STATE UNIVERSITY OF NEW YORK

# THE NEW YORK STATE COLLEGE OF CERAMICS AT ALFRED UNIVERSITY

CATALOG NUMBER FOR 1950-1951

# STATE UNIVERSITY OF NEW YORK

THE NEW YORK STATE

COLLEGE OF **CERAMICS**

AT ALFRED UNIVERSITY

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CATALOG NUMBER FOR **1950-1951**

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# CALENDAR FOR 1950-51

## FIRST SEMESTER

| | | 1950 |
|---|---|---|
| Registration | Monday to Thursday | Sept. 18-21 |
| Instruction begins | Friday, 8:00 A.M. | Sept. 22 |
| Registration of part-time graduate students | Monday, 4:00-9:00 P.M. | Sept. 25 |
| Founders' Day | Thursday | Nov. 2 |
| Mid-semester grades | Wednesday, 12:00 M. | Nov. 15 |
| Thanksgiving recess begins | Wednesday, 10:00 A.M. (8 and 9 o'clock classes only) | Nov. 22 |
| Instruction resumed | Monday, 8:00 A.M. | Nov. 27 |
| Christmas recess begins | Friday, 10:30 A.M. (10 and 11 o'clock classes only) | Dec. 22 |
| | | 1951 |
| Instruction resumed | Monday, 8:00 A.M. | Jan. 8 |
| Review days | Monday, Tuesday | Jan. 22, 23 |
| Mid-year Examinations begin | Wednesday | Jan. 24 |
| Examinations end: Semester ends | Friday | Feb. 2 |

## SECOND SEMESTER

| | | |
|---|---|---|
| Advising | Tuesday | Feb. 6 |
| Registration of new students | Tuesday | Feb. 6 |
| Instruction begins | Wednesday, 8:00 A.M. | Feb. 7 |
| Registration of part-time graduate students | Wednesday, 5:00-8:00 P.M. | Feb. 7 |
| St. Pat's Festival, half hol. | Thursday | Mar. 15 |
| St. Pat's Festival, half hol. | Friday | Mar. 16 |
| Spring recess begins | Thursday, 10:00 A.M. (8 and 9 o'clock classes only) | Mar. 22 |
| Instruction resumed | Monday, 8:00 A.M. | Apr. 2 |
| Mid-semester grades | Wednesday, 12:00 M. | Apr. 11 |

| | | |
|---|---|---|
| Moving-Up Day, half hol. | Thursday | May 10 |
| Pre-registration | Tues., 1:30-5:00 P.M. | May 15 |
| Review Days | Monday, Tuesday | May 28, 29 |
| Memorial Day, half hol. | Wednesday | May 30 |
| Final Examinations begin | Wednesday | May 30 |
| Examinations end: | | |
| Semester ends | Friday | June 8 |
| 115th Anniversary Commencement | Monday | June 11 |

## SUMMER SESSIONS—1951

*Intersession*

| | | |
|---|---|---|
| Term begins | Tuesday | June 12 |
| Term ends | Friday | June 29 |

*Regular Summer Session*

| | | |
|---|---|---|
| Term begins | Monday | July 2 |
| Holiday | Wednesday | July 4 |
| Term ends | Friday | Aug. 17 |

# CALENDAR FOR 1951-1952

## FIRST SEMESTER

| | | 1951 |
|---|---|---|
| Registration | Monday to Thursday | Sept. 17-20 |
| Instruction begins | Friday, 8:00 A.M. | Sept. 21 |
| Founders' Day | Thursday | Nov. 1 |
| Mid-Semester Grades | Wednesday, 12:00 M. | Nov. 14 |
| Thanksgiving recess begins | Wednesday, 10:00 A.M. (8- and 9-o'clock classes only) | Nov. 21 |
| Instruction resumed | Monday, 8:00 A.M. | Nov. 26 |
| Christmas recess begins | Friday, 10:00 A.M. (10- and 11-o'clock classes only) | Dec. 14 |



| | | 1952 |
|---|---|---|
| Instruction resumed | Thursday, 8:00 A.M. | Jan. 3 |
| Mid-year Examinations begin | Wednesday | Jan. 23 |
| Examinations end: | | |
| Semester ends | Friday | Feb. 1 |

## SECOND SEMESTER

| | | |
|---|---|---|
| Advising | Tuesday | Feb. 5 |
| Registration of new students | Tuesday | Feb. 5 |
| Instruction begins | Wednesday, 8:00 A.M. | Feb. 6 |
| Registration of part-time graduate students | Wednesday, 5:00 to 8:00 P.M. | Feb. 6 |
| St. Pat's Festival, half holiday | Thursday | Mar. 20 |
| St. Pat's Festival, half holiday | Friday | Mar. 21 |
| Mid-semester grades | Monday, 12:00 M. | Mar. 31 |
| Spring recess begins | Friday, 10:00 A.M. (8- and 9-o'clock classes only) | Apr. 4 |
| Instruction resumed | Tuesday, 8:00 A.M. | Apr. 15 |
| Moving-Up Day, half holiday | Thursday | May 8 |
| Pre-registration | Tuesday, 1:30-5:00 P.M. | May 13 |
| Final Examinations begin | Wednesday | May 28 |
| Memorial Day, half holiday | Friday | May 30 |
| Examinations end: | | |
| Semester ends | Friday | June 6 |
| 116th Anniversary Commencement | Monday | June 9 |

## SUMMER SESSIONS—1952

*Intersession*

| | | |
|---|---|---|
| Term begins | Tuesday | June 10 |
| Term ends | Friday | June 27 |

*Regular Summer Session*

| | | |
|---|---|---|
| Term begins | Monday | June 30 |
| Term ends | Friday | Aug. 8 |

## ALFRED UNIVERSITY SUMMER SESSION

A six-week summer session is offered by the Liberal Arts College of Alfred University. Liberal Arts courses constitute most of the work given in this season, but courses in pottery production, drawing and modeling may be included. For further information regarding this six-week course address Director of Summer School, Alfred, N. Y.

# STATE UNIVERSITY OF NEW YORK

STATE UNIVERSITY of New York, established by the Legislature of the State in 1948 to provide a "comprehensive and adequate" program of higher education for the youth of this State, is a unique institution.

Differing sharply from the traditional American State University, State University of New York presently includes 33 separate post-high school units each of which antedates the establishment of the University itself. The 33 units were incorporated into the overall University system as a first step toward providing a comprehensive and coordinated State-supported higher education system for this State.

The colleges of the University are distributed almost the entire length and breadth of the State. They offer a multitude of widely varying curricula ranging from agriculture to ceramics, liberal arts, veterinary medicine, home economics, teacher training, dental technology and a wealth of other technical and vocational subjects.

One of the principal objectives of the State University, as stated in the law, is that it should supplement, not supplant, the extensive post-high school educational facilities presently maintained under private auspices in the State. New York has already what is perhaps the finest group of privately-endowed colleges and universities of any State in the country.

Accordingly the State University is pushing forward in the establishment of new units chiefly in those areas, geographic and educational, which are not now adequately served by private institutions. Already the University has absorbed the Long Island College of Medicine in Brooklyn, now State University College of Medicine at New York; and the College of Medicine

of Syracuse University, now State University College of Medicine at Syracuse. These Colleges of Medicine are the nuclei of two medical centers, soon to be largely developed.

In addition, State University has established two four-year liberal arts colleges, Champlain College at Plattsburg and Harpur College in Broome County.

The University has also formulated a master plan for a community college program for the entire State. The community colleges, to be financed partly by the State and partly by the local community, are intended to provide two years of post-high school education, either as a largely vocational terminal course or leading toward completion of a four-year course. The aim of this program is to provide at least two years of college training within a reasonable distance of the homes of most qualified high school graduates of the State. Two Community Colleges, at Middletown and Jamestown, have been established.

State University is also exploring, among other matters, the broadening of the curriculum of the teacher colleges, a re-examination of the entire field of general education, and the advisability of establishing a central campus unit for the University, complete with undergraduate and graduate schools.

The central office of the State University in Albany and the branch office in New York do not process applications for admission to any of the units of State University. Candidates for admission to any unit of the University should communicate directly with the institution itself.

At present the University is composed of the following colleges and institutes:

LIBERAL ARTS COLLEGES

Champlain College at Plattsburg
Harpur College at **Endicott**



PROFESSIONAL COLLEGES

College of Medicine at New York City
College of Medicine at Syracuse

College for Teachers at Albany
Teachers College at Brockport
College for Teachers at Buffalo
Teachers College at Cortland
Teachers College at Fredonia
Teachers College at Geneseo
Teachers College at New Paltz
Teachers College at Oneonta
Teachers College at Oswego
Teachers College at Plattsburg
Teachers College at Potsdam

College of Agriculture at Cornell University
College of Ceramics at Alfred University
College of Forestry at Syracuse University
College of Home Economics at Cornell University
School of Industrial and Labor Relations at Cornell University
Maritime College at Fort Schuyler
Veterinary College at Cornell University

TWO-YEAR TECHNICAL INSTITUTES

Agricultural and Technical Institute at Alfred
Agricultural and Technical Institute at Canton
Institute of Agriculture and Home Economics at Cobleskill
Agricultural and Technical Institute at Delhi
Agricultural and Technical Institute at Farmingdale
Agricultural and Technical Institute at Morrisville

Institute of Applied Arts and Sciences at Binghamton
Institute of Applied Arts and Sciences at Brooklyn
Institute of Applied Arts and Sciences at Buffalo
Institute of Applied Arts and Sciences at Utica
Institute of Applied Arts and Sciences at White Plains

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# THE NEW YORK STATE COLLEGE OF CERAMICS

## OBJECTIVES

CHAPTER 383 of the Laws of New York of 1900 stated that the purpose of the institution 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-one 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 ceramic education and stimulating research that would prepare them to be not only good ceramists but also good citizens.

## LOCATION

The New York State College of Ceramics is located at Alfred University, Alfred, N. Y. 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 N. Y. highway No. 244, which, two miles away at Alfred Station, connects with N. Y. highway No. 36 and the main line of the Erie Railroad. Alfred is a village of 700 population, situated at an elevation of 1800 feet. Detached from the distractions of large municipal centers and with an exceptionally fine climate, its location enhances the opportunities for a successful college career.

## HISTORY

The New York State College of Ceramics 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 school offering specialized courses in ceramics, and 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 raised by legislative action to the rank of a college, and it was named the New York State College of Ceramics. A new building (Merrill Hall) was built and equipped, and the first course in Glass Technology in the country was established. Funds appropriated by the Legislature provided not only for the new well-equipped building but also for an appreciably enlarged staff.

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 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); ground was laid for the development of a research program; the engineering curriculum was accredited by the Engineering Council for Professional Development; state moneys were appropriated for a planned classroom and laboratory building; plans were drawn up for a research and development building; and carefully planned studies of the State's mineral resources were commenced.

During the years of World War II, registration fell off and 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. S. R. Scholes, who served as Dean 1946-1948, provisions were made for handling the heavy research program and the record registration stemming from World War II; the engineering and technology courses were reviewed 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 well serviced 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.

Ever since its beginning, the school, 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, Industrial Ceramic Design, and Glass Technology.

## CONTROL

The College of Ceramics is a unit of the State University of New York and as such comes under the general direction of the officers and Board of Trustees of that University. 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 College is supported by legislative appropriations made annually and based on prepared budgets approved by the Board of Trustees of the State University and by the Board of Regents.

The trustees of Alfred University have been entrusted with the responsibility of operating the College and they appoint annually a Board of Managers which acts in an advisory capacity to them in carrying on the affairs of the College. The President of Alfred University is President of the Ceramic College and Chairman of the Board of Managers. Several other administrative officers of Alfred University act in their respective capacities for the College.

The immediate direction of the affairs of the College is carried out by the Dean and his Executive Committee which is composed of the heads of the various departments.

# THE NEW YORK STATE COLLEGE OF CERAMICS

***Administered by Alfred University***

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NOTE: *Individual members of the faculty serve on several committees of the University Faculty.*

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* On leave of absence.

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## 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 more true understanding of the principles involved in the manufacture of ceramic products and a more full appreciation of the range of products made from fired earth. There is a continuing demand for ever better and special products; for items unheard of fifty years ago. In order to make refractories that would permit steel furnaces to operate at higher temperatures, glasses for the various 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 practically 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 ganges and/or beneficiated 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 and 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 about 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 tile 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 basement 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; porcelain and glass to the chemical industry. All these items and many more are produced by the ceramic industry.

The ceramic profession is one of the oldest and one of the most challenging. It has need for persons equipped and willing to carry the industry on and 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 2,000 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 thousands of plants and turning out products valued in billions each year. The opportunities for ceramic graduates are great.

