribed by the various college associations.

MATHEMATICS — 3 units.

Elementary and intermediate algebra and trigonometry, including fundamental operations, factoring, fractions, ratio, proportion, radicals, quadratics, plane geometry, including the straight line, angle, circle, proportion, similarity and areas.

Deficiencies in mathematics may be made up during the three weeks of Alfred University post session. For details address Director of Summer School.

SCIENCE — 3 units.

Physics, chemistry and general science. In certain cases consideration will be given to the substitution of biology or physical geography for one of the above.

ELECTIVES — 6 units.

Electives may be chosen from any of the regular high school subjects such as foreign languages, social sciences, mathematics or natural sciences. One or two units may be chosen from the following: agriculture, domestic science, commercial subjects, drawing and design, industrial arts, music, public speaking, and dramatics.

ENTRANCE REQUIREMENTS — Design

ENGLISH — 4 units.

The candidate must be familiar with elementary rhetoric, both as a science and an art, must be proficient in spelling, punctuation, idiom, and division into paragraphs. Preparation must include the work in English prescribed by the various college associations.

MATHEMATICS — 2½ units.

To include elementary algebra and plane geometry.

SCIENCE — 1 unit.

Physics, chemistry, biology or general science.

ELECTIVES

Electives may be chosen from any of the regular high school subjects such as foreign languages, social sciences, natural sciences or mathematics. No more than four units may be chosen from the following: commercial subjects, drawing or design, industrial arts, music, public speaking and dramatics.

SPECIAL REQUIREMENTS

After applicants are found to meet the general requirements stated above, the Admissions Committee proceeds to consider them as poten-

tial candidates for the next entering class. These deliberations are made on an individual basis with careful attention to the following considerations.

1. *Scholarship.* Experience has shown that high school students who rank low scholastically rarely make a success of their ceramic education. It is the policy of the institution, therefore, to reject the applications of all students who do not have a good high-school scholastic record.

2. *Adaptability.* In addition to general scholastic ability, adaptability to the special requirements of a ceramic education is required. Applicants for admission to the Design Department may be invited for a personal interview or to submit exhibits of their high-school art work, in order to present satisfactory evidence of adaptation to art work. This may be done either before or after they make formal application for admittance.

3. *Interest.* Evidence of special interest in gaining a ceramic education of the kind offered by the State University of New York College of Ceramics, and absence of too absorbing an interest in other fields of education, will influence the committee in making its decisions.

4. *Personal qualities.* Personal traits, such as initiative, industry, appearance, honesty, originality, and resourcefulness are given due consideration.

5. *Likelihood of continuing through the four-year course.* It is necessary to refuse admittance to applicants who want to enroll in the College and transfer to another institution before completing the course. Admittance may also be refused in cases where the applicant cannot make satisfactory financial arrangements.

6. *Age, character and health.* Applicants must be at least sixteen years of age, of good moral character, and possessed of health which permits them to do satisfactory work. All entering students must have a physical examination. A health form will be sent to the entering freshman during the summer. This form should be filled out by the family physician.

7. *Date of application.* The choice between applicants who equally meet the foregoing requirements will be determined by the date of application.

8. *Interviews.* Occasionally a candidate may be specially requested to present himself at the College for an interview with the Dean and other members of the Admissions Committee. Interviews will be much more profitable if, at least several days before them, the applicant's credentials, particularly the certificate of recommendation conveying the high-school record have been received by the College officers. Appointments for interviews should be made several days in advance by writing to the Director of Admissions.

ADMISSION TO ADVANCED STANDING

Students in other approved institutions may transfer to the College. Their admittance is subject to the following regulations:

1. They must supply a statement of their entrance units and date of graduation from high school, a transcript of their college record, a letter of honorable dismissal by the proper official, and a statement that they are eligible to return to the institution which they are leaving.

2. Credit will be granted for equivalent courses in which the grades are C or higher. No credit is given for grades of D or lower.

3. Transfer students are subject to the same standards of selection as entering freshmen.

SPECIAL STUDENTS

It is not the policy of the institution to encourage the enrollment of special students who are not candidates for a degree. Disappointment, both to the institution and the student, usually results from this arrangement. However, in special cases where the applicant is of mature age, and of extraordinary ability, arrangements may be made for admittance as a special student.

REQUIREMENTS FOR DEGREES

GRADUATION DEPENDS upon successfully completing the prescribed courses of study with a grade-point index of 1.00 or more. No substitutions for the prescribed courses are permitted, but by means of the elective courses, some degree of variation in the curriculum to meet the individual wishes of the student is possible. The College reserves the right to withhold a diploma for poor scholarship or other reasons.

BACHELOR'S DEGREES

The degree of BACHELOR OF SCIENCE (B.S.) is awarded to those students of the Department of Ceramic Engineering and the Department of Glass Technology, who successfully complete the prescribed courses of study in these departments with scholastic cumulative grade-point indices of 1.00. The department in which the student majored is stated on the diploma.

The degree of BACHELOR OF FINE ARTS (B.F.A.) is awarded to those students who successfully complete the prescribed courses of study in the department of Design with a scholastic cumulative grade-point index of 1.00.

MASTER'S DEGREES

The degree of MASTER OF SCIENCE (M.S.) is awarded to graduate students who successfully complete the thirty-six hours of prescribed graduate studies and submit an approved research thesis.

The degree of MASTER OF FINE ARTS is awarded to graduate students who successfully complete the thirty-two hours of prescribed graduate studies and submit an approved thesis.

A minimum of one year's residence is required for the Master's Degree.

MASTER OF SCIENCE DEGREE

To be eligible for general admission to the graduate school an applicant must have received a Bachelor of Science degree from a recognized institution and must present evidence of (a) his ability to carry on work at the graduate level, (b) sound character, (c) better than average scholarship in his undergraduate work.

Science graduates of the Ceramic College or others with equivalent preparation may earn the Master of Science degree in one or two years, depending upon the program decided upon.

The programs of students coming from other institutions may differ considerably from those of graduates of the College of Ceramics. If the Bachelor's degree was obtained in a field other than ceramics, students will be required either: (1) to take undergraduate courses in those subjects necessary to bring their backgrounds up to the level required for graduation from this College, or (2) to pass a comprehensive examination after suitable independent study, before they may become candidates for the Master of Science degree. More than one year will be required in such cases.

Courses marked with an asterisk in this catalogue are accepted for graduate credit. In order to obtain graduate credit for those courses which are normally undergraduate courses, students must (1) prepare an acceptable term paper, (2) pass an oral examination in the subject.

Due consideration will be given to graduate work done elsewhere. However, transferred credit must be of grade B or better, and it will not reduce the time of residence.

Generally, the Master of Science degree is evidence that the holder possesses a maturity and grasp of his major subject well beyond that of one having the bachelor's degree; that he is able, not only to read and study independently, but also to understand and apply the literature of his field.

Written application for admission to candidacy must be made by the student to the Dean of the Graduate School not later than three months before the date of graduation.

To become a candidate for the Master's degree a student must satisfy the Committee on graduate studies that he has met the following preliminary requirements.

1. The satisfactory completion of 18 semester hours of acceptable courses, including not more than 9 hours of thesis work.
2. At least one semester in residence with graduate standing.
3. The completion of any non-credit prerequisites specified at the time of registration for graduate study.
4. A grade-point index of at least 2.00 for courses completed and forming a part of the student's program.

5. Acceptable performance on any qualifying or comprehensive examination required.

6. Satisfactory progress on thesis, if it has formed a part of the student's program.

The complete requirements for the degree are:

1. At least one year of residence (work must be completed within a period of three years unless special permission is granted).

2. Thirty-six credit hours of study including thesis. The thesis may count for not more than 18, nor less than 12 of the required hours. Not more than 12 credit hours may be taken outside the candidate's field of specialization.

3. A completed thesis based on original experimental work, on an approved subject, and so written as to be suitable for publication.

4. Successful performance during a two-hour oral examination in the candidate's major field.

MASTER OF FINE ARTS DEGREE

Interested persons are requested to write directly to the Chairman of the Design Department prior to making formal application. If possible, an interview should be arranged.

The prerequisites for graduate study toward the Master of Fine Arts degree are: (1) the Bachelor of Fine Arts or Art Education or, (2) the Bachelor of Arts degree with a major in Fine Arts or Art Education or, (3) the Bachelor of Arts degree with the equivalent of fifty semester hours of professional art training in a recognized institution.

Credit and residence requirements for the Master of Fine Arts degree can be completed in two semesters, but graduate students who have not had sufficient undergraduate courses in design should plan on a longer period of study in order to complete the full requirements.

To be eligible for general admission an applicant must have received his degree from a recognized institution and must furnish evidence (a) of having ability to carry on work at the graduate level, (b) of sound character, (c) of better than average scholarship in his undergraduate work.

The programs of transfer students will differ considerably from those of students graduating with a Bachelor of Fine Arts degree from the College of Ceramics. Where the Bachelor's degree was obtained in a field other than ceramics, students will be required either: (1) to take undergraduate courses in those subjects necessary to bring their backgrounds up to the level required for graduates from the College of Ceramics or, (2) to pass a comprehensive examination after suitable independent study, before they may become candidates for the Master of Fine Arts degree.

Graduate students who are enrolled in undergraduate courses will be allowed full graduate credit for such courses under the following conditions:

1. The student's work must be approved for graduate credit by a faculty jury.

2. Grades earned in such courses must be B or higher.

Due consideration will be given to graduate work done elsewhere. However, transferred credit must be of grade B or better and it will not reduce the time of residence.

Generally, the Master of Fine Arts degree is evidence that the holder possesses a maturity and grasp of his major subject well beyond that of one having the Bachelor's degree; that he is able, not only to read and study independently, but also to understand and apply the literature of his field.

Written application for admission to candidacy must be made by the student to the Dean of the Graduate School not later than 6 months before the date of graduation.

To become a candidate for the Master's degree, a student must satisfy the same preliminary requirements as those already outlined for the degree of Master of Science. The complete requirements for the Fine Arts degree are also the same except that 32 hours of graduate work are required. The thesis, or graduate project, is not necessarily written for publication and the examination for the Fine Arts degree may differ in form.

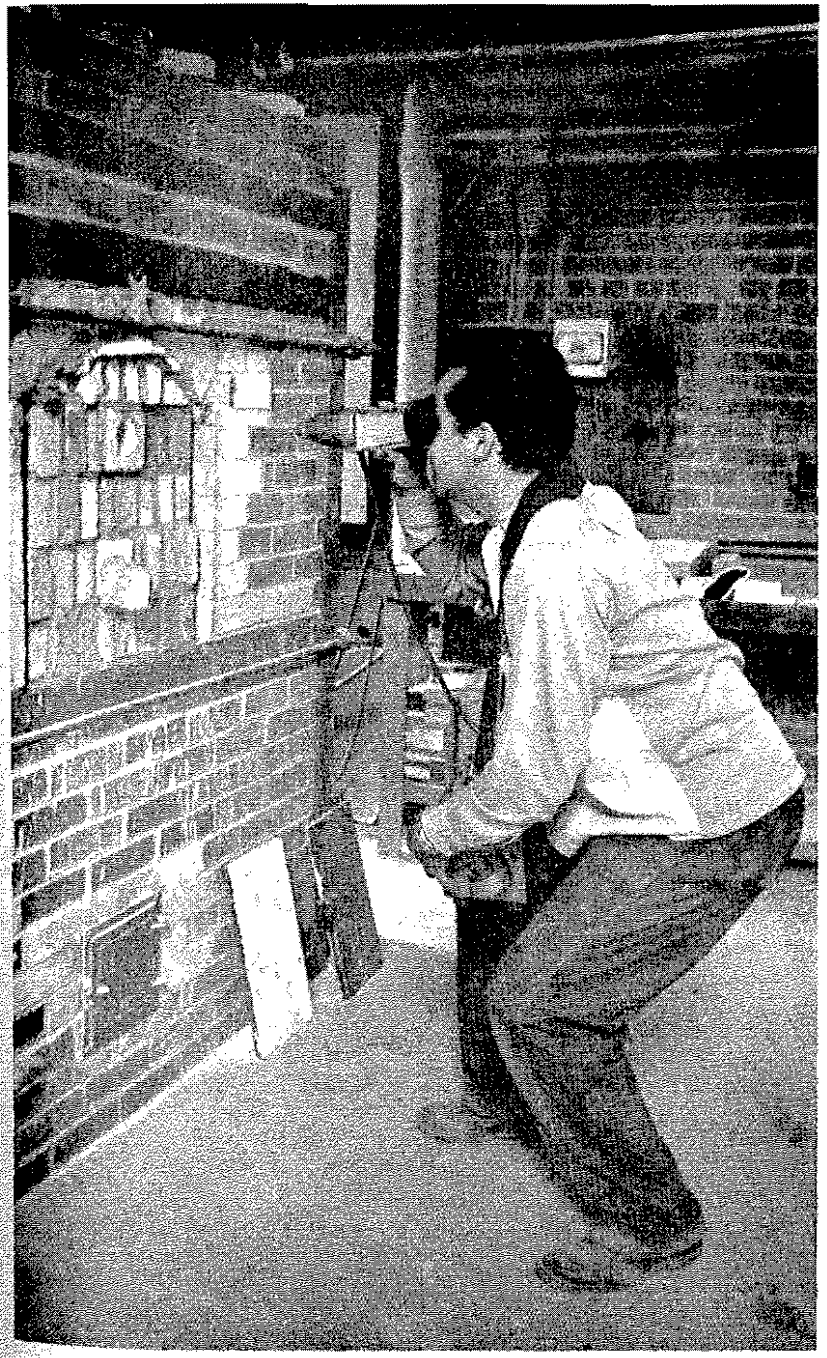
Graduate students who wish to specialize in industrial design may, at the discretion of the Chairman of the Department, be permitted to spend a portion of one semester as internees in the design laboratory of an industrial firm.

