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College of Ceramics

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STATE UNIVERSITY OF
NEW YORK

COLLEGE OF CERAMICS AT ALFRED UNIVERSITY

GENERAL CATALOG 1952-1953

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CALENDAR FOR 1952-1953

	First Semester	1952
Registration	Mon.—Thur.	Sept. 15-18
Instruction begins	Fri. 8:00 A.M.	Sept. 19
Registration part-time graduate students	Mon. 5 to 8 P.M.	Sept. 22
Founders' Day	Thur.	Nov. 6
Mid-Semester Grades	Wed. 12:00 M.	Nov. 12
Thanksgiving recess begins	Wed. 10:00 A.M. (8 and 9 o'clock classes only	Nov. 26
Instruction resumed	Mon. 8:00 A.M.	Dec. 1
Christmas recess begins	Wed. 10:00 A.M. (10 and 11 o'clock classes only)	Dec. 17
		1953
Instruction resumed	Mon. 8:00 A.M.	Jan. 5
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Registration new students	Tues.	Feb. 3
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Registration of part-time graduate students	Wed. 5 to 8 P.M.	Feb. 4
St. Pat's Festival half hol.	Thur.	Mar. 19
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117th Anniversary Comm.	Mon.	June 8

	Summer Session	1953
Intersession		
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Term ends	Fri.	June 26
Regular Summer Session		
Term begins	Mon.	June 29
Term ends	Fri.	Aug. 7

PROPOSED CALENDAR FOR 1953-1954

	First Semester	1953
Registration	Mon.—Thur.	Sept. 14-17
Instruction begins	Fri. 8:00 A.M.	Sept. 18
Registration part time Graduate Students	Mon. 5 to 8 P.M.	Sept. 21
Founders' Day	Thur.	Nov. 5
Mid-Semester Grades	Mon. 12:00 M	Nov. 16
Thanksgiving recess begins	Wed. 10:00 A.M. (8 and 9 o'clock classes only)	Nov. 25
Instruction resumed	Mon. 8:00 A.M.	Nov. 30
Christmas recess begins	Wed. 10:00 A.M. (10 and 11 o'clock classes only)	Dec. 16
		1954
Instruction resumed	Mon. 8:00 A.M.	Jan. 4
Mid-year examinations begin	Wed.	Jan. 20
Examinations end; Sem. ends	Fri.	Jan. 29

	Second Semester	
Registration new students	Wed.	Feb. 3
Instruction begins	Thur. 8:00 A.M.	Feb. 4
Registration of part time grad. students	Thur. 5 to 8 P.M.	Feb. 4
St. Pat's Festival half hol.	Thur.	Mar. 18
St. Pat's Festival half hol.	Fri.	Mar. 19
Mid-semester grades	Mon. 12:00 M.	Mar. 29
Spring recess begins	Fri. 10 A.M. (8 and 9 o'clock classes only)	Apr. 9
Instruction resumed	Tues. 8:00 A.M.	Apr. 20
Moving up day	Thur. No classes after 10:00 A.M.	May 7
Pre-registration	Week of	May 10-14
Final examinations	Wed.	May 26
Exams end: Semester ends	Fri.	June 4
118th Anniversary Comm.	Mon.	June 7

	Summer Session	1954
Intersession		
Term begins	Tues.	June 8
Term ends	Fri.	June 25
Regular Summer Session		
Term begins	Mon.	June 28
Term ends	Fri.	Aug. 6

ALFRED UNIVERSITY SUMMER SESSION

A six-week summer session is conducted by Alfred University. During this session there are offered special courses in pottery, glazing, drawing, and modeling as well as courses in the liberal arts.

STATE UNIVERSITY OF NEW YORK

The College of Ceramics at Alfred University, Alfred, New York, is part of the State University of New York which was established by the State Legislature in 1948. State University now comprises twenty-two colleges and eleven institutes separated geographically but united in purpose to improve and extend, where necessary, opportunities for youth to continue their education after high school. Ninety-four per cent of New York high school graduates live within commuting distance of one of the 33 State University institutions.

State University offers cultural, technical and professional courses of study which include liberal arts, mechanical technology, home economics, ceramics, agriculture, forestry, the maritime service, and education for medicine or teaching.

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

State University was commissioned by the people of New York to admit all qualified students regardless of race or color, creed or economic status. The current full-time undergraduate enrollment is about 26,000.

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

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

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

LOCATION

The College is at Alfred University, Alfred, N. Y. The village of Alfred is in Allegany County, 74 miles south of Rochester, 12 miles southwest of Hornell, and 14 miles northeast of Wellsville. It is located on state highway 244, which, two miles east at Alfred Station, connects with state highway 36 and the main line of the Erie Railroad. Alfred, with a population of 2000, is 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 College had its beginning as the New York State School of Clay Working and Ceramics, which was established at Alfred University in 1900. Two men, Boothe C. Davis and John J. Merrill, visioning the promising position ceramic education was to take in the professional and industrial life of the nation, labored unceasingly for its establishment.

At the time the school was established there was only one other 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 Engineers' 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 decreased but the research work of the College increased rapidly. The staff readjusted its efforts to care for the demands being placed on the College and made numerous contributions to the war effort.

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

CONTROL

The College of Ceramics is a unit of the State University of New York and as such is under the general direction of the officers and

Board of Trustees of that University. 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 of Ceramics and they appoint annually a committee which acts in an advisory capacity in carrying on the affairs of the college. This committee is the Advisory Board of the College. The President of Alfred University is President of the College of Ceramics and Chairman of the Advisory Board. 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 chairmen of the various departments.

ADMISSION

Policy

It is the responsibility of the Committee on Admissions to select those candidates who have character, intelligence and purpose and who will profit most by the program offered by the College.

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

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

Procedure

Catalogs and application blanks may be secured by writing to the Director of Admissions. The application blanks consist of three forms:

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

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

Form III is in duplicate. The family physician and one other person, not a member of the candidate's family, should complete these forms and mail them directly to the Director.

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

A personal interview is an important part of the admissions procedure. The candidate should make an appointment with the Director of Admissions to visit the Alfred University campus and to meet the Dean of the College of Ceramics.

ENTRANCE REQUIREMENTS

1. The basic requirement for admission to the College is graduation from an accredited secondary school. The candidate is expected to rank in the upper portion of his class and to present a total of 16 units, including English, 4 units; mathematics, 2½ units, science, 2 units, electives, 5½ units; and foreign language, 2 units. In certain cases, substitution may be made for the foreign language requirement.

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.

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.

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

SPECIAL REQUIREMENTS

After applicants 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 commitee 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 intervew 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 Director of Admissions.

ADMISSION TO ADVANCED STANDING

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

1. They must supply a statement of their entrance units and date of graduation from high school, a transcript of their college record, a letter of honorable dismissal by the proper official, and a statement that they are eligible to return to the institution which they are leaving.
2. Credit will be granted for equivalent courses in which the grades are C or higher. No credit is given for grades of D or lower.
3. Transfer students are subject to the same standards of selection as entering freshmen.

SPECIAL STUDENTS

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

CAMPUS FACILITIES

THE COLLEGE OF CERAMICS is an integral part of Alfred University, and its students are students of Alfred University. In view of this, students of the College have available to them all the facilities provided by Alfred University. Among the most important of these facilities are Alumni Hall, an assembly hall used for dramatic production, student assemblies, moving pictures, commemorative exercises, concerts and Forum series; The Carnegie Library, containing over 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.

ORIENTATION WEEK

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

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 languages, sciences, drama, art, journalism, athletics, music, outdoor sports, aviation and scouting. There are honorary scholastc 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 200. Students elect officers who are responsible for arranging the year's program. Speakers, having messages of particular interest to the members, are brought to the campus.

The St. Patrick's Board is composed of upper-class technologists and engineers, elected by the 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 or technology can attain.

PUBLICATIONS

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

RELIGIOUS LIFE

Though religious activity is voluntary, a well-organized religious program forms an integral part of life on the campus. Distinctly nonsectarian in character, it provides for the spiritual development of the students. The Director of Religious Activities, 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 Tuesday during the College year. These services feature brief talks by the Chaplain and special music by the chapel choir. Attendance is voluntary.

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

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

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

CONCERTS AND LECTURES

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

SOCIAL LIFE

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

SELF-HELP

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

INDUSTRIAL EXPERIENCE

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

VETERANS

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

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 housemother, who is assisted by upperclass counselors. Most of the rooms in Bartlett are single, whereas all in The Brick are double.

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 University dormitores or private homes.

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.

RESERVE OFFICERS' TRAINING CORPS

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

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

The Basic Course, which is required for graduation, carries regular college credit. These hours may be substituted for the requirements in physical education.