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 ceramic 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 of these courses is described in detail under Departments of Instruction, and the material presented will prove worthwhile to interested persons.

## POLICIES

The policies of the College were 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 to the student, 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 him 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.

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. This proficiency results in student respect, and the student-teacher relationships in the College are of a high order. Because of the intimate contact which the teacher enjoys with the student, teachers are depended upon to counsel students in personal matters as well as those pertaining to their educational and professional programs.

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. This program, which is sponsored not only by the College, but also by industry, federal agencies and associations, brings to the campus leading industrialists and outstanding research workers. Research carried on by undergraduate and graduate students affords the link between the teacher, the researcher and student; which association adds much to the student's educational experience.

Contact with the industries of the State is maintained through the splendid cooperation afforded the College by the Ceramic Association of New York State, whose special committees assist college authorities in evaluating its 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 such activities as: the religious fellowship of Alfred, dramatics, and

athletics and reporting is difficult to evaluate but experience has shown that such activities not only add much to the student's outlook on life but have served to develop confidence in areas outside his chosen field.

## BUILDINGS AND EQUIPMENT

The College of Ceramics now occupies Merrill Hall, a four-story brick building finished in 1932, 60 by 140 feet in dimensions; and in consequence of the building program now under way, it houses a number of its activities in remodeled space leased from Alfred University. Binns Hall, the original home of the School of Clayworking and Ceramics, dating from 1900, has been razed. On its site rises the new Binns Hall, a duplicate in architecture of Merrill Hall and connected to it by two structures 50 by 60 feet in size, thus completing a quadrangle with central court.

This new building, with its equipment, will represent an outlay of more than one million dollars, and will provide the largest and most complete plant for ceramic education in America. It is scheduled for completion early in 1952.

An auxiliary building for grinding and clay storage, constructed of concrete block, was completed in 1949.

The ceramic laboratories are equipped with the most modern apparatus and machinery needed in connection with: clay and mineral processing; body mixing and preparation; shaping and forming of ware; drying and firing of samples; and the testing of products and materials. The special laboratories such as those for chemistry, petrography, spectroscopy, and X-rays have modern and adequate equipment. Besides the stationary equipment, there are available the many small items of equipment and apparatus so essential to the conduct of special studies and research. The College prides itself on the quality and amount of its equipment.

## 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 on all phases of ceramic engineering, technology, art and design, as well as books covering the related sciences. The room equipped with work tables and chairs, is open five days and four evenings per week for reading on assigned topics, for consultation of published work by research men, or for browsing by interested students.



The collection will compare favorably with any in the country, in the ceramic field. The number of bound volumes of art and technical books is abut 5000. In this number are not included unbound bulletins, reprints, pamphlets, and student theses. Nearly 200 periodicals are currently received on subscription.

Alfred University Library is also available to ceramic students. Its collection of books supplements effectively the ceramic library, particularly in humanistic-social subjects.

# DEPARTMENTS OF INSTRUCTION

## INDUSTRIAL NEEDS

THE COURSES of instruction are patterned after the essential needs of the ceramic industries. These needs can be illustrated by considering the production of any typical ceramic product, such as a dinner plate. The first thing to do is to design the plate. Its shape, form, color, and decoration must be developed by means of drawings. That is ceramic design. After the plate is designed, it is necessary to assemble the technical information regarding the ingredients to be used, their properties, and their behavior under fire. These data are representative of ceramic technology. Finally, the plate must be made. Doing so involves choosing and operating the proper machinery, kilns, and other manufacturing facilities. This operation represents ceramic engineering.

Corresponding with these industrial needs are the three departments: Ceramic Engineering and General Technology, Glass Technology, and Industrial Ceramic Design. Students may take all three courses, but to do so would require at least seven years' work. If a student expects to graduate in four years he must choose one of these departments in which to specialize. The choice must be made when he enters college, in the case of indus-

trial design. The choice between technology and ceramic engineering may be delayed until the end of the sophomore year, as the work of the first year is the same for both departments. The work of the depatrments is described in more detail in the sections that follow,

## CERAMIC ENGINEERING

A ceramic product is one made from non-metallic, earthy, raw materials by a firing operation. With the exception of the glass industry, ceramic products are fundamentally similar. It is possible, therefore, to give a student a broad fundamental training in ceramics that fits him for usefulness in any of the divisions of the industry. His career in the industry will be determined by his development along the lines of laboratory research and development work, plant production work, or sales engineering work. The college training is designed to give him the foundation on which to build.

In addition to a general cultural development, the department provides first of all 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 problems of the ceramic industries.

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

This department is fully accredited by the Engineers' Council for Professional Development. For this reason, the graduates are eligible for licensing as professional engineers after they have had the necessary industrial experience.

This program leads to the degree of Bachelor of Science,

## GLASS TECHNOLOGY

Glass differs from other ceramic products in two essentials: the firing operation is carried to complete fusion; the forming process follows the furnace treatment instead of preceding it. Glass is related to other ceramic bodies, because all are made up of oxides, among which silica predominates. The glazes and



## CERAMIC ENGINEERING CURRICULUM

### First Year

| *First Semester* | *Hours* | *Second Semeter* | *Hours* |
|---|---|---|---|
| Mathematics 5 (*College Math.*) | 5 | Mathematics 6 (*College Math.*) | 5 |
| Chemistry 7 (*General Inorganic*) | 5 | Chemistry 8 (*Qual. Analysis*) | 5 |
| Industrial Mechanics 1 (*Eng. Draw.*) | 3 | Industrial Mechanics 2 (*Desc. Geom.*) | 3 |
| English 1 (*Composition*) | 3 | English 2 (*Composition*) | 3 |
| Ceramics 101 or 151 (*Introd.*) | 1 | Ceramics 102 or 152 (*Introd.*) | 1 |
| Physical Education | 1 | Physical Education | 1 |
| Assembly | 0 | Assembly | 0 |
| | 18 | | 18 |

Summer Term of three weeks following close of second semester:
Mathematics 21s, *Plane Surveying* . . . . . 3 credit hours

### Second Year

| *First Semester* | *Hours* | *Second Semester* | *Hours* |
|---|---|---|---|
| Mathematics 15 (*Calculus*) | 4 | Mathematics 16 (*Calculus*) | 4 |
| Chemistry 13 (*Quant. Anal.*) | 3 | Chemistry 40 (*Physical Chem.*) | 3 |
| Physics 11 (*General Physics*) | 4 | Physics 12 (*General Physics*) | 4 |
| Geology (*Structural*) | 3 | Mineralogy (*Introd. & Cryst.*) | 3 |
| Ceramics 103 (*Unit Operations*) | 3 | Ceramics 104 (*Raw Materials*) | 4 |
| Physical Education | 1 | Physical Education | 1 |
| Assembly | 0 | Assembly | 0 |
| | 18 | | 19 |

### Third Year

| *First Semester* | *Hours* | *Second Semester* | *Hours* |
|---|---|---|---|
| Physics 37 (*Mechanics*) | 4 | Physics 38 (*Resist. of Mat.*) | 4 |
| Chemistry 41 (*Physical Chem.*) | 5 | Chemistry 44 (*Silicate Analysis*) | 3 |
| Chemistry 43 (*Fuels & Combustion*) | 3 | Petrography (&*Instrumentation*) | 4 |
| Ceramics 105 (*Unit Processes*) | 4 | Ceramics 106 (*Glasses, Glazes, Enam.*) | 4 |
| English 35 (*Professional*) | 2 | Civilization 22 (*Eng. Indoct.*) | 3 |
| | 18 | | 18 |

### Fourth Year

| *First Semester* | *Hours* | *Second Semester* | *Hours* |
|---|---|---|---|
| Physics 31 (*Heat*) | 3 | Physics 43 (*Mag. & Elec.*) | 3 |
| Economics 11 (*Prin. & Prob.*) | 3 | Economics 12 (*Prin. & Prob.*) | 3 |
| Ceramics 107 (*Testing of Prod.*) | 2 | Non-Technical Elective | 3 |
| Ceramics 121 (*Structural Plan.*) | 2 | Ceramics 122-72 (*Plant Layout*) | 5 |
| Ceramics 161 (*Thesis*) | 2 | Ceramics 162 (*Thesis*) | 2 |
| Ceramic Elective | 3 | Ceramic Elective | 3 |
| Non-Technical Elective | 3 | Plant Inspection | 1 |
| | 18 | | 20 |

enamels are glasses formed in place on the surfaces which they protect and ornament. Ceramic bodies such as pottery or porcelain owe 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.

In his specailization, 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.

The first year is uniform for all students in technology and engineering. Not only are the required subjects fundamental and necessary to all these curricula, but the uniformity of freshman year permits the student to postpone selection of his field of specialization until he is a sophomore and has become more acquainted with what the College offers.

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 upper-classmen 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

### First Year

| *First Semester* | *Hours* |
|---|---|
| Mathematics 5 (*College Math.*) | 5 |
| Chemistry 7 (*General Inorganic*) | 5 |
| Industrial Mechanics 1 (*Eng. Draw.*) | 3 |
| English 1 (*Composition*) | 3 |
| Ceramics 101 or 151 (*Introd.*) | 1 |
| Physical Education | 1 |
| Assembly | 0 |
| | 18 |

| *Second Semester* | *Hours* |
|---|---|
| Mathematics 6 (*College Math.*) | 5 |
| Chemistry 8 (*Qual. Analysis*) | 5 |
| Industrial Mech. 2 (*Desc. Geom.*) | 3 |
| English 2 (*Composition*) | 3 |
| Ceramics 102 or 152 (*Introd.*) | 1 |
| Physical Education | 1 |
| Assembly | 0 |
| | 18 |

Summer Term of three weeks following close of second semester:
Mathematics 21s, *Plane Surveying* ..... 3 credit hours

### Second Year

| *First Semester* | *Hours* |
|---|---|
| Mathematics 15 (*Calculus*) | 4 |
| Chemistry 13 (*Quant. Anal.*) | 3 |
| Physics 11 (*General Physics*) | 4 |
| Ceramics 103 (*Unit Operations*) | 3 |
| Geology (*Structural*) | 3 |
| Physical Education | 1 |
| Assembly | 0 |
| | 18 |

| *Second Semester* | *Hours* |
|---|---|
| Mathematics 16 (*Calculus*) | 4 |
| Chemistry 40 (*Physical Chem.*) | 3 |
| Physics 12 (*General Physics*) | 4 |
| Ceramics 200 (*Raw Materials*) | 3 |
| Mineralogy (*Introd. & Cryst.*) | 3 |
| Physical Education | 1 |
| Assembly | 0 |
| | 18 |

### Third Year

| *First Semester* | *Hours* |
|---|---|
| Physics 37 (Mechanics) | 4 |
| Chemistry 41 (*Physical Chem.*) | 5 |
| Ceramics 201 (*Glass; Comp.*) | 5 |
| Ceramics 251 (*Glass Analysis*) | 2 |
| Chemistry 43 (*Fuels & Comb.*) | 3 |
| | 19 |

| *Second Semester* | *Hours* |
|---|---|
| Physics 38 (*Resist. of Materials*) | 4 |
| Petrography (*& Instrumentation*) | 4 |
| Ceramics 202 (*Glass Properties*) | 5 |
| Ceramics 252 (*Glassmelting*) | 2 |
| Physics 32 (*Light*) | 3 |
| | 18 |

### Fourth Year

| *First Semester* | *Hours* |
|---|---|
| Physics 31 (*Heat*) | 3 |
| Differential Equations | 2 |
| Ceramics 261 (*Thesis*) | 2 |
| Non-Technical Elective | 3 |
| Economics 11 (*Prin. & Prob.*) | 3 |
| Elective | 5 |
| | 18 |

| *Second Semester* | *Hours* |
|---|---|
| Non-technical Elective | 3 |
| Statistics | 3 |
| Ceramics 262 (*Thesis*) | 2 |
| Plant Inspection | 1 |
| Economics 12 (*Prin. & Prob.*) | 3 |
| Elective | 5 |
| English 35 (*Professional*) | 2 |
| | 19 |

## GENERAL CERAMIC TECHNOLOGY

The courses in Ceramic Technology differ from the courses in Ceramic Engineering in but one respect. In General 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 ceramic 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.

The reader will please consult the outline under the heading "Department of Ceramic Engineering" for a description of a ceramic product and for a statement regarding a career in the ceramic profession.