DOCTOR OF PHILOSOPHY DEGREE

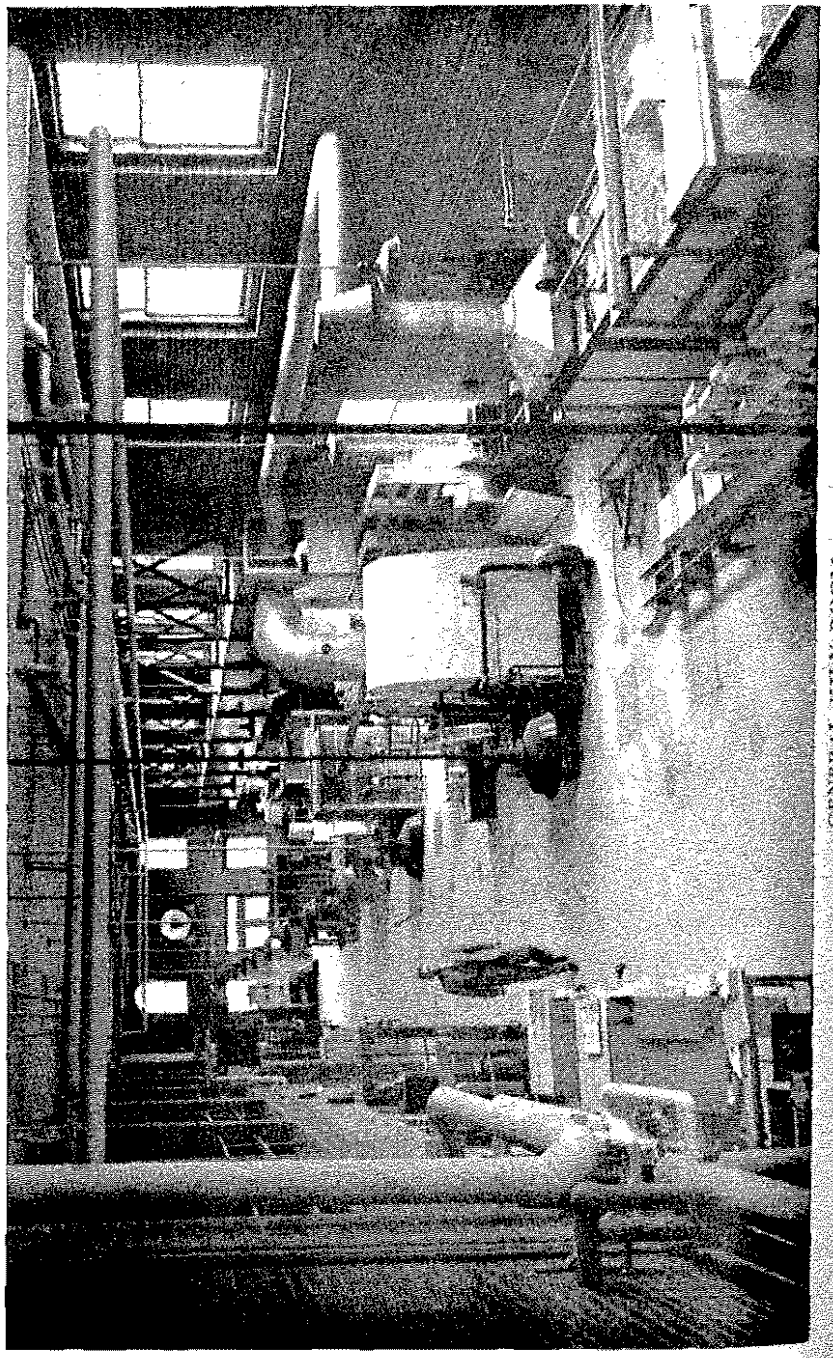
Those interested in the Doctor of Philosophy degree should write directly to the Dean of the Graduate School of Alfred University.

THROWING A PIECE OF POTTERY

MAKING AN ANALYSIS



FIRING OF A KILN



GENERAL KILN ROOM

TUITION FEES AND EXPENSES

TUITION

LEGAL RESIDENTS of the State of New York pay no tuition. All students who are not legal residents of the State pay tuition of $150 per semester, in addition to all other fees and expenses.

No person is considered eligible to register as a resident of the State of New York unless he has been a *bona fide* resident in New York for the six consecutive months next preceding the date of his enrollment. No person shall be considered to have gained or lost his residential status in this State for the purpose of registering by any conduct of his own while he is a student in the College, unless, after attendance at the College for one year, it can be clearly established by the student that his previous legal residence has been abandoned and a new one established in New York for purposes other than merely attending the College.

The residence of a minor follows that of parents or legal guardian, regardless of emancipation. The residence of a wife follows that of her husband. Any student whose residence thus follows that of another person, and who has not been a resident for the six months immediately preceding marriage or assignment to a guardian, cannot be considered to have gained residence until the full six-month period has elapsed.

FEES

Fees are charges made which are non-returnable and the college reserves the right to charge fees without notice.

A general fee of $75 each semester is charged to care for laboratories, plant trip, library, campus tax, student year book, student branch of American Ceramic Society, athletics, the college paper, University Forum, and infirmary service.

Students taking elective courses in the College of Liberal Arts beyond those required for graduation will be expected to pay laboratory fees for such courses.

Special service fees are charged as follows:

1. An application fee of $5 to cover the cost of processing an application.

2. A special examination fee of $5 is charged a student for taking a test or examination which he or she has missed.

3. A late registration fee of $5 is charged to cover the cost of processing registrations which are not made during the prescribed times.

DEPOSITS

Deposits are those monies paid from which some return may be expected. The deposit charges are as follows:

A pre-registration charge of $25 is made to assure the college of the student's sincerity in registering in college. This deposit is refunded upon graduation or at the time of leaving school, providing the student follows the prescribed rules for discontinuing his program.

Breakage deposits are required in chemistry and other courses having laboratory work where glassware and other apparatus may be broken or lost. At the end of such a course the value of missing or broken pieces will be deducted from the breakage fee and the balance of the deposit will be refunded to the student. The breakage deposit in chemistry courses is usually $15.00.

All students in Design make a deposit of $40 to cover the cost of art supplies needed in their work. The amount the student receives back as a refund will depend on the cost of the items he or she has received from the stockroom.

DORMITORY EXPENSES

Dormitory Room Deposit, each year..... $10.00

The room deposits must be paid in advance at the time the room is reserved. This is not a part of the room rental. In case a student fails to occupy a room so reserved, the deposit it forfeited. Upon surrender of the room in good condition at the close of the school year, the deposit will be refunded to the student.

Dormitory Room Rentals, per semester..... $110.00

In the Brick, Cannon, Barresi or Bartlett Dormitories. Prices in all cases are per person. All rooms are completely furnished. Students are to supply their own towels, bed linen, blankets and desk lamps.

Board in Dormitory Dining Halls per semester $205.00

Residents of the University dormitories are required to board in the dining halls. No credits or rebates for absences are allowed on board bills. The charges for board and room in dormitories will be in effect unless cost of food and labor or new forms of taxation make it necessary for the University to increase them. If and when such increases are made, they will become effective at the beginning of the following semester.

TERMS OF PAYMENT

Tuition and other regular charges are billed at the beginning of each semester, during the process of registration. These bills cover the semester charges for tuition, laboratory and other fees, also room rental and board if the student rooms in a University dormitory.

Semester bills are due when issued and must be paid, or definite and satisfactory arrangements made at the Treasurer's Office for payment, before the student is eligible to attend classes.

Some students and parents prefer to pay tuition, room, board, and fees on a time-payment basis. Midland Time Plan, of which Alfred University is a participating member, provides a method by which parents and guardians may pay tuition and other fees in eight equal monthly installments during the academic year. This corporation applies to education the accepted and well established methods of deferred payments familiar in other fields. The Midland Plan charges 2¾% interest on money borrowed for college expenses.

REFUNDS

No refunds on account of tuition and fees will be allowed if the student withdraws after the 5th week of the semester. However, refunds on deposits will be made.

A student withdrawing before the middle of the semester because of serious illness or other good and sufficient reason, may be granted a refund by the Treasurer of the University, the amount of such refund, if any, to be determined after full investigation of the circumstances. Board and room charges will be refunded on a pro-rata basis.

All other refunds will be made according to the following schedule:

Week of registration	100% refund
First week after registration	80% refund
Second week after registration	60% refund
Third week after registration	40% refund
Fourth week after registration	20% refund

No refund after fifth week (including registration week)

A special refund and credit policy has been formulated to protect those called into military service.

ESTIMATE OF EXPENSES

Total expenses for students who are legal residents of the State of New York, for the two semesters of the college year, exclusive of personal expenditures, such as transportation, clothing, recreation, etc., may be estimated as follows:

	— In — University Dormitories	With Private Families or in Clubs
Board	$410	$400
Room	220	170
Inclusive College Fee	150	150
Deposits	25	25
Books, etc.	40	40
	$845	$785

Out-of-state students can compute comparable budgets by adding to each of the columns $300 for tuition.

All freshmen are expected to room and board in University dormitories. For complete regulations covering student housing please refer to that section on page 71 of this catalog.

All freshmen in the Engineering and Technology courses are required to take Mathematics 21S, Plane Surveying, and all freshmen in Ceramic Design will take a course in drawing. These courses are offered in the three-week intersession in June, starting immediately after the close of the freshman year. An intersession symposium on some field of ceramics is given for three weeks each June and all students in the Ceramic Engineering and Technology courses are required to attend at least one of these sessions. Such students are free to elect the symposium following their sophomore or junior years. The cost of room and board for three weeks during all these sessions is not included in the estimate of annual expenses shown above.

During the three-week intersession the cost can be estimated as follows: Dormitory room $15.00, board in cafeteria $36.00.

PROGRAMS OF STUDY

THE COURSES of instruction have been developed to satisfy the needs of the ceramic industry. Engineers are needed to work with people, money and machines for the purpose of producing ceramic wares. Designers are needed to create shapes or forms, to select and develop colors, and to maintain standards in decoration. Technologists are needed to maintain quality and to further the understanding of the principles underlying the manufacture of ceramic products, whether in the area of fine china, building brick or refractories.

Corresponding with these industrial needs are the three departments: Ceramic Engineering, Glass Technology, and Design. If a student expects to graduate in four years he must choose one of these areas in which to specialize. The choice must be made when he enters college, if it is to be design. The choice between technology and ceramic engineering may be delayed until the end of the sophomore year, for the work of the first two years is the same for engineers and technologists.

At the present time all curricula are being readjusted with a view toward strengthening the programs. The first year courses have already been revised as shown in this catalog. Suitable changes may be expected in the courses of the other three years.

CERAMIC ENGINEERING*

The course provides for a thorough grounding in the fundamental sciences of mathematics, chemistry, and physics. Most of the first two years' work is devoted to these subjects. The last two years of the course are devoted primarily to the application of these fundamental sciences to the technical and engineering aspects of the ceramic industries.

The work of the ceramic engineer is usually the manufacture of ceramic ware. Although he may find work in research or sales, the ceramic engineer is primarily a production man. For this reason, the subjects of mathematics, mechanics, strength of materials, and equipment design and plant layout are emphasized.

Program leads to the degree of Bachelor of Science (B.S.).

* Accredited by Engineers Council for Professional Development.

CERAMIC ENGINEERING

First Year

Attendance at Assembly is required

First Semester	*Hrs.*	*Second Semester*	*Hrs.*
Mathematics 5	4	Mathematics 17 (Dif. Calculus)	4
Chemistry 5 (General Inorganic)	4	Chemistry 6 (General Inorganic)	4
Engineering Drawing 1	2	Engineering Drawing 2	2
Cer. Eng. 101 or 151 (Introd.)	1	Cer. Eng. 102 or 152 (Introd.)	1
English 1 (Composition)	3	English 2 (Composition)	3
Civilization 1	3	Civilization 2	3
P.E. 1 or M.S. & T.	1	P.E. 2 or M.S. & T.	1
	18		18

Intersession term of three weeks following close of Second Semester
Mathematics 21S (Plane Surveying and Map Reading) *3 credit hours*

Second Year

Attendance at Assembly is required

First Semester	*Hrs.*	*Second Semester*	*Hrs.*
Mathematics 15 (Integral Calculus)	4	Mathematics (Engineering Math. or Diff. Equations)	4
Chemistry 11 (Qualitative Analysis)	3	Chemistry 13 (Quantitative Analysis)	3
Physics 11 (General)	4	Physics 12 (General)	4
Geology 5 (Structural)	3	Mineralogy 1 (Introd. & Cryst.)	3
Cer. Eng. 103 (Unit Operations)	3	*Cer. Eng. 104 (Materials)	4
English 35 (Technical Writing)	2	P.E. 4 or M.S. & T.	1
P.E. 3 or M.S. & T.	1		
	20		19

**Intersession term of three weeks following close of Second Semester.

Ceramics Special fields ..... *3 credit hours*
(See Symposium on page 51)

* Glass Technology students will substitute Glass 200 for Ceramics 104.
** R.O.T.C. students are required to attend the symposium following their sophomore year.

Third Year

First Semester	*Hrs.*	*Second Semester*	*Hrs.*
Physics 37 (Mechanics)	4	Physics 38 (Strength of Materials)	4
Chemistry 41 (Physical Chem.)	4	*Chemistry 42 (Physical Chem.)	4
Chemistry 43 (Fuels & Combustion)	3	Petrography 1	3
Cer. Eng. 105 (Unit Processes)	4	Cer. Eng. 106 (Glasses, Glazes & Enamels)	4
M.S. & T. or Non-Tech. Elective	3	M.S. & T. or Civilization 22	3
	18		18

* Upon recommendation, Chemistry 44 (advanced quantitative analysis) may be substituted for Chemistry 42.