Participation in the Advanced Course entitles the student to three hours of credit per semester toward a degree. In addition, Advanced Course students are furnished on a loan basis all textbooks, equipment and uniforms. They are also paid a commutation of subsistence allowance of approximately twenty-seven dollars per month during the junior and senior years.

EXPENSES

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

	— In —		With Private Families or in Clubs	
	University	Dormitories		
Board	$400	$400	$300	$400
Room	100	170	100	170
Inclusive College Fee	100	100	100	100
Deposits	17	25	17	25
Books, etc.	30	40	30	40
	$647	$735	$547	$735

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 218, 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. Surveying must be taken during the intersession immediately following the freshman year.

TUITION

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

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

The residence of a minor follows that of parents or legal guardian, regardless of emancipation. The residence of a wife follows that of her

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

FEES AND DEPOSITS

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

General Fee

In all departments ..... $100.00 per year

The general fee covers 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 fee 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	15.00
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 Deposit: Chemistry 1	10.00
Chemistry 5	10.00
Other courses in Chemistry	15.00
Art Supplies Deposit (Art Students only)	10.00

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	$85.00
In Burdick Hall, for upperclassmen	50.00

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, bed linen and blankets.

Board in Dormitory Dining Hall, Per Semester:

In The Brick or Bartlett Dormitory $200.00

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 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.

Some students and parents prefer to pay tuition, room, board, and fees on a time-payment basis. Tuition Plan, Inc., of which Alfred University is a participating member, provides a method by which parents and guardians may pay tuition and other fees in eight equal monthly installments during the academic year. This corporation applies to education the accepted and well established methods of deferred payments familiar in other fields. Tuition Plan, Inc., charges 4% interest on money borrowed for college expenses.

REFUNDS

No refunds on account of tuition and fees will be allowed if the student withdraws after the 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 refund by the Treasurer of the University, the amount of such refund, if any, to be determined after full investigation of the circumstances. Board and room charges will be refunded on a pro-rata basis.

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

Week of registration	100% refund
First week after registration	80% refund
Second week after registration	60% refund
Third week after registration	40% refund
Fourth week after registration	20% refund
No refund after fifth week (including registration week)	

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

CERAMICS

THE WORD CERAMICS is derived from the Greek word *keramos,* which means fired earth. To know ceramics fifty years ago was to know clays, shales, flints and feldspars, and to understand the methods involved in the manufacture of brick, tile, sewer pipe, terra cotta, pottery, and fire-clay refractories. During the years, ceramic technology has advanced greatly and with the advance has come a truer understanding of the principles involved in the manufacture of ceramic products and a fuller appreciation of the range of products made from fired earth. There is a continuing demand for ever better 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 special radio tubes, more durable cements, dielectrics for ultra-high-frequency currents, spark plugs for faster airplanes, linings for jet engines, and numerous other articles of timely importance, the ceramist has had to go back to nature and concern himself with 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 impurities and/or purified so as to produce a material that can be economically and satisfactorily used in his product. The knowledge gained from studies of nature are leading him to an understanding of how to make artificial minerals. It is his concern to understand how to fabricate articles from non-metallic minerals, to understand the reactions that take place as such minerals and mixtures of such minerals are heated to increasingly higher temperatures, and to know the properties of the finished products.

The most durable products 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 room 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 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 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 the Departments of Instruction.

POLICIES

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

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 scientfic 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 links the teacher, the researcher, and student in a valuable 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 religious fellowship, dramatics, athletics, and journalism is difficult to evaluate, but experience has shown that such activities not only add much to the student's outlook on life but have served to develop confidence in areas outside his chosen field.

BUILDINGS AND EQUIPMENT

The College now occupies Merrill Hall, a four-story brick building finished in 1932. 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 school building erected in 1900, has been razed. On its site rises the new Binns Hall, a duplicate in architecture of Merrill Hall and joined to it by two connecting structures, thus completing a quadrangle with central court.

This new building, with its equipment, represents an outlay of more than one million dollars, and provides the largest and most complete plant for ceramic education in America. It is to be occupied in January, 1953.

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

The ceramic laboratories are equipped with modern apparatus and machinery needed for 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.

LIBRARY

A highly important facility of the College is the ceramic reference library. Under the guidance of trained librarians, the students find here a wealth of published material in all phases of ceramic engineer-

ing, technology, art, and design, as well as in the related sciences. Equipped with work tables and chairs, the library is open five days, five evenings during the week and at prescribed times over week-ends.

The number of bound volumes of art and technical books approximates 7000. In this number are not included unbound bulletins, reprints, pamphlets, and student theses. More than 200 periodicals are currently received on subscription.

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

DEPARTMENTS OF INSTRUCTION

INDUSTRIAL NEEDS

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

Corresponding with these industrial needs are the three departments: Ceramic Engineering, Glass Technology, and 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 areas in which to specialize. The choice must be made when he enters college, if it is to be design. The choice between technology and ceramic engineering may be delayed until the end of the sophomore year, for the work of the first two years is the same for engineers and technologists. The work of the departments 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 those made of glass, 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 aptitude in laboratory research and development, for plant production or for sales engineering. The college training is designed to give him the foundation on which to build.

In addition to a general cultural development, the department provides for a thorough grounding in the fundamental sciences of mathematics, chemistry, and physics. Most of the first two year's 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. Although he may find work in research or sales, the ceramic engineer is primarily a production man. For this reason, the subjects of mathematics, mechanics, strength of materials, and equipment design and plant layout are emphasized.

The program is fully accredited by the Engineers' Council for Professional Development. Graduates are eligible for licensing as pro-

fessional engineers after they have had the necessary industrial experience.

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

CERAMIC ENGINEERING CURRICULUM

First Year

First Semester	*Hrs.*	*Second Semester*	*Hrs.*
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 or Military Science and Tactics	1	Physical Education or Military Science and Tactics	1
Assembly	0	Assembly	0
	18		18

Summer Term of three weeks following close of second semester:
Mathematics 21 (Plane Surveying) ..... 3 credit hours

Second Year

First Semester	*Hrs.*	*Second Semester*	*Hrs.*
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 or Military Science and Tactics	1	Physical Education or Military Science and Tactics	1
Assembly	0	Assembly	0
	18		19

Third Year

First Semester	*Hrs.*	*Second Semester*	*Hrs.*
Physics 37 (Mechanics)	4	Physics 38 (Strength of Materials)	4
Chemistry 41 (Physical Chem.)	5	Chemistry 44 (Advan. Quan.)	3
Chemistry 43 (Fuels & Combustion)	3	Petrography (& Instrumentation)	4
Ceramics 105 (Unit Processes)	4	Ceramics 106 (Glasses, Glazes, Enam.)	4
English 35	2	Civilization 22 (Eng. Indoct.)	3
	18		18

Fourth Year

First Semester	*Hrs.*	*Second Semester*	*Hrs.*
Physics 31 (Heat)	3	Physics 34 (Mag. & Elec.)	3
Economics 11 (Prin. & Prob.)	3	Economics 12 (Prin. & Prob.)	3
Ceramics 107 (Testing of Prod.)	2	Ceramics 122-72 (Plant Layout)	5
Ceramics 121 (Structural Plan.)	2	Ceramics 162 (Thesis)	2
Ceramics 161 (Thesis)	2	Ceramic Elective	3
Ceramic Elective	3	Non-Technical Elective	3
Non-Technical Elective	3		
Plant Inspection	1		
	19		19

GLASS TECHNOLOGY

Glass differs from other ceramic products in two essentials: the firing operation is carried to complete fusion, and the forming process follows the furnace treatment instead of preceding it. Glass is related to other ceramic bodies, because all glasses are made up of oxides, among which silica predominates. The glazes and 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 specialization, the student deals with the raw materials for glass and the behavior of its constituent oxides, particularly their high-temperature chemistry. He learns how to analyze glasses, and how to design and calculate compositions for various purposes; he studies fuels and furnaces and acquires experience in glass-melting on a laboratory scale; he does not become a glassworker, but he learns the principles of the art; he finds out how glassware is annealed and gives a great deal of his time to the classroom and laboratory study of its physical properties; he becomes acquainted wtih the fascinating subject of colored glasses, in theory and practice.

