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CALENDAR FOR 1934-1935

First Semester

		1934
Entrance examinations	Monday	Sept. 17
Freshman Week	Monday, Tuesday, Wednesday	Sept. 17, 18, 19
Registration for Seniors, Juniors and Sophomores	Thursday, Friday	Sept. 20, 21
Instruction begins	Monday	Sept. 24
Mid-semester grades	Thursday	Nov. 22
Thanksgiving Recess begins	Wednesday, 12:30 P. M.	Nov. 28
THANKSGIVING RECESS		
Instruction resumed	Monday morning	Dec. 3
Founders' Day	Wednesday	Dec. 5
Christmas Recess begins	Thursday noon	Dec. 20
CHRISTMAS RECESS		

		1935
Instruction resumed	Monday, 1:45 P. M.	Jan. 7
Mid-year examinations begin	Wednesday	Jan. 23
Examinations end; semester ends	Friday evening	Feb. 1

Second Semester

Instruction begins	Wednesday morning	Feb. 6
Mid-semester grades	Thursday	Apr. 4
Spring Recess begins	Thursday evening	Apr. 4
SPRING RECESS		
Instruction resumed	Monday morning	Apr. 15
Final examinations begin	Wednesday	May 29
Memorial Day, half holiday	Thursday	May 30
Senior examinations end	Friday	May 31
Final examinations end	Friday	June 7

NINETY-NINTH COMMENCEMENT

Alumni Dinner and Annual Meeting	6:30 P. M., Saturday	June 8
Baccalaureate Sermon	8:00 P. M., Sunday	June 9
Annual Meeting of Trustees	9:00 A. M., Monday	June 10
Commencement Exercises	2:00 P. M., Monday	June 10
President's Reception	4:30 P. M., Monday	June 10

Summer School, 1935

Term begins	Monday	July 1
Term ends	Friday	Aug. 9

CALENDAR FOR 1935-1936

First Semester

		1935
Entrance examinations	Monday	Sept. 16
Freshman Week	Monday, Tuesday, Wednesday	Sept. 16, 17, 18
Registration for Seniors, Juniors, and Sophomores	Thursday, Friday	Sept. 19, 20
Instruction begins	Monday	Sept. 23
Mid-semester grades	Thursday	Nov. 14
Thanksgiving Recess begins THANKSGIVING RECESS	Wednesday, 12:30 P. M.	Nov. 27
Instruction resumed	Monday morning	Dec. 2
Founders' Day	Thursday	Dec. 5
Christmas Recess begins	Friday, 12:30 P. M.	Dec. 20
CHRISTMAS RECESS		
		1936
Instruction resumed	Tuesday, 8 A. M.	Jan. 7
Mid-year examinations begin	Wednesday	Jan. 22
Examinations end; semester ends	Friday evening	Jan. 31

Second Semester

Instruction begins	Wednesday morning	Feb. 5
Mid-semester grades	Thursday	Apr. 2
Spring Recess begins	Thursday evening	Apr. 2
SPRING RECESS		
Instruction resumed	Monday morning	Apr. 13
Final examinations begin	Wednesday	May 27
Senior examinations end	Friday	May 29
Memorial Day	Saturday	May 30
Final examinations end	Friday	June 5

ONE-HUNDRETH COMMENCEMENT

Saturday, June 6 to Wednesday, June 10

Summer School, 1936

Term begins	Monday	July 6
Term ends	Friday	Aug. 14

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* Deceased

THE NEW YORK STATE COLLEGE OF CERAMICS

In founding the New York State School of Clay Working and Ceramics in the year 1900 and placing it under the control of Alfred University, the Legislature of the State of New York recognized not only the importance of education in the pursuit of industry and industrial art but also the fact that such education can best be pursued in cooperation with coordinated studies in the field of liberal arts.

The aims of education are vision and skill. Industry is making greater demands than ever upon the character and qualities of its employees, and the teaching profession calls for ability and personality of a superior order.

To enable its graduates to meet these requirements in their chosen careers, the School was established. The studies relating to the arts and industries of ceramics are numerous and varied. Physics and Chemistry are fundamental and are closely followed by mechanical knowledge and manual dexterity. Engineering looks to production on a large scale, while Ceramic Art plans to beautify the product and enhance its appeal to the consumer.

Recently the New York State Legislature has raised the ranking of the institution to that of a college. Henceforth it will be known as the New York State College of Ceramics. A new building, costing \$175,000, has been provided, adding 24,000 square feet of floor space to the 18,000 square feet of the old plant, fully relieving thereby the cramped quarters of the past. \$60,000 has been spent in equipping this new building with the most up to date apparatus and furniture obtainable. This new building was opened in the fall of 1932, affording the students one of the largest and most completely equipped institutions of its kind in the world.