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

## GENERAL CERAMIC TECHNOLOGY CURRICULUM

### First Year

| *First Semester* | *Hours* | *Second Semester* | *Hours* |
|---|---|---|---|
| Mathematics 5 (*College Math.*) | 5 | Mathematics 6 (*College Math.*) | 5 |
| Chemistry 7 (*General Inorganic*) | 5 | Chemistry 8 (*Qual. Analysis*) | 5 |
| Industrial Mechanics 1 (*Eng. Draw.*) | 3 | Industrial Mechanics 2 (*Desc. Geom.*) | 3 |
| English 1 (*Composition*) | 3 | English 2 (*Composition*) | 3 |
| Ceramics 101 or 151 (*Introd.*) | 1 | Ceramics 102 or 152 (*Introd.*) | 1 |
| Physical Education | 1 | Physical Education | 1 |
| Assembly | 0 | Assembly | 0 |
| | 18 | | 18 |

Summer Term of three weeks following close of second semester:
Mathematics 21s, *Plane Surveying* ..... 3 credit hours



### Second Year

| *First Semester* | *Hours* | *Second Semester* | *Hours* |
|---|---|---|---|
| Mathematics 15 (*Calculus*) | 4 | Mathematics 16 (*Calculus*) | 4 |
| Chemistry 13 (*Quant. Anal.*) | 3 | Chemistry 40 (*Physical Chem.*) | 3 |
| Physics 11 (*General Physics*) | 4 | Physics 12 (*General Physics*) | 4 |
| Geology (*Structural*) | 3 | Mineralogy (*Introd. & Cryst.*) | 3 |
| Ceramics 103 (*Unit Operations*) | 3 | Ceramics 104 (*Raw Materials*) | 4 |
| Physical Education | 1 | Physical Education | 1 |
| Assembly | 0 | Assembly | 0 |
| | 18 | | 19 |

### Third Year

| *First Semester* | *Hours* | *Second Semester* | *Hours* |
|---|---|---|---|
| Chemistry 41 (*Physical Chem.*) | 5 | Chemistry 44 (*Silicate Analysis*) | 3 |
| Chemistry 43 (*Fuels & Comb.*) | 3 | Petrography (*&Instrumentation*) | 4 |
| Ceramics 105 (*Unit Processes*) | 4 | Ceramics 106 (*Glasses, Glaz., Enam.*) | 4 |
| Technical Elective | 5 | Technical Elective | 4 |
| Professional English | 2 | Civilization 22 | 3 |
| | 19 | | 18 |

### Fourth Year

| *First Semester* | *Hours* | *Second Semester* | *Hours* |
|---|---|---|---|
| Physics 31 (*Heat*) | 3 | Physics 34 (*Magnet. & Electr.*) | 3 |
| Economics 11 (*Prin. & Prob.*) | 3 | Economics 12 (*Princ. & Prob.*) | 3 |
| Ceramics 107 (*Testing of Prod.*) | 2 | Ceramics 162 (*Thesis*) | 2 |
| Ceramics 161 (*Thesis*) | 2 | Non-technical Elective | 3 |
| Non-technical Elective | 3 | Elective | 7 |
| Elective | 5 | Plant Inspection | 1 |
| | 18 | | 19 |

## INDUSTRIAL CERAMIC DESIGN

The department provides specialized professional training in the design of ceramic products. The basis of the curriculum is the broad study of creative design, expressed in three-dimensional materials and in graphic media. A parallel study of technical subjects and practical experience with methods of production provide a means of relating creative ideas to modern demands. Studies in the humanities and in the history and philosophy of design supply a necessary part of the students' educational background. A well-stocked reference library of publications and books on all phases of historic and contemporary design is available for student use.

For the first two years, the student concentrates on the fundamentals of three-dimensional and graphic design; color; free hand and instrumental drawing; and on courses in modeling. Design courses include exercises in the use of the camera and photographic processes. Many materials and modes of expression are employed in solving creative problems in form and space. The study of design is approached from an abstract basis, because of its special relevance to the design of three-dimensional objects.

In his junior year, the student enters the shops and laboratories where his study of design expands to include problems of function, and the physical structure and behavior of materials. He experiments with many processes and their adaptation to design solutions. Experience with a wide variety of ceramic colors, textures and compositions of clay and glasses increases his range of expression. The equipment of a modern pottery is placed at his disposal so that he may test the value of his designs by expressing them in a finished product. Contacts with manufacturing and retail outlets provide talented students with an opportunity further to check the practicability of their ideas in actual production and sales. At intervals, the scheduled courses are supplemented by trips to museums, exhibitions, and industrial plants.

Because of present limitation of facilities, enrollment of freshman students is limited to twenty-five. Preference is given to those students whose high-school marks rank in the upper third of their class, or who otherwise show exceptional adaptation for creative work.

Students who receive failing marks in Liberal Arts courses, chemistry, or drafting, must satisfactorily complete such work before entering school the following year. Sophomore students must acquire a cumulative index of 1.00 in drawing, design, and modeling courses, in order to be eligible for entrance in the Junior year. With faculty permission, junior and senior students may elect a limited number of hours in courses in the following fields—Economics and Business Administration; Education; Speech and Dramatics; special courses in Design and in Ceramics.

The College reserves the right to retain ware, drawings, and designs, made by students.

This program leads to the degree of Bachelor of Fine Arts (B.F.A.).



## INDUSTRIAL CERAMIC DESIGN CURRICULUM

### First Year

| *First Semester* | *Hours* | *Second Semester* | *Hours* |
|---|---|---|---|
| Ceramics H301 (*History*) | 1 | Ceramics H302 (*History*) | 1 |
| Ceramics N321 (*Drawing*) | 3 | Ceramics N322 (*Drawing*) | 3 |
| Ceramics K323 (*Design*) | 4 | Ceramics K324 (*Design*) | 4 |
| Ceramics E323A (*Design*) | 2 | Ceramics E324A (*Design*) | 2 |
| Ceramics F325 (*Form*) | 3 | Ceramics F326 (*Form*) | 3 |
| Civilization I | 5 | Civilization II | 5 |
| Mechanical Drawing | 2 | Mechanical Drawing | 2 |
| Physical Education | 1 | Physical Education | 1 |
| Assembly | 0 | Assembly | 0 |
| | 21 | | 21 |

### Second Year

| *First Semester* | *Hours* | *Second Semester* | *Hours* |
|---|---|---|---|
| Ceramics N327 (*Drawing-Painting*) | 3 | Ceramics N328 (*Drawing-Painting*) | 3 |
| Ceramics E329A (*Design*) | 4 | Ceramics E330A (*Design*) | 4 |
| Ceramics K329 (*Design*) | 2 | Ceramics K330 (*Design*) | 2 |
| Ceramics F331 (*Sculpture*) | 3 | Ceramics F332 (*Sculpture*) | 3 |
| Ceramics H303 (*History*) | 1 | Ceramics H304 (*History*) | 1 |
| Chemistry S305 (*Ceramic Chem.*) | 3 | Ceramics M306 (*Ceramic Materials*) | 3 |
| Sociology | 3 | Sociology | 3 |
| Physical Education | 1 | Physical Education | 1 |
| Assembly | 0 | Assembly | 0 |
| | 20 | | 20 |

### Third Year

| *First Semester* | *Hours* | *Second Semester* | *Hours* |
|---|---|---|---|
| Ceramics N333 (*Design*) | 2 | Ceramics N334 (*Design*) | 2 |
| Ceramics EK335 (*Industrial Design*) | 4 | Ceramics EK336 (*Industrial Design*) | 4 |
| Ceramics R335A (*Industrial Design*) | 2 | Ceramics R336A (*Industrial Design*) | 2 |
| Ceramics R337 (*Production*) | 5 | Ceramics R338 (*Production*) | 5 |
| Ceramics F337A (*Sculpture*) | 2 | Ceramics F338A (*Sculpture*) | 2 |
| Ceramics M307 (*Materials*) | 3 | Ceramics M308 (*Materials*) | 3 |
| Psychology (*General*) | 3 | Psychology (*Educational*) | 3 |
| | 21 | | 21 |

### Fourth Year

| *First Semester* | *Hours* | *Second Semester* | *Hours* |
|---|---|---|---|
| Ceramics EK341 (*Design Theory*) | 2 | Ceramics EK342 (*Design Theory*) | 2 |
| Ceramics R342A (*Industrial Design*) | 2 | Ceramics R343A (*Industrial Design*) | 2 |
| Ceramics N339 (*Drawing-Design*) | 2 | Ceramics N340 (*Drawing-Design*) | 2 |
| Ceramics R343 (*Design & Production*) | 4 | Ceramics R344 (*Design & Production*) | 4 |
| Ceramics F343A (*Sculpture*) | 2 | Ceramics F344A (*Sculpture*) | 2 |
| Ceramics M309 (*Equip. & Materials*) | 2 | Ceramics M310 (*Equip. & Materials*) | 2 |
| Elective | 6 | Elective | 6 |
| | 20 | | 20 |

## DEPARTMENT OF RESEARCH

The Department of Research, also known as the Ceramic Experiment Station, is the agency by which the New York State College of Ceramics renders service to the producers and users of ceramic products in the State of New York. The need for research work in the field of ceramics has become increasingly apparent in the last half-century. The conversion of the industry from an art to a science can only be achieved through research and its proper application. The gathering of fundamental information and the application of known scientific principles to ceramic problems is one of the main functions of the Research Department. The research very often produces new methods and products more useful to man; hence, the public benefits by better and more serviceable products; the manufacturer gets the benefit of new products, new markets, and more efficient operation; and labor benefits by more employment and better salaries.

The demand for ceramic research in the post-war period is greater than ever before. The value of research was made evident to private industry, the Armed Forces, and the Federal and State Governments by war-time developments. Most of these developments were the result of application of fundamental information discovered in prewar years. These facts, which are so necessary for developmental research, require replenishment. The staff of the department is actively engaged in fundamental studies designed to provide such information.

The Research Department now conducts programs of research for the Air Force and for the Office of Naval Research. The Air Force program is concerned with developing ceramic parts capable of withstanding higher temperatures than the metal-alloy parts now used in jet engines and rockets. The Office of Naval Research program is involved in a fundamental study of the phase equilibria and kinetics of reaction between metals and ceramic oxides at high temperatures.

A study of the mineral resources of New York State is now in progress, in cooperation with the Science Service Division of the New York State Museum and the New York State Department of Commerce. This will make available to old and new industries information on the properties of ceramic materials available in the State. A survey of the clay and shale resources of the State has been completed. In connection with this work, over 450 samples were collected, and data were obtained regarding their chemical and physical properties. The program has been expanded, and a survey of the limestone resources of the State is now in progress.



A considerable amount of industrial research is being conducted under the supervision of the Research Department. The investment by industry of large sums for special equipment is avoided by supporting cooperative research in this Department and making use of its excellent facilities. Several of the industries are maintaining Fellowships on problems peculiar to their industries. Fellowships are often maintained by an association of manufacturers and render service to a whole group instead of to an individual. Duplication of research is thereby avoided, and important economies are effected.

The State is considering a request for a new building and additional facilities to make possible increased fundamental and applied research as well as pilot-plant testing of developments.

While space does not permit a complete picture of current activities, mention of some of the more recent studies may give a clearer conception of the work of the Research Department: (1) jet-engine refractories; (2) the mineral composition and properties of New York clays and shales; (3) the physical and chemical properties of New York State limestones; (4) a study of surface-tension effects in glass; (5) the kinetics of Portland Cement hydration; (6) improved compositions and processes for refractories and abrasives; (7) new methods of manufacturing building brick; (8) color control of high-titania enamels; (9) differential thermal analysis of clay minerals; (10) fundamental factors influencing efflorescence of clay products; (11) development of a low-fired wall-tile body; (12) utilization of fly-ash.

Practical results on such problems are achieved by a competent staff of workers. Preliminary tests are carried out in the laboratory; if these are promising, service tests are conducted to determine the practical value of the development. Through the cooperation of the Ceramic Association of New York, whose Board of Directors acts as an advisory committee, the Experiment Station gets the advice of the leading ceramic industrialists of the State and the active cooperation of their companies.

The Research Department also has a part in the educational program of the Ceramic College. Members of its staff supervise part of the undergraduate and graduate research work and are available for consultation on any problem which may require their assistance. Staff members offer courses in specialized fields at graduate levels.