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

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

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

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

GLASS TECHNOLOGY CURRICULUM

First Year

First Semester	*Hrs.*	*Second Semester*	*Hrs.*
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 Mech. 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 or Military Science and Tactics	1	Physical Education or Military Science and Tactics	1
Assembly	0	Assembly	0
	18		18

Summer Term of three weeks following close of second semester:
Mathematics 21 (Plane Surveying) ..... 3 credit hours

Second Year

First Semester	*Hrs.*	*Second Semester*	*Hrs.*
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
Ceramics 103 (Unit Operations)	3	Ceramics 200 (Raw Materials)	3
Geology (Structural)	3	Mineralogy (Introd. & Cryst.)	3
Physical Education or Military Science and Tactics	1	Physical Education or Military Science and Tactics	1
Assembly	0	Assembly	0
	18		18

Third Year

First Semester	*Hrs.*	*Second Semester*	*Hrs.*
Physics 37 (Mechanics)	4	Physics 38 (Strength of Materials)	4
Chemistry 41 (Physical Chem.)	5	Petrography (& Instrumentation)	4
Ceramics 201 (Glass; Comp.)	5	Ceramics 202 (Glass Properties)	5
Ceramics 251 (Glass Analysis)	2	Ceramics 252 (Glassmelting)	2
Chemistry 43 (Fuels & Comb.)	3	Physics 32 (Light)	3
	19		18

Fourth Year

First Semester	*Hrs.*	*Second Semester*	*Hrs.*
Physics 31 (Heat)	3	Non-technical Elective	3
Differential Equations	2	Statistics	3
Ceramics 261 (Thesis)	2	Ceramics 262 (Thesis)	2
Non-Technical Elective	3	Plant Inspection	1
Economics 11 (Prin. & Prob.)	3	Economics 12 (Prin. & Prob.)	3
Elective	5	Elective	5
English 35	2		
	18		19

CERAMIC TECHNOLOGY

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

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

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

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

CERAMIC TECHNOLOGY CURRICULUM

Third Year

First Semester	*Hrs.*	*Second Semester*	*Hrs.*
Chemistry 41 (Physical Chem.)	5	Chemistry 44 (Silicate Anal.)	3
Chemistry 43 (Fuels & Comb.)	3	Petrography (& Instrumentation)	4
Ceramics 105 (Unit Processes)	4	Ceramics 106 (Glasses, Glazes, Enam.)	4
Mathematics 101 (Diff. Equat.)	2	Mathematics 102 (Diff. Equat.)	2
Technical Elective	3	Technical Elective	2
English 35	2	Civilization 22 (Eng. Indoct.)	3
	19		18

Fourth Year

First Semester	*Hrs.*	*Second Semester*	*Hrs.*
Physics 31 (Heat)	3	Physics 34 (Mag. & Elec.)	3
Economics 11 (Prin. & Prob.)	3	Economics 12 (Prin. & Prob.)	3
Ceramics 107 (Testing of Prod.)	2	Ceramics 162 (Thesis)	2
Ceramics 161 (Thesis)	2	Ceramics 124 (Adv. Cer. Tech.)	2
Ceramics 123 (Adv. Cer. Tech.)	2	Non-Technical Elective	3
Ceramics 125 (Thermo. Min.)	1	Technical Elective	5
Advanced Petrography	2		
Non-Technical Elective	3		
Plant Inspection	1		
	19		18

DESIGN

The Design 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 means of relating creative ideas to industrial practice. Studies in the humanities and in the history and philosophy of design supply a necessary part of the student's educational background.

For the first two years, the student concentrates on the fundamentals of three-dimensional and graphic design, color, free hand and instrumental drawing, and modeling.

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. At intervals, the scheduled courses are supplemented by trips to museums, exhibitions, and industrial plants.

Guest instructors and visiting lecturers take part in the teaching program.

The list of courses prescribed for the first two years must be taken by all students. However, a pattern of elective courses during the third and fourth years allows the advanced student to plan an individual program of study according to his interest and aptitude.

During the junior and senior years, students must complete a minimum of 47 credit hours of courses from among those listed: pp. 00 to 00. The remaining credit hours required for graduation may be taken outside the major field, or additional departmental courses may be elected. A total of 146 credit hours is required for graduation.

Qualified junior and senior students who wish to prepare for teaching ceramics or art may elect appropriate courses in education. Others may choose electives from the following areas: English, speech and dramatics, music, history, mathematics, religion, economics, painting, design, sculpture and ceramics.

The schedules of junior and senior students are subject to approval by the Chairman of the Department.

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 them in the upper third of their class and/or who 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 departmental courses, in order to be eligible for entrance in the junior year.

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.).

CERAMIC DESIGN CURRICULUM

First Year

Ceramics 321 (Drawing)	3
Ceramics 323 (Design)	4
Ceramics 323A (Design)	2
Ceramics 325 (Sculpture)	1
Civilization I (History-English)	6
Mechanical Drawing	2
Physical Education or Military Science and Tactics	1
Assembly	0
	19

Second Semester	*Hrs.*
Ceramics 322 (Drawing)	3
Ceramics 324 (Design)	4
Ceramics 326 (Sculpture)	1
Ceramics 324A (Design)	2
Civilization II (History-English)	6
Mechanical Drawing	2
Physical Education or Military Science and Tactics	1
Assembly	0
	19

Second Year

First Semester	*Hrs.*
Ceramics 327 (Drawing-Painting)	3
Ceramics 329A (Design)	4
Ceramics 329 (Design)	2
Ceramics 331 (Sculpture)	3
Ceramics 303 (Art History)	1
Chemistry 305 Chemistry of Ceramic Materials	3
Psychology (General) $	3
Physical Education or Military Science and Tactics	1
Assembly	0
	20

Second Semester	*Hrs.*
Ceramics 328 (Drawing-Painting)	3
Ceramics 330A (Design)	4
Ceramics 330 (Design)	2
Ceramics 332 (Sculpture)	3
Ceramics 304 (Art History)	1
Ceramics 306 (Cer. Materials)	3
Psychology (Educational)	3
Physical Education or Military Science and Tactics	1
Assembly	0
	20

Third Year

First Semester	*Hrs.*
Ceramics 333 (Design)	2
Ceramics 335 (Industrial Design)	4
Ceramics 335A (Ceramic Design)	2
Ceramics 337 (Production)	5
Ceramics 337A (Sculpture)	2
Sociology	3
Ceramics 307 (Materials)	3

Second Semester	*Hrs.*
Ceramics 334 (Design)	2
Ceramics 336 (Industrial Design)	4
Ceramics 336A (Ceramic Design)	2
Ceramics 338 (Production)	5
Ceramics 338A (Sculpture)	2
Sociology	3
Ceramics 308 (Ceramic Color)	2
Ceramics 304B (Observation & Practice)	3

Fourth Year

First Semester	*Hrs.*
Ceramics 309 (Equipment & Plant Design)	2
Ceramics 341 (Design)	2
Ceramics 341A (Ceramic Design)	2
Ceramics 339 (Drawing-Design)	2
Ceramics 343 (Design & Product.)	4
Ceramics 343A (Sculpture)	2
Elective	6

Second Semester	*Hrs.*
Ceramics 310 (Equipment & Plant Design)	2
Ceramics 342 (Design)	2
Ceramics 342A (Ceramic Design)	2
Ceramics 340 (Drawing-Design)	2
Ceramics 344 (Design & Product.)	4
Ceramics 344A (Sculpture)	2
Elective	6
Ceramics 304A (Art Education)	3

DEPARTMENT OF RESEARCH

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

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

The Research Department now conducts several programs sponsored by government agencies. These include the Air Force, Office of Naval Research (Material Branch), Office of Naval Research (Physics Branch), and Office of Flight Research. These programs deal with high-temperature materials for use in power-plant application: fundamental studies of ceramic-metal (cermet) compositions including thermal shock, thermal diffusivity, oxidation and phase studies; metal diffusion in carbides and phase studies in metal-carbide systems; and fundamental studies of ferrites.

A study of the mineral resources of New York State is 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 industry much needed information regarding New York State resources. During the past year, a book covering the clays and shales has been published. The program is continuing with the survey of the limestones. A field party is maintained during the summer months. Analytical and testing work is done during the winter months in the department's laboratory.

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

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

Other research carried on in the department includes such projects as (1) surface tension effects in glass, (2) efflorescence of mortars, (3) grinding and polishing of glass, (4) particle-size studies, (5) differential thermal analysis of ceramic raw materials, (6) glaze studies, (7) Portland Cement, (8) utilization of waste materials such as fly-ash.

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

INDUSTRIAL FELLOWS (Assistants)

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

DESCRIPTION OF COURSES

CERAMIC ENGINEERING

101–102. A BRIEF HISTORY OF THE CERAMIC INDUSTRIES.

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

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.

103. UNIT OPERATIONS.

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

105. UNIT PROCESSES.

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

106. GLAZES, GLASSES, AND ENAMELS.

Fundamental studies of the glassy state, followed by applications to the industries producing glazed ceramic ware, glassware, and enameled ware. Colors, compositions; methods of calculation.
Three lectures and one laboratory period per week, second semester.
Four credit hours.