The expansion program has included not only large additions to the plant and the equipment, but also an expansion of the courses of study to cover all branches of the ceramic industry. A complete department of glass technology has been added. In addition, courses in refractories, lime, gypsum, cement, equipment design and plant layout, and pyrometry have been added. Other features of the expansion program include extension of the courses in physical chemistry, petrography, and research work. The work of the college is thereby fully rounded out, making it possible to cover the entire field of ceramics and to devote to each division the attention it deserves.

The college embraces three departments, (1) department of general ceramic technology and engineering, (2) ceramic art, and (3) glass technology and engineering. Specialized four year college courses of study are given in each of these departments and the student must choose between them not later than the sophomore year.

The courses of study in general ceramic technology and engineering deal primarily with clay and clay products, but refractories, lime, gypsum, cement, enamels, and the various other materials used with them in the industries are included. The study of clay and clay products includes the physical and chemical properties of the raw materials and products, the operations involved in processing the clays and in manufacturing the products and the scientific control of all these operations.

The ceramic art course is established to meet the industrial need for those who can create and execute original work in accordance with the requirements of modern factory processes. The combination of thorough training in ceramic art with courses from the department of general technology and engineering, and the department of glass technology gives the student an introduction to conditions necessary to successful design for industrial products, and leads to specialization in one of the fields of architectural terra-cotta, glass, tile, or whitewares.

The purpose of this course is to meet the industrial need for

those who can not only produce hand wrought ware but who can create and execute original work in accordance with the requirements of modern factory processes.

The course in glass technology is designed primarily to give the student a thorough grounding in the scientific basis of glass-making; also to acquaint him with glass-manufacturing practice, so far as that is possible in a school; and thirdly to present glass as an engineering material, a substance of unending interest to the chemist and physicist, and a medium for artistic expression and the cultivation and satisfaction of the aesthetic sense.

Residence Halls

THE BRICK. Women students are required to live in this hall, unless permitted for sufficient reason to room in approved homes in the village. Application for such permission must be made to the Dean of Women.

BARTLETT DORMITORY is a residence for freshman men. All students living in the dormitory are required to take their meals there. All freshman men must live in Bartlett Dormitory, unless excused by the Dean.

College Year

The college year consists of two semesters of about seventeen weeks each. There is a vacation at Christmas of about two weeks, a week's recess in the spring, and a summer vacation of about thirteen weeks.

Class Exercises

The class period, lecture or recitation, is one hour; the laboratory period varies from two to three hours. There are no classes on Saturday or Sunday.

Unit of Credit

One class period or one laboratory period per week for one semester is taken as the unit of credit and is called a semester

hour. For graduation a credit of one hundred and forty-four semester hours is required.

System of Grading

The work of students in each subject is graded as A, excellent; B, good; C, fair; D, poor; E, conditioned failure; F, failure; I, incomplete; W, withdrawn.

Scholarship Indices

For determining scholarship and for awarding honors the office uses a system of point values corresponding to the above grades as follows: each hour at A is equivalent to 3 points; at B, to 2; at C, to 1; at D, to 0; at E, to -1; at F, to -2; at I, to -1; at W, to -1. At intervals the Registrar determines a scholarship index for every student and for student groups. These indices are obtained by dividing the total number of points by the total number of hours.

Attendance at Classes

Regular attendance at class exercises is expected. Penalties are imposed on those who absent themselves from classes without excuse more than a certain number of times. Usually a student is permitted one absence per semester without excuse for each hour of credit accorded the course he is pursuing. Juniors and seniors who have not previously been penalized for violating the attendance rules are given the privilege of voluntary attendance. (For detailed rules on absences see Alfred University Handbook, page 20.)

Examinations

Final examinations are held at the close of each semester, in addition to occasional written tests during the semester. Fees will be charged for all examinations taken by those not regular members of classes, or taken at other times than those appointed for the class examinations.

Registration

All students will register on the days given under "Calendar"; new students entering at the beginning of the second semester will register on the first day thereof. Any student not registering on the days set therefor will be charged a fee of five dollars for late registration.

Each student is expected to register for at least sixteen hours, but may not register for more than required with the following exceptions; (1) physical training and assembly may be taken in addition to the maximum of required hours; (2) if a student has had an average standing of B or higher in the preceding semester, he may register for more hours with approval of the office.

Scholarship requirements are given below:

Freshmen .5 minimum grade point index

Sophomores .75 minimum grade point index

Juniors 1.00 minimum grade point index

Seniors 1.00 minimum grade point index

Students not meeting above mentioned scholarship standards but whose indices are within .5 of the figures given may be put on probation for one semester, during which time an opportunity is offered to reach the standard specified. If the specified standard is not reached the student is dropped from school.