# DESCRIPTION OF COURSES

## CERAMIC ENGINEERING AND CERAMIC TECHNOLOGY

**Ceramics 101. A Brief History of the Cramic Industries.**
One lecture per week, first semester.
*One credit hour.*

**Ceramics 102. Repetition of Ceramics 101.**
Given in the second semester to a second section of the freshman class.

**Ceramics 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.*

**Ceramics 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.*

**Ceramics 105. Unit Processes.**
The basic and fundamental consideration 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.*



**Ceramics 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.
Three lectures and one laboratory period per week, second semester.
*Four credit hours.*

**Ceramics 107. Testing Ceramic Products.**
Lectures, laboratory work, and demonstrations on instruments and methods, and practice in testing commercial ceramic products of all sorts. Second semester.
*Two credit hours.*

***Ceramics 108. Structural Clay Products.**
Specialization in the technology and the engineering aspects of the structural-clay-products industry.
Three lectures per week, second semester.
*Three credit hours.*

***Ceramics 109. Whitewares.**
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.

***Ceramics 114. Refractories.**
A study of the fundamental technology of all kinds of refractories and the engineering aspects of their production and use.
Three lectures per week, second semester.
*Three credit hours.* Prerequisite, Ceramics 104.

***Ceramics 115. Lime, Gypsum and Cement.**
The properties, manufacture, testing, and uses of cementing materials.
Three lectures per week, first semester.
*Three credit hours.* Prerequisite, Ceramics 104.

* *For Elective or Graduate Study.*

***Ceramics 118. Enamels.**
The technology of the application of vitreous or porcelain enamels to metals.
Two lectures per week, second semester.
*Two credit hours.* Prerequisite, Ceramics 104.

**Ceramics 121. Equipment, Design and Plant Layout.**
The engineering features of structural planning and design, plant layout and ceramic-plant design.
Two lectures per week, first semester.
*Two credit hours.* Prerequisite, Ceramics 106 and Math. 37 and 38.

**Ceramics 122. Equipment, Design and Plant Layout.**
The engineering features of structures and of ceramic equipment design, particularly as applied to drying and firing of ceramic ware.
Two lectures per week, second semester.

***Ceramics 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.*

***Ceramics 125. Advanced Phase-Equilibrium Studies.**
Methods of establishment of diagrams; calculations.
One lecture per week, first semester.
*One credit hour.*

***Ceramics 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.*

**Ceramics 151. 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 processes is demonstrated.
One laboratory period each week, first semester.
*One credit hour.*

**Ceramics 152. Repetition of Course 151.**
For a second section of the freshman class. One laboratory period each week, second semester.
*One credit hour.*

***Ceramics 159. Laboratory Practice in Whiteware Technology.**
Laboratory studies to demonstrate the properties of whiteware raw materials, the preparation and testing of typical whiteware bodies, glazes and colors. Two laboratory periods per week, first semester. Associated with Ceramics 109.
*Two credit hours.*

**Ceramics 161. Thesis.**
Original research on some problem decided upon in conference with the instructor.
Two laboratory periods per week; first semester.
*Two credit hours.*

**Ceramics 162. Thesis.**
Continuation of Ceramics 161.
Two laboratory periods per week, second semester.
*Two credit hours.*

***Ceramics 168. Laboratory Practices in Enamels.**
Two laboratory periods per week, second semester. To be taken with Ceramics 118.
*Two credit hours.*

**Ceramics 172. Equipment, Design and Plant Layout.**
Laboratory practice in which the structural engineering details of plant design, plant layout and plant equipment, including kilns and driers, is carried out.
Three laboratory periods per week, second semester. Associated with Ceramics 122.
*Three credit hours.*

* *For Elective or Graduate Study.*



* *For Elective or Graduate Study.*

***Ceramics 119-120.**

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

***Ceramics 128. Crystal Chemistry.**

The principles of crystal chemistry; the nature of the bonds; 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.

**Civilization 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 authoritative members of the engineering profession. The course emphasizes Engineering Ethics, Engineering Methods, Safety and Industrial Hygiene.

Three lectures per week, second semester.

*Three credit hours.*

## GLASS TECHNOLOGY

**Ceramics 200. Raw Materials for Glass.**

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

Three lectures per week.

*Three credit hours.*

**Ceramics 201-251. Glass Furnaces, Glassmelting, and Glassworking.**

Simple glasses are melted, and the melting process is studied in relation to refractories, containers, temperatures, batch compositions, and fining agents. Text and references

* *For Elective or Graduate Study.*



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.

Five lectures and two laboratory periods per week, first semester. *Seven credit hours.* Prerequisites—two years college work in science or equivalent experience.

**Ceramics 202-252. The Physics of Glass.**

The effects of common and unusual colorants, the influence of batch and glass compositions, the study of temperatures and furnace atmospheres in relation to colors, the mathematics of transmission of light through glass, the specific physical and optical properties of glass, constitution theory, and historical development.

Five lectures and two laboratory periods per week, second semester.

*Seven credit hours.*

***Ceramics 203. Properties of Glass.**

Elective. Primarily for graduate students. 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.*

***Ceramics 204. Glassmelting Units.**

Elective. Primarily for graduate students. Studies on the design, construction, and operation of glass furnaces.

Three lectures per week, second semester.

*Three credit hours.*

***Ceramics 205. Survey of Glass Technology.**

A lecture course offered for the benefit of students in General Ceramics or other departments, covering the subject in a summary manner. Three lectures per week, first semester.

*Three credit hours.*

* *For Elective or Graduate Study.*

**Ceramics 261. Glass Thesis.**
Laboratory study of a problem selected in conference with the department head. Review of literature. Two laboratory periods per week, first semester.
*Two credit hours.*

**Ceramics 262. Glass Thesis.**
Continuation of Ceramics 261.
Two laboratory periods per week, second semester.
*Two credit hours.*

## INDUSTRIAL CERAMIC DESIGN

**Ceramics H301, H302, H303, H304.**
Lecture and individual study of reference material. An examination of various methods and styles of creative expression, as influenced by changing patterns of social and physical environment. Architecture, sculpture, furnishings, tools, graphic expression and forms of social communication.
One lecture period per week during the first and second year.
*One credit hour each semester.*

**Chemistry S305.**
A special course in ceramic chemistry.
Two lecture periods and one laboratory period per week.
*Three credit hours.*
(Note: All laboratory periods in this department are two hours in length.)

**Ceramics M306.**
This is a special course in ceramics which deals specifically with the chemical nature of ceramic raw materials, clays and glasses. Chemistry S305 is a prerequisite for this course.
Two lecture periods and one laboratory period each week.
*Three credit hours each semester.*

**Ceramics M307. Lecture.**
A study of the formation, occurrence, properties and composition of the principal ceramic raw materials.
Laboratory: Explanatory problems in the nature of ceramic raw materials. Problems in the properties of clays and glazes. Ceramic colors and textures.
Two lecture periods and one laboratory period per week.
*Three credit hours.*



**Ceramics M308. Glaze Calculation and Development.**
Two lecture periods and one laboratory period per week.
*Three credit hours.*

**Ceramics N321-N322. Drawing.**
Free-hand drawing and design in various media from still life, landscape, the figure and memory.
Introductory work in color.
Three and one-half laboratory periods per week.
*Three credit hours each semester.*

**Ceramics E323A-E324A. Design Theory—Three-Dimensional Design.**
Exercises in creative articulation of materials.
Two laboratory periods each week.
*Two credit hours each semester.*

**Ceramics K323-K324. Introductory Course—Design.**
Graphic interpretation, employing the language of lines, planes, values, color and texture, and their specific uses in relation to design problems, problems in perspective delineation.
Six and one-half laboratory periods per week.
*Four credit hours each semester.*

**Ceramics F325-F326. Form.**
Elements of three-dimensional composition using clay and other media. Organization of forms, space and volumes, as the basis of creative sculpture. Natural and geometric forms used as the basis for progressive exercises. Graphic exercises in the analysis and construction of form.
Three laboratory periods per week.
*Three credit hours each semester.*

**Ceramics N327-N328. Drawing-Painting.**
Plastic drawing, spatial organization, from life, still life, and landscape. Various media used.
Three and one-half laboratory periods per week.
*Three credit hours each semester.*

**Ceramics K329-K330. Graphic Interpretation.**
A continuation of course K324.
Two laboratory periods per week.
*Two credit hours each semester.*

**Ceramics E329A-E330A. Three-Dimensional Design.**
The development of special knowledge and skills necessary to the solution of design problems. Creative organization of varied materials in space. The study of sections, profiles and models in their roles as tools of design expression. The camera and photographic processes as design media.
Six laboratory periods per week.
*Four credit hours each semester.*

**Ceramics F331-F332. Sculpture.**
A continuation of Course F325-F326.
Four laboratory periods per week.
*Four credit hours each semester.*

**Ceramics N333-N334. Painting and Drawing.**
Creative organization of pattern, color, texture, and form in relation to a two dimensional surface.
Various media used.
Two laboratory periods per week.
*Two credit hours each semester.*

**Ceramics EK335-EK336. Industrial Design.**
Basic problems in design, stressing the influence of function, materials, production, social and economic factors. Selected problems are carried into experimental production in allied shop and laboratory courses.
Three and one-half laboratory periods per week.
*Four credit hours each semester.*

**Ceramics R35A-R36A. Industrial Design.**
A design course with graphic problems related to ceramic products.
Two laboratory periods per week.
*Two credit hours each semester.*

***Ceramics R337-R338. Ceramic Design and Production.**
Lecture and laboratory. A general course in the design and production of ceramic wares. Creative problems in the adaptation of abstract form to problems of function and production. Use of clays, glazes and color. Practice in methods of forming in clay and plaster. Mold and model making for wheel formed and sculptured models. Kiln operation.
Five and one-half laboratory periods per week.
*Five credit hours each semester.*

***Ceramics F337A-F338A. Sculpture.**
Sculptural problems related to Course R337-R338.
Two laboratory periods per week.
*Two credit hours each semester.*

***Ceramics 339-340. Drawing-Design.**
A continuation of Course 333-334.
Two laboratory periods per week.
*Two credit hours each semester.*

**Ceramics EK341-EK342. Design Theory.**
An advanced course in design problems.
Two laboratory periods per week.
*Two hours credit each semester.*

***Ceramics 343-344. Design and Production.**
A pre-professional course in the solution of design problems. Individual problems in ceramics, from drawing to final product, and designed for various methods of making and types of market, are planned and produced by each student.
Seven laboratory periods per week.
*Six credit hours each semester.*

***Ceramics 343A-344A. Sculpture.**
Work in this course is coordinated with that given in 343-344.
Two laboratory periods each week.
*Three credit hours each semester.*

***Ceramics 343B-344B. Design Theory and Practice.**
The planning and graphic presentation of design problems for various types of production. Solutions planned in this

** For Elective or Graduate Study.*



** For Elective or Graduate Study.*

course are produced in final form in connection with course 343-344.
Two laboratory periods each week.
*Two credit hours each semester.*

***Ceramics M345-M346. Equipment and Materials.**

**M345.** Refractory and insulating materials and their uses in firing ceramic wares. Kiln construction, firing reactions, temperature measurement and control. Ceramic production equipment.
Two lecture periods per week.
*Two credit hours.*

***M346.** Individual problems in the laboratory development of ceramic materials. An elective for graduates and undergraduates.
Two laboratory periods per week.
*Two credit hours.*

**1-2. Civilization—Our Cultural Heritage.** *Five hours each semester.*
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 Freshmen 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 Industrial Design.

**21-22. Introduction to Sociology.** *Three hours.*
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 lecture hours per week.
*Three credits per semester.*

* *For Elective or Graduate Study.*



**Industrial Mechanics 3-4.**
Descriptive geometry, orthographic projection, intersections, developments, revolutions, and pictorial representation. This is a special course in drafting and mechanical drawing for design students.
Two laboratory periods per week.
*Two credits per semester.*

**Psychology 11. Introductory Psychology.** *Three hours, either semester.*
An examination and discussion of the basic concepts in psychology, including: learning, motivation, heredity, environment, intelligence, emotion, personality, and adjustment. Demonstrations and group experiments.

**Psychology 32. Educational Psychology.** *Three hours, either semester.*
Development of 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.

## GRADUATE COURSES—DESIGN

**F363-F364**—For graduate students only.
Sculpture and three-dimensional design.

**N367-N368**—Graduate course.
Painting, design, drawing.

**H369-H370**—For graduate students only.
Laboratory problems in the design and production of ceramic wares for various types of uses, methods of production, and market requirements. Problems exploring the creative use of earthy materials for design purposes. Work on a graduate thesis is included as a part of this course.

**H369a-H370a**—Graduate course.
Assigned reading and library research and study. Each graduate student follows an individual program in this course.

## GRADUATE THESIS IN DESIGN

Work on an approved thesis is begun after the candidate has been admitted to full graduate study. The thesis is a problem or an integrated series of problems in creative design. The subject matter may be chosen to accord with the student's individual objective. In general this would come under one of two broad fields of creative design—design for various uses, materials, and types of manufacture, or design as related to the problems of education.