107. TESTING CERAMIC PRODUCTS.

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

*108. STRUCTURAL CLAY PRODUCTS.

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

*109. WHITEWARES.

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

*114. REFRACTORIES.

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.

*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.

*118. ENAMELS.

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

*119–120.

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

121. ENGINEERING I.

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 Physics 37 and 38.

122. ENGINEERING II.

The engineering features of structures and of ceramics-equipment design, particularly as applied to the drying and firing of ceramic ware.
Two lectures per week, second semester.
Two credit hours.

*123–124. ADVANCED CERAMIC TECHNOLOGY.

The study of solid-state reactions, ion exchange, unequilibrium crystallizations, etc., and their ceramic implications.
Two lectures per week, each semester.
Two credit hours each semester.

*125. THERMOCHEMICAL MINERALOGY.

Establishment and interpretation of phase equilibrium diagrams to predict quantitatively the formation of ceramic minerals at high temperatures.
Two lectures per week, first semester.
Two credit hours. Prerequisite, Chemistry 40.

126. ADVANCED CERAMIC ENGINEERING.

For graduate students. Undergraduates must receive special permission should they desire to take it.
A study of the recent developments in furnaces, kilns, and equipment for ceramic plants.
Two lectures per week, second semester.
Two credit hours.

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

Particular attention is given to the use of pottery plaster, the steps in mold making, and the jiggering and casting processes. Use of equipment for common ceramic operations is demonstrated.
One laboratory period each week, first or second semester.
One credit hour.

*159. WHITEWARE LABORATORY.

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.

161 162. THESIS.

Original research on some problem decided upon in conference with the instructor.
Two laboratory periods per week; each semester.
Two credit hours, each semester.

*168. ENAMEL LABORATORY.

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

172. ENGINEERING DESIGN.

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

GLASS TECHNOLOGY

200. RAW MATERIALS.

The chemistry of the glassmaking 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.

201–251.

Simple glasses are melted, and the melting process is studied in relation to refractories, containers, temperatures, batch compositions, and fining agents. Text and references to the literature of glass covering glass composition, furnace design and operation, tank blocks and parts, and fundamental chemistry of glassmaking and calculations, working processes, annealing, finishing, defects and testing of commercial glassware.
Five lectures and two laboratory periods per week, first semester. Seven credit hours. Prerequisites — two years college work in science or equivalent experience.

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.

*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.

* For Elective or Graduate Study.

*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.

*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.

*206. STRUCTURE OF GLASS.

Elective. Primarily for graduate students. A lecture course dealing with the coordination and linkage of cations and oxygen in the glass-forming, glass-modifying, and intermediate oxides, from the viewpoint of crystal chemistry.
Two lectures per week, second semester.
Two credit hours.

261–262. GLASS THESIS.

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

DESIGN

301 302; 303 304. HISTORY OF DESIGN.

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, and graphic expression.
One lecture period per week during the first and second year.
One credit hour each semester.

304A. ART EDUCATION.

Methods and philosophy of Art Education.
Three credit hours.
Lecture and laboratory.

304B. ART EDUCATION.

Observation and practice teaching.
Three credit hours.

*306. CERAMIC RAW MATERIALS.

This is a special course in ceramics which deals specifically with the chemical nature of ceramic raw materials, clays and glasses.
Chemistry 305 is a prerequisite.
Two lecture periods and one laboratory period each week.
Three credit hours each semester.

*307. GLAZE CALCULATION AND DEVELOPMENT.

Two lecture periods and one laboratory period per week.
Three credit hours.

*308. CERAMIC COLORS AND TEXTURES.

An advanced course in the development of ceramic colors and textures.
Elective.
Three credit hours.

* For Elective or Graduate Study.

*309–310. EQUIPMENT AND MATERIALS.

Refractory and insulating materials and their uses in firing ceramic wares.
Kiln construction, firing reactions, temperature measurement and control.
Ceramic production equipment and plant design.
Two lecture periods per week, first semester.
Two credit hours.
Individual problems in the laboratory development of ceramic materials.
Elective.
Two laboratory periods per week.
Two credit hours.

321–322. 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.

323A–324A. DESIGN I.

Exercises in creative articulation of materials.
Two laboratory periods each week.
Two credit hours each semester.

323–324. DESIGN II.

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.
Five laboratory periods per week.
Four credit hours each semester.

325–326. SCULPTURE I.

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.
One and one-half laboratory periods per week.
One hour credit each semester.

327–328. PAINTING AND DRAWING I.

Plastic drawing, spatial organization, from life, still life, and landscape. Various media used.
Two laboratory periods per week.
Two credit hours each semester.

329–330. GRAPHIC INTERPRETATION.

A continuation of course 324.
Two laboratory periods per week.
Two credit hours each semester.

329A–330A. THREE-DIMENSIONAL DESIGN.

The development of special knowledge and skills necessary to the solution of design problems. Creative organization of varied materials. The study of sections, profiles and models in their roles as tools of design expression.
Three laboratory periods per week.
Three credit hours each semester.

331–332. SCULPTURE II.

A continuation of Course 325-326.
Three laboratory periods per week.
Three credit hours each semester.

333–334. PAINTING AND DRAWING II.

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.

335–336. INDUSTRIAL DESIGN I.

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 periods.
Three and one-half laboratory periods per week.
Four credit hours each semester.

*335–336A. INDUSTRIAL DESIGN II.

A design course with graphic problems related to ceramic products.
Two laboratory periods per week.
Two credit hours each semester.

*337–338. DESIGN AND PRODUCTION I.

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.

*337A–338A. SCULPTURE III.

Sculptural problems related to Course 337-338.
Two laboratory periods per week.
Two credit hours each semester.

*339–340. PAINTING AND DRAWING III.

A continuation of Course 333-334.
Two laboratory periods per week.
Two credit hours each semester.

*341–342. DESIGN THEORY.

An advanced course in design problems.
Two laboratory periods per week.
Two credit hours each semester.

*343–344. DESIGN AND PRODUCTION II.

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.
Five laboratory periods per week.
Four credit hours each semester.

*343A–344A. SCULPTURE IV.

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

*343B–344B. DESIGN AND PRODUCTION III.

The planning and graphic presentation of design problems for various types of production. Solutions planned in this course are produced in final form in connection with course 343-344.
Two laboratory periods each week.
Two credit hours each semester.

GRADUATE COURSES

For graduate students, only. Credit hours and schedule to be arranged.

Graduate credit may be allowed for additional hours in those undergraduate courses marked with an asterisk. Superior performance must be maintained and only grades above C will be credited for graduate work.

363–364. SCULPTURE AND THREE-DIMENSIONAL DESIGN.

367–368. PAINTING, DESIGN, DRAWING.

369–370. LABORATORY PROBLEMS.

Problems in the design and production of ceramic wares for various types of uses, methods of production, and market requirements. Problems exploring the creative uses of earthy materials for design purposes.
Work on graduate thesis is included as a part of this course.

369A–370A. LIBRARY RESEARCH.

Assigned reading, 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.

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.
Laboratory fee $15.00 each semester. Breakage deposit $15.00.

13. QUANTITATIVE ANALYSIS.

Volumetric and gravimetric analysis. One lecture, one quiz, two laboratory periods per week, first semester.
Three credit hours. Prerequisite, Chemistry 8.
Laboratory fee $15.00. Breakage deposit $15.00.

13A. CALCULATIONS IN QUANTITATIVE ANALYSIS.

Methods and practice in various types of calculations arising from analytical procedures.
One hour, first semester.

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 and Chemistry 13.

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.

42. PHYSICAL CHEMISTRY LABORATORY.

A laboratory course to accompany Chemistry 41.
One laboratory period per week, second semester.
Laboratory fee $15.00. Breakage deposit $15.00.
One credit hour.

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.
Laboratory fee $15.00. Breakage deposit $15.00.

44. ADVANCED QUANTITATIVE ANALYSIS I.

The analysis of silicate rocks, clays and ceramic materials. One lecture and two laboratory periods per week, second semester.
Laboratory fee $15.00. Breakage deposit $15.00.
Three credit hours.

45. GLASS ANALYSIS.

A laboratory course designed to accompany Ceramics 201.
Two laboratory periods per week, first semester.
Laboratory fee $15.00. Breakage deposit $15.00.
Two credit hours.

48. ADVANCED QUANTITATIVE ANALYSIS II.

A study of the principles and applications of physico-chemical methods and the use of instruments in quantitative analysis.
Two laboratory periods per week, second semester.
Two credit hours.

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.