For graduation a minimum scholarship of 0.8 for the entire course is required.

Fees

Matriculation (all new students)	\$ 5 00
Graduation	10 00
Tuition out-of-state students, per semester	50 00
Medical and Infirmary, per semester	6 00
Reading room, per semester	2 00
Athletics, per semester	10 00
College Paper (<i>Fiat Lux</i>) Subscription \$1.25. Student Campus Tax, 75 cents per semester	2 00

EXTRA FEES, per semester, for the use of instruments, apparatus, and laboratory materials:

Chemistry 1, 5, each	8 00
Chemistry 2, 3, 7, 10, each	10 00 or 15 00
Chemistry 4	15 00
Chemistry 6b	5 00
Gymnasium (freshmen, sophomores)	2 00
Physics 1b, 4, each	5 00
Surveying	5 00
Industrial Mechanics 6, 7, 8, 9, 12, each	5 00
All Pottery Courses	1 00
Summer Surveying, payable second semester	10 00
Dues for local section of American Ceramic Society....	50

MISCELLANEOUS FEES AND DEPOSITS:

Drawing supplies furnished at cost.	
Chemistry breakage deposit, Chemistry 1, per year.....	10 00
Chemistry breakage deposit, Chemistry 2, 3, 4, 5, 7, 10, each per year	15 00
Dormitory Room deposit, per year	10 00
Room Deposits must be paid in advance at time rooms are reserved. 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.	
Special examinations (final and mid-semester), each...	5 00
Special tests, each	1 00
Late registration (failure to register on registration days)	5 00

* A medical infirmary fee of \$6.00 per semester is charged all students. This fee entitles students to any necessary services of the University Physician, but does not include druggist's charges for prescriptions, X-rays, operations, etc. This fee also entitles any student, upon recommendation of the University Physician, to a maximum of ten days' infirmary and trained nurse service in the Clawson Infirmary, without extra charge. All students are urged to report promptly any illness or threatened illness to the superintendent of the Clawson Infirmary or to the University Physician.

TERMS OF PAYMENT

Fees are payable in four installments as follows:

Students will pay upon registration at the beginning of each year \$20.00, on account of the first semester's fees. This payment will be deducted from the semester bill when rendered. Similar payments will be made before entering classes for the second semester.

Semester bills for fees will be issued on or before the fifteenth of October and February, and must be paid at the office of the Treasurer before the first of the following month. Students who fail to comply with this regulation are reported to the Dean of the college, and are rendered liable to suspension.

Rates for rooms in the Bartlett Memorial Dormitory for freshman men and The Brick, a dormitory for women students, vary from \$50.00 to \$65.00 per semester (17 weeks) per student; for single or double rooms according to size and location; in Burdick Hall (dormitory for men) rates vary from \$40.00 to \$50.00 per semester per student, in accordance with size and location of room. Board in Bartlett Dormitory is \$220 and in The Brick \$204 for the college year and is payable in advance in four equal installments, the first installment upon registration at the beginning of the year, the second November 15th, the third upon registration for the second semester, and the fourth April first.

Rooms and board, including fuel, can be obtained in private families for \$8 to \$10 per week. Board in clubs organized and managed by the students themselves varies from \$5 to \$6 per week, according to the means and inclinations of the students.

Estimated Annual Expenses

Excluding cost of clothing and travel, one can go through a college year by close economy upon \$400, and, by exercising care, upon \$500. An allowance of \$600 is comfortable.

IN DORMITORIES

Board	\$204—\$220
Rooms	100— 130
Books	20— 30
Tuition and Fees	40— 125
Miscellaneous Expenses	15— 30
	\$379—535

IN PRIVATE FAMILIES

Board	\$160—\$220
Rooms	85— 130
Books	20— 30
Tuition and Fees	40— 125
Miscellaneous Expenses	15— 30
	\$320—\$535
Out of State tuition, per year	100— 100

Self-help

Many of the graduates of the College have been persons of very limited means who worked their way through. While the College cannot guarantee work to all applicants, enterprising students can usually find employment in the town with satisfactory compensation for all the time they can profitably spare from their studies. Some earn enough to meet the greater part of their expenses. Students should distinctly understand that when they attempt entire self-support they will find it necessary to lengthen their term of study.

ADMISSION

A candidate for admission to the freshman class must be (1) a graduate of an approved four-year high school, (2) of good moral character, (3) at least sixteen years of age, and (4) ranking in either the middle or upper third of his high school class. A personal interview to determine the aptitude of the applicant is very desirable. The particular requirements for entrance to college explained below cover in each case not less than a four-year preparatory or high school course.

Preparatory work is estimated in units. The unit represents a course of five recitations weekly throughout an academic year of the preparatory school. Fifteen units or an equivalent and graduation from the school are definite requirements for unconditioned entrance.