An average thesis requires about 14 credit hours out of the total graduate requirements of 36 hours. A general understanding of the social and economic problems of the designer's profession is expected of all students. Professional skill in design for materials, and a detailed knowledge of production problems, are requirements.

The final thesis is submitted in writing, illustrated by photographs, diagrams, plans or drawings, and by examples of completed work.

A brief interneship in a ceramic plant or other appropriate professional outlet may be required in cases where it is indicated by the objective and scholastic standing of the student.

The completion of a thesis will require a variety of skills including:

1. Skill and experience in the creative use of colors, textures, and processes in relation to the material; and understanding of the technical problems involved.
2. Various methods and media of design presentation and expression.
3. The making of suitable models and molds; the planning of "jigs", tools, and other production aids.
4. Experience with various types of small and large scale production, and their appropriate design interpretations.

## PETROGRAPHY AND X-RAYS

**Petrography.**

Summary of the nature and properties of electromagnetic radiations including light and X-rays in refraction, diffraction and detection; the use of the polarizing microscope in the study of ceramic raw materials and products, the measurement of particle size, stress analysis, photomicrography, and the identification of natural and artificial minerals; the use of X-rays in radiographic and microradiographic inspection; X-ray diffraction in the identification of mineral mixtures and determination of particle size; spectrographic methods for the qualitative and quantitative analysis of inorganic materials by emission and absorption. Three lectures and one laboratory period per week, second semester.
*Four credit hours.*

***Advanced Petrography.**

Advanced work in the use of the petrographic microscope and accessories in the examination and photography of ceramic raw materials and products.
Two lecture periods per week, second semester.
*Two credit hours.* Prerequisite, 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-Rays Laboratory.**

One laboratory period per week, first semester.
*One credit hour.*

## ECONOMICS

**Economics 11-12. Principles and Problems.**

A study of modern economic society and the functioning of the price-system. The technique of economic analysis. The application of economic principles and methods of analysis to present-day economic problems. Prerequisite for all advanced courses in the department. Three lectures per week.
*Three credit hours each semester.*

## ENGLISH

**English 1-2. English Composition.**

The use of written and oral language.
Three lectures and discussions per week.
*Three credit hours each semester.*

* *For Elective or Graduate Study.*

**English 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.*

**English 35. Technical Writing (Professional English).**
*Two hours.*
Practice in routine business correspondence followed by a study of the engineering report, technical article, and research paper. Primarily for ceramic engineering students.

## CHEMISTRY

**Chemistry 7-8. 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.
*Five credit hours each semester.*

**Qualitative Analysis.**
Qualitative analysis of metals and inorganic compounds and the chemical principles involved. A brief, intensive course presented as the latter-portion of Chemistry 8.

**Chemistry 13. Quantitative Analysis.**
Volumetric and gravimetric analysis. One lecture, one quiz, two laboratory periods per week, first semester.
*Three credit hours.* Prerequisite, Chemistry 8.

**Chemistry 13A. Calculations in Quantitative Analysis.**
Methods and practice in various types of calculations arising from analytical procedures.
*One hour, first semester.*

**Chemistry 40. States of Matter.**
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.* Prerequisite, Chemistry 8.

* *For Elective or Graduate Study.*



**Chemistry 41. Physical Chemistry.**
A continuation of Chemistry 40. Theoretical chemistry.
Prerequisites: Chemistry 13 and 40; Calculus.
Five class periods per week, first semester.
*Five credit hours.*

**Chemistry 43. Fuels and Combustion.**
Fuels, principles of combustion, and heat balance. Two lectures and one laboratory per week, first semester.
*Three credit hours.* Prerequisite, Chemistry 13.

**Chemistry 44. Silicate Analysis.**
The analysis of silicate rocks, clays, and ceramic materials. One lecture and two laboratory periods per week, second semester.
*Three credit hours.* Prerequisite, Chemistry 13.

**Chemistry 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, second semester.
*Two credit hours.*

***Chemistry 70. Chemistry of the Colloidal State.**
Two lectures per week, second semester; *two credit hours.*

***Chemistry 77. Elementary Spectroscopy.**
Emission and absorption spectroscopy in chemical analysis. Construction and use of spectrographic equipment. Spectrum analysis by arc or spark methods of excitation. Qualitative and quantitative analysis.
One lecture per week, first semester. *One credit hour.*
Admission by special permission.

***Chemistry 78A. Spectroscopy Laboratory.**
Qualitative and quantitative analysis of inorganic salts and ceramic materials for ceramic engineering students.
One 3-hour laboratory period per week, second semester.
Prerequisite, Chemistry 77. *One credit hour.*

* *For Elective or Graduate Study.*

***Chemistry 78B. Spectroscopy Laboratory.**
Qualitative analysis of ceramic materials. Absorption spectroscopy. Glass technology students and chemistry majors.
One 3-hour laboratory period per week, second semester.
Prerequisite, Chemistry 77. *One credit hour.*

***Chemistry 79. Advanced Spectrochemistry.**
Research applications. Analytical interpretation. Control and experimental.
One hour lecture and six hours laboratory per week.
*Three credit hours.*
For graduate students by special permission. Offered both semesters.

***Thermodynamics 1-2.**
An introduction to the study of energy and heat, based on the first and second laws of thermodynamics.
Two lectures per week, each semester.
*Two credit hours, each semester.*

**Chemistry S305.**
This is a special course in ceramic chemistry (inorganic) offered to Industrial Ceramic Design Students in which the fundamentals necessary to an understanding of glazes and bodies are presented.
Two lecture periods and one laboratory period each week.
*Three hours credit.*
Prerequisite for M306.

## INDUSTRIAL MECHANICS

**Industrial Mechanics 1-2. Engineering Drawing.**
The fundamental principles of drafting and descriptive geometry.
*Three credit hours each semester.*

**Industrial Mechanics 3-4. Mechanical Drawnig.**
A fundamental drafting course to acquaint the beginning art student with the graphical language used by engineers.
*Two credit hours each semester.*

* *For Elective or Graduate Study.*



**Industrial Mechanics 31-32. Advanced Mechanical Drawing.**
Mechanical drawing which parallels the commercial design course for junior art students, to give them as much practical industrial training as possible.
*Two credit hours each semester.*

## MATHEMATICS

**Mathematics 5-6. College Algebra.**
A study of progressions, variation coordinates and graphs, simultaneous equations and determinants, exponents and radicals, the binomial theorem, complex numbers, partial fractions, and theory of equations. Much emphasis is given those algebraic manipulations which are important to the further study of mathematics.

**Trigonometry.**
A study of the trigonometric functions and their applications.

**Physics 36. Electrical Measurements.**
Two lectures and one three hour laboratory period.
Prerequisites, Physics 11–12, Mathematics 15–16.
*Three hours second semester.*
Laboratory fee, $5.00.

**Physics 37-38. Mechanics and Strength of Materials.**
A study of statics and kinetics, with emphasis on the determination of forces acting on bodies in equilibrium. Both analytic and graphic methods are used. Other topics included are center of gravity, moment of inertia, work, energy, and power. A large portion of the second semester is devoted to the study of strength of materials.
*Four hours each semester.* Prerequisites, Math. 15–16 and Physics 11–12.

***Physics 107. Introductory Radioactivity and Nuclear Physics.**
A lecture-demonstration course dealing with radioactivity and properties of radioactive emanations; nuclear reac-

* *For Elective or Graduate Study.*

tions, modern detection methods, properties of nuclear particles, tracer applications, and health physics.
Three lectures per week, first semester.
*Three credit hours.*
Graduate credit.

***Physics 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.
Graduate credit only.

***Physics 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.
Graduate credit only.

## GEOLOGY AND MINERALOGY

**Mineralogy 1.**

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

**Geology.**

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.*

* *For Elective or Graduate Study.*



## PHYSICAL EDUCATION

**Physical Education 1-2.**

Instruction is given in all the following activities: in the fall—football, cross-country, 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.
Required of freshmen.
Two hours practice.
*One credit hour each semester.*

**Physical Education 11-12.**

A continuation of 1–2 with more advanced instruction in skills of the various activities. Required of sophomores.
Two hours practice.
*One credit hour each semester.*

# SCHOLASTIC REGULATIONS

## ADMISSION

THE COLLEGE has had to reject many applications in order to limit enrollment to the capacity of the institution. Applications for admission will be acted upon not later than August 15th.

### CORRESPONDENCE

Requests by prospective students for literature, general information and admission blanks should be addressed to the Director of Admissions. Special queries relating to the nature of the courses should be addressed to the Dean of the College of Ceramics. After the application is submitted, correspondence and consultations regarding admission should be carried on with the Dean of the College of Ceramics. If applicants are accepted for admission, they should make arrangements for living accommodations and employment, if necessary, with the Director of Admissions.

### PROCEDURE AND NOTIFICATIONS

The admission blanks that are to be obtained from the Director include three separate documents. The Certificate of Recommendations is to be filled out by the secondary-school principal and mailed directly to the Director. The Health Certificate is to be handled similarly by the family physician. The Application for Admission is to be completed by the candidate and mailed to the Director together with the application fee of $5.00. This should be in the form of a check or money order payable to Alfred University. After these three credentials and the fee have been received, they are assembled by the Director and presented to the Admission Committee. The Committee meets at frequent intervals and notifies applicants of its action shortly after each meeting. Ordinarily, the candidate is definitely accepted or rejected, but in border-line cases decision may be deferred until nearer the time of College opening.



## ENTRANCE REQUIREMENTS

The basic requirement for admission to the College is graduation from an accredited four-year secondary school. Beyond this, and the special requirements stated on succeeding pages, the candidate must present the specific credits itemized below.

For purposes of secondary-school accrediting, the College relies upon the evaluations of the New York State Board of Regents or the various regional associations of colleges and secondary schools. Detailed statements by principals of such schools are regarded as sufficient evidence, not only of graduation but of the units completed and achievement in them, although candidates from New York State schools are expected to present Regents' credit.

In general, full compliance with the unit requirements is necessary, but in exceptional cases 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.

The following table gives the specific subjects and the number of units required for admittance to the Departments of General Ceramic Engineering, Glass Technology, and General Ceramic Technology.

| | |
|---|---|
| English | 4 units |
| Mathematics | 2½ units |
| Science | 2 units |
| *Foreign Language | 2 units |
| Electives | 5½ units |
| | 16 units |

* In certain cases, substitutions may be made for the foreign language requirements.

Admission to the Department of Industrial Ceramic Design is governed by substantially the same requirements as those for Technology and Engineering, but high school art work, if of superior quality, may be substituted to a limited extent for some of the requirements listed above.

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.

Additional information regarding these requirements is given in the following paragraphs.

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.

FOREIGN LANGUAGE—2 units.

Latin, German, French, or Spanish, is acceptable for the foreign language requirements. In certain cases, substitutions of other courses for foreign language may be made, or the fulfilling of the foreign language requirements may be deferred until the summer following the freshman year.

MATHEMATICS—2½ units.

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

SCIENCE—2 units.

Biology, general science, physical geography, physics or chemistry. Any two subjects may be offered.

ELECTIVES—5½ 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 also be chosen from each of the following, but not more than four units may be chosen from these subjects altogether: agriculture, domestic science, commercial subjects, drawing and design, industrial arts, music, public speaking, and dramatics.

## SPECIAL REQUIREMENTS

After applications are found to meet the general requirements stated above, the Admissions Committee proceeds to consider them as potential 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 are required. Applicants for admission to the Ceramic Art Department should, by a personal interview or by submitting exhibits of their high-school art work, show 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 New York State 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 of character, 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.
7. *Date of application.* The choice between applicants who equally meet the foregoing requirements will be determined by the date of application.
8. *Interviews.* It is highly desirable for each candidate to present himself at the College for an interview with the Dean, and, if possible, with 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 Dean. Applicants who wish on the same visit to look over the campus or investigate rooming and

boarding arrangements should make an appointment with 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 credentials, 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.

## REGISTRATION

All students are expected to register on the days designated for that purpose in 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 Art Department is expected to register for at least fifteen hours of work.

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.



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 the 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 between 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 draws a heavy 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 semetser covering the entire semester's work. This examination is the main factor in determining the scholastic standing of the student. A "block week" period of several days immediately preceding these examinations is provided, with no classes in operation, so as to afford ample opportunity for the student to review the semester's work and correlate all parts of it. The full time of the faculty is available for private consultation during this period.

## ADMINISTRATION OF SCHOLASTIC STANDARDS

Owing to the exacting demands of the ceramic profession, relatively high standards of scholarship must be maintained. Students unable to meet these standards are dropped from the College. However, every possible effort is made by the faculty to assist every student to meet these standards. Every instructor is 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 all of his problems.