50. INDUSTRIAL STOICHIOMETRY.

Chemical calculations of manufacturing processes, including the use of material and energy balances applied to specific plant operations.
Two lectures per week, second semester.
Two credit hours.

*70. CHEMISTRY OF THE COLLOIDAL STATE.

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

72. MOLECULAR STRUCTURE AND THE CHEMICAL BOND.

A survey of the nature of the chemical bond and the relation of the structure of inorganic molecules to the chemical and physical properties of matter. A more elementary and general course than Chemistry 128.
Two lectures per week, second semester.
Two credit hours.

*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.

*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.
Laboratory fee $5.00.

*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.
Laboratory fee $5.00.

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* For Elective or Graduate Study.

79. ADVANCED SPECTROCHEMISTRY.

For graduate students. Undergraduates must receive special permission if they desire to take it.

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.

Laboratory fee $10.00.

128. CRYSTAL CHEMISTRY.

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

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

Two lectures per week, second semester.

Two credit hours. Prerequisite, Applied X-rays.

129–130. THERMODYNAMICS.

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

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

Two lectures per week, each semester.

Two credit hours, each semester.

305. ELEMENTARY CHEMISTRY.

This is a special course in ceramic chemistry offered to 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 306.

GEOLOGY AND MINERALOGY

GEOLOGY 5.

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

Three lectures per week, first semester.

Three credit hours.

MINERALOGY 1.

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

Three credit hours.

PETROGRAPHY I.

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 emmission and absorption.

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

Four credit hours.

*PETROGRAPHY II.

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, first 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-RAY LABORATORY.

One laboratory period per week, first semester.

One credit hour.

MATHEMATICS

5 6. FRESHMAN MATHEMATICS.

A unified course including topics from college algebra, trigonometry, and analytic geometry. Intended primarily for freshmen of the College of Ceramics.

Five credit hours each semester.

15–16. CALCULUS.

The processes of differentiation and integration and their applications. Prerequisites, Mathematics 5-6 or 11-2. Permission may be given to exceptional students to take courses 12 and 16 simultaneously.

Four credit hours each semester.

21S. PLANE SURVEYING.

Primarily for engineering students in the College of Ceramics. A student must do satisfactory work in both the field and classroom in order to receive credit. Offered for three weeks each summer, beginning immediately after the close of the regular school year. Prerequisites, Mathmatics 4 and Engineering Drawing 1-2 or their equivalent. Instrument fee $10.00.

33C.11 ELEMENTARY STATISTICS.

An introduction to the statistical methods of the natural and social sciences. This course will be repeated the second semester. The first semester is intended primarily for students in the College of Liberal Arts, while the second semester is primarily for students in Glass Technology. Prerequisites, Mathematics 3 or 5, or their equivalent. Laboratory fee $3.00.

Three credit hours.

* For Elective or Graduate Study.

65–66. MATHEMATICAL STATISTICS.

A study of modern techniques in mathematical statistics, frequency distributions, correlation, analysis of variance, small sample theory, and the design of experiments. Prerequisite, Mathematics 15-16. Laboratory fee $2.00 per semester.

Three credit hours each semester.

*101–102. DIFFERENTIAL EQUATIONS.

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

Two credit hours each semester.

PHYSICS

11–12. GENERAL PHYSICS.

This course covers the whole field of physics with emphasis on problem solving and engineering applications. Prerequisites, high school trigonometry, or registration in freshman mathematics. Three lectures and one laboratory. Laboratory fee $10.00 per semester.

Four credit hours each semester.

31. HEAT.

The more important phenomena of heat, temperature measurement, and the elements of thermodynamics are included in this course. Prerequisites, Physics 11-12 and Mathematics 15-16. Two lectures and one laboratory. Laboratory fee $10.00.

Three credit hours.

32. OPTICS.

The principles of geometrical and physical optics. Prerequisites, Physics 11-12 and Mathematics 15-16. Two lectures and one laboratory. Laboratory fee $10.00.

Three credit hours.

34. MAGNETISM AND ELECTRICITY.

This course covers the phenomena of magnetism and electricity and the theoretical explanation. Prerequisites, Physics 11-12 and Mathematics 15-16. Three lectures.

Three credit hours.

36. ELECTRONICS LABORATORY.

This course is similar to Physics 35 except that emphasis is placed on electronic equipment and its applications in research and industry. It is not intended to be a course in communications engineering. Prerequisites, Physics 11-12, Mathematics 15-16, and permission of the instructor. One lecture and one or two laboratory sessions. Laboratory fee $10.00 each laboratory session.

Two or three credit hours.

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, Mathematics 15-16 and Physics 11-12.

* For Elective or Graduate Study.

111. SOLID-STATE PHYSICS.

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

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.

112. SOLID-STATE PHYSICS (Continued).

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

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.

CIVILIZATION

1–2. CIVILIZATION — OUR CULTURAL HERITAGE.

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

Six credit hours, each semester.

22. ENGINEERING INDOCTRINATION.

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

Three lectures per week, second semester.

Three credit hours.

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. Three lectures per week.

Three credit hours each semester.

* For Elective or Graduate Study.

41. EDUCATION IN A DEMOCRACY.

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

Two credit hours.

42. FOUNDATIONS OF THE PHILOSOPHY OF EDUCATION.

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

Two credit hours.

51 52. SECONDARY SCHOOL METHODS AND MATERIALS.

The problems, methods, materials, and techniques involved in the work of a high-school teacher.

Three credit hours first semester; one credit second semester.

For work in Art education see Ceramic courses 304 A and 304 B.

ENGLISH

1–2. ENGLISH COMPOSITION.

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

Three credit hours each semester.

21–22. INTRODUCTION TO ENGLISH LITERATURE.

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

Three credit hours each semester.

35. TECHNICAL WRITING (PROFESSIONAL ENGLISH).

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

Two credit hours.

INDUSTRIAL MECHANICS

1-2. ENGINEERING DRAWING.

The fundamental principles of drafting and descriptive geometry.

Three credit hours each semester.

3-4. MECHANICAL DRAWING.

A fundamental drafting course to acquaint the beginning art student with the graphical language used by engineers.

Two credit hours each semester.

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.

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.

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.

PSYCHOLOGY

11. INTRODUCTORY PSYCHOLOGY.

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

Three credit hours, either semester.

32. EDUCATIONAL PSYCHOLOGY.

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

SOCIOLOGY

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 credit hours each semester.

SCHOLASTIC REGULATIONS

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 each semester.

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

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

CREDIT, ATTENDANCE, EXAMINATIONS

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

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

In addition to the routine quizzes that are given periodically throughout the semester, final comprehensive examinations are given in each course at the end of the semester covering the entire semester's work. This examination is the main factor in determining the scholastic standing of the student. A "block week" period of several days immediately preceding these examinations is provided, wtih 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, high standards of scholarship must be maintained. Students unable to meet these standards are dropped from the College. Instructors are available for private consultation and help, and the instructional work itself is supplemented by a system of faculty advising intended to help the student with all of his problems.

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

GRADES AND INDICES

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	Point 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
WF	Withdrawn Failing	—1
WP	Withdrawn Passing	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	0.85
	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 contiue 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 freshman, 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 award of research fellowships is discussed in another section of this catalogue,

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 the Department of Glass Technology, who successfully complete the prescribed courses of study in these departments with scholastic cumulative grade-point indices of 1.00. The department in which the student majored is stated on the diploma.

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

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 graduate fee of $10 is charged, and the candidate must present himself in person to receive the degree.

PLACEMENT

The Collge 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.

TEACHING AND RESEARCH ASSISTANTSHIPS

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

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. In order to obtain graduate credit for those courses which are normally undergraduate couses, student must (1) pepare an acceptable term paper, (2) pass an oral examination in the subject.

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

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

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

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

(1) The satisfactory completion of 18 semester hours of acceptable courses, including not more than 9 hours of thesis work.

(2) At least one semester in residence with graduate standing.

(3) The completion of any non-credit prerequisites specified at the time of registration for graduate study.

(4) A grade-point index of at least 2.00 for courses completed and forming a part of the student's program.

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

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

The complete requirements for the degree are:

(1) At least one year of residence (work must be completed within a period of three years).

(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 Chairman of the Design Department prior to making formal application. If at all possible, an interview will be arranged. 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 or Art Education or, (2) the Bachelor of Arts degree with a major in Fine Arts or Art Education or, (3) the Bachelor of Arts degree with the equivalent of fifty semester hours of professional art training in a recognized institution.

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

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

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

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.