Admission is gained, either on certificate or on examination, as follows:

Admission on Certificate

COLLEGE BOARD EXAMINATIONS. A statement from the College Board certifying that a student has satisfactorily passed the College Board examination in any subject will be accepted as credit in full for that subject.

REGENTS CREDENTIALS. The credentials of the University of the State of New York are accepted instead of an examination in the subjects required for admission, so far as such credentials cover these requirements. (For description of subjects, see *Entrance Requirements*.)

PRINCIPALS' CERTIFICATES. Certificates are also accepted from principals of preparatory or high schools, provided such schools are known to the Committee on Admissions for thoroughness of instruction. The certificate must show that the applicant is a graduate of a four-year high school. The

certificate must also specify, in connection with each subject, the year in which it has been given, the extent to which it has been pursued, the amount of time given to it, and the degree of the applicant's proficiency, and must show clearly that the student has met the requirements in every way. Principals of high schools who desire to have their students admitted on certificate are invited to correspond with the Registrar, who will provide them with blank standard certificates of recommendation.

Admission on Examination

Candidates who fail to present satisfactory certificates must pass a written examination in the required subjects.

For the convenience of students not having such certificates, entrance examinations are held at Alfred on the first day of registration week (Monday, September 16, 1935).

Conditioned Students

No student may enter the freshman class deficient in any subject.

Entrance Requirements

ENGLISH—3 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 LANGUAGES—4 units. Latin grammar and composition; Caesar, four books of the *Gallie War*; Cicero, six orations; Virgil, six books of the *Aeneid* or equivalents; or four units from not more than three of the following; Latin, Greek, German, French, Spanish.

MATHEMATICS—2 units. Elementary algebra, including fundamental operations, factoring, fractions, ratio, proportion, radicals, quadratics; plane geometry, including the straight line, angle, circle, proportion, similarity, and areas.

SCIENCE—1 unit. Biology, botany, physiology, zoology, physical geography, physics, or chemistry. Any one subject may be offered.

ELECTIVES—5 units in addition to the above subjects.

Summary

English	3 units
Mathematics	2 units
*Foreign languages	4 units
Science	1 unit
Electives	5 units

Admission to Advanced Standing

Students from other accredited colleges may enter the Ceramic College with advanced standing upon presentation of satisfactory certificates of standing and character. Such students should request the Registrar or corresponding official of the institution from which they wish to be transferred to forward to the Registrar of Alfred University the following information:

1. A statement of their entrance units, including the date of their graduation from high school.
2. A transcript of their college credits.
3. A letter of honorable dismissal signed by the proper official.
4. A statement to the effect that they are eligible to return to the institution which they are leaving.

Industrial Experience

Each candidate for a degree in general technology and engineering and in glass technology and engineering is required to spend one summer period of ten weeks, or the equivalent, in an approved industrial plant and to turn in a satisfactory report,

* Candidates may offer only 2 units of foreign language, but must substitute science or advanced mathematics, or both, for the other two units of foreign language required.

together with a certifying letter from the person in charge of the work.

Graduation

Upon students who satisfactorily complete the prescribed courses of study, Alfred University will confer the degree of Bachelor of Science. Appended to the diploma shall be a clause indicating the department in which the student specialized. (General Ceramic Technology and Engineering, Glass Technology, Ceramic Art).

DEPARTMENTS OF INSTRUCTION

A. DEPARTMENT OF GENERAL CERAMIC TECHNOLOGY AND ENGINEERING

Mr. Holmes Mr. Merritt
Mr. Amberg Mr. Lobaugh
Mr. Campbell

The courses of study in the department of general ceramic technology and engineering are designed to train students for any of the clay products or other closely allied ceramic industries. The technical and engineering aspects of these industries are covered in a fundamental way so that the graduate may enter any of them.

In addition to the general cultural training, which applies to all departments of the college, training in the department is intended to give the student, first of all, a thorough grounding in the fundamental sciences of mathematics, chemistry, and physics. This work occupies most of the first two years. It is followed by an application of these sciences to the technical and engineering problems of the ceramic industries.

The ceramic industries are those manufacturing products out of non-metallic, earthy, raw materials by firing operations. They include the lime, gypsum, cement, enamel, glass, refractories and clay industries. The last, which is the most important of the group includes the common brick, face brick, drain tile, sewer pipe, wall, floor and roofing tile, hollow block, fire brick, insulator, porcelain, whiteware and pottery industries. Most of the work of this department is devoted to the clay industry. All operations in these industries are studied thoroughly from both technical and engineering points of view. The objective is to give the student such a broad and fundamental training that after adequate industrial experience, he may qualify for work in connection with any phase of the building and operation of any kind of ceramic plant.