The Scholarship Committee of the College of Ceramics has charge of the application of all scholastic regulations. Students have the privilege of meeting with the committee for the purpose of presenting any information they wish to have the committee consider in connection with their scholastic difficulties, but in no case are the regulations voidable by any excuse.

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

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

| *Grade* | *Quality of Work* | *Points per credit hour* |
|---|---|---|
| A | Excellent | 3 |
| B | Good | 2 |
| C | Fair | 1 |
| D | Poor | 0 |
| E | Conditioned failure | —1 |
| F | Failure | —1 |
| I | Incomplete | No Effect |
| W | Withdrawn | No Effect |

The grade point index is obtained by dividing the total number of points by the total number of credit hours. 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 credit is included.

In order that students may have acceptable scholastic standing, the quality of their work in all their courses must be such as to yield the following cumulative grade-point indices:

| *Year* | *Grade Point Index Required Cumulative* |
|---|---|
| Freshman | 0.50 |
| Sophomore | 0.75 |
| Junior (First semester) | .85 |
| Junior (Second semester) | 1.00 |
| Senior | 1.00 |

These requirements apply to either semester of the College year. A student who for the first time fails to meet these requirements but whose cumulative grade point index is within 0.5 of the specified figure, will not be dropped from College immediately but will be given one semester of scholastic probation to bring his index up to the required standard. If at the end of the probationary semester he fails to raise the index to the required standard, he becomes ineligible to continue in College. A student who is not on probation but whose cumulative grade point index is more than 0.5 below the required index, immediately becomes ineligible to continue in College.



## HONORS, PRIZES AND AWARDS

Members of the freshmen, sophomore, and junior classes, who have a cumulative grade-point index of 2.0 or more, are eligible for a certificate of merit.

Members of the senior class may receive honors as follows:

a. Summa cum laude, or highest scholastic honors, to those having a cumulative index of 2.9 or more, with no grade below B.
b. Magna cum laude, or high honors, to those having a cumulative index between 2.6 and 2.9, with no grade below C.
c. Cum laude, or honors, to those having a cumulative index between 2.2 and 2.6.
d. Departmental honors to those who are recommended by the heads of the various departments as having done superior work and who have a cumulative index of 2.2 or more.

The Major Edward Holmes Thesis Prize 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, also established by the Ceramic Association, 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.

The Charles Fergus Binns medal is awarded each year to the ceramic artist of national reknown who has made the most outstanding contribution to ceramic art during the year and who has not previously received the medal.

The award of research fellowships is discussed in another section of this catalogue.

## INDUSTRIAL FELLOWS (*Research Associates*)

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.

## REQUIREMENTS FOR GRADUATION

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.

## DEGREES

*Degrees in Course*

The degree of BACHELOR OF SCIENCE (B.S.) is awarded to those students of the Department of Ceramic Engineering and General Technology 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 in 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 Industrial Ceramic Design with a scholastic cumulative grade-point index of 1.00.

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. (see Graduate Studies)

The degree of MASTER OF FINE ARTS is awarded to graduate students who successfully complete the thirty-six hours of prescribed graduate studies and submit an approved thesis. (see Graduate Studies)

A minimum of one year's residence is required for all degrees in course.



*Professional Degree*

The professional degree of CERAMIC ENGINEER (Cer.E) may be conferred upon a candidate who holds a degree in some branch of engineering or science and who, after at least four years of industrial ceramic experience, is adequately recommended as having demonstrated superior ability in industrial engineering work. A full statement of his training and experience and an acceptable thesis on some of his engineering achievements must be submitted at least two weeks before Commencement. A graduation fee of $10 is charged, and the candidate must present himself in person to receive the degree.

## PLACEMENT

The College cannot guarantee employment of its graduates, but all members of the staff assist graduates in finding positions for which they are fitted. The wide contacts which the College and its staff enjoy with the whole ceramic industry result in the receipt of many inquiries for qualified persons. Graduating students who are considered to have the required qualifications for an open position are placed in direct contact with the persons interested.

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 with the individual and the position. Advancement 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 Ceramic Technology, Master of Science in Glass Technology, and Master of Fine Arts.

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.

## GRADUATE 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. Applications for assistantships should be made to the heads of the various departments (see Faculty).

## MASTER OF SCIENCE DEGREE

To be eligible for general admission 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 set up.

The programs of students coming from other institutions may differ considerably from those of graduates of 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 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. Where undergraduate preparation in ceramics is deficient, and such courses are taken for graduate credit, more work will be required than is usually covered by undergraduates.

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).
(2) Thirty-six semester 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 head of the Industrial Ceramic Design Department prior to making formal application. If at all possible, an interview will be arranged. However, formal application must be made to the Dean of the Graduate School prior to acceptance.

The prerequisites for graduate study toward the Master of Fine Arts degree are: (1) the Bachelor of Fine Arts degree 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. Students whose undergraduate degrees have been taken at other institutions will require three semesters to two years.

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 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.

Courses marked with an asterisk in this catalogue are accepted for graduate credit. Where undergraduate preparation in ceramics or design subjects is deficient and such courses are taken for graduate credit, more work will be required than is usually covered by undergraduates.

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 Committee on Graduate Studies that he has met the same preliminary requirements as those already outlined for the degree of Master of Science. The complete requirements for the degree are also the same, except that four years is allowed for the completion of the work, and the thesis is not necessarily written for publication. The final examination may differ in form.





## 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 productions, student assemblies, moving pictures, commemorative exercises, concerts and Forum series; The Carnegie Library, containing over 65,000 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; The 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; the Susan Howell Social Hall, providing kitchen, dining room and reception room and available for special meeting purposes; the Track and Field House, containing an indoor track, a basketball court and a jumping and vaulting pit, besides training quarters, team rooms and showers, and used for large dances; and the Campus Union, a place to eat, relax and meet friends.

## FRESHMEN ORIENTATION WEEK

The first week of the College year is devoted to orienting the freshmen into university life and into their scholastic work. Full attendance by all freshmen is required. Instructional programs are provided by upper classmen and members of the faculty. Intelligence and adaptation 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 freshmen 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.

## GENERAL ACTIVITIES

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 lanugages, 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 IN THE CERAMIC COLLEGE

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 300. Students elect their officers who are responsible for arranging a program for the year. Through the efforts of the officers there is brought to the campus, each month, some important speaker having a message of particular interest to the members.

The St. Patrick's Board is composed of upper-class technologists and engineers, elected by the seniors. 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 tea dance, 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 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 the publications.

## RELIGIOUS LIFE

Though all student religious activity is voluntary, a well-organized religious program forms an integral part of life on the campus. Distinctly non-sectarian in character, it provides for a strong emphasis on the spiritual development of the students. There is provided, a Director of Religious Activities who as University Chaplain, and advisor to the Religious Fellowship of Alfred, does much to stimulate an interest in and an appreciation for things spiritual.

Chapel service is held each Wednesday 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 on Sundays 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 Brent Fellowship 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, Intrafraternity and University Balls, various sports events, teas, receptions, the campus union, 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 as they enter college should be prepared to finance their first two years, at least. Juniors and seniors are eligible for student assistanceships and some find gainful employment in dining halls, village shops, and garages. 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.

## VETERANS

The College continues to give preference to veterans in the selection of its enrollment. Approximately 25 percent of the present student body are veterans, either new students or those who have returned to complete their courses. The benefits obtainable under the G.I. Bill of Rights 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.

## STUDENT HOUSING

In normal times all freshmen, unless excused by the Dean of Men or the Dean of Women, live and take their meals in one of the University dormitories. These include Bartlett Memorial Dormitory, for men, and The Brick, for women. Each is in charge of a hostess, who is assisted by upperclass counselors. Most of the rooms in Bartlet are single, whereas all in The Brick are double. All bedding is furnished and laundered regularly, and daily maid service is provided.

After the freshman year, students who have joined fraternities or sororities live and board in those houses. Non-sorority women are normally accommodated in The Brick. Men who do not live in fraternity houses are lodged in private homes.

Veterans and their families find living quarters in Saxon Heights, a group of temporary dwellings erected by the F.P.H.A. near the Campus, on a site prepared by the State.



It is hoped that by the fall of 1951 there will be available three new dormitories that will house 120 men and 60 women.

## ESTIMATED TOTAL ANNUAL EXPENSES

For students who are legal residents of the State of New York, total expenses 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 | $360 | $360 | $240 | $360 |
| Room | 90 | 150 | 100 | 150 |
| Inclusive College Fee | 100 | 100 | 100 | 100 |
| Deposits | 17 | 25 | 17 | 25 |
| Books, etc. | 30 | 40 | 30 | 40 |
| | $577 | $675 | $487 | $675 |

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

Freshmen are required to live in the dormitories, unless excused for a compelling reason. By doing so, they have the services of upperclass counselors and the advantage of living with one another. Most upperclass students live in private homes, clubs, fraternities or sororities.

All freshmen in the Engineering and Technology courses are required to take Mathematics 21S, Plane Surveying, which is given during the three weeks immediately following Commencement. Students who take this course make their own arrangements for board and room during that period.

## TUITION

Legal residents of the State of New York pay no tuition. All students who are not legal residents of the State pay tuition at $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 AND DEPOSITS

The College reserves the right to change fees and deposits without notice.

### *GENERAL FEES*

| | |
|---|---|
| In all departments | $100.00 per year |

The general fees cover expenses for which students are obliged for laboratory courses, medical and infirmary service, athletics, library, campus tax, student year book, Student Branch of the American Ceramic Society, the college paper, the University Forum and plant inspection trips.

The statement concerning laboratory fees refers to ceramic laboratories only. In all the chemistry laboratories each course requires a fee of $15.00 per semester, and each physics course involving laboratories requires a fee of $15.00 per semester. Laboratory fee for Geology is $15.00.

### *SPECIAL FEES*

| | |
|---|---|
| Application (to accompany application for admission) | $5.00 |
| Graduation | 10.00 |
| Summer Surveying (freshmen) Mathematics 21-S | 10.00 |
| Special Tests | 1.00 |
| Special Examinations | 5.00 |
| Late Registration | 5.00 |
| Preregistration | 25.00 |
| Chemistry Breakage: Chemistry 1 | 10.00 |
| Chemistry 5 | 10.00 |
| Other courses in Chemistry | 15.00 |
| Art Supplies (Art Students only) | 40.00 |

## 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 is 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:

| | |
|---|---|
| In The Brick or Bartlett Dormitory | $75.00 |
| In Burdick Hall, for upperclassmen | 45.00 |

The prices vary according to size and location of room. Prices in all cases are per person. All rooms are completely furnished. Students are to supply their own towels. Maid service is furnished daily.

Board in Dormitory Dining Hall, Per Semester:

| | |
|---|---|
| In The Brick or Bartlett Dormitory | $180.00 |

Residents of these two dormitories are required to board in the dining halls connected therewith. 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.

All deposits are on a yearly basis and, in most cases, appear on the first semester bill. The breakage deposits provide for replacement of equipment broken or damaged and material wasted by students. The art-supplies deposit covers the cost of supplies used by the student in the Industrial Ceramic Design Department. Unused portions of these deposits will be returned to the students.

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. If extension of time for payment is granted, a service charge is added to the bill in accordance with the time allowed. No regular extensions for a period longer than to December 1 for the first semester, and to April 1 for the second semester will be granted. No extension will be allowed on more than one-half of the general and special fees and deposits.

## REBATES

No rebates on account of tuition and fees will be allowed if the student withdraws after the middle of the semester.