Fourth Year

First Semester	*Hrs.*	*Second Semester**	*Hrs.*
Cer. Eng. 107 (Testing of Products)	2	Cer. Eng. 122-172 (Plant Layout)	5
Cer. Eng. 121 (Structural Plan)	2	Cer. Eng. 134 (Electricity)	3
Cer. Eng. 131 (Heat)	3	Cer. Eng. 162 (Thesis)	2
Cer. Eng. 161 (Thesis)	2	Cer. Elective	3
Economics 11 (Prin. and Probs.)	3	Economics 12 (Prin. and Probs.)	3
Non-technical Elective	3	Non-technical Elective	3
Plant Inspection	1		
M.S. & T. or Ceramic Elective	3		
	19		19

* R.O.T.C. students must take 3 hrs. of M. S. & T. in addition to normal schedule.

GLASS TECHNOLOGY

Glass differs from other ceramic products in two essentials: the firing operation is carried to complete fusion, and the forming process follows the furnace treatment instead of preceding it. Glass is related to other ceramic bodies, because all glasses are made up of oxides, among which silica predominates. Glazes and enamels are glasses formed in place on the surfaces which they protect and ornament. Ceramic bodies such as pottery or porcelain owe much of their strength to a glassy bond which holds their crystallized minerals together.

The purpose of the curriculum in glass technology is to prepare the graduate for usefulness in the glass industry or in related fields. The student necessarily spends most of his time upon fundamental sciences, mathematics, physics, and chemistry. The application of these sciences to an industry constitutes technology. The course is identical with Ceramic Engineering for the first year.

In his specialization, the student deals with the raw materials for glass and the behavior of its constituent oxides, particularly their high-temperature chemistry. He learns how to analyze glasses, and how to design and calculate compositions for various purposes; he studies fuels and furnaces and acquires experience in glass-melting on a laboratory scale; he does not become a glassworker, but he learns the principles of the art; he finds out how glassware is annealed and gives a great deal of his time to the classroom and laboratory study of its physical properties; he becomes acquainted with the fascinating subject of colored glasses, in theory and practice.

Because clay is important in building the furnaces and containers in which glass is melted, certain courses in ceramic technology are included in this curriculum.

The department offers an opportunity for research in glass to those who are adequately prepared by college or plant experience. Glass manufacturers are invited to send their employees for further training and to establish fellowships for the study of special problems.

Students who exhibit unusual promise as they reach junior year will be given opportunity to prepare for graduate study by acquiring reading knowledge of a foreign language. Certain deviations from the prescribed courses will be allowed to suit the preference of upperclassmen who may wish to emphasize particular phases of their training.

This program leads to the degree of Bachelor of Science (B.S.).

GLASS TECHNOLOGY CURRICULUM

(See Symposium on page 51)

The first two years of this course are the same as those outlined for Ceramic Engineering with the exception that Glass 200 will be substituted for Ceramics 104.

Third Year

First Semester	*Hrs.*	*Second Semester*	*Hrs.*
Physics 37 (Mechanics)	4	Physics 38 (Strength of Materials)	4
Chemistry 41 (Physical Chem.)	4	*Chemistry 42 (Physical Chem.)	4
Chemistry 43 (Fuels & Combustion)	3	Petrography	3
Glass 200 (Composition)	3	Glass 202 (Physics of Glass)	3
Glass 251 (Laboratory)	1	Glass 252 (Laboratory)	1
Glass 271 (Seminar)	1	Glass 272 (Seminar)	1
M.S. & T. or Technical Elective	3	Glass 282 (Plant Inspection)	1
		M.S. & T. or Civilization 22	3
	19		20

* Upon recommendation Chemistry 44 (Advanced Quantitative Analysis) may be substituted for Chemistry 42.

Fourth Year

First Semester	*Hrs.*	*Second Semester**	*Hrs.*
Cer. Eng. 131 (Heat)	3	Mathematics 33C (Statistics)	3
Glass 203 (Properties)	3	Cer. Eng. 134 (Electricity)	3
Glass 261 (Thesis)	2	Glass 204 (Melting)	3
Glass 273 (Seminar)	1	Glass 262 (Thesis)	2
Economics 11 (Prin. and Probs.)	3	Glass 274 (Seminar)	1
Non-technical Elective	3	Economics 12 (Prin. and Probs.)	3
M.S. & T. or Technical Elective	3	Non-technical Elective	2
	18		17

* R.O.T.C. students must take 3 hrs. of M. S. & T. in addition to normal schedule.

CERAMIC TECHNOLOGY

The course in Ceramic Technology differs from the course in Ceramic Engineering in but one respect. In Ceramic Technology, subjects generally accepted as technological in character have been substituted for the engineering subjects in the engineering curriculum. There is an active demand by the ceramics industries for graduates to serve as scientists and technologists in addition to the demand for engineers. The department provides for the education of students as scientists and technologists.

As in the Ceramic Engineering course, a thorough grounding in mathematics, chemistry, and physics is given. This is followed by increased emphasis on both scientific subjects and specialized ceramic courses stressing the application of the fundamental sciences to the technical problems of the ceramic industries.

The course is identical with Ceramic Engineering for the first two years. Thereafter, certain courses regarded as fundamental are required, but certain options will be allowed. Students whose scholastic records indicate that they would succeed in graduate study may take one or two foreign languages, additional chemistry, and more mathematics. Those who show a decided preference for particular branches of ceramics will be allowed more intensive specialization in those subjects.

This program leads to the degree of Bachelor of Science (B.S.).

CERAMIC TECHNOLOGY

(See Symposium on page 51)

The first two years of this course are the same as those outlined for Ceramic Engineering.

Third Year

First Semester	*Hrs.*	*Second Semester*	*Hrs.*
Chemistry 41 (Physical Chem.)	4	Chemistry 42 (Physical Chem.)	4
Chemistry 43 (Fuels & Combustion)	3	Cer. Eng. 106 (Glasses, Glazes & Enamels)	4
Cer. Eng. 105 (Unit Processes)	4	Cer. Eng. 134 (Electricity)	3
Cer. Eng. 125 (Thermo Mineralogy)	1	Cer. Elective	2
Cer. Eng. 131 (Heat)	3	Petrography	3
M.S. & T. or Elective	3	M.S. & T. or Civilization 22	3
	18		19

Fourth Year

First Semester	*Hrs.*	*Second Semester**	*Hrs.*
Cer. Eng. 107 (Testing of Prod.)	2	Mathematics 33C (Statistics)	3
Cer. Eng. 123 (Adv. Cer. Tech.)	2	Cer. Eng. 124 (Adv. Cer. Tech.)	2
Cer. Eng. 161 (Thesis)	2	Cer. Eng. 162 (Thesis)	2
Petrography 2	2	Cer. Elective	2
Economics 11 (Prin. and Probs.)	3	Technical Electives	4
Non-technical Elective	3	Economics 12 (Prin. & Probs.)	3
Plant Inspection	1	Non-technical Elective	3
M.S. & T. or Cer. Elective	3		
	18		19

* R.O.T.C. students must take 3 hrs. of M. S. & T. in addition to normal schedule.

DESIGN

The curriculum of the Design Department provides opportunity for professional training in the design and production of ceramic products. By electing appropriate courses in the third and fourth years students may specialize in the design of ceramic wares for industrial production. Others may find in the potter's craft a means of personal expression and a future part-time vocation, and may wish to concentrate on acquiring the skills of the individual artist-potter.

The work of the first two years provides a foundation for the student's general education and introduces him to beginning courses in creative art, design, and the study of materials. The freshman and sophomore curriculum includes courses in the following areas—English, History, and History of Art, Mathematics, Science, Literature, Drawing and Engineering Drafting, Painting, Sculpture, and Design.

The list of courses offered in the last two years provides for six hours of electives each year, which may be applied to additional studies in liberal arts or to extra courses in Design subjects. The study of ceramics begins in the third year with laboratory exercises and lectures on the properties of earthy materials and their uses in the manufacture of glasses, clays and other ceramic products. Technical studies are blended with exercises in the use of ceramic materials and processes and their application to problems of creative design. These are accompanied by parallel courses in Drawing, Painting, Sculpture, Graphics, Photography, History of Art, and Design for furniture and other non-ceramic materials.

Although the college offers no organized training program for teachers of art in secondary schools, those design students who choose to do so may elect a maximum of twelve credits in education courses. The remaining courses, required for teacher certification, must be taken outside the regular design curriculum and at the student's own expense.

Attendance at a three week intersession course in drawing is required of all first year students. This course is given each June. A minimum of 139 hours is required for graduation. The college reserves the right to retain selected examples of student ware. Freshmen enrollment is limited to twenty-five students, and preference is given to applicants whose high school record places them in the upper third of their graduating class, and/or who show evidence of exceptional ability for creative design.

CERAMIC DESIGN CURRICULUM

First Year*

Attendance at Assembly is required

First Semester	*Hrs.*	*Second Semester*	*Hrs.*
Mathematics 3 (College Algebra)	3	Mathematics 4 (Trigonometry)	3
Design 321 (Free Hand Drawing)	1	Design 322 (Free Hand Drawing)	1
Design 323 (Introd. to Design)	1	Design 324 (Introd. to Design)	1
Design 325 (Clay Sculpture)	1	Design 326 (Exercises with various materials)	1
Design 311 (Mechanical Drawing)	2	Design 312 (Mechanical Drawing)	2
Design 351 (History of Art)	2	Design 352 (History of Art)	2
Civilization 1 (History & English)	6	Civilization 2 (History & English)	6
P.E. 1 or M.S. & T.	1	P.E. 2 or M.S. & T.	1
	17		17

Intersession term of three weeks following close of second semester

3278 (Life Drawing) *3 credit hours*

Second Year

Attendance at Assembly is required

First Semester	*Hrs.*	*Second Semester*	*Hrs.*
Design 327 (Drawing and Painting—organization)	2	Design 328 (Drawing and Painting organization)	2
Design 329 (Two Dimensional Design)	2	Design 330 (Two Dimensional Design)	1
Design 329A (Three Dimensional Design)	3	Design 330A (Three Dimensional Design)	3
Design 331 (Advanced Sculpture)	2	Design 332 (Advanced Sculpture)	3
Design 353 (Hist. of American Art)	3	Design 354 (Hist. of American Art)	3
Design 305 (Ceramic Chemistry)	3	Design 306 (Ceramic Materials)	3
Psychology 11 or Sociology 21	3	Psychology 32 or Sociology 22	3
P.E. 3 or M.S. & T.	1	P.E. 4 or M.S. & T.	1
	19		19

* The first year program in the 1955-56 catalogue marks the beginning of a new curriculum. Subsequent catalogues will show changes in the listing of courses for the second, third and fourth years.

Third Year*

First Semester	*Hrs.*	*Second Semester*	*Hrs.*
Design 313 (Advanced Dralting)	2-3	Design 314 (Advanced Drafting)	2-3
Design 333 (Creative organization of P. and D.)	2	Design 334 (Creative organization of P. and D.)	2
Design 333A (Graphics)	2	Design 334A (Graphics)	2
Design 335 (Problems in Design)	3	Design 336 (Problems in Design)	3
Design 337 (Pottery)	5	Design 338 (Pottery)	5
Design 337A (Probs. in Sculpture)	2	Design 338A (Probs. in Sculpture)	2
Design 307 (Glazes)	3	Design 308 (Ceramic Colors)	2
Design 355 (History of Design)	3	Design 356 (History of Design)	3
†M.S. & T.	3	†M.S. & T.	3

Fourth Year*

First Semester	*Hrs.*	*Second Semester*	*Hrs.*
Design 339 (Adv. Draw'g & Paint'g)	2	Design 340 (Adv. Draw'g & Paint'g)	2
Design 341 (Adv. Design Probs.)	2-4	Design 342 (Adv. Design Probs.)	2-4
Design 341A (Advanced Graphics)	2	Design 342A (Advanced Graphics)	2
Design 343 (Prob. in Pottery Design)	4-6	Design 344 (Prob. in Pottery Design)	4-6
Design 343A (Sculpture allied with 343)	2	Design 344A (Sculpture allied with 344)	2
Design 309 (Equip. & Materials)	2	Design 310 (Product Development)	2
Design 357 (Seminar in Design Hist.)	2	Design 358 (Seminar in Design History)	2
†M.S. & T.	3	†M.S. & T.	3

* Each student must carry a minimum of 56 credit hours from the above listed third and fourth year departmental courses.

† P.E. stands for Physical Education. M.S. & T. stands for Military Science and Tactics and represents those courses given in connection with the Reserve Officers Training Corps Program.

RESEARCH

THE COLLEGE OF CERAMICS regards research and development as being essential to good instruction of both undergraduate and graduate students. Therefore, it maintains an active research department which works closely with the undergraduate and graduate students. Even though research is the primary departmental function, it is closely associated with the instructional program of the College of Ceramics. The staff members of this department direct research projects at the undergraduate and graduate levels, act in a consulting capacity on sponsored projects, teach courses and carry on original investigations.

The demand for personnel trained in research methods and attitude is today greater than ever before. The acquisition of skill in applying knowledge by the undergraduate who works out a research problem is highly important. In directing research problems, the staff endeavors to develop this ability in the student.

The Research Department now conducts many programs sponsored by government agencies. These include the Air Force Power Plant Laboratory and Materials Laboratory; Office of Naval Research Materials Branch and Physics Branch; Atomic Energy Commission; Aeronautical Research Laboratory and the Air Research and Development Command. All of these programs deal with the high temperature applications of ceramic materials in various processes or equipment vital to the defense program.

A study of the mineral resources of New York State is in progress, in cooperation with the Science Service of the New York State Museum and the New York State Department of Commerce. This will make available to industry much needed information regarding New York State resources. Recently a book describing the clays and shales has been published. The program is continuing with a survey of the limestones. A field party is maintained during the summer months. Analytical and testing work is done during the winter months in the department's laboratory.