CURRICULUM General Technology and Engineering

First Semester		First Year		Second Semester	
Mathematics 1	5	Mathematics 1	5	Mathematics 1	5
Chemistry 1	4	Chemistry 1	4	Chemistry 1	4
English 1	3	English 1	3	English 1	3
Ceramics 151	½	Ceramics 102	1	Ceramics 102	1
Drafting	3	Drafting	3	Drafting	3
Physical Training	1	Physical Training	1	Physical Training	1
Assembly	½	Assembly	½	Assembly	½
		Ceramics 152	½	Ceramics 152	½

17

18

SUMMER SCHOOL

Ceramics 100, Plane Surveying..... 3 credit hours
3 weeks following end second semester

Second Year		Second Year	
Mathematics 3a	4	Mathematics 3b	4
Physics 1	4	Physics 1	4
Chemistry 2	3	Chemistry 3	3
Ceramics 103	3	Ceramics 104	3
Mineralogy	3	Ceramics 154	2
Physical Training	1	Physical Training	1
Assembly	½	Assembly	½
	18½		17½

Third Year		Third Year	
Ceramics 113	1	Mechanics	3
Mechanics	3	Chemistry 6a	2
Chemistry 6a	4	Ceramics 106	3
Ceramics 105	3	Chemistry 5	3
Chemistry 4	3	Geology	3
Ceramics 155	3	Ceramics 156	3
Ceramics 107A	1	Chemistry 6b	1
		Ceramics 107B	1

18

19

Fourth Year		Fourth Year	
Economics	2	Ceramics 107C	1
Physics 2	3	Ceramics 162	2
Power and Machinery	2	Power and Machinery	2
Petrography 1	3	Elective	4
Elective	4	Ceramics 114	4
Ceramics 161	2	Ceramics 116	3
Professional English	2	Economics	2

18

18

The elective is to be chosen with the consent of the Dean from the following subjects: German or French, seven hours; Petrography, two hours; Glass Technology, seven hours; Portland Cement, Lime, Gypsum, three hours; Enamels, four hours; Applied X-ray, four hours; Advanced Physical Chemistry, two hours; Economics, four hours.

Description of Courses in General Ceramic Technology and Engineering

- Ceramics 102.** An introduction to the study of ceramics. The study of ceramic raw materials is introduced.
One lecture per week; second semester.
One credit hour.
- Ceramics 151.** An introduction to the use of ceramic apparatus and equipment. One laboratory period per week; first semester. One half credit hour.
- Ceramics 152.** An introduction to the use of ceramic apparatus and equipment. The making of forms, molds, and dies: Making saggers, jiggering, pressing and casting pottery is included.
One laboratory period per week; second semester.
One half credit hour.
- Ceramics 103.** Ceramic Raw Materials. A detailed study of the chemical and physical properties of the important ceramic raw materials in relation to the manufacturing operation and the properties of ceramic products.
Three lectures per week; first semester.
Three credit hours.
- Ceramics 104.** Processing of Clays. An engineering course dealing with the manufacturing operations of the industry up to the operations of drying and firing.
Three lectures per week; second semester.
Three credit hours. Prerequisite Ceramics 103.
- Ceramics 154.** Laboratory Testing of Ceramic Materials.
Two laboratory periods per week; second semester.
Two credit hours. Prerequisite Ceramics 103.
- Ceramics 105.** Drying and Firing. This course deals with the technology and engineering aspects of the commercial drying and firing of all types of ceramic products.
Three lectures per week; first semester.
Three credit hours. Prerequisite Ceramics 104.

- Ceramics 155.** Ceramic Processes and Products. A laboratory course dealing with the manufacturing operations involved in forming and firing various types of ceramic products.
Three laboratory periods per week; first semester.
Three credit hours. Prerequisite Ceramics 104.
- Ceramics 106.** Whitewares. A study of bodies, glazes and colors. A specialized course in the technology and engineering aspects of the industry in which complex mixtures and glazing are employed.
Three lectures per week; second semester.
Three credit hours. Prerequisite Ceramics 105.
- Ceramics 156.** Laboratory Practice in Whiteware Technology. The preparation of bodies and the application of glazes.
Three laboratory periods per week; second semester.
Three credit hours. Prerequisite Ceramics 105.
- Ceramics 107.** Ceramic Calculations. Practice in the solving of problems dealing with the subject matter of the other courses.
107A. One lecture per week; first semester.
One credit hour. Prerequisite Ceramics 104.
107B. One lecture per week; second semester.
One credit hour. Prerequisite Ceramics 105.
107C. One lecture per week; second semester.
One credit hour. Prerequisite Chemistry 6.
- Ceramics 161.** Thesis. Original research on some ceramic problem decided upon in conference with the instructor.
Two laboratory periods per week; first semester.
Two credit hours. Prerequisite Ceramics 106.
- Ceramics 162.** Thesis. Continuation of Ceramics 161.
Two laboratory periods per week; second semester.
Two credit hours. Prerequisite Ceramics 106.