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



# STUDENT ENROLLMENT

# 1950-1951

## FRESHMEN

| *Name* | *Residence* | *Course* |
|---|---|---|
| Anger, Alan Paul | Metuchen, N. J. | Engineering |
| Beebe, Robert George | Islip | Design |
| Behrenberg, James Loucks | Pittsburgh, Pa. | Engineering |
| Berry, Benard Richard | Penn Yan | Engineering |
| Bloomquist, Robert Leslie | Alfred | Engineering |
| Brown, Donuell Starr | Binghamton | Design |
| Brummer, George Michael | Williamsville | Engineering |
| Casterline, Dale Roger | Painted Post | Engineering |
| Chart, Margaret Ann | Addison | Design |
| Christiano, Joseph Patrick | Waterloo | Engineering |
| Cipriano, Ronald Nicholas | Utica | Engineering |
| Coatney, Anne Elizabeth | Hornell | Design |
| Cole, David Lee | Metuchen, N. J. | Engineering |
| Constantinides, Jane Willard | Great Neck | Design |
| Cook, Miles Henry | Middletown | Engineering |
| Coombs, Jack Alton | Addison | Engineering |
| Cremean, Robert William | Todelo, Ohio | Design |
| Cutting, Paul Robert | Chaffee | Engineering |
| DeCoursey, Donald Thomas | Brooklyn | Engineering |
| Dessel, Stanford Joel | Cedar Hurst | Technology |
| Diefenderfer, Richard Parker | Bradford, Pa. | Engineering |
| Dries, Gerald Joseph | Arkport | Engineering |
| Dulin, Francis Harvey | Sarasota, Fla. | Engineering |
| Epstein, Sylvia | Brooklyn | Design |
| Esposito, Russell Paul | Pawling | Engineering |
| Goldenberg, Roberta Sue | Bronx | Design |
| Griffith, William Albert | Little Falls | Glass |
| Halem, Robert Gordon | New York | Engineering |
| Hausman, Conrad Karl | Elmira | Engineering |
| Henssler, Arthur Edward | Fredonia | Engineering |
| Humphrey, John Plympton Stuart | Canisteo | Engineering |
| Jacobs, Jean Mary | Belmont | Design |
| Jacobs, Joan Esther | Belmont | Design |
| Jacobs, Robert Dean | Scio | Engineering |
| Jasper, Stanley Joel | Paterson, N.J. | Engineering |
| Jordan, Duane Richard | Oneida | Glass |
| Kast, Henry Gustav | Athol Springs | Engineering |

| *Name* | *Residence* | *Course* |
|---|---|---|
| Katnack, Fred LeRoy | Cold Spring Harbor | Glass |
| Keagle, John Charles | Elmira | Glass |
| Keck, John Gaerste | Tenafly, N.J. | Engineering |
| Keefe, Daniel Joseph | Scarsdale | Technology |
| Klein, Jonathan David | Brooklyn | Glass |
| Kober, Karl Ernest | Herkimer | Design |
| Lawrie, Alexander Richard | East Rochester | Engineering |
| Lewis, Robert Taber | Bayside | Glass |
| Lindenthal, James Ruddle | Freeport | Engineering |
| Lindsay, Bruce George | Nutley, N.J. | Engineering |
| McClurg, Robert Leonard | Painted Post | Engineering |
| McHenry, William Luther | Lewiston | Engineering |
| McNeilly, Clyde Emerson | Oneonta | Engineering |
| McNicol, Daniel Edward | Clarksburg, W. Va. | Engineering |
| Mangefrida, David John | LeRoy | Engineering |
| Maroon, William Richard | Niagara Falls | Design |
| Marshall, Claude Louis | Middleton | Engineering |
| Mike, Thomas Mancer | Hornell | Engineering |
| Miller, Marlin, Jr. | South Bend, Ind. | Engineering |
| Miller, Suzanne | Canisteo | Design |
| Moore, Carleton Bryant | Hempstead | Glass |
| Murphy, James Michael | Hornell | Engineering |
| Nagan, Harold Raphael | Rochester | Engineering |
| Nelson, William Irving | Binghamton | Engineering |
| Newsome, George Walter | Springville | Design |
| Noren, Saul | New York | Glass |
| O'Brien, Francis Xavier | Port Washington | Engineering |
| Odink, Harry Jean | Port Washington | Engineering |
| Oliver, John Herman | Corning | Glass |
| Olson, Alice Joan | Floral Park | Design |
| Paladino, Albert Edward | Bellmore | Engineering |
| Patrick, Howard Wesley | Pine City | Engineering |
| Pedro, Louis Glen | Owego | Engineering |
| Richardson, Nancy Anne | Greenwich, Conn. | Design |
| Robbins, Ronald Stacey | Hornell | Engineering |
| Russell, Edward Bernard | Schenectady | Design |
| Russell, George Alan, Jr. | Orchard Park | Engineering |
| Schwenkler, Edward Paul | Elmira | Engineering |
| Severin, Harold | New York | Engineering |
| Sherman, Ann Wynne | Silver Creek | Design |
| Smith, Ralph Seymour, Jr. | Irvington | Glass |
| Stanley, Howard Monroe | Watervliet | Engineering |
| Stone, Jerrold Richardson | Congers | Technology |
| Storer, John Peter | New York | Engineering |
| Sweet, Roderic Vincent | Falconer | Engineering |
| Taeler, David Henry | New York | Engineering |
| Tatem, William Arthur | Westbury | Engineering |
| Thornton, Hubert Richard | Van Etten | Glass |
| Turner, Edward John | Bellmore | Engineering |
| Tuska, John Regis | Richmond Hill | Design |
| Waith, Frank Lee | Falconer | Engineering |



| *Name* | *Residence* | *Course* |
|---|---|---|
| Warren, Robert Frederick | Geneseo | Design |
| Webb, Bradley Arthur | Hamburg | Engineering |
| Wightman, Carl Allen | Bath | Glass |
| Williams, Suzanne Ruth | Utica | Design |
| Wright, Kenneth Lester | Newburgh | Design |
| Zeman, John Roosevelt | Little Falls | Engineering |
| Zielinski, Louis Stanley | Phoenixville, Pa. | Design |
| Zlotnick, Herman | Brooklyn | Engineering |
| Zudeck, Simone | Lynbrook | Design |

## SOPHOMORES

| | | |
|---|---|---|
| Asquith, Russell Maynard, Jr. | Little Valley | Design |
| Baugh, Elizabeth Ann | San Antonio, Texas | Design |
| Blankheit, Carolyn Ann | Kenmore | Design |
| Boorman, John Frederick | East Rochester | Engineering |
| Brown, Diana May | New York | Design |
| Brown, Merle LaVerne | Chandlers Valley, Pa. | Engineering |
| Chapin, Janice Gertrude | Corning | Design |
| Chapman, Frank Edwin, Jr. | New York | Engineering |
| Childs, Clayton Gerald | Friendship | Engineering |
| Colcord, John Edward | Hempstead | Engineering |
| Corson, Robert Manley | Endicott | Glass |
| Curran, Martin Timothy | Moira | Engineering |
| DeForest, Raymond Abbott | White Plains | Engineering |
| Denero, John Victor | East Syracuse | Engineering |
| Dobson, Evelyn | Alfred | Design |
| Dorf, Arthur Lewis | Brooklyn | Engineering |
| Earl, William Allison | Bolivar | Design |
| Egbert, Leigh Buckner | Ithaca | Design |
| Ersley, Chauncey John, Jr. | Rexville | Engineering |
| Ewell, Robert Carroll | Saratoga Springs | Engineering |
| Feldman, Gail Hobart | Hempstead | Engineering |
| Fish, Elford Thomas | Brooklyn | Engineering |
| Fleming, Marilyn Jane | Canajoharie | Design |
| Funk, James Edward | Buffalo | Engineering |
| Gelch, Howard H. | Brooklyn | Engineering |
| Gersch, Herbert Morris | New York | Engineering |
| Goss, Bruce Roger | Weedsport | Engineering |
| Gowdy, Reena Ruth | Port Washington | Design |
| Hanna, Richard Duane | Hartford | Engineering |
| Hauser, Richard Ernest | Buffalo | Engineering |
| Henkes, John Lawrence, Jr. | Loudonville | Design |
| Ichikawa, Yoshio | Wahiawa, Oahu T.H., Hawaii | Engineering |
| Jones, Mary Roxanne | Park Ridge, Ill. | Design |
| Joseph, A. David | Highland Park, N.J. | Engineering |
| Kester, Stuart Benjamin, Jr. | Boston | Design |
| Kirkland, Walda Roslyn | New York | Design |

| *Name* | *Residence* | *Course* |
|---|---|---|
| Lax, Rosemary R. | Chicago, Ill. | Design |
| McClelland, Joyce Erma | Springville | Design |
| McMurtry, Carl Hewes | Wellsville | Engineering |
| Maguire, Andrew High | Trenton, N.J. | Glass |
| Martin, Howard Donn | Alfred | Engineering |
| Martin, Orin Kenneth, Jr. | Needham, Mass. | Engineering |
| Montgomery, Daniel | Jacobsburg, Ohio | Engineering |
| O'Brien, Neil Henry | Port Washington | Engineering |
| Olympia, Frederick Dominick | Newburgh | Engineering |
| Osborn, Janice Lee | Battle Creek, Mich. | Design |
| Pappis, James | Boston, Mass. | Engineering |
| Pedrick, Francis Charles | Lewiston | Engineering |
| Phillips, Dudley Bruce | Portville | Engineering |
| Quick, Donald Arvis | Bolivar | Engineering |
| Reed, James Ramsey | Rochester | Engineering |
| Renkert, Donald Harry | Canton, Ohio | Engineering |
| Richard, Marilyn Ruth | Herkimer | Design |
| Riegert, Paul | Dobbs Ferry | Engineering |
| Robbins, Ross Wright, Jr. | Lancaster | Engineering |
| Rodman, Stuart Ezra | Binghamton | Engineering |
| Ryder, Robert John | Olean | Glass |
| Sailer, Edward | Bellmore | Engineering |
| Scallon, Barbara Louine | Oneida | Design |
| Singleton, Robert John | Hornell | Engineering |
| Sonenshine, Lewis | Bronx | Engineering |
| Stromgren, Joseph Bruce | Jamestown | Glass |
| Swanson, Ralph Armwell | Caledonia | Engineering |
| Swart, Robert | East Aurora | Engineering |
| Tower, Bernard Allen | Bolivar | Engineering |
| Tunkel, Burton | Brooklyn | Design |
| Vail, Ruth Annette | Hamburg | Design |
| Viola, Nazzareno, Jr. | Little Falls | Engineering |
| Waugh, John Stanley | East Patchogue | Engineering |
| Whalen, Thomas John, Jr. | Rochester | Engineering |
| Wood, Russell Keith | Pasadena, Calif. | Engineering |

## JUNIORS

| | | |
|---|---|---|
| Armstrong, Andree Marie Louise | Rochester | Design |
| Auskern, Allan | Brooklyn | Engineering |
| Balint, Nancy Barbara | Yonkers | Engineering |
| Baxter, Allen Jay | Naples | Engineering |
| Beaudoin, Armand Joseph | Massena | Engineering |
| Behrenberg, John Paul | Pittsburgh | Glass |
| Benzing, David Hull | Springville | Design |
| Byers, Eleanore Lynwood | Rochester | Design |
| Carson, Allison Richards | Houlton, Me. | Design |
| Chodos, Martin | New York | Design |
| Cohen, Herbert | New York | Design |



| *Name* | *Residence* | *Course* |
|---|---|---|
| Cole, Sandford Stoddard | Metuchen, N.J. | Engineering |
| Conroe, Barden Alexander | Altamont | Engineering |
| Cushing, Val Murat | Rochester | Design |
| Decker, Edward Leonard | Hudson | Engineering |
| Disch, Joan Armeda | Dolgeville | Engineering |
| Durst, William Albert | Mayville | Engineering |
| Earl, Fred Cornell | Broadalbin | Engineering |
| Eichenberger, Frederick John, Jr. | Elba | Engineering |
| Fitzsimmons, Robert Francis | Oakfield | Engineering |
| Forry, Walter James | Lancaster, Pa. | Engineering |
| Gilluly, William Francis | Port Allegany, Pa. | Engineering |
| Grewer, Paul Douglas | Rochester | Engineering |
| Gzowski, Edward Robert | Oakfield | Engineering |
| Hawkes, John Hubert | Baldwin | Engineering |
| Higgins, Wallace Charles | Kendall | Design |
| Homer, Richard Wellington | Bethlehem, Pa. | Design |
| James, Esta Krainis | New York | Design |
| Kinsman, Bradley Quaif | Amsterdam | Engineering |
| Larisch, Herbert Walter | Hewlett | Engineering |
| Litchfield, Nancy Ann | Mayville | Engineering |
| McClurg, William Blair | Painted Post | Glass |
| McKenna, John Francis | Bellerose | Glass |
| McWilliams, Robert James | Brooklyn | Engineering |
| Marcus, Leon | Brooklyn | Engineering |
| Martz, Jane Marshall | Veedersburg, Ind. | Design |
| Mendez, Louis Ernest | Goshen | Design |
| Mockus, Aldona | Amsterdam | Design |
| Morgan, John Millington | Schenectady | Engineering |
| Moskof, Martin Stephen | Bronx | Design |
| Nerenstone, Marc Abraham | New York | Engineering |
| Nolan, William Fortner | Deposit | Engineering |
| Norton, George Robert | Sauquoit | Engineering |
| Owens, Robert Kellum | Elmira | Engineering |
| Pedersen, John Randall | Wilkinsburg, Pa. | Glass |
| Pettengill, Edwin Raymond | Boston | Design |
| Phillips, Leigh Frederic | East Quogue | Engineering |
| Pixley, David Mase | New Hartford | Glass |
| Racine, Fritz Edouard | Haiti, B.W.I. | Engineering |
| Reuning, Charles Robert | Wellsville | Engineering |
| Ridgeway, Thomas James, Jr. | Niagara Falls | Engineering |
| Riker, Leon Wayland, Jr. | Spencer | Engineering |
| Rosen, Louis E. | Elmhurst, Ill. | Engineering |
| Schrader, David Moore | Massilon, Ohio | Engineering |
| Schultz, James B. | Akron | Engineering |
| Seeley, Clarence Edward | Galeton, Pa. | Engineering |
| Sheehan, Robert William | Yonkers | Engineering |
| Sheeley, William John | Hornell | Engineering |
| Shippy, Gordon Dean | Niagara Falls | Engineering |
| Small, Carlton Fessenden, Jr. | New London, Conn. | Engineering |
| Sommer, Alfred | Hornell | Engineering |
| Stapleton, Robert Emanuel | Floral Park | Engineering |