A considerable amount of sponsored industrial research is conducted in the department. Three types of programs are available. Undergraduate, graduate and full-time projects are now in operation. The type depends entirely on the purpose and scope of the investigation required.

Fellowships are often maintained by associations of manufacturers such as the Hudson River Brick Manufacturers, who maintain a research laboratory at Kingston, New York, where they support an active research program on the manufacture of soft-mud brick. The Structural Clay Products Research Foundation sponsors a program on efflorescence in structural clay products.

Other research carried on in the department includes clay studies, efflorescence, high temperature x-ray studies, differential thermal analysis of materials, lightweight products, catalysis, ferrites and single crystal work.

The Research Department is fortunate in having the close cooperation of the Ceramic Association of New York. The Research Committee of this organization acts as an advisory committee, whose recommendations are most helpful in organizing and planning the department's program. Through this organization, the department obtains the advice of the leading ceramic industrialists of the State and the active cooperation of their companies.

INDUSTRIAL FELLOWS (Assistants)

Various ceramic industries, groups of industries, organizations and Federal agencies sponsor research fellowships at the College. Some of these fellowships are held by seniors and graduate students on a part-time basis, whereas others are held by full-time research fellows. Salaries are commensurate with the experience and ability of the fellow and with the time that is devoted to the project on which he is employed. Full-time industrial fellows and research associates are permitted to take a maximum of eight semester-hours of courses per year.

COURSES OF INSTRUCTION

CERAMIC ENGINEERING

101–102. A STUDY OF THE CERAMIC INDUSTRIES.

One lecture per week.
One credit hour, each semester.

103. UNIT OPERATIONS.

The engineering aspects of typical and fundamental operations in each of the ceramic industries.
Three lectures per week, first semester.
Three credit hours.

104. RAW MATERIALS.

The raw materials for all ceramic industries are considered: winning, refining, processing, properties, including behavior in firing and use in manufacturing; calculations.
Three lectures and one laboratory period per week, second semester.
Four credit hours.

105. UNIT PROCESSES.

The fundamental considerations of plastic, slip-casting, and dry-pressing processes; drying and firing; effects of grain size and particle distribution; application to unit operations.
Three lectures and one laboratory period per week, first semester.
Four credit hours.

106. GLAZES, GLASSES, AND ENAMELS.

Fundamental studies of the glassy state, followed by applications to the industries producing glazed ceramic ware, glassware, and enameled ware. Colors, compositions; methods of calculation. Simple glasses are melted. Thermal expansions, softnesses and densities of glasses are measured in the laboratory.
Three lectures and one laboratory period per week, second semester.
Four credit hours.

107. TESTING CERAMIC PRODUCTS.

Lectures, laboratory work, and demonstrations on instruments and methods, and practice in testing commercial ceramic products.
Two credit hours.

*108. STRUCTURAL CLAY PRODUCTS. (Ceramic Elective)

Specialization in the technology and the engineering aspects of the structural-clay-products industry.
Two lectures per week, second semester.
Two credit hours.

*109. WHITEWARES. (Ceramic Elective)

A study of bodies, glazes and colors. A specialized course in the technology and engineering aspects of the industry in which complex whiteware mixtures and glazes are employed.
Three lectures per week, first semester.
Three credit hours. Prerequisite, Ceramics 106.

*114. REFRACTORIES. (Ceramic Elective)

A study of the fundamental technology of all refractories and the engineering aspects of their production and use.
Three lectures per week, second semester.
Three credit hours. Prerequisite, Ceramics 104.

*115. LIME, GYPSUM AND CEMENT. (Ceramic Elective)

The properties, manufacture, testing, and uses of cementing materials.
Three lectures per week, first semester.
Three credit hours. Prerequisite, Ceramics 104.

*118. ENAMELS. (Ceramic Elective)

The technology of the application of vitreous enamels to metals.
Two lectures per week, second semester.
Two credit hours. Prerequisite, Ceramics 104.

†119–120. SEMINAR.

Seminar in Ceramic Engineering or Technology, for graduates. Hours to be arranged.

121. ENGINEERING I.

The engineering features of structural planning and design.
Two lectures per week, first semester.
Two credit hours. Prerequisite, Ceramics 106 and Physics 37 and 38.

122. ENGINEERING II.

The engineering features of plant layout and design as applied particularly to the drying and firing of ceramic ware.
Two lectures per week, second semester. Associated with 172.
Two credit hours.

* For elective or graduate credit.
† Graduate students only.

*123–124. ADVANCED CERAMIC TECHNOLOGY.

The study of solid-state reactions, ion exchange, unequilibrium crystallizations, etc., and their ceramic implications.

Two lectures per week, each semester.

Two credit hours, each semester.

*125. THERMOCHEMICAL MINERALOGY.

Establishment and interpretation of phase equilibrium diagrams to predict quantitatively the formation of ceramic minerals at high temperatures.

Two lectures per week, first semester.

Two credit hours. Prerequisite, Chemistry 40.

†126. ADVANCED CERAMIC ENGINEERING.

A study of the recent developments in furnaces, kilns, and equipment for ceramic plants.

Two lectures per week, second semester.

Two credit hours.

131. HEAT ENGINEERING.

Review of the laws of thermodynamics and their application to ceramic reactions and processes, principles of heat transfer, temperature measurement and instrumentation.

Two lectures and one laboratory.

Three credit hours. Prerequisites, Physics 11-12 and Mathematics 17-18.

134. ELECTRICAL ENGINEERING.

A treatment of the elements of electrical engineering practice for non-electrical engineering majors.

Three lectures.

Three credit hours. Prerequisites, Physics 11-12 and Mathematics 17-18.

151–152. A BRIEF INTRODUCTION TO THE METHODS FOR PRODUCING CLAYWARE.

Particular attention is given to the use of pottery plaster, the steps in mold making, and the jiggering and casting processes. Use of equipment for common ceramic operations is demonstrated.

One laboratory period each week, first or second semester.

One credit hour. Not offered in 1955-56.

*159. WHITEWARE LABORATORY. (Ceramic Elective)

Laboratory studies to demonstrate the properties of whiteware raw materials, the preparation and testing of typical whiteware bodies, glazes and colors. Associated with Ceramics 109.

Two laboratory periods per week, first semester.

Two credit hours.

* For elective or graduate credit.

† Graduate students only.

161–162. THESIS.

Original research on some problem decided upon in conference with the instructor.

Two laboratory periods per week, each semester.

Two credit hours, each semester.

*168. ENAMEL LABORATORY. (Ceramic Elective)

Two laboratory periods per week, second semester. To be taken with Ceramics 118.

Two credit hours.

172. ENGINEERING DESIGN.

Design practice in which the structural engineering details of plant design, plant layout and plant equipment, including kilns and driers, are carried out.

Three laboratory periods per week, second semester. Associated with Ceramics 122.

Three credit hours.

PLANT INSPECTION TRIP.

Each year a one-week bus trip is planned where students are enabled to observe the operations used in various types of ceramic plants. Approximately fifteen different plants can be visited during the trip, illustrating most of the principal types of ceramic production.

Required of all seniors in ceramic engineering and technology.

One credit hour.

CERAMIC SYMPOSIUM

Over the past six years, symposia have been held on refractories, whitewares, structural clay products, abrasives, enamels, and glass. In each symposium approximately forty speakers participated and each was an authority his own field. The lectures were generally non-technical in nature and included the most recent practical developments that have taken place in that branch of the industry being considered. These speakers, representative of plant executives, research, production, quality control, sales and teaching, have made the symposia outstanding educational experiences. The symposia are held during the three weeks immediately following commencement, which period is termed the intersession.

All engineering and technology students are required to attend at least one symposium on ceramics during their four years in college. The symposium immediately following the sophomore year is the one that is generally recommended. The College has been extremely fortunate in being able to present to undergraduate students exceptional courses in the various fields of ceramics.

Three credit hours. (By special arrangement with the chairman of a symposium, two hours of graduate credit may be earned.)

* For elective or graduate credit.

CHEMISTRY

5–6. GENERAL INORGANIC CHEMISTRY.

A systematic study of fundamental principles, theories, and calculations. High-school chemistry is a desirable foundation for taking this course.

Two lectures, one recitation and two laboratory periods per week.

Breakage deposit $15.00.

Four credit hours, each semester.

11. QUALITATIVE ANALYSIS.

Analysis of anions and cations with special emphasis on ionization and chemical equilibrium.

One lecture, one quiz period and two laboratory periods per week.

Breakage deposit $15.00.

Four credit hours. Prerequisite, Chemistry 5-6.

13. QUANTITATIVE ANALYSIS. (Given in first and second semesters)

Volumetric and gravimetric analysis.

One lecture, one quiz, two laboratory periods per week.

Breakage deposit $15.00.

Three credit hours. Prerequisite, Chemistry 11.

13A. CALCULATIONS IN QUANTITATIVE ANALYSIS. (Repeated in second semester)

Methods and practice in various types of calculations arising from analytical procedures.

One credit hour.

40. STATES OF MATTER. (New curriculum beginning 1957-58. This will be Chem. 41)

An introduction to the principles of physical chemistry most useful in ceramics. Studies on gases, liquids, and solids; vitreous and crystalline conditions; the phase rule, thermochemistry; plasticity, viscosity, and other properties of matter.

Three lectures per week, second semester.

Three credit hours. Prerequisites, Chemistry 5-6 and 13.

41. PHYSICAL CHEMISTRY. (See Chem. 40) (New curriculum beginning 1957-50. This will be Chem. 42). It is assumed that the student will have had Calculus and Physics 11-12.

A continuation of Chemistry 40. Theoretical Chemistry.

Four class periods per week, first semester.

Four credit hours. Prerequisites, Chemistry 13 and 40.

42. PHYSICAL CHEMISTRY LABORATORY. (New curriculum beginning 1957-58. This course will become part of Chem. 42)

One laboratory period per week to be taken with Chemistry 41.

Breakage deposit $15.00 unless the student has already made a similar deposit for another course in the department.

One credit hour.

43. FUELS AND COMBUSTION.

Fuels, principles of combustion, and heat balance.

Two lectures and one laboratory per week, first semester.

Breakage deposit $15.00.

Three credit hours. Prerequisite, Chemistry 13.

44. ADVANCED QUANTITATIVE ANALYSIS.

The analysis of silicate rocks, clays and ceramic materials.

One lecture and two laboratory periods per week, second semester.

Breakage deposit $15.00.

Three credit hours.

45. GLASS ANALYSIS.

A laboratory course in advanced analysis for glass technologists. Special problems in analysis of glass are assigned for laboratory work.

Two laboratory periods per week, first semester.

Breakage deposit $15.00.

Two credit hours. Prerequisite, Chemistry 44.

46. FUNDAMENTALS OF ORGANIC CHEMISTRY.

A summary course, emphasizing as much as possible, applications of carbon compounds in ceramics. Elective, for undergraduate credit.

Two lectures per week, offered both semesters.

Two credit hours.

48. ADVANCED QUANTITATIVE ANALYSIS.

A study of the principles and applications of physico-chemical methods and the use of instruments in quantitative analysis.

Two laboratory periods per week, second semester.

Two credit hours.

50. INDUSTRIAL STOICHIOMETRY.

Chemical calculations of manufacturing processes, including the use of material and energy balances applied to specific plant operations.

Two lectures per week, second semester.

Two credit hours.

*70. CHEMISTRY OF THE COLLOIDAL STATE.

Two lectures per week, second semester.
Two credit hours.

72. MOLECULAR STRUCTURE AND THE CHEMICAL BOND.

A survey of the nature of the chemical bond and the relation of the structure or inorganic molecules to the chemical and physical properties of matter. A more elementary and general course than Chemistry 128.

Two lectures per week, second semester.
Two credit hours.

†75. THERMODYNAMICS.

For graduate students. Undergraduate students must receive special permission if they wish to take it.

An introduction to the study of energy and heat, based on the first and second laws of thermodynamics.

Three lectures per week, first semester.
Three credit hours.

*77. ELEMENTARY SPECTROSCOPY.

Emission and absorption spectroscopy in chemical analysis. Construction and use of spectographic equipment. Spectrum analysis by arc or spark methods of excitation. Qualitative and quantitative analysis.

One lecture per week, first semester.
One credit hour.

*78A. SPECTROSCOPY LABORATORY.

Qualitative and quantitative analysis of inorganic salts and ceramic materials for ceramic engineering students.

One three-hour laboratory period per week, second semester.
One credit hour. Prerequisite, Chemistry 77.

*78B. SPECTROSCOPY LABORATORY.

Qualitative analysis of ceramic materials. Absorption spectroscopy. Glass technology students and chemistry majors.

One three-hour laboratory period per week, second semester.
One credit hour. Prerequisite, Chemistry 77.

†79. ADVANCED SPECTROCHEMISTRY.

Research applications. Analytical interpretation. Control and experimental.

One hour lecture and six hours laboratory per week. Offered both semesters.
Three credit hours.

* For elective or graduate credit.
† Graduate students only.

†128. CRYSTAL CHEMISTRY.

The principles of crystal chemistry; the nature of the bond; the sizes of atoms and ions, and the organization of these units into solid bodies. Greater emphasis is placed on the structure of silicate compounds, both crystalline and glassy, than on other compounds or on metals.

Two lectures per week, second semester.
Two credit hours. Prerequisite, Applied X-rays.

†130. ADVANCED CERAMIC CHEMISTRY.

Modern concepts of inorganic chemistry with special emphasis on high temperature and surface chemistry.

Three credit hours.

305. CHEMISTRY.

This is a special course in ceramic chemistry offered to Ceramic Design students in which the fundamentals necessary to an understanding of glasses and clays are presented.

Two lectures and one laboratory period per week.
Three credit hours.

CIVILIZATION

1-2. CIVILIZATION — OUR CULTURAL HERITAGE.