Ceramics 113. Pyrometry. Laboratory practice on the problems of handling pyrometric installations of the optical, radiation and thermoelectric types.

One laboratory period per week; first semester.

One hour credit. Prerequisite Ceramics 106.

Ceramics 114. Refractories and heavy clay products. The materials, manufacturing operations, properties, and uses of all kinds of refractories. A brief consideration of the more important heavy clay products.

Four lectures per week; second semester.

Four credit hours. Prerequisite Ceramics 106.

Ceramics 115. Lime, Gypsum, and Cement. The properties, manufacture, and uses of cementing materials. Optional.

Three lectures per week; first semester.

Three credit hours. Prerequisite Ceramics 104.

Ceramics 116. Design and Plant Layout. The engineering features of plant equipment for drying and firing ceramic wares; the design of this equipment and the layout of a complete typical plant.

Three laboratory periods per week; second semester.

Three credit hours. Prerequisite Ceramics 106.

Ceramics 118. Enamels. The technology and engineering aspects of the application of enamels to metals. Optional.

Two lectures per week; second semester.

Two credit hours. Prerequisite Ceramics 104.

Ceramics 168. Laboratory practice in Enamels.

Two laboratory periods per week; second semester.

Two credit hours. To be taken with Ceramics 118.

B. DEPARTMENT OF GLASS TECHNOLOGY

Mr. Scholes

These courses, together with the mathematical, scientific, and cultural courses of the entire curriculum B, should prepare

the graduate for immediate usefulness in the glass industry. They are also presented as a foundation for research work in glass and allied fields of silicate technology.

In addition to these undergraduate courses, the department offers an opportunity for research work on glass problems by those who have adequate preparation, either in schools or in plant practice.

Glass manufacturers who desire to give their employees further training, or to establish fellowships for work upon their special problems, are offered the facilities of the laboratories.

CURRICULUM

Glass Technology

First Year

<i>First Semester</i>		<i>Second Semester</i>	
Mathematics 1	5	Mathematics 1	5
Chemistry 1	4	Chemistry 1	4
English 1	3	English 1	3
Drafting	3	Drafting	3
Ceramics 151	½	Ceramics 102	1
Physical Training	1	Ceramics 152	½
Assembly	½	Physical Training	1
		Assembly	½
17		18	

SUMMER SCHOOL

Ceramics 100, Plane Surveying..... 3 credit hours

3 weeks following end second semester

Second Year

Mathematics 3a	3	Mathematics 3b	3
Physics 1	5	Physics 1	5
Chemistry 2	3	Chemistry 3	3
German 1	3	German 1	3
Ceramics 103	3	Ceramics 200	3
Physical Training	1	Physical Training	1
Assembly	½	Assembly	½
18½		18½	

Third Year

Chemistry 4	3	Chemistry 5	3
Chemistry 6a	4	Chemistry 6a	2
German 2	3	Chemistry 6b	1
Mineralogy	3	German 2	3
Ceramics 201	2	Geology	3
Ceramics 251	2	Ceramics 202	2
Ceramics 113	1	Ceramics 252	2
		Elective	2
	18		18

Fourth Year

Physics 2	3	Ceramics 114	4
Mechanics	3	Mechanics	3
Ceramics 203	3	Ceramics 204	2
Ceramics 253	1	Ceramics 262	2
Ceramics 261	2	Economics	2
Economics	2	Ceramics 254	1
Petrography 1	3	Elective	3
Professional English	2		
	19		18

The elective is to be chosen with the consent of the Head of the Department from the following subjects; General Ceramics, German, Economics, French, Chemistry, Petrography, X-ray Analysis.

Description of Courses in Glass Technology

Ceramics 200. Raw Materials for Glass. The Chemistry of the glass-forming oxides. A study of the methods of production of the minerals and chemicals used in glass; their chemical reactions and properties.
Three lectures per week, second semester.
Three credit hours.

Ceramics 201 and 251. Glass-Making Materials and Melting Processes. An elementary laboratory study of raw materials; methods of testing for purity, chemical composition, functions in glass-melting. Simple glasses are melted and the melting process studied in relation to refractories, containers, temperatures, batch composition, and fining agents. Lectures, study-outlines, and references to the literature of glass, covering raw materials,

furnace design and operation, tank blocks and pots, the fundamental chemistry of glass-making and calculations. Two lectures, two laboratory periods per week, first semester.

Four credit hours.

Prerequisite, two years college work in Science or equivalent experience.