| Name | Residence | Course |
|---|---|---|
| St. Clair, John Harold | West Valley | Glass |
| Stubbs, John Milton | Ridgewood, N.J. | Engineering |
| Stull, John Leete | Hornell | Glass |
| Styhr, Karsten Holst, Jr. | Huntington | Engineering |
| Sutton, Willard Holmes | Alfred | Engineering |
| Tao, Yung | Kunming, China | Glass |
| Taylor, Charles Henry, Jr. | Buffalo | Engineering |
| Tostevin, Edgar Ronald, Jr. | Purdy's | Engineering |
| Wagner, James Burnham | Sinclairville | Glass |
| Wakely, Wilbur Thomas | S. Glens Falls | Glass |
| Woodin, Harrison David | New Paltz | Design |
| Wright, Harold DeWayne | Mineral Ridge, Ohio | Engineering |
| Wyndham-Quin, Francis Henry, Jr. | Oradell, N. J. | Engineering |

## SENIORS

| | | |
|---|---|---|
| Alexander, John Martin, Jr. | North Bellmore | Engineering |
| Alliegro, Richard Alan | Malverne | Engineering |
| Berger, Donald Francis | Buenos Aires, Arg. | Glass |
| Brigham, Ralph Victor, Jr. | Almond | Engineering |
| Brison, William Stanley | Ridgewood, N.J. | Engineering |
| Carl, John Edward | Hammondsport | Engineering |
| Clark, Albert William | Rutherford, N.J. | Design |
| Clark, Howard Hurlbutt, Jr. | Buffalo | Engineering |
| Clute, Charles Valgene | Bellerose | Design |
| Crouchley, George Eric | Westbury | Glass |
| Dahoda, Peter | Cohoes | Design |
| DelloStrologo, Sergio Richard | New York | Design |
| Dennerlein, John Richard | Valhalla | Glass |
| Distler, Robert Roland | Floral Park | Design |
| Driscoll, Bernard Eugene | Wellsville | Engineering |
| Dungan, Robert Hugh | Hornell | Engineering |
| Eldred, Oren John | Oneonta | Engineering |
| Evans, George Cott | Buffalo | Design |
| Fahnert, Curtis Ernest, Jr. | Lincoln, Ill. | Design |
| Finney, Edwin Lee | Middletown | Engineering |
| George, William Russell | Bridgeville, Pa. | Engineering |
| Giess, Edward August | Woodhaven | Engineering |
| Goodrich, Ruth Audrey | Pleasantville | Design |
| Harris, Daniel Christiana | Wellsville | Engineering |
| Hessinger, Philip Scott | Kenmore | Engineering |
| Hinds, Howard Clark | Williamsport, Pa. | Design |
| Hui, Ka-Kwong | Hongkong, China | Design |
| Husted, Wayne Dale | Poughkeepsie | Design |
| Jones, Roger Davies | Buffalo | Engineering |
| Kassel, Eugene Robert | New York | Engineering |
| Knapp, Robert Carl | Hornell | Engineering |
| LaVan, Barbara Wilson | Ransomville | Design |
| Lax, Michael S. | New York | Design |



| Name | Residence | Course |
|---|---|---|
| Lockhardt, Eleanor Charlotte | Plainfield, N.J. | Design |
| McMahon, John Francis | Alfred | Glass |
| McNamara, Richard Brian | Buffalo | Engineering |
| Martz, Gordon Louis | Arlington Heights, Ill. | Design |
| Miller, Norman Betty | Elmira | Design |
| Monroe, James Edward | Hamburg | Engineering |
| Myers, Thomas Joseph | Wappingers Falls | Glass |
| Nohle, Richard Charles | Middletown | Engineering |
| Norton, James Michael | Great Valley | Engineering |
| Olenchuk, Daniel Leon | Bayonne, N.J. | Engineering |
| Palmisano, Donald Joseph | Buffalo | Engineering |
| Peterson, Ralph Gordon | Falconer | Engineering |
| Pixley, Francis Vatable | New Hartford | Engineering |
| Powell, Richard Herbert | Jamestown | Engineering |
| Prusik, Stephen Anthony, Jr. | Franklin Square | Engineering |
| Roach, Wilfred Herbert | Falconer | Glass |
| Sayer, Ethel Dixon | Middletown | Design |
| Schaa, Ferdinand August, Jr. | Bay Shore | Engineering |
| Schaefer, William Howard, Jr. | Addison | Engineering |
| Schoenfeld, Norman | Hewlett | Engineering |
| Schuenzel, Ernest Charles | Mahopac | Engineering |
| Schulmeister, Alice Martha | Niagara Falls | Design |
| Schulz, Eugene George, Jr. | Bronx | Engineering |
| Sheets, Herbert Dwight | Middletown | Engineering |
| Spangenberg, William Carl | Albany | Engineering |
| Spring, Kenneth Louis | Spring Valley | Glass |
| Swain, Janice Ann | Cleveland Heights, O. | Design |
| Swartz, David Lawrence | Sherman | Engineering |
| Tarny, Eugene George | Astoria, L.I. | Engineering |
| Timko, Marvin Thomas | Trenton, N.J. | Technology |
| Trzaskos, Stanley Joseph | Alfred | Engineering |
| Ugol, Louis | Rochester | Engineering |
| Walton, Irving | New York | Engineering |
| Whalley, Roger Edwin | Buffalo | Engineering |
| Woodward, Roger Westcott | Elmira | Engineering |
| Youngs, Robert Arthur | Olean | Engineering |
| Zneimer, Joel Edward | Rockville Center | Engineering |

## GRADUATES

| | | |
|---|---|---|
| Alenius, Carl-Axel | Abo, Finland | Engineering |
| Barlow, Earle Berkeley | North Abington, Mass. | Design |
| Best, Edison Frederick | Corning | Glass |
| Eiwen, George Ernest | Ridgewood, N.J. | Glass |
| Fluhr, Robert A. | Brooklyn | Design |
| Foster, Robert Pettis | Lanoka Harbor, N. J. | Design |
| Griffen, Phyllis Jean | Hannibal, Mo. | Design |
| Holman, Eugene William | Alfred Station | Engineering |
| Hosbein, Roger Louis | Clencoe, Ill. | Engineering |

| *Name* | *Residence* | *Course* |
|---|---|---|
| Jones, George Arthur | Sherrill | Engineering |
| Kane, Daniel Francis, Jr. | Dunkirk | Engineering |
| Knudsen, Friedrich Paul | New York | Engineering |
| Levine, Robert Joseph | New York | Design |
| Ludwig, Urban Wilbert | Jamaica | Glass |
| Marshall, Darwin | Buffalo | Engineering |
| Matterson, Duane | Seattle, Wash. | Design |
| Murthy, M. Krishna | Kolar, S. India | Glass |
| Pixley, George Whiting | New Hartford | Engineering |
| Rase, Daniel Edward | Cleveland, Ohio | Engineering |
| Reichle, Marvin Charles | Detroit, Mich. | Design |
| Rothmer, Ilse | New York | Design |
| Roy, Peejush Kanti | Calcutta, India | Glass |
| Sheheen, Alexander Tonius | Hornell | Engineering |
| Terr, Samuel | New York | Design |
| Williams, Robert Mantell | Brooklyn | Engineering |
| Wilson, Roger Earl | Lockport | Engineering |
| Wright, Jack Edwin | Watsontown, Pa. | Design |

## SPECIALS

| | | |
|---|---|---|
| Chiu, Hung-Wen | Shanghai, China | Glass |
| Hay, John | Musselburgh, Scotland | Engineering |
| Hurley, Ann Dickenson | Tulsa, Okla. | Design |
| Lombard, Francina Helena | Bedford C.P., South Africa | Design |
| Miller, Elwin Lynn | Addison | Engineering |
| Parsons, Barbara Joy | Scotia | Design |
| Patterson, Clare Beatrice | Niagara Falls | Design |
| Raben, Trude Ottonie | Hamburg, Germany | Design |
| Ruggles, Robert William, Jr. | Elmira | Engineering |
| Stillman, Donald Richard | Friendship | Engineering |



# DEGREES CONFERRED JUNE, 1950

## BACHELOR OF SCIENCE

### *In Ceramic Engineering*

Paul Richard Antoun
John Russell Bradley
Robert Howard Brooks
Dwight Rutherford Brown
Glenn Grover Burnside
Donald Joseph Busteed
William George Carlson
William E. Coffin
Robert Arnold Cotton
Victor Amadeus DeProsse
Jarvis Jerome Fargo
Thomas Orange Frantz
John Frederick Gardner
Donald Leon Garrison
Lawrence Kopell
John Walter Lindenthal
Robert Kirby Longfritz
Earl Charles Lowe
Christopher Paul McAllister
William Francis Maloney
Darwin Marshall
Eldon Davidson Miller, Jr.
Richard Clair Hallberg
George Mark Harris
Robert Cleveland Harris
Irvin Fenley Havens, Jr.
Robert Joseph Hawkins
David Hildebrand
Joseph Harold Holmstrom, Jr.
Robert Ralph Immediato
Alton Edwin Johnson
Richard Clayton Johnson
Juan Auguste Jova
Madan Mohan Kapur
Richard William Kennedy
Paul Frederick Kiesow, Jr.
Donald Saltman
William George Schmidt
Joseph Seidel
Howard Edwin Shapiro
Harvey Edward Siebert, Jr.
William Charles Strang
Robert Orrin Strong
Bruce Leo Tarquino
Frederick Clarence Myers
Eugene Louis Nobles
John George Pabst, Jr.
Louis Mark Palamara
Margaret Jean Pausewang
Richard Kingsley Pedu
Jack Leon Peterson
George Whiting Pixley
Robert Prokopec
John Maurice Quirk
Daniel Edward Rase
Howard Louis Taylor
Howard Urban Taylor
John deMontigny Tournaud
Bernard James Trompeter
Frank William Trost
Roy Leonard VanAlsten
Charles Griswold VanWiggeren
Roger John Wighton
Robert Mantell Williams
Lee Clayton Winship
Graydon Read Woodworth
Herbert Dean Root

### *In Ceramic Technology*

Lucille Lorraine Losch

### *In Glass Technology*

Edison Frederick Best
Laverne Jay Conklin
George Ernest Eiwen
Lawrence Olinger Griffith, Jr.
Lawrence Zachary Selewach
Alan Martin Trax

## BACHELOR OF FINE ARTS

### *In Industrial Ceramic Design*

Earle Berkeley Barlow
Joseph Pickford Bowden
Neysa Jean Dixon
Roberta Doris Farnham
Knowlton Wilber Farr
John James Gilkes
Mary Eleanor Grannis
James Augustus Hall
Irene Akhurst Johnston
Nancy Lou Kelly
Patricia Joan Kennedy
Jerome Allen Lyons
Louemma Reed
Ilse Rothmer
Philip Jay Secrest
Barbara Jean Theurer
Martha Jayne VanAlstyne

## MASTER OF SCIENCE

### *In Ceramic Engineering*

John Willard DeRemer
Albert David Indyk
John Leo Kane
James Root Tinklepaugh
Richard Rudolph West

### *In Ceramic Technology*

Joseph Moses Katz

### *In Glass Technology*

Hung-Wen Chiu
Donald Henry Dreyer
Minocher Dadabhoy Karkhanavala
Niranjan Maganbhai Parikh
Rameshwary Prasad Tiwary
Robert Charles Turnbull

## MASTER OF FINE ARTS

Justin Michael Brady
Warren Anthony Gilbertson
Minnie Negoro
Susan Harnly Peterson
William Eldbridge Pitney
James Dwite Secrest
Peter Adam Slusarski
Bacia Righter Stepner
Martha Jayne VanAlstyne