This course is an integration of the history of western civilization with the traditional freshman composition. Through concentration on a relatively few periods whose culture is judged to be of greatest significance, the course introduces the student to the basic patterns of social organization, intellectual activity, and artistic achievement. These materials form the basis of the work in composition, which meets the same quantitative and qualitative standards that are maintained in the traditional course in Freshman English. The course is conducted by a permanent teaching panel with occasional lectures given by representatives from the various departments of the college.

Required of all freshmen in the College of Ceramics. Design students will take the entire course while Engineering and Technology students will take only the lectures in history.

Six credit hours, each semester for Design students.

Three credit hours, each semester for Engineering and Technology students.

22. ENGINEERING INDOCTRINATION.

The broad aspects of the relationship of the engineer to society and his responsibility as a professional man and a citizen are treated by the coordinator of the course, assisted by instructors from the Liberal Arts College and by leading members of the engineering profession. The course also emphasizes engineering ethics, engineering methods, safety and industrial hygiene.

Three lectures per week, second semester.
Three credit hours.

† Graduate students only.

305. CHEMISTRY.

A special course in ceramic chemistry offered to Ceramic Design students in which the fundamentals necessary to an understanding of glasses and clays are presented.

Two lecture periods and one laboratory period each week.

Three credit hours. Prerequisite for 306.

306. CERAMIC RAW MATERIALS.

A special course in ceramics which deals specifically with the chemical nature of ceramic raw materials, clays and glasses.

Two lecture periods and one laboratory period per week.

Three credit hours. Prerequisite, Ceramics 305.

307. GLAZE CALCULATION AND DEVELOPMENT.

Two lecture periods and one laboratory period per week.

Three credit hours.

308. CERAMIC COLORS AND TEXTURES (Elective).

An advanced course in the development of ceramic colors and textures.

Two lecture periods and one laboratory period per week.

Two credit hours.

309. EQUIPMENT AND MATERIALS.

Kiln construction, firing reactions, temperature measurement and control. Ceramic production equipment and plant design.

Two lecture periods per week, first semester.

Two credit hours.

310. INDIVIDUAL PROBLEMS IN THE LABORATORY DEVELOPMENT OF CERAMIC MATERIALS (Elective).

Two laboratory periods per week.

Two credit hours.

311–312. ENGINEERING DRAWING.

The fundamental principles of drafting and elementary problems in descriptive geometry for Ceramic Design students.

Two credit hours, each semester.

313–314. ADVANCED DRAFTING (Elective).

Advanced drafting and architectural drawing.

Two or three credit hours, each semester.

321–322. PAINTING AND DRAWING.

Free-hand drawing and design from still life, landscape, the figure and memory; all media used. Introductory work in color.

Four clock hours per week.

One credit hour, each semester.

321A–322A. PAINTING AND DRAWING.

An elective for Liberal Arts students. A general course for beginners consisting of informal lectures, demonstrations, studio practice in drawing and painting from life, still life, and landscape.

Two laboratory periods per week.

Two credits, each semester.

323–324. DESIGN.

A study of the basic vocabulary of two-dimensional design: point, line, texture, value and color. Application of this vocabulary in drawing and elementary design problems leading to an understanding of two-dimensional form and space.

Four clock hours per week.

One credit hour, each semester.

325. SCULPTURE.

Elements of three-dimensional composition using clay and other media. Organization of forms, space and volumes, as the basis of creative sculpture.

Four clock hours per week.

One credit, each semester.

326. THREE-DIMENSIONAL DESIGN.

Exercises in three-dimensional design using a variety of materials. The student designs and constructs simple hand tools and utensils. Construction drawing.

Four clock hours per week.

One credit, each semester.

325A–326A. SCULPTURE AND THREE-DIMENSIONAL DESIGN.

An elective for Liberal Arts students. A general course for beginners in modeling, sculpture and three-dimensional design. Informal lectures and exercises in creative sculpture and three-dimensional design using a variety of materials and processes.

Two laboratory periods per week.

Two credit hours, each semester.

327–328. PAINTING AND DRAWING.

Plastic drawing, spatial organization, from life, still life, and landscape. All media used.

Three laboratory periods per week.

Two credit hours, each semester.

327S. DRAWING.

A course in drawing from life and from landscape. Class meets all day five days per week for a period of three weeks.

Intersession.

Three credit hours.

329–330. TWO-DIMENSIONAL DESIGN.

A continuation of 324. Introduction to typography, photomontage, exhibition. Applied problems in visual design.

One and one-half laboratory periods per week.

Two credit hours, first semester.

One credit hour, second semester.

329A–330A. THREE-DIMENSIONAL DESIGN.

The development of special knowledge and skills necessary to the solution of design problems. The study of structure. Design of small objects in wood, metal, glass, and other materials. The study of sections, profiles and models in their roles as tools of design expression.

Three and one-half laboratory periods per week.

Three credit hours, each semester.

331–332. SCULPTURE.

A continuation of Course 325-326.

Four laboratory periods per week.

Two credit hours, first semester.

Three credit hours, second semester.

333–334. PAINTING AND DRAWING.

Creative organization of pattern, color, texture, and form in relation to a two-dimensional surface, decorative pattern for various materials and processes. All types of media used in this course.

Two laboratory periods per week.

Two credit hours, each semester.

333A–334A. GRAPHICS.

General survey of graphic methods. Introduction to elementary printing methods: stencil, type, monoprint. Investigation of the woodcut as a creative medium.

Two laboratory periods per week.

Two credit hours, each semester.

335–336. INDUSTRIAL DESIGN.

Basic problems in design, stressing the influence of function, materials, methods of making, social and economic factors; problems in interior arrangement, furniture models and constructions. Selected problems are produced, full scale, in the final materials.

Three and one-half laboratory periods per week.

Three credit hours, each semester.

337–338. POTTERY.

A general practice course in the design and production of ceramic wares closely integrated with technical Course 307 and with design and sculpture courses. Color, texture, and pattern and their development in ceramic materials and processes. Creative use of clays and glazes. Practice in hand and machine methods of forming clay and plaster; construction of models and molds. Kiln operation and heat treatment of ceramic materials.

Six laboratory periods per week.

Five credit hours, each semester.

337A–338A. SCULPTURE.

Sculptural problems related to Course 337–338.

Two laboratory periods per week.

Two credit hours, each semester.

339–340. PAINTING AND DRAWING.

An advanced course in painting and drawing—all media used.

Two laboratory periods per week.

Two credit hours, each semester.

*341–342. DESIGN. (Elective)

An advanced course in drawing and three dimensional design problems, planned individually with each student.

Two to four laboratory periods per week.

Two to four credit hours, each semester.

341A–342A. GRAPHIC DESIGN. (Elective)

Advanced application of graphic methods learned in 333A and introduction to photography. Problems in visual design (book illustration, exhibition, the series) will be arranged individually with the student.

Two laboratory periods per week.

Two credit hours, each semester.

341B–342B. POTTERY.

A general course in pottery making for Liberal Arts students. Informal lectures and demonstrations, and practice in creative problems in ceramics.

Two laboratory periods per week.

Two credit hours, each semester.

343–344. POTTERY.

Problems in the design of pottery, tableware, and glass products. Individual problems including various methods of production and types of market requirements; survey of history of ceramics.

Four to six laboratory periods per week.

Four to six credit hours, each semester.

* For elective or graduate credit.

343A–344A. SCULPTURE.

Work in this course is coordinated with that given in 343-344.
Two laboratory periods per week.
Two credit hours, each semester.

351–352. HISTORY OF ART.

Architecture, painting, sculpture and crafts from the earliest times to the present, examined in the light of prevailing ideals, traditions, modes of social behavior and environmental factors.
One lecture and one discussion each week.
Two credit hours, each semester.

353–354. HISTORY OF AMERICAN ART.

A survey of American expression in the arts from the 17th to the 20th century, dealing with such topics as European traditions and American culture, the influence of developing American political and social thought and the effects of mass production and communication.
Two lectures and one discussion each week.
Three credit hours, each semester.

355–356. HISTORY OF DESIGN.

This course explores the evolution of influential and significant ideas in the history of design from their genesis and original environment to their meaning in our own time. Particular emphasis is placed on the role of such ideas in the unfolding of American thought and ideals, with constant reference to the styles, techniques and related expressions of other cultures.
Two lectures and one discussion each week.
Three credit hours, each semester.

357–358. HISTORY OF DESIGN.

In this course, conducted as a seminar, students engage in independent research on selected aspects of the history of design with emphasis on contemporary problems.
One lecture and one discussion each week, with oral reports by the students.
Two credit hours, each semester.

GRADUATE COURSES.

Hours and credits for graduate courses are arranged individually with each student.

361–362. LIBRARY RESEARCH.

Assigned reading, library research and study

363–364. SCULPTURE AND THREE-DIMENSIONAL DESIGN.

367–368. PAINTING, DRAWING, GRAPHICS.

369–370. GRADUATE PROJECT.

In this course each graduate student selects and carries to completion an advanced problem or project in ceramics or design. The subject of the project is selected jointly with the faculty and is based upon the student's interests and aptitudes as evidenced by his previous performance in all courses. When completed and submitted in an approved form the graduate project may be considered in support of the student's application for the Master of Fine Arts degree.

369A-370A. DESIGN—PROFESSIONAL PRACTICE (Elective).

This is a supervised off-campus work period in the design laboratory of an industrial plant.

ECONOMICS

11–12. PRINCIPLES AND PROBLEMS.

A study of modern economic society, its organization, operation and control.
Three credit hours, each semester.

EDUCATION

41. EDUCATION IN A DEMOCRACY.

A course designed as general education for the lay student, as well as a first course in Education for the prospective teacher. A study of the function of education in society, and, in particular, the organization of the American schools system, the influences affecting our schools, and present practices and trends.
Two credit hours.

42. FOUNDATIONS OF THE PHILOSOPHY OF EDUCATION.

The application of philosophy of education to the processes, the principles, the objectives, the methods, and the organization of the school system in a democracy.
Two credit hours.

51–52. SECONDARY SCHOOL METHODS AND MATERIALS.

The problems, methods, materials, and techniques involved in the work of a high-school teacher.
Three credit hours, first semester; *one credit*, second semester.
For work in Art education see Courses 345 and 346.

ENGLISH

1–2. ENGLISH COMPOSITION.

The use of written and oral language. Three lectures and discussions per week.

Three credit hours, each semester.

21–22. INTRODUCTION TO ENGLISH LITERATURE.

A survey of the development of English literature from its beginning to the close of the Nineteenth Century, with emphasis on the most significant writings of the representative authors in each period. Three lectures per week.

Three credit hours, each semester.

35. TECHNICAL WRITING (PROFESSIONAL ENGLISH).

Practice in routine business correspondence followed by a study of the engineering report, technical article, and research paper. Primarily for ceramic engineering students.

Two credit hours.

GEOLOGY AND MINERALOGY

GEOLOGY 5.

This is a course in general geology with special reference to the materials of ceramic importance.

Three lectures per week, first semester.

Three credit hours.

MINERALOGY 1.

This course includes an introduction to crystallography and to the study of minerals and their identification by chemical and physical tests. Two lectures and one laboratory period per week, second semester.

Three credit hours.

PETROGRAPHY 1.

A course designed to prepare the student for the microscopic work ordinarily required in the average ceramic plant.

Two lectures and one laboratory period per week, second semester.

Three credit hours.

*PETROGRAPHY 2.

Advanced work in the use of the petrographic microscope and accessories in the examination and photography of ceramic raw materials and products.

One laboratory period per week, first semester.

Two credit hours. Prerequisite, Petrography 1.

* For elective or graduate credit.

MINERALOGY 110

Crystalline structure, methods of analysis and genesis of clay minerals. The surface chemistry of solids and a structure theory of water will be studied in connection with advanced work on clay-water systems.

Three lectures per week, second semester.

Three credit hours. Prerequisites, Chemistry 41 and Petrography 1.

*APPLIED X-RAYS.

The study of X-ray diffraction and its application to ceramic materials.

Two lecture periods per week, first semester.

Two credit hours.

*APPLIED X-RAY LABORATORY.

One laboratory period per week, first semester.

One credit hour.

GLASS TECHNOLOGY

200. COMPOSITION.

The chemistry of the glass-making oxides. A study of the methods of production of the minerals and chemicals used in glass making and of the chemical reactions and properties; methods of testing purity, chemical composition, and functions in glass melting.

Three lectures per week.

Three credit hours.

201. GLASS COMPOSITION AND MANUFACTURE.

The glass melting process is studied in relation to refractories, containers, temperatures, batch compositions, and fining agents. Text and references to the literature of glass, covering glass composition, furnace design and operation, tank blocks and parts, and fundamental chemistry of glassmaking and calculations, working processes, annealing, finishing, defects and testing of commercial glassware.

Three lectures per week, first semester.

Prerequisites, two years college work in science or equivalent experience, and one-half year of Physical Chemistry.

Three credit hours.

202. THE PHYSICS OF GLASS.

The properties of glass are studied with particular attention to methods of measurement. Density, thermal expansion, viscosity, surface tension and the stress optical properties are covered in detail. The calculation of properties from composition, annealing, measurement of strain and heat shock resistance are treated mathematically.

Three lectures per week, second semester.

Three credit hours. Prerequisites, Calculus, Physics 11-12, Glass 201.

* For elective or graduate credit.

*203. PROPERTIES OF GLASS.

Text, lectures, assigned reading, individual reports on research papers. The physical chemical and optical properties of glass are intensively studied.

Three lectures per week, first semester.

Three credit hours. Prerequisites, Glass 201, 202, 251, 252.

*204. GLASS-MELTING UNITS.

Studies on the design, construction, and operation of glass furnaces. Thermal efficiency, heat economy, and application of electric energy are considered.

Two lecture hours, one laboratory period per week.

Three credit hours. Prerequisites, Glass 201, 202, 203, Chemistry 43, Physics 31.