Ceramics 202 and 252. Glass-Working and Testing. Laboratory studies of glasses for specific commercial purposes; demonstrations of hand-working by skilled workmen; studies of annealing; testing of laboratory and commercial specimens for strain, mechanical and chemical resistance, and visible defects.

Lectures, recitations and reports on compounding glasses, working processes, annealing, finishing, etching and other forms of decoration, testing and defects in commercial glassware.

Two lectures, two laboratory periods per week, second semester.

Four credit hours.

Ceramics 203 and 253. Glass Colors and Decolorizing. A laboratory study of colorants. Experimental meltings demonstrating the effects of the common and unusual colorants, the influence of batch and glass compositions, studies of temperature, time and furnace atmosphere with relation to colors. Similar practice in decolorizing crystal glass.

Lectures and reading assignments. Two lectures, two laboratory periods per week, first semester.

Four credit hours.

Ceramics 204 and 254. The Physics of Glass. Laboratory practice in the measurement of the physical and optical properties of glass. The identification of defects. Both laboratory specimens and commercial glasses will be examined.

Lectures on relation between composition and specific physical properties; optical properties; constitution theory; historical development.

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

Four credit hours.

Ceramics 261. Glass Thesis. Laboratory study of a problem selected in conference with the department head.

Two laboratory periods, first semester.

Two credit hours.

Ceramics 262. Glass Thesis. Continuation of Ceramics 261, second semester.

Two laboratory periods, second semester.

Two credit hours.

C. DEPARTMENT OF CERAMIC ART

Miss Fosdick

Miss Nelson

Mr. Harder

Part Time Instruction

Mr. Merritt

Miss Hewitt

Note: The curriculum given below is for sophomore, junior, and senior students. Considerable change will be made in this curriculum for the class entering in 1935.

A course of study which combines an intensive program in ceramics, design, and drawing with subjects in the department of general technology and engineering, and in the department of glass technology. This course has as its objective the training of the ceramic artist which will qualify him for the position of designer for the architectural terra cotta, glass, tile or white-ware industries.

CURRICULUM

First Year

<i>First Semester</i>		<i>Second Semester</i>	
Chemistry 1	4	Chemistry 1	4
Ceramics 351 (Pottery)....	1	Ceramics 352 (Pottery)....	1
Ceramics 303 (Theory)....	1	Ceramics 304 (Theory)....	1
Ceramics 355 (Drawing)....	3	Ceramics 356 (Drawing)....	3
Ceramics 357 (Lettering)...	1	Ceramics 358 (Lettering)...	1
Ceramics 359 (Design)....	2	Ceramics 360 (Design)....	2
Mechanical Drawing	2	Mechanical Drawing	2
English 1	3	English 1	3
Physical Training	1	Physical Training	1
Assembly	1/2	Assembly	1/2
18 1/2		18 1/2	

Second Year

Ceramics 305 (Theory)....	1	Ceramics 306 (Theory)....	1
Ceramics 361 (Cer. Lab.)...	2	Ceramics 362 (Pottery)....	2
Elective	2	Elective	2
Ceramics 363 (Drawing)....	4	Ceramics 364 (Life Drawing)	2
English 2	3	English 2	3
Chemistry 2 (Qualitative)...	3	Ceramics 366 (Professional	
Ceramics 367 (Design)....	2	Rendering)	2
Physical Training	1	Ceramics 368 (Design)....	2
Assembly	1/2	Ceramics 102	1
		Chemistry 3 (Quantitative).	3
		Physical Training	1
		Assembly	1/2
18 1/2		19 1/2	

Third Year

Ceramics 393 (Metal).....	2	Ceramics 104 (Processing of	
Ceramics 373 (Tiles).....	2	clays)	3
Ceramics 377 (Drawing)....	2	Ceramics 374 (Metal).....	2
Ceramics 379 (Design)....	2	Ceramics 378 (Drawing)....	2
Ceramics 375 (Ceramics with		Ceramics 380 (Design)....	2
reading course in History		Ceramics 376 (375 continued)	2
of Ceramics).....	2	Ceramics 154 (Lab. for 104).	2
Ceramics 103 (Raw Materials)	3	History of Western Europe.	3
History of Western Europe.	3	Ceramics 372 (Architectural	
Ceramics 371 (Architectural		Modeling)	3
Modeling)	3		
		19	19

Fourth Year

Ceramics 381 (Pottery).....	3	Ceramics 382 (Pottery).....	3
Ceramics 383 (Theory).....	2	Ceramics 384 (Theory).....	2
Ceramics 395 (Kiln Construc- tion)	1	Ceramics 396 (Kiln Construc- tion)	1
Ceramics 389 (Design).....	2	Ceramics 390 (Design).....	2
Ceramics 391 (History of Art)	2	Ceramics 392 (History of Art)	2
Woodworking	1	Woodworking	1
Ceramics 397 (Ceramic De- sign)	2	Ceramics 398 (Ceramic De- sign)	2
Elective from Glass or White wares	4	Elective from Glass or White wares	4
	17		17

Description of Courses in Ceramic Art

Ceramics 351, 352, 362, 371, 372, 381 and 382 cover the various methods of pottery production including hand building, the potter's wheel, and mold construction. Ceramic design is an integral part of every course, and stresses the decorative possibilities peculiar to each method of production. The structure of glazes and a wide range of decorative processes are included.