REGISTER OF STUDENTS: 1951-1952

Name	*Classification*	*Residence*
Ackerman, Jerome S.	C.D. Graduate	Los Angeles, Calif.
Akmoran, Huban	Glass Special	Istanbul, Turkey
Albrecht, Nelson O.	Glass Freshman	Rochester
Alliegro, Richard A.	Eng. Graduate	Malverne
Armstrong, Andree M. L.	C.D. Senior	Rochester
Atkins, Richard I.	Eng. Freshman	New York
Auskern, Allan	Eng. Senior	Brooklyn
Baldwin, Judith A.	C.D. Freshman	East Meadow
Balint, Nancy B.	Tech. Senior	Yonkers
Baugh, Elizabeth A.	C.D. Junior	Schenectady
Bayley, Glen F.	Eng. Freshman	Hornell
Beaudoin, Armand J.	Eng. Senior	Massena
Behrenberg, John P.	Glass Senior	Pittsburgh, Pa.
Benzing, David H.	C.D. Senior	Springville
Berry, B. Richard	Eng. Freshman	Penn Yan
Beswick, Roger P.	Eng. Junior	Washington, D. C.
Blankheit, Carolyn A.	C.D. Junior	Kenmore
Bliss, Drusilla H.	C.D. Sophomore	Morrisville
Bloss, Harold E.	Eng. Freshman	Whitesville
Boorman, John F.	Eng. Junior	East Rochester
Braun, Donald F.	Eng. Freshman	Naples
Brown, Donnell S.	C.D. Sophomore	Binghamton
Brownell, Wayne E.	Eng. Special	Hornell
Brummer, George M.	Eng. Sophomore	Williamsville
Bullard, R. Keith, Jr.	Eng. Freshman	Port Washington
Bunnell, Diana V. (Mrs.)	C.D. Special	Indianapolis, Ind.
Button, Daniel D.	Eng. Freshman	Belmont
Byers, Eleanor L.	C.D. Senior	Rochester
Casterline, Dale R.	Eng. Sophomore	Painted Post
Chapman, Frank E., Jr.	Eng. Junior	Brooklyn
Chen, Edith T.	C.D. Special	Alfred
Childs, Clayton G.	Eng. Junior	Friendship
Chodos, Martin	C.D. Senior	New York
Chow, George F.	C.D. Senior	New York
Christiano, Joseph P.	Eng. Sophomore	Waterloo
Cipriano, Ronald N.	Eng. Sophomore	Utica
Coatney, Anne E.	C.D. Sophomore	Hornell
Cohen, Herbert	C.D. Senior	New York
Colcord, John E.	Eng. Junior	Hempstead
Cole, David L.	Eng. Sophomore	Metuchen, N. J.
Cole, Sandford S.	Eng. Senior	Metuchen, N. J.
Conner, Bernard J.	Glass Freshman	Jones Point
Conningham, Jane B.	C.D. Special	Sea Cliff
Conroe, Barden A.	Eng. Senior	Altamont
Constantine, Elizabeth J.	C.D. Freshman	New York
Constantinides, Jane W.	C.D. Sophomore	Great Neck
Cook, Miles H.	Eng. Sophomore	Middletown

Name	*Classification*	*Residence*
Coombs, Jack A.	Eng. Freshman	Addison
Corbett, Patricia C.	C.D. Freshman	Johnstown
Cornell, John P.	Eng. Freshman	Troupsburg
Corson, Robert M.	Glass Junior	Endicott
Cosolito, Bartolo	Eng. Freshman	Port Washington
Courtright, John H.	Eng. Freshman	Johnson City
Cremean, Robert W.	C.D. Sophomore	Toledo, Ohio
Cushing, Val M.	C.D. Senior	Rochester
Cutler, Harold A.	Tech. Freshman	Corning
Dahoda, Peter	C.D. Graduate	Cohoes
Daly, Howard J., Jr.	Eng. Junior	Niagara Falls
Decker, Edward L.	Eng. Senior	Hudson
DeCoursey, Donald T.	Eng. Sophomore	Brooklyn
DeForest, Raymond A.	Eng. Junior	White Plains
DelloStrologo, Sergio R.	C.D. Graduate	New York
Denero, John V.	Tech. Junior	Syracuse
Dennerlein, John R.	Glass Senior	Valhalla
DiMartino, John M.	Eng. Freshman	Merrick
Dobson, Evelyn	C.D. Junior	Alfred
Dorf, Arthur L.	Eng. Junior	Brooklyn
Driscoll, Bernard E.	Eng. Senior	Wellsville
Dulin, Francis H.	Eng. Sophomore	Sarasota, Fla.
Dungan, Robert H.	Eng. Graduate	Hornell
Durst, William A.	Tech. Senior	Mayville
Earl, Fred C.	Eng. Senior	Broadalbin
Earl, William A.	C.D. Junior	Bolivar
Egbert, Leigh B.	C.D. Junior	Alfred
Eichenberger, Frederick J., Jr.	Eng. Senior	Elba
Englert, Frances A.	Tech. Sophomore	Hornell
Ensle, Maria E.	C.D. Special	Heilbronn, Germany
Epstein, Sylvia	C.D. Junior	Brooklyn
Ersley, Chauncey J., Jr.	Eng. Junior	Rexville
Ersley, Emmett J.	Eng. Freshman	Rexville
Esposito, Russell P.	Eng. Sophomore	Pawling
Ewell, Robert C.	Eng. Junior	Saratoga Springs
Feinbloom, David H.	Glass Freshman	Long Island City
Feldman, Gail H.	Glass Junior	Hempstead
Ferguson, Donald M.	Eng. Freshman	Brocton
Fish, E. Thomas	Eng. Sophomore	Brooklyn
Fitzsimmons, Robert F.	Eng. Senior	Oakfield
Flipse, Merle K.	Eng. Freshman	Vestal
Fluhr, Robert A.	C.D. Graduate	Brooklyn
Forry, Walter J.	Eng. Senior	Lancaster, Pa.
Foster, Malcolm O.	Eng. Freshman	Corning
Francis, Ronald K.	Eng. Freshman	Elmira
Fraser, Penelope	C.D. Freshman	Charlottesville, Va.
Fraser, William J.	Eng. Freshman	Rosedale
Fuller, Kathryn S. (Mrs.)	C.D. Senior	Coudersport, Pa.
Funk, James E.	Eng. Junior	Buffalo
Gelch, Howard H.	Eng. Junior	Brooklyn

Name	*Classification*	*Residence*
Geltman, Gerald L.	Eng. Freshman	Teaneck, N. J.
Gersch, Herbert M.	Tech. Senior	New York
Getto, Allan	Eng. Freshman	Brooklyn
Giess, Edward A.	Eng. Graduate	Woodhaven
Gilluly, William F	Eng. Senior	Alfred
Glazier, Dewey W.	Eng. Freshman	Oakfield
Goldstein, Marcy	Eng. Sophomore	Bronx
Goss, Bruce R.	Eng. Junior	Weedsport
Gould, Anita H.	Glass Sophomore	White Plains
Gowdy, R. Ruth	C.D. Junior	Utica
Griffin, James J.	Eng. Freshman	Dansville
Griffith, William A.	Glass Sophomore	Little Falls
Grimes, Donald L.	Eng. Sophomore	Wellsville
Guild, Ward H.	Glass Freshman	Wellsville
Gunning, James R.	Glass Freshman	East Aurora
Gzowski, Edward R.	Eng. Senior	Oakfield
Haas, Robert W.	Eng. Freshman	Wellsville
Haecker, James L.	Eng. Freshman	Hamburg
Halem, Robert C.	Eng. Sophomore	New York
Hanna, Richard D.	Eng. Junior	Hartford
Hauser, Richard E.	Eng. Junior	Buffalo
Hawkes, John H.	Eng. Senior	Baldwin
Helliesen, Richard O.	Eng. Special	Stavanger, Norway
Henkes, John L., Jr.	C.D. Junior	Loudonville
Higgins, Norma M. (Mrs.)	C.D. Graduate	Elmira Heights
Higgins, Wallace C.	C.D. Senior	Kendall
Hoffman, William A., Jr.	C.D. Graduate	Roswell, N. Mexico
Holman, Eugene W.	Eng. Graduate	Ransomville
Homer, Richard W.	C.D. Senior	Bethlehem, Pa.
Hosbein, Roger L.	Eng. Special	Glencoe, Ill.
Howe, David G.	Glass Freshman	Wellsville
Hui, Ka-Kwong	C.D. Graduate	Hong Kong, China
Hupman, Winifred L.	C.D. Freshman	Whitehall
Hurley, Ann D.	C.D. Graduate	Tulsa, Okla.
Husted, Wayne D.	C.D. Senior	Poughkeepsie
Ichikawa, Yoshio	Eng. Junior	Wahiawa, Oahu, T. H.
Jacobs, Jean M.	C.D. Sophomore	Belmont
Jacobs, Joan E.	C.D. Sophomore	Belmont
Jacolow, Jules	C.D. Sophomore	Brooklyn
Jasper, Stanley J.	Eng. Sophomore	Paterson, N. J.
Jelly, Chester F., Jr.	C.D. Freshman	Kearny, N. J.
Jones, M. Roxanne	C.D. Junior	Park Ridge, Ill.
Jordan, Duane R.	Glass Sophomore	Oneida
Joseph, A. David	Glass Junior	Highland Park, N. J.
Kaiser, Alan D.	Eng. Freshman	Rochester
Kallup, Charles, Jr.	Eng. Sophomore	Brooklyn
Kaplan, Sidney M.	C.D. Graduate	Hollywood, Fla.
Kast, Henry G.	Eng. Sophomore	Athol Springs
Katnack, Fred L.	Glass Sophomore	Cold Spring Harbor
Kazdailis, Stanley	C.D. Special	Chicago, Ill.