*206. STRUCTURE OF GLASS.

Primarily for graduate students. A lecture course dealing with the coordination and linkage of cations and oxygen in the glass-forming, glass-modifying, and intermediate oxides, from the viewpoint of crystal chemistry.

Two lectures per week, second semester.

Two credit hours.

251–252. GLASS TECHNOLOGY LABORATORY.

Laboratory exercises on the measurement of the physical properties of glass. Annealing and tempering are studied as well as the measurement of strains by optical means. The effect of composition on the melting characteristics, color and other physical properties is studied by melting various batches in the laboratory. Elementary exercises in pressing and blowing glass.

One laboratory period per week, first and second semesters.

One credit hour. Prerequisites, Physics 11-12, Calculus. To be taken with Glass 201 and 202.

261–262. GLASS THESIS.

Laboratory study of a problem selected in conference with the department head. Review of literature. Two laboratory periods per week, each semester.

Two credit hours, each semester.

271–272. GLASS SEMINAR.

One credit hour, each semester.

273–274. GLASS SEMINAR.

Oral reports on advances in glass technology from current literature.

One hour per week, each semester.

One credit hour, each semester.

* For elective or graduate credit.

282. PLANT INSPECTION.

Visits to glass factories arranged during the second semester. One week away from Alfred.

One credit hour. Prerequisites, Glass 201, 251. To be taken with Glass 202 and 252.

INDUSTRIAL MECHANICS

1–2. ENGINEERING DRAWING.

The fundamental principles of drafting and descriptive geometry.

Two credit hours, each semester.

311–312. ENGINEERING DRAWING.

The fundamental principles of drafting and descriptive geometry for students in Ceramic Design.

Two credit hours, each semester.

313–314. ADVANCED DRAFTING.

Drafting and architectural drawing. An elective for Ceramic Design students.

Two or three credit hours, each semester.

MATHEMATICS

3. COLLEGE ALGEBRA.

A review of high school algebra, together with a study of progressions, binomial theorem, complex numbers, determinants, and the theory of equations. Prerequisite, one and a half years of high school algebra.

Three credit hours.

4. PLANE TRIGONOMETRY.

A study of the trigonometric functions and their applications. Prerequisite, Mathematics 3 or its equivalent.

Three credit hours.

5. FRESHMAN MATHEMATICS.

A unified course including topics in algebra and trigonometry. Intended primarily for freshmen in Ceramic Engineering.

Four credit hours.

15–16. CALCULUS.

The processes of differentiation and integration and their applications. Prerequisites, Mathematics 5-6.

Four credit hours, each semester.

17. ANALYTIC GEOMETRY AND CALCULUS.

An introduction to analytic geometry and calculus, a continuation of Mathematics 5 in the second semester.

Four credit hours.

21S. PLANE SURVEYING AND MAP READING

Primarily for engineering students in the College of Ceramics. A student must do satisfactory work in both the field and classroom in order to receive credit. Offered for three weeks each summer, beginning immediately after the close of the regular school year. Prerequisites, Mathematics 5 and Engineering Drawing 1-2 or their equivalent.

Three credit hours.

33G. ELEMENTARY STATISTICS.

An introduction to the statistical methods of the natural sciences, with special emphasis on industrial applications. Primarily for students of Glass Technology. Prerequisite, Mathematics 5 or its equivalent.

Three credit hours.

*65-66. MATHEMATICAL STATISTICS.

A study of modern techniques in mathematical statistics, frequency distributions, correlations, analysis of variance, small sample theory, and the design of experiments.

Prerequisite, Mathematics 15-16.

Three credit hours, each semester.

*101-102. DIFFERENTIAL EQUATIONS.

The solution of first order and first and second degree differential equations and general linear differential equations, with applications to the sciences. Prerequisite, Mathematics 15-16 or equivalent.

Two credit hours, each semester.

PHYSICAL EDUCATION

1-2.

Instruction is given in all the following activities: in the fall—football, cross county, touch football, soccer, and tennis; in the winter—basketball, volley ball, wrestling, boxing, fencing, badminton, tumbling, games, contests and relays; in the spring—track, baseball, tennis and softball.

Two hours practice.

One credit hour, each semester.

3-4.

A continuation of 1-2 with more advanced instruction in skills of the various activities.

Two hours practice.

One credit hour, each semester.

* For elective or graduate credit.

PHYSICS

11-12. GENERAL PHYSICS.

An intensive study of the fundamental principles of physics, covering the fields of mechanics, heat, sound, electricity, magnetism, and light, with emphasis on problems. Co-requisite, Mathematics 15-16. Three lectures, one quiz, and one laboratory.

Four credit hours, each semester.

32. OPTICS.

The principles of geometrical and physical optics. Prerequisites, Physics 11-12 and Mathematics 15-16. Two lectures and one laboratory.

Three credit hours.

36. ELECTRONICS LABORATORY.

This course is concerned primarily with electronic equipment and its application in research and industry. It is not intended to be a course in communications engineering. Prerequisites, Physics 11-12, Mathematics 15-16, and permission of the instructor. Two lectures and one laboratory.

Three credit hours.

37. INTERMEDIATE MECHANICS.

An intermediate treatment of the statics and dynamics of particles and rigid bodies. Prerequisites, Physics 11-12 and Mathematics 15-16. Four lectures.

Four credit hours.

38. STRENGTH OF MATERIALS.

The concepts of stress and strain, Hooke's law, normal and shear stresses in structural members, stresses and deflections in beams, failure theories, combined torsion and bending, stresses in clamps and springs, statically indeterminate problems. Prerequisites, Physics 11-12 and Mathematics 15-16. Four lectures.

Four credit hours.

†111. SOLID-STATE PHYSICS.

Application of fundamental principles to a study of the electrical and magnetic properties of matter. Theory of dielectrics from an atomic point of view. Behavior of induced and permanent dipoles in electric fields. Dipole, atomic and electronic polarization. Dependence of dielectric constant and index of refraction on temperature and frequency. Ferroelectricity. Dia-, para- and ferromagnetism. Three lectures per week, first semester.

Three credit hours. Prerequisite: Physics 34.

† For graduate students only.

†112. SOLID-STATE PHYSICS (Continued).

A physical approach to the study of the nature of bonding in solids, from both the classical and wave-mechanical points of view. Theory of electrical conductivity and specific heat. Insulators, semiconductors and conductors. Three lectures per week, second semester.

Three credit hours. Prerequisite, Physics 34.

PSYCHOLOGY

11. INTRODUCTORY PSYCHOLOGY.

An examination and discussion of the basic concepts in psychology, including: learning, motivation, heredity, environment, intelligence, emotion, personality, and adjustment. Demonstrations and group experiments.

Three credit hours, either semester.

32. EDUCATIONAL PSYCHOLOGY.

Development and behavior; emotional, social and mental development; nature and measurement of intelligence; nature of learning; principles of guidance in learning; transfer of training; adjustment process; mental health of students and teachers. Prerequisite, Psychology 11.

Three credit hours.

SOCIOLOGY

21–22. INTRODUCTION TO SOCIOLOGY.

An introduction to social structures and social processes, with stress on the interaction of individuals and groups within the larger culture. This course is not open to freshmen except with the special permission of the department chairman.

Three credit hours, each semester.

† For graduate students only.

EXTRA-CURRICULAR

CAMPUS LIFE is motivated and governed by the students under the guidance of the personnel Deans. Among the many sponsored activities, each is certain to find one or more of interest. There are clubs and organizations carrying on programs pertaining to languages, sciences, drama, art, journalism, athletics, music, outdoor sports, aviation and scouting. There are honorary scholastic and service organizations which recognize a student's accomplishments in different areas.

ORGANIZATIONS

The Student Branch of the American Ceramic Society is an organization composed of students taking ceramic engineering, ceramic technology or glass technology. Its present membership is 325. Students elect officers who are responsible for arranging the year's program. Speakers, having messages of particular interest to the members, are brought to the campus.

The St. Patrick's Board is composed of upper-class technologists and engineers, elected by the student branch. The board manages the most important social event of the year, which is a celebration in honor of the birthday of St. Patrick, the patron saint of engineers. The celebration entails one-and-one-half days of fun and relaxation and associated with it are an all-university assembly, a parade of floats, and a Ceramic College open house.

Keramos is the national honorary ceramic engineering fraternity. Its membership is composed of students from all ceramic schools and colleges, and men particularly prominent in the ceramic engineering profession. The principal objectives of the fraternity are: to promote and emphasize scholarship and character; to stimulate mental achievement; and to promote interest in ceramic engineering. Student membership is based on scholastic record, character, and interest in ceramics. It is the highest honor a student in ceramic engineering or technology can attain.

PUBLICATIONS

The University students issue a weekly newspaper, the "Fiat Lux," and a year book, the "Kanakadea." Ceramic students interested in journalism or publishing as a hobby find ample opportunity for active work on these publications.

RELIGIOUS LIFE

Though religious activity is voluntary, a well-organized religious program forms an integral part of life on the campus. Distinctly nonsectarian in character, it provides for the spiritual development of the students. The University Chaplain and advisor to the Religious Fellowship of Alfred is the Director of Religious Activities and does much to stimulate an interest in and an appreciation for things spiritual.

Chapel service is held each Tuesday during the College year. These services feature brief talks by the Chaplain and special music by the chapel choir. Attendance is voluntary.

Sunday services of a non-denominational character are held under the auspices of the Union University Church in the Seventh-Day Baptist Church.

The First Seventh-Day Baptist Church of Alfred offers opportunity for worship to those who are accustomed to worship on the Seventh Day.

Extending the benefits of weekly services of worship are the Canterbury Club for Episcopal students, the Newman Club for Catholic students, and the Hillel Foundation for Jewish students.

CONCERTS AND LECTURES

An outstanding group of lecturers and musical artists is brought to the campus each year to appear on the University Forum and in University assemblies. These programs are maintained through the inclusive college fee, and all regularly enrolled students are admitted without extra charge.

SOCIAL LIFE

Social life revolves around the open houses, informal dancing parties, the formal St. Pat's, Interfraternity and University Balls, various sports events, teas, receptions, the campus union, theatricals, and the Cooperative Motion Pictures.

SELF-HELP

The College cannot guarantee that a student will find work which will help him pay part of his expenses. Students should be prepared to finance their first two years, at least. Juniors and seniors are eligible for student assistantships and some find gainful employment in dining halls and in the village. The best means for a student to augment his resources substantially is to find employment during the summer vacation period.

INDUSTRIAL EXPERIENCE

Students are urged to secure employment in ceramic plants during the summer-vacation period. A few months' work under industrial conditions aid materially in rounding out their training. Every possible aid is given students in their efforts to obtain summer positions.

STUDENT HOUSING

All freshmen, unless excused by the Dean of Women or the Dean of Men, are required to room and board in University dormitories. These include for women The Brick and a new dormitory completed in January 1956, and for men Bartlett, Cannon, and Barresi Halls. Each dormitory is in charge of a head resident, who is assisted by upperclass counselors.

All women students are required to live in University dormitories during their freshman and sophomore years. During the junior and senior years, women may live in either sorority houses, University cooperative housing, or University dormitories. During the sophomore year men students must room and board in either University dormitories or fraternity houses. Beyond the sophomore year, men may reside in fraternities, University dormitories, or in private homes. In all instances, however, the right of assignment to housing for both men and women rests with the University.

Married students are usually housed in Saxon Heights, a temporary housing development located about three-quarters of a mile from the center of the campus. Applications for these apartments should be made to the Dean of Men.

RESERVE OFFICERS' TRAINING CORPS (ROTC)

A UNITED STATES Army Reserve Officers' Training Corps program of the Branch General Type has been established at Alfred University. Students who successfully complete the four years of instruction in Military Science will be commissioned as 2d Lt.'s in the Officer Reserve Corps by the President of the United States. Appointments will be to a specific branch of the United States Army and will be made on the basis of individual aptitudes and military needs.

The program is divided into two phases. The first two years are known as the Basic Course and the second two years as the Advanced Course. All freshmen and sophomore male students who are physically fit will be required to participate in the basic phase of the program. Students who apply, and who are acceptable to the Professor of Military Science and Tactics, may participate in the Advanced Course.

The Basic Course, which is required for graduation, carries regular college credit. These hours may be substituted for the requirements in physical education. The Advanced Course is offered as an elective course to eligible juniors who have demonstrated outstanding ability and aptitude for military training.

Students are furnished on a loan basis all textbooks, equipment and uniforms. The Advance Course students are also paid $.90 per day subsistence allowance and $78.00 per month while attending the six-week summer camp, a total of over $700 during a two year period.

REGULATIONS

REGISTRATION

ALL STUDENTS are expected to register on the days designated for that purpose on the College calendar. Any student not registering on the days set therefor will be charged a fee of five dollars for late registration.

Each student in the Technology and Engineering Departments is expected to register for at least sixteen hours of work. Each student in the Design Department is expected to register for at least fifteen hours of work each semester.

The conditions under which students may register for more than the number of hours specified in the curriculum are the following: (1) physical training and assembly may be taken in addition to the regular schedule; (2) if a student had an average grade of B or higher in the preceding semester, he may register for additional work with approval of the Dean of the College; (3) the payment of $20.00 per semester hour for each extra credit hour taken.

With the exception of the electives, all courses are definitely prescribed, and no change can be made in the schedule. Electives may be chosen by the student from a permissible list, but in making his selection he should be governed by the advice of the faculty.

CREDIT, ATTENDANCE, EXAMINATIONS

One class period per week for one semester, lecture or laboratory, constitutes one unit of credit. The number of these credits required for graduation varies among the three departments as indicated in the curricula.

The class period is fifty minutes. The laboratory periods vary from two to four hours in length. Regular attendance without tardiness is expected of all the students. Absence on the day preceding or the day following a vacation period during the College year makes the student liable for penalty.