Ceramics 373. This course covers the production of tiles with reference to their various architectural applications.

Ceramics 303, 304, 305, 306, 361, 375, 376, 383, and 384 cover the fields of ceramic theory and laboratory experiment essential to a general knowledge of clays and glazes. In all the ceramic courses kilns are studied and practical experience with various types is required.

Drawing

Ceramics 355 and 356. These courses are thorough in the fundamentals of freehand drawing, including the principles of perspective.

Ceramics 371 and 372 in the Industrial Arts course cover architectural modeling, and Ceramics 381 and 382 in this course are utilized in specialization in glass or whitewares according to the student's choice.

Ceramics 357 and 358. Lettering.
Ceramics 363. Still Life in Charcoal.
Ceramics 364. Figure Study.
Ceramics 366. Professional rendering.
Ceramics 377 and 378. Continuation of 363—colour.

Design

Ceramics 359, 360, 367, 368, 379, 380, 389 and 390. The student is helped to understand the decorative possibilities of ceramic materials through the creative use of the technical principles involved in design. Advancement depends on the student's native ability and industry. The work in line, form and colour is directly related to materials throughout the four years of the course.

Metal Working

Ceramics 374 and 393. The courses in metal working include both hammered and constructed work. A correlation between the pottery and metal work is effected by making metal fittings for ceramic objects.

History of Art

Ceramics 391 and 392. A survey of the fine arts and crafts through the ages.

OTHER REQUIRED COURSES

The catalogue of Alfred University gives descriptions of the required courses which do not deal with ceramic subjects and which are not given in the Ceramic College. Those given in the Ceramic College are described below:

CHEMISTRY

Mr. Rice

Mr. Cortelyou

1. INORGANIC CHEMISTRY. A systematic study of the fundamental principles of chemistry. Lectures and recitations,

three periods; laboratory, two periods. *Four hours throughout the year.*

2. **QUALITATIVE ANALYSIS.** Qualitative analysis of metals and inorganic compounds and the chemical principles involved. Prerequisite, Chemistry 1. *Three hours, I.*

3. **QUANTITATIVE ANALYSIS.** Volumetric and gravimetric analysis. Lecture, one period; laboratory, two periods. Prerequisite, Chemistry 2. *Three hours, II.*

4. **QUANTITATIVE ANALYSIS.** The analysis of silicate rocks, clays, and ceramic materials. Lecture, one period; laboratory, two periods. Prerequisite, Chemistry 3. *Three hours, I.*

5. **FUELS AND COMBUSTION.** Fuels, principles of combustion, the heat balance. Prerequisite, Chemistry 3. *Three hours, II.*

6. **PHYSICAL CHEMISTRY.** An elementary course in theoretical chemistry. Prerequisites, Chemistry 3, Mathematics 3a and 3b, Physics 1a and 1b. Four lectures, I; two lectures, II.

6a. **ADVANCED PHYSICAL CHEMISTRY.** An advanced course for ceramic students. Two lectures, II. Prerequisite, Chemistry 6. *Two hours, II.*

6b. **PHYSICAL CHEMISTRY LABORATORY.** One period, II. This course is to be taken with Chemistry 6. *One hour.*

GEOLOGY AND MINERALOGY

Mr. Amberg

Mr. Lobaugh

Mr. Campbell

Mineralogy. This course includes an introduction to crystallography and a study of minerals and their identification by chemical and physical tests.

One lecture and two laboratory periods per week.

First semester. Three credit hours.

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

Three lectures per week; second semester.

Three credit hours.

Petrography 1. Practical Petrography. A course designed to prepare the student for the microscope work ordinarily required in the average ceramic plant.

Two lectures and one laboratory period per week.

First semester; three credit hours. Prerequisite Ceramics 105.

Petrography 2. The practical use of the petrographic microscope in identifying crystals of natural and artificial minerals. Optional.

Two laboratory periods per week; second semester.

Two credit hours. Prerequisite Petrography 1.

Applied X-rays. The study of X-ray diffraction as applied to the examination of ceramic materials.

One lecture and one laboratory period per week; first and second semesters.

Two credit hours per semester.