Name	*Classification*	*Residence*
Keefe, Daniel J.	Tech. Sophomore	Scarsdale
Kester, Stuart B., Jr.	C.D. Junior	Boston
Kinsman, Bradley Q.	Eng. Senior	Amsterdam
Kirkland, Walda R.	C.D. Junior	New York
Klein, Jonathan D.	Glass Sophomore	Brooklyn
Kober, Karl E.	C.D. Sophomore	Herkimer
Krevolin, Lewis A.	C.D. Freshman	New Haven, Conn.
Langford, Barbara A.	C.D. Freshman	Fayetteville
Larisch, Herbert W.	Eng. Senior	Valley Stream
Lass, Abram L.	C.D. Sophomore	New York
Lewis, Robert T.	Glass Sophomore	Bayside
Lieberson, Alice N.	Eng. Freshman	Brooklyn
Lindenthal, James R.	Eng. Sophomore	Lakehurst, N. J.
Litchfield, Nancy A.	Tech. Senior	Mayville
Litherland, Roland H.	C.D. Special	Alfred
Litteer, Lynda	C.D. Freshman	W. Hempstead
LoCastro, Frank S.	Eng. Freshman	Batavia
Louy, Darrell E.	Eng. Freshman	Campbell
McClurg, William B.	Glass Senior	Painted Post
McMurtry, Carl H.	Eng. Junior	Wellsville
McNeilly, Clyde E.	Eng. Sophomore	Oneonta
McNicol, Daniel E.	Eng. Sophomore	Clarksburg, W. Va.
Mahoney, David L.	Eng. Freshman	White Plains
Mapel, Marcianne	C.D. Freshman	Tarentum, Pa.
March, Donald H.	C.D. Sophomore	Hempstead
Marcus, Leon	Eng. Senior	Brooklyn
Marquart, Rodney W.	C.D. Freshman	Oneonta
Marshall, Claude L.	Eng. Sophomore	Middletown
Marshall, Darwin	Eng. Graduate	Buffalo
Matterson, Duane	C.D. Graduate	Seattle, Wash.
Mendez, Louis E.	C.D. Senior	Goshen
Messner, Paul D., III	Eng. Freshman	Rome
Meysel, Peter J.	Eng. Freshman	Grimsby, Ontario, Canada
Mike, Thomas M.	Eng. Sophomore	Hornell
Miller, Elwin L.	Glass Special	Addison
Miller, Henry M.	Glass Freshman	Tuckahoe
Miller, Karl H.	C.D. Freshman	Port Washington
Miller, Marlin, Jr.	Eng. Sophomore	South Bend, Ind.
Miller, Suzanne	C.D. Sophomore	Canisteo
Miller, Wayne A.	Eng. Freshman	Fredonia
Milliken, William U.	Eng. Freshman	Bowerston, Ohio
Mindich, Barbara M.	C.D. Freshman	Bronx
Mockus, Aldona	C.D. Senior	Amsterdam
Montgomery, Daniel	Eng. Junior	Jacobsburg, Ohio
Montouri, Frank A., Jr.	Eng. Freshman	Port Washington
Moore, Carleton B.	Glass Sophomore	Hempstead
Morgan, John H.	Eng. Freshman	Elmira
Morgan, John M.	Eng. Senior	Schenectady
Morgan, W. David	Eng. Freshman	Campbell
Moskof, Martin S.	C.D. Senior	Bronx

Name	*Classification*	*Residence*
Nagan, Harold R.	Eng. Sophomore	Rochester
Nanning, Ronald L.	Eng. Freshman	Skaneateles
Nelson, William I.	Glass Sophomore	Binghamton
Nerenstone, Marc A.	Eng. Graduate	New York
Newsome, George W.	C.D. Sophomore	Springville
Nill, Joyce	C.D. Sophomore	Schenectady
Noren, Saul	Glass Sophomore	New York
O'Brien, Donald H.	Eng. Freshman	Port Washington
O'Brien, Francis X.	Eng. Sophomore	Port Washington
O'Brien, Neil H.	Eng. Junior	Port Washington
O'Connor, Francis J.	Eng. Freshman	Lycoming
Odink, Harry J.	Eng. Sophomore	Port Washington
Oliver, John H.	Glass Sophomore	Corning
Olson, A. Joan	C.D. Sophomore	Floral Park
Olympia, Frederick D.	Eng. Junior	Newburgh
Orr, David B.	Eng. Freshman	Oneonta
Osborn, Janice L.	C.D. Junior	Battle Creek, Mich.
Owens, Robert K.	Eng. Senior	Elmira
Paladino, Albert E., Jr.	Eng. Sophomore	Bellmore
Palmer, M. Phyllis	C.D. Freshman	Whitestone
Pappis, James	Eng. Junior	Boston, Mass.
Parsons, Barbara J.	C.D. Special	Schenectady
Parsons, Priscilla M.	C.D. Freshman	Schenectady
Patrick, Howard W.	Eng. Sophomore	Pine City
Patterson, Clare B.	C.D. Special	Alfred
Pedersen, John R.	Glass Senior	Pittsburgh, Pa.
Peterson, Albert F.	Eng. Freshman	Brooklyn
Pettengill, Edwin R.	C.D. Senior	Alfred
Pettengill, Floyd E.	C.D. Freshman	Alfred
Phillips, Dudley B.	Eng. Junior	Portville
Phillips, Leigh F.	Eng. Senior	East Quogue
Phillips, Richard A.	Eng. Freshman	Niagara Falls
Pixley, David M.	Glass Senior	New Hartford
Powell, Elizabeth A.	C.D. Sophomore	Alfred
Quick, Donald A.	Eng. Junior	Bolivar
Quincer, Claire J.	C.D. Special	Redwood
Racine, Fritz E.	Eng. Senior	Croix-des-Bouquets, Haiti
Ramsdell, John L.	Eng. Freshman	Batavia
Rao, Bhogaraju V. J.	Glass Graduate	Madras, India
Ray, John M., Jr.	Eng. Sophomore	Port Chester
Reed, James R.	Eng. Junior	Vails Gate
Reichle, Marvin C.	C.D. Graduate	Alfred Station
Renkert, Donald H.	Eng. Junior	Canton, Ohio
Reuning, Charles R.	Eng. Senior	Wellsville
Richard, Marilyn R.	C.D. Junior	Herkimer
Richardson, Nancy A.	C.D. Sophomore	Old Greenwich, Conn.
Rickey, Charles J.	Eng. Freshman	Albion
Ridgeway, Thomas J., Jr.	Eng. Senior	Niagara Falls
Ridley, Robert D.	C.D. Graduate	Nashville, Tenn.
Riegert, Richard P.	Eng. Junior	Dobbs Ferry