In addition to the routine quizzes that are given periodically throughout the semester, final comprehensive examinations are given in each course at the end of the semester covering the entire semester's work. This examination is the main factor in determining the scholastic standing of the student.

SCHOLASTIC STANDARDS

Owing to the exacting demands of the ceramic profession, high standards of scholarship must be maintained. Students unable to meet these standards are dropped from the College. Instructors are available for private consultation and help, and the instructional work itself is supplemented by a system of faculty advising intended to help the student with his problems.

Students who fail to meet the scholastic requirements of the college are placed on probation for one semester. If, at the end of the probation semester, the student has failed to raise his scholastic index to the required figure, he is dropped from college. In this case he is not eligible to apply for readmission until one semester has intervened. For this purpose, a six-week summer session does not constitute an intervening semester.

GRADES AND INDICES

SYSTEM OF GRADING

The grades used by the instructors in reporting the scholastic accomplishment of students and the points corresponding with the grades are given in the following table:

Grade	*Quality of work*	*Quality points per credit hour*
A	Superior	3.
B+	Very Good	2.5
B	Good	2.0
C+	Average	1.5
C	Average	1.0
D+	Average	0.5
D	Poor	0.0
F	Failure	−1.0
I	Incomplete	No Points
W.P.	Withdrew Passing	No Points
W.F.	Withdrew Failing	−1.0

The lowest passing grade is "D". However, a "D" obtained in a course prerequisite to other courses will not permit the student to register in these courses, i.e., inasmuch as Mathematics 5 is prerequisite to Mathematics 17, a "D" will earn credit in Mathematics 5 but will not permit the student to register in Mathematics 17 or in any other course for which Mathematics 5 is a prerequisite.

SCHOLARSHIP INDICES

The grade point index is obtained by dividing the total number of points by the total number of the credit hours taken. In determining the semester grade-point index only the grades and points for the semester are included. In determining the cumulative grade-point index, all of the work for which the student has grades is included.

The indices required of students at the end of the Freshman and each semester of the following years are as follows:

Year	*Required Index*
Freshman	0.7
Sophomore (each semester)	1.0
Junior (each semester)	1.1
Senior (each semester)	1.1

A student whose average index at the end of any semester falls below the minimum scholastic requirement may enroll the following semester "on condition". The student's adviser and the Dean of the College determine the nature of the "condition". As a rule, a Junior or Senior may remain "on condition" for only one semester. At the end of the semester of probation, if the students fails to meet the scholastic requirements expected of him, he will not be permitted to enroll. In unusual circumstances the Committee on Scholastic Standards may waive the rule.

Whatever the nature of "the condition", its main objective is to assist the student in gaining or regaining the requisite academic standing in the shortest possible time and in a way that will do the student the most all-around good. That may mean that the student will not be permitted to participate in any extracurricular activities (athletics, dramatics, music, and etc.) or that he will not be permitted to engage in any extra social activities.

HONORS, PRIZES AND AWARDS

Undergraduate Honors. A Dean's Honors List is published at the end of each semester. This is composed of the names of students from all classes who have a semester's scholarship index of at least 2.20, and who have no college entrance condition.

Senior Honors. Three grades of honors are awarded, upon faculty approval, to seniors based on their attainment in scholarship during the entire college course, viz.:

(a) Summa cum laude, or highest honors, to those having a scholarship index of 2.90 and no grade below B.

(b) Magna cum laude, or high honors, to those having a scholarship index of 2.60 and no grade below C.

(c) Cum laude, or honors, to those having a scholarship index of 2.20.

The Major Edward Holmes Thesis Prize. This award of $25 is awarded to the senior in either of the Technology or Engineering Departments who submits the best research thesis. The award is decided by a committee of industrial executives, representing the Ceramic Association of New York, the founder and donor of the prize.

The College Citizenship Award. This was established by the Ceramic Association of New York, and it is made annually by nomination by students and vote of the faculty, to that senior whose entire record as a College citizen is most outstanding.

Departmental Honors. These honors may be awarded to seniors at the time of their graduation by the departments in which they have pursued their major studies. The specific requirements for these honors are determined by each department. The general requirements for all departments have been adopted by the faculty:

A candidate for departmental honors shall have (1) attained a cumulative index of 2.20 in the courses of his major field, (2) earned at least two semester hours of credit in a tutorial course, (3) passed an oral examination in his major and allied fields, conducted by a committee selected by the major department. Candidates for departmental honors will be recommended by their respective departments and approved by the faculty.

The Mary Wager Fisher Literary Prize. William Righter Fisher, Esq., of Philadelphia, contributed $1,000 to found in perpetuity a literary prize in Alfred University in memory of his late wife, Mary Wager Fisher, of the Class of 1863. The income of this fund will be given annually to one or more students as a prize for excellence in literary composition. The head of the Department of English is chairman of the committee of the award.

The Chemistry Medal. This medal will be awarded to that member of the senior class majoring in chemistry, ceramic engineering or glass technology, who, during his sophomore and junior years, has made the highest average in all his subjects.

REGISTER OF STUDENTS: 1954-1955

Name	*Classification*		*Residence*
Abbey, Constance L.	Design	'56	Floral Park
Abbott, Keith E.	Tech.	'56	Franklinville
Agarwal, Gopal M.	Eng.	'58	Calcutta, India
Albrecht, Nelson O.	Glass	'55	Rochester
Alger, Jack F.	Eng.	'58	Hornell
Anderson, Robert N.	Eng.	'58	Delevan
Ansel, Ruth	Design	'57	New York
Ansorge, Audrey E. M.	Design	'57	Oradell, N. J.
Austin, Garth F.	Eng.	'57	Addison
Axt, Charles M.	Design	'57	New York
Babu, Victor A.	Design	'58	New York
Bacher, Peter H.	Eng.	'58	Rock Tavern
Baldwin, Judith A.	Design	'55	East Meadow
Balsiger, James B.	Eng.	'57	Emporium, Pa.
Bard, Roger H.	Design	'57	Unadilla
Barnes, Jessie E.	Design	'56	Hornell
Bartholomew, George L.	Eng.	'56	Niagara Falls
Bates, Arlyn W., Jr.	Eng.	'57	Alfred Station
Battista, George F.	Eng.	'57	Mamaroneck
Bayley, Glen F.	Glass	'55	Hornell
Beltz, Kenneth A.	Design	'58	Stewartsville, N. J.
Bergamaschi, Henry T.	Eng.	'55	Union City, N. J.
Berrin, Lloyd	Eng.	'56	Brooklyn
Bertha, Edward J.	Eng.	'56	New York
Bierly, Harriet A.	Design	'56	Endicott
Blechinger, Frederick K.	Eng.	'58	Roscoe
Bliton, Jerald L.	Eng.	'57	Buffalo
Bloss, Harold E.	Eng.	'55	Whitesville
Borden, Ronald G.	Eng.	'58	Elmira
Boulton, Harold B.	Eng.	'58	Alplaus
Braun, Gary A.	Eng.	'57	Naples
Brennan, Richard T.	Eng.	'58	Laconia
Bromeley, Catherine S.	Design	'58	Belmont
Bromley, Barbara L.	Design	'57	New Rochelle
Brown, Ernest E., III	Tech.	'58	Hornell
Brown, Sandra R.	Design	'56	Tuckahoe
Brown, W. Richard	Eng.	'56	Alfred Station
Bubnack, Harry W., Jr.	Eng.	'58	East Syracuse
Bullard, R. Keith, Jr.	Glass	'55	Port Washington
Burkert, John G., Jr.	Eng.	'56	Valley Stream
Button, Daniel D.	Eng.	'55	Belmont

Name	*Classification*		*Residence*
Calabrese, Donald W.	Eng.	'57	Flushing
Caldwell, Smiley M., III	Glass	'58	Clarksburg, W. Va.
Cameron, Joseph J.	Eng.	'57	Hornell
Campbell, William R.	Eng.	'57	Oneonta
Carlson, William A.	Eng.	'55	Niagara Falls
Carmi, Moshe M.	Eng.	'56	Tel-Aviv, Israel
Champlin, Carlin S.	Glass	'56	Alfred
Childs, Gary D.	Eng.	'57	Olean
Cileski, Alfred J.	Eng.	'57	Rochester
Clair, Colys R.	Eng.	'57	Solsville
Clark, Gerald R.	Eng.	'56	Ashville
Clough, Eugene R.	Eng.	'58	Oneonta
Conklin, Wayne A.	Eng.	'58	Cuba
Conley, James M.	Eng.	'56	Lockport
Conner, Bernard J.	Glass	'55	Tompkins Cove
Constantine, Elizabeth J.	Design	'55	Bronx
Cooper, Joseph E.	Eng.	'58	Knoxville, Pa.
Courtright, John H.	Eng.	'55	Johnson City
Crozier, George W.	Eng.	'56	Jamestown
Culver, Richard L.	Eng.	'57	Oneonta
Curtin, Thomas R.	Eng.	'58	Buffalo
Curtis, William H., Jr.	Eng.	'55	Hornell
Dassance, Sally A.	Design	'56	Newfield
Davis, Elaine Y.	Design	'56	Allentown, Pa.
Dennis, John S.	Eng.	'56	Valley Stream
DeRienzo, Earl J.	Eng.	'56	Hornell
Der Sarkissian, Michael	Eng.	'58	Gasport
di Benedetto, Bernard A.	Glass	'58	Bedford
Dick, William O., Jr.	Eng.	'55	Oakfield
Dick, William R.	Glass	'58	Garden City
Diller, Stanley	Eng.	'57	Brooklyn
Donnelly, John A.	Eng.	'58	S. Glens Falls
Dunfee, James C.	Eng.	'57	Waverly
Earl, William A.	Eng.	Spec.	Bolivar
Ebert, Harry E.	Eng.	'57	Ellicottville
Ecklund, James M.	Eng.	'57	Rochester
Eiss, Valerie R.	Design	'57	Williamsville
Ellinger, Joan	Design	'56	New York
Emerson, Frederick B., Jr.	Eng.	'57	Wellsville
Ersley, Emmett J.	Eng.	'55	Rexville
Euvrard, Louis E., Jr.	Eng.	'56	Tuxedo
Fahey, John R.	Eng.	'58	Waverly
Farrington, Grant M., Jr.	Eng.	'57	Afton
Feinbloom, David T.	Eng.	'56	Long Island City

Name	*Classification*		*Residence*
Feld, Philip	Eng.	'56	Levittown
Fell, Edward C.	Eng.	'58	Elmira Heights
Fields, Jeanne V.	Design	'57	Islip
Fischman, Joan	Design	'57	Brooklyn
Fisher, Richard G.	Tech.	'58	Dansville
Fitzpatrick, John W.	Eng.	'58	Niagara Falls
Flipse, Merle K.	Eng.	'55	Vestal
Floch, Jenny E.	Design	'58	New York
Flood, Frances J.	Design	'58	Ottawa, Canada
Forrest, Robert J.	Eng.	'57	Oyster Bay
Fox, Gerald G.	Design	'56	Poughkeepsie
Fox, Marilyn L.	Eng.	'57	Utica
Francis, Ronald K.	Eng.	'55	Elmira
Fraser, Penelope	Design	'55	Charlottesville, Va.
Frazier, James H.	Eng.	'56	Yonkers
French, Gregory M.	Design	'57	Avon
Fuess, Douglas A.	Eng.	'56	Madison
Geary, John G.	Glass	'57	Hornell
Geller, Harold I.	Eng.	'56	Brooklyn
Geltman, Gerald L.	Eng.	'56	Teaneck, N. J.
Georganta, Anastasia T.	Design	'58	Olean
Getto, Allan	Eng.	'55	Brooklyn
Gilbert, Frank C., III	Eng.	'57	Schenectady
Gillman, Dale C.	Glass	'56	Salamanca
Glover, Stanley J.	Eng.	'58	Hornell
Goldstein, Marcy	Eng.	'55	New York
Goodridge, Paul F.	Eng.	'56	Whitesville
Goodwin, Gail R.	Eng.	'56	Holley
Gorton, Roy E.	Eng.	'57	Alma
Goss, Bruce R.	Eng.	Grad	Weedsport
Gowdy, R. Ruth	Design	Grad	Utica
Graham, Henry C.	Eng.	'56	Mayville
Grant, John F.	Eng.	'55	Piffard
Grassi, Richard A.	Design	'56	Islip
Green, Daniel K.	Eng.	'58	Elmira Heights
Guild, Ward H.	Glass	'56	Allentown
Hall, Donald H.	Eng.	'56	Rochester
Hall, Douglas E.	Tech.	'57	Waverly
Hanna, Charles N.	Eng.	'57	Industry
Hansen, Helen K.	Design	'57	Nyack
Harnett, Joan J.	Design	'58	Massapequa, L. I.
Harris, Donald M.	Eng.	'58	East Rochester
Harris, Frederic K.	Eng.	'57	Hornell
Hart, Bernard J.	Eng.	'58	Hudson Falls
Hausler, Elwood B.	Eng.	'58	Buffalo