Name	*Classification*	*Residence*
Riker, Leon W., Jr.	Eng. Senior	Spencer
Rithner, Henry A.	Glass Graduate	Wellsburg, W. Va.
Robbins, Ronald S.	Eng. Sophomore	Hornell
Roberts, Louis E.	Glass Freshman	Hornell
Rosen, Louis E.	Eng. Senior	Elgin, Ill.
Roy, Peejush K.	Glass Graduate	Calcutta, India
Russell, Edward B.	C.D. Sophomore	Schenectady
Russell, George A., Jr.	Eng. Sophomore	Orchard Park
Ryder, Robert J.	Glass Junior	Olean
Sailer, Edward	Eng. Junior	Bellmore
Sarian, Suren	Eng. Freshman	Niagara Falls
Scallon, Barbara L.	C.D. Junior	Oneida
Schrader, David M.	Eng. Senior	Massillon, Ohio
Schultz, James B.	Eng. Senior	Akron
Schwenkler, Edward P.	Eng. Sophomore	Elmira
Secgar, Elizabeth B.	C.D. Graduate	Alfred
Secley, Clarence E.	Eng. Senior	Galeton, Pa.
Severin, Harold	Eng. Sophomore	Bronx
Shanly, Sheila M.	C.D. Freshman	Buffalo
Sharpe, Leo E.	Eng. Freshman	Addison
Shaw, Arthur H., Jr.	Tech. Freshman	Hornell
Sheehan, Joan D. (Mrs.)	Tech. Senior	Dolgeville
Sheehan, Robert W.	Tech. Senior	Yonkers
Sheeley, William J.	Eng. Senior	Hornell
Shelton, Philo S.	Glass Sophomore	Fairfield, Conn.
Sherman, Ann W.	C.D. Sophomore	Silver Creek
Shippy, Gordon D.	Eng. Senior	Niagara Falls
Shupe, Gwendolyn U.	C.D. Sophomore	Nassau
Small, Carlton F., Jr.	Eng. Senior	New London, Conn.
Smith, Ronald L.	Glass Freshman	Hornell
Sonenshine, Lewis	Eng. Junior	Bronx
Soxman, Edwin J.	Eng. Special	Alfred
Spangenberg, William C.	Eng. Graduate	Cortland
Spiegel, Robert A.	Glass Freshman	Rochester
St. Clair, John H.	Glass Senior	West Valley
Stapleton, Robert E.	Eng. Senior	Floral Park
Steen, Lawrence P.	Eng. Freshman	LeRoy
Stickler, Gale N.	Eng. Freshman	Corning
Stillman, A. Paul	Eng. Freshman	Alfred
Stone, Jerrold R.	Tech. Sophomore	Congers
Storer, John P.	Eng. Sophomore	New York
Storner, William G.	C.D. Sophomore	Olean
Stubbs, John M.	Eng. Senior	Ridgewood, N. J.
Stull, John L.	Glass Senior	Hornell
Styhr, Karsten H., Jr.	Eng. Senior	Huntington
Suraiya, Valjec J.	Glass Graduate	Calcutta, India
Suszynska, Aleksandra M.	C.D. Freshman	Weedsport
Sutton, Willard H.	Eng. Senior	Alfred
Swanson, Ralph A.	Eng. Junior	Caledonia
Swart, Robert	Eng. Junior	E. Aurora

Name	*Classification*	*Residence*
Swartz, David L.	Eng. Graduate	Sherman
Swearingen, M. Barbara	C.D. Sophomore	Bath
Sweet, Roderic V.	Eng. Sophomore	Falconer
Sweetland, James C.	Eng. Freshman	Painted Post
Taeler, David H.	Tech. Sophomore	New York
Tao, Yung	Glass Senior	Kunming, China
Tarny, Eugene G.	Eng. Senior	Astoria
Tatem, William A.	Eng. Sophomore	Westbury
Taylor, Charles H., Jr.	Eng. Senior	Alfred
Terr, Samuel	C.D. Graduate	New York
Thomas, Robert B.	Eng. Freshman	Alma
Thornton, H. Richard	Glass Sophomore	VanEtten
Tindall, E. Keith, Jr.	Eng. Freshman	Rome
Tostevin, Edgar R., Jr.	Eng. Senior	Purdys
Veiga, Roberto A.	Eng. Graduate	Paranagua, Brazil
Vickery, Theodore J.	Eng. Freshman	Lockport
Viola, Nazzareno, Jr.	Eng. Junior	Little Falls
Wagner, James B.	Glass Junior	Sinclairville
Waith, Frank L.	Eng. Sophomore	Falconer
Wakely, Wilbur T.	Glass Senior	S. Glens Falls
Walker, Maurice H., Jr.	Glass Sophomore	Corning
Wall, M. Patricia	C.D. Special	Wellsville
Warren, Robert F.	C.D. Sophomore	Genesco
Wasmuth, Karl E., Jr.	Eng. Freshman	Watervliet
Watkins, E. Charles	Glass Freshman	Bath
Waugh, J. Stanley	Eng. Junior	Patchogue
Webb, Bradley A.	Eng. Sophomore	Hamburg
Weinrib, David	C.D. Senior	Brooklyn
Weinrib, Karen R. (Mrs.)	C.D. Graduate	Brooklyn
Weiseuseel, Charles W., Jr.	Eng. Freshman	Bellmore
Westfall, Emmett M.	Glass Freshman	Alfred
Whalen, Thomas J., Jr.	Glass Junior	Rochester
Wickwire, Charles E.	Glass Freshman	Corning
Wilcox, Bruce A.	Eng. Freshman	Wellsville
Williams, Charles N.	Eng. Graduate	Auburn
Williams, Doris K.	C.D. Freshman	Buffalo
Wilson, Roger E.	Eng. Graduate	Lockport
Winslow, Anne C.	C.D. Graduate	Baltimore, Md.
Wood, Russell K.	Eng. Junior	Pasadena, Calif.
Woodin, Harrison D.	C.D. Senior	New Paltz
Woods, George T., Jr.	Glass Freshman	Corning
Wright, Harold D.	Eng. Senior	Mineral Ridge, Ohio
Wright, Kenneth L.	C.D. Sophomore	Newburgh
Wright, Paul C.	Eng. Freshman	Auburn
Zeman, John R.	Eng. Freshman	Little Falls
Zieliuski, Louis S.	C.D. Sophomore	Alfred
Zlotnick, Herman	Eng. Sophomore	Brooklyn
Zudeck, Simone	C.D. Sophomore	Lynbrook

DEGREES CONFERRED JUNE, 1952

BACHELOR OF SCIENCE IN CERAMIC ENGINEERING

Allan Auskern
Armand Joseph Beaudoin
Sandford Stoddard Cole
Edward Leonard Decker
Bernard Eugene Driscoll
Fred Cornell Earl
Frederick John Eichenberger, Jr.
Walter James Forry
Edward Robert Gzowski
John Hubert Hawkes
Leon Marcus, *cum laude*
Robert Kellum Owens
Leigh Frederic Phillips
Thomas James Ridgeway, Jr.
Leon Wayland Riker, Jr.
Louis E. Rosen
David Moore Schrader
James B. Schultz
Clarence Edward Seeley
William John Sheeley
Carlton Fessenden Small, Jr.
Robert Emanuel Stapleton
John Milton Stubbs
Karsten Holst Styhr, Jr.
Willard Holmes Sutton, *cum laude*
Eugene George Tarny
Charles Henry Taylor, Jr., *in absentia*
Edgar Ronald Tostevin, Jr., *cum laude*
Russell Keith Wood, *magna cum laude*
Roger Westcott Woodward
Harold DeWayne Wright

BACHELOR OF SCIENCE IN CERAMIC TECHNOLOGY

Nancy Barbara Balint
William Albert Durst
Robert Francis Fitzsimmons, *magna cum laude*
William Francis Gilluly
Nancy Ann Litchfield
Joan Disch Sheehan
Robert William Sheehan

MASTER OF SCIENCE IN CERAMIC ENGINEERING

Eugene William Holman, *in absentia*
George Whiting Pixley

MASTER OF SCIENCE IN CERAMIC TECHNOLOGY

Richard Alan Alliegro
Robert Hugh Dungan
Edward August Giess
Darwin Marshall

PROFESSIONAL DEGREE—"Ceramic Engineer"

Charles Rhodimer Amberg
Robert Esterly Boyce

BACHELOR OF SCIENCE IN GLASS TECHNOLOGY

John Paul Behrenberg
John Richard Dennerlein
William Blair McClurg, *cum laude*
David Mase Pixley
John Harold St. Clair
John Leete Stull, *magna cum laude*
Yung Tao, *cum laude*
Wilbur Thomas Wakely

MASTER OF SCIENCE IN GLASS TECHNOLOGY

Carl Axel Alenius, *in absentia*
Peejush Kanti Roy

Department of Design
BACHELOR OF FINE ARTS

Andree Marie Louise Armstrong
Eleanor Lynwood Byers
Martin Chodos
George Fong Chow
Herbert Cohen, *cum laude*
Val Murat Cushing
Kathryn Swanson Fuller
Wallace Charles Higgins
Richard Wellington Homer, *cum laude*
Wayne Dale Husted
Louis Ernest Mendez
Martin Stephen Moskof
Edwin Raymond Pettengill
David Weinrib, *cum laude*
Harrison David Woodin

MASTER OF FINE ARTS

Jerome Seymour Ackerman
Robert Arthur Fluhr
Ka-Kwong Hui
Duane Jardine Matterson
Marvin Charles Reichle
Samuel Terr