Name	*Classification*		*Residence*
Hedges, Philip E.	Eng.	'56	Hornell
Helliesen, Richard O.	Eng.	'55	Detroit, Mich.
Hertz, Paula L.	Eng.	'57	Mt. Vernon
Hill, David C.	Eng.	'57	Livingston Manor
Hokanson, Dean R.	Design	Spec.	Alfred
Homer, Stephen B.	Design	'58	Bethlehem, Pa.
Hoskyns, William R.	Eng.	'58	Kenmore
House, Roger L.	Eng.	'56	Perry
Housman, William C.	Eng.	'58	Corning
Howe, David G.	Eng.	'55	Wellsville
Hughes, Donald L., Jr.	Eng.	'58	Lackawanna
Hulbert, Samuel F.	Eng.	'58	Adams Center
Indig, Maurice	Eng.	'56	Brooklyn
Inskip, Mary C.	Design	'58	Port Byron
Irland, David L.	Eng.	'57	Seneca Falls
Jacobs, David B.	Eng.	'58	Hornell
Jacolow, Jules	Design	'55	Brooklyn
Jankowski, Charles R.	Eng.	'57	Hornell
Janowitch, Joseph H.	Eng.	'56	Long Beach
Jelly, Chester F., Jr.	Design	'55	Alfred
Jewett, Jenifer	Glass	'56	Upper Nyack
Johnson, Sylvia A.	Design	'56	Ithaca
Johnston, Sandra L.	Design	'57	Cleveland, Ohio
Jones, Paul E.	Eng.	'57	Mt. Upton
Kamler, Anthony R.	Eng.	'56	Allegany
Kan, Michael	Design	Grad	Danbury, Conn.
Kast, Edward T.	Eng.	'58	Athol Springs
Kasten, Elliott A.	Eng.	'57	Brooklyn
Katz, Bertram S.	Design	'56	South Bronx
Keener, Harry T.	Eng.	'58	Minerva, Ohio
Kirchmaier, Brenda L.	Design	'57	Rochester
Klinder, Thomas W.	Glass	'58	Pompton Plains, N. J.
Knight, Charles H.	Tech.	'56	Limestone
Koster, Suzanne	Design	'58	Beacon
Krevolin, Lewis A.	Design	'55	New Haven, Conn.
Krinsky, Marvin J.	Eng.	'57	Long Beach
LaGreca, Frank A.	Design	Spec.	Niagara Falls
Laktasich, Peter M.	Eng.	'58	Lackawanna
Lampman, Laura R.	Design	'57	Weedsport
Lane, Richard L.	Eng.	'57	Franklinville
Lasky, Elliott	Eng.	'58	New York
Lattari, Patsy F.	Eng.	'56	Waverly
Lauck, Peter B.	Eng.	'58	White Plains

Name	*Classification*		*Residence*
LeBlanc, John R.	Eng.	'58	Canastota
Lefkowitz, Carl H.	Design	'56	Brooklyn
Leonard, Margery S.	Design	'57	New York
Lerner, Judith	Design	'57	Brooklyn
Lewis, Eugene N.	Design	'58	Brooklyn
Lewis, Gordon	Eng.	'55	Ashville
Lewis, Harold B.	Eng.	'57	Hamburg
Lim, Richard H. Y.	Glass	'58	Surabaya, Java
Lindenthal, James R.	Eng.	'55	Lakehurst, N. J.
Lipman, B. David	Eng.	'57	Rockville Centre
Little, John R.	Eng.	'57	Fairport
LoCastro, Frank S.	Glass	'55	Batavia
Lomery, Barbara J.	Design	'57	Oneida
Longuil, Olive	Design	'57	Congers
Lounsbury, Jeanne H.	Design	'55	Rochester
Lubin, Stephen H.	Design	'56	Binghamton
Luks, Adria E.	Design	'57	Frenchtown, N. J.
Luther, Johanna C.	Design	'58	Allegany
Lydahl, Gustav T.	Design	'56	Bronx
Lyman, Donald R.	Tech.	'57	Wayland
McDaniel, Summer W.	Eng.	'56	Beaver Falls, Pa.
McKinley, Donald L.	Design	'55	Wichita, Kansas
McMahon, Nathan W.	Design	'57	Durand, Wisconsin
McMindes, Carl L.	Eng.	'58	Jasper
McMurtry, Carl H.	Eng.	Grad.	Wellsville
McMurtry, Everett L.	Eng.	'58	Wellsville
McMurtry, Walter R., Jr.	Eng.	'57	Wellsville
McNamara, Edward P., Jr.	Eng.	'56	Wyoming, Ohio
McNamara, John V.	Eng.	'58	Wyoming, Ohio
Maccalous, Joseph W.	Tech.	'57	Cobleskill
Maeder, Douglas E.	Glass	'57	Delmar
Magee, James H.	Eng.	'57	Wellsville
Mahoney, David L.	Eng.	'55	White Plains
Mansen, Dorothea M.	Design	'56	Pearl River
Mapel, Marcianne	Design	'55	Tarentum, Pa.
Maroney, Doris M.	Eng.	'58	Poughkeepsie
Maroney, Dorothy M.	Eng.	'58	Poughkeepsie
Marquart, Rodney W.	Design	'55	Oneonta
Marr, George W.	Eng.	'57	Locust Valley
Marshall, Ann S.	Design	'57	Ellicottville
Martling, Chester	Eng.	'57	East Norwich
Marvin, Charles G.	Eng.	'58	Fillmore
Massey, William D.	Eng.	'58	Wellsville
Mendes, Howard D.	Glass	'56	Brooklyn
Mesibov, Barbara	Design	'55	Hewlett, Long Island
Messner, Paul D., III	Eng.	'55	Rome

Name	*Classification*		*Residence*
Mike, Thomas W.	Eng.	Grad.	Hornell
Milani, Helio	Eng.	'56	Rio Claro, Sao Paulo
Miller, Harry L.	Eng.	'57	Hornell
Miller, Karl H.	Design	'55	Port Washington
Milliken, William U.	Eng.	'55	Bowerston, Ohio
Mindich, Barbara M.	Design	'55	Bronx
Mistler, Richard E.	Glass	'56	Medford
Moffat, Richard J.	Eng.	'57	Poughkeepsie
Moresco, Albert J.	Eng.	'57	Wilkes-Barre, Pa.
Morris, David P.	Design	'58	Newark, N. J.
Muccigrosso, Angelo T.	Eng.	'58	Alfred
Murphy, James M.	Eng.	'56	Hornell
Nagan, Raymond M.	Tech.	'58	Rochester
Nedreberg, Roy E. G.	Eng.	'55	Ashville
Odinov, Lloyd D.	Eng.	'58	Great Neck
Ohnsorg, Roger W.	Eng.	'58	Staten Island
Olsen, Karen M.	Design	'57	Amsterdam
Orloff, Joan R.	Design	'58	Nunda
Ormsby, Phillip A.	Glass	'56	Alfred
Orr, David B.	Eng.	'55	Oneonta
Page, Thomas A.	Eng.	'57	Hornell
Paladino, Albert E., Jr.	Eng.	Grad.	Bellmore
Palombi, Lawrence M.	Eng.	'55	Elbridge
Park, Donald R.	Eng.	'57	Elmira
Parks, Sidney E.	Eng.	'56	Canisteo
Partington, Philip A.	Eng.	'58	Richmond, Va.
Perry, Frederick W.	Eng.	'57	Holley
Perry, Robert W.	Glass	'56	Corning
Petersen, Ann K.	Design	'58	Skaneateles
Peterson, Albert F.	Eng.	'55	Brooklyn
Pettengill, Floyd E.	Design	'55	Alfred
Phillips, Richard A.	Eng.	'55	Niagara Falls
Porter, Erford E., Jr.	Eng.	'57	Roscoe
Potter, Alan	Eng.	'57	Rochester
Potter, Allen B.	Eng.	'56	Utica
Pratt, James E.	Eng.	'57	Wilton
Rahe, Villem	Glass	Spec.	Corning
Rahl, Linda G.	Design	'58	Washingtonville
Ramsdell, John L.	Eng.	'55	Batavia
Rhodes, William H.	Eng.	'57	Oneonta
Richman, Peter D.	Eng.	'58	Brooklyn
Richmond, William A.	Eng.	'58	Wellsville
Rickey, Charles J.	Eng.	'55	Albion

Name	Classification		Residence
Rittler, Hermann L.	Eng.	'56	Rochester
Robbins, Ross W., Jr.	Eng.	'55	Lancaster
Roberson, Richard M.	Eng.	'57	Machias
Roberts, Louis E.	Eng.	'55	Hornell
Rochford, David S.	Eng.	'58	Schenectady
Rogers, Edward	Eng.	'57	Athens, Pa.
Rowlands, Richard R.	Design	'58	West Winfield
Salomon, Anne M.	Design	'57	New York
Sanford, William W.	Design	'57	Hammondsport
Sarian, Suren	Eng.	'55	Niagara Falls
Schelker, Daniel H.	Eng.	'56	Roscoe
Schlegel, Walter H.	Eng.	'57	Naples
Schneebs, Susan G.	Design	'58	Larchmont
Schreiber, Edward	Eng.	'56	Alfred
Schultz, Christian F.	Eng.	'58	Hornell
Schwartz, Barbara L.	Design	'56	Bronx
Semmler, Lee E.	Eng.	'57	Victor
Shanly, Sheila M.	Design	'55	Buffalo
Shaw, Arthur H., Jr.	Tech.	'56	Hornell
Sherman, Marilyn K.	Design	'57	Depauville
Shultz, Charles H.	Eng.	'57	Turtle Creek, Pa.
Sicker, Richard E.	Eng.	'56	Buffalo
Siebach, Ralph E.	Eng.	'56	Gloversville
Slack, Lyle H.	Eng.	'58	Whitesville
Slawson, John W., III	Eng.	'56	Bayville
Smith, Dale P.	Design	'56	Bath, Pa.
Smith, Diana J.	Design	'58	Norwich
Smith, Douglas R.	Glass	'58	Hempstead
Smith, James F.	Eng.	'58	Andover
Smith, Ronald J.	Tech.	'57	West Carmel
Smith, Sidney L.	Eng.	'58	LeRoy
Smith, William R.	Eng.	'56	Geneva
Smolowitz, Robert	Design	'57	Brooklyn
Snyder, Arthur B.	Eng.	'57	Rhinebeck
Snyder, Merwin R.	Eng.	'56	Penn Yan
Sobon, Leon E.	Eng.	'56	Lackawanna
Soxman, Edwin J.	Eng.	Grad	Alfred
Spirko, Edward J.	Eng.	'57	Bayonne, N. J.
Sproul, James D., Jr.	Eng.	'58	Delevan
Sproule, Richard T.	Glass	'56	Corning
Stein, Joseph L.	Eng.	'58	Buchanan
Stillman, A. Paul	Eng.	'55	Alfred
Stirrup, John T.	Eng.	'57	Corning
Stockton, Betsy M.	Design	'57	Elmira
Stoke, Frank W.	Design	'57	Washington, N. C.
Stokes, Roberta K.	Design	Grad	St. Louis, Mo.

Name	Classification		Residence
Storer-Folt, John P.	Eng.	'55	Queensville, Ont., Canada
Story, Richard G.	Eng.	'56	Oceanside
Straka, Anna J.	Design	Spec.	South Hempstead
Stull, John L.	Glass	Grad	Alfred
Sturzebecher, Richard J.	Eng.	'58	Perry
Sullivan, Robert M.	Eng.	'57	Elmira
Swanson, Leroy M.	Eng.	'56	Jamestown
Swartz, John M.	Eng.	'58	Sherman
Swica, Joseph J.	Eng.	'57	Dunkirk
Swirsky, Helen E.	Eng.	'58	Rego Park
Tatem, William A.	Eng.	Grad	Westbury
Tatnall, Rodman F.	Eng.	'58	Kenmore
Taylor, Ernest C.	Eng.	'57	Horseheads
Terkoski, Raymond A., Jr.	Eng.	'56	Elmira
Thomas, Robert B.	Glass	'55	Alma
Thompson, Gail L.	Design	'58	Ottawa, Canada
Thompson, Orrin S., Jr.	Eng.	'56	Red Hook
Thunhorst, Helen M.	Eng.	'56	Valley Stream
Tierney, James E., Jr.	Glass	'57	Hornell
Titlar, James M.	Eng.	'57	Pleasantville
Tracy, John R.	Eng.	'58	Anthens, Pa.
Tricase, Samuel J.	Eng.	'57	Massena
Truesdale, Richard S.	Eng.	'56	Geneva
Tsukada, Kenichi	Glass	'58	Minato-Ku, Tokyo, Japan
Tuccio, Josephine J.	Design	'56	Rochester
Tuomola, Richard V.	Eng.	'56	Huntington Station
Urode, Raymond J.	Eng.	'58	Buffalo
Vail, Milford R.	Eng.	'56	Hamburg
Van Vliet, Ilene W.	Design	'55	Fort Frances, Canada
Wagner, Warren O.	Eng.	'58	Avoca
Wales, Wayne F.	Eng.	'58	Sherburne
Walker, Emmett L.	Eng.	'58	Buffalo
Wang, Yien-Koo C.	Design	'58	New York
Watkins, E. Charles	Eng.	'55	Bath
Weaver, Don S.	Eng.	'56	Mayville
Webb, Ronald W.	Eng.	'57	Hamburg
Weisenseel, Charles W., Jr.	Eng.	'56	Bellmore
Weiss, Edward F.	Eng.	'58	Valley Stream
White, John V.	Eng.	'56	Delhi
Whiting, Mary G.	Design	'58	Canisteo
Whitney, Earl J.	Eng.	'56	Corning
Wier, Dorsey	Design	'57	Stratford, Conn.
Wightman, Richard F.	Tech.	'56	Corning

Name	*Classification*		*Residence*
Wilcox, David L.	Eng.	'58	Cortland
Wilder, Joseph J.	Eng.	'57	Yonkers
Wildman, Charles F.	Glass	'57	Wellsville
Williams, Lee C.	Glass	'57	West Valley
Wise, Douglas C.	Eng.	'58	Alden
Witherell, William F.	Eng.	'57	Depew
Wolcott, J. David	Eng.	'57	Corning
Wolkenberg, Gertrude J.	Design	'57	Port Jervis
Wright, John C., Jr.	Eng.	'57	Welland, Ontario
Young, Paul C.	Eng.	'56	Boston
Young, Phyllis C.	Design	'57	Riverhead
Yunker, Donald D.	Eng.	'58	Oakfield
Zielinski, Louis S.	Design	'55	Alfred
Ziminski, Priscilla A.	Design	'58	West Hempstead