

# ALFRED UNIVERSITY PUBLICATION

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## New York State School of Clay Working and Ceramics

### Catalogue Number



1927 -- 1928

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Alfred, N. Y.

FEBRUARY, 1928

No. 2

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*Published Monthly by Alfred University. Entered as second class matter at Alfred, N. Y., under act of Congress, July 16, 1894. Accepted for mailing at special rate of Postage provided for in Section 1103, Act of Oct. 3, 1917, authorized on July 3, 1918.*

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# Calendar

First Semester 1927-1928

Entrance Examinations	Monday	1927 Sept. 19
"Freshman Week"	Tues. and Wed.	Sept. 20-21
Registration for Seniors, Juniors and Sophomores	Thurs. and Fri.	Sept. 22-23
Instruction begins	Monday	Sept. 26
Mid-semester grades	Thursday	Nov. 17
Thanksgiving Recess begins	Wednesday evening	Nov. 23

## THANKSGIVING RECESS

Instruction resumed	Monday morning	Nov. 28
Founders' Day	Thursday	Dec. 1
Christmas Recess begins	Thursday evening	Dec. 15

## CHRISTMAS RECESS

Instruction resumed	Tuesday morning	1928 Jan. 3
Mid-year Examinations begin	Monday	Jan. 30
Examinations end, semester ends	Friday evening	Feb. 3

Second Semester

Instruction begins	Wednesday	Feb. 8
Mid-semester grades	Thursday	Mar. 29
Easter Recess begins	Tuesday evening	April 3

## EASTER RECESS

Instruction resumed	Wednesday morning	April 11
Memorial Day, half holiday	Wednesday	May 30
Final Examinations begin	Friday	June 1
Senior Examinations end	Tuesday	June 5
Under-class Examinations end	Friday	June 8
Junior Examinations end	Tuesday	June 12

## NINETY-SECOND COMMENCEMENT

Annual Sermon before Christian Associations	Saturday morning	June 9
Commencement Play	Saturday evening	June 9
Baccalaureate Sermon	Sunday evening	June 10
Alumni Association, Directors' meeting	Monday afternoon	June 11
Annual Concert	Monday evening	June 11
Class breakfasts and reunions	Tuesday morning	June 12
Annual meeting of Trustees	Tuesday morning	June 12
Annual meeting of Corporation	Tuesday afternoon	June 12
Class-day Exercises	Tuesday afternoon	June 12
Alumni Banquet	Tuesday evening	June 12
Commencement Exercises	Wednesday morning	June 13
Alumni Association, Public Session	Wednesday afternoon	June 13
President's Reception	Wednesday evening	June 13

## SUMMER VACATION

Summer Session 1928

Term begins	Monday	July 2
Term ends	Friday	Aug. 10

## BOARD OF MANAGERS

(Appointed annually by the Trustees of Alfred University)

BOOTHE C. DAVIS, President

JOHN J. MERRILL

WILLIAM R. CLARK

B. SHEPHERD BASSETT

D. S. BURDICK

First Semester 1928-1929

Entrance Examinations	Monday	1928 Sept. 17
" Freshman Week "	Tues. and Wed.	Sept. 18-19
Registration for Seniors, Juniors, and Sophomores	Thurs. and Fri.	Sept. 20-21
Instruction begins	Monday	Sept. 24
Mid-semester grades	Thursday	Nov. 22
Thanksgiving Recess begins	Wednesday evening	Nov. 28

THANKSGIVING RECESS

Instruction resumed	Monday morning	Dec. 3
Founders' Day	Wednesday	Dec. 5
Christmas Recess begins	Thursday evening	Dec. 20

CHRISTMAS RECESS

Instruction resumed	Tuesday morning	1929 Jan. 8
Mid-year examinations begin	Friday	Jan. 25
Examinations end; semester ends	Friday evening	Feb. 1

Second Semester

Instruction begins	Wednesday morning	Feb. 6
Mid-semester grades	Thursday	Mar. 21
Easter Recess begins	Tuesday evening	Mar. 26

EASTER RECESS

Instruction resumed	Wednesday morning	Apr. 1
Memorial Day, half holiday	Thursday	May 30
Final examinations begin	Friday	May 31
Senior examinations end	Tuesday	June 4
Under-class examinations end	Friday	June 7
Junior examinations end	Tuesday	June 11

NINETY-THIRD COMMENCEMENT

Annual Sermon before Christian Associations	Saturday morning	June 8
Annual Concert	Saturday evening	June 8
Baccalaureate Sermon	Sunday evening	June 9
Alumni Association Directors' meeting	Monday afternoon	June 10
Commencement Play	Monday evening	June 10
Class breakfasts and reunions	Tuesday morning	June 11
Annual meeting of Trustees	Tuesday morning	June 11
Annual meeting of corporation	Tuesday afternoon	June 11
Class-day Exercises	Tuesday afternoon	June 11
Alumni Banquet	Tuesday evening	June 11
Commencement Exercises	Wednesday morning	June 12
Alumni Association, Public Session	Wednesday afternoon	June 12
President's Reception	Wednesday evening	June 12

SUMMER VACATION

Summer Session, 1929

Term begins	Monday	July 1
Term ends	Friday	Aug. 9

OFFICERS OF INSTRUCTION

BOOTH COLWELL DAVIS, Ph.D., D.D., LL.D., President  
Professor of Ethics.

CHARLES F. BINNS, S.D., Director  
Professor of Ceramic Technology.

MURRAY J. RICE, A.M., Ph.D.  
Professor of Chemistry.

FRANK C. WESTENDICK, S.M.  
Professor of Ceramic Engineering.

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Assistant Professor of Ceramics.

MARION L. FOSDICK  
Professor of Ceramic Art.

CLARA K. NELSON  
Professor of Drawing and Design.

CHARLES M. HARDEG  
Instructor in Drawing and Ceramic Art.

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Treasurer and Accountant.

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Librarian.

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Secretary.

EVA B. MIDDAGH  
Matron.

NATHAN F. TUCKER  
Assistant.

A. L. WHITFORD  
Janitor and Machinist.

## NEW YORK STATE SCHOOL OF CLAY- WORKING AND CERAMICS

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This school was founded by the State of New York in 1900.

The building was especially designed for the purpose, and is located on land which was deeded by Alfred University to the people of the State. It is built of red brick and terra cotta with gray trimmings and roofed with brown tile. The main building has a floor space of about thirteen thousand square feet, and a frontage of seventy-five feet.

To this has been added a fireproof wing measuring about 36 by 57 feet and three stories in height.

In the main basement are located the kilns, the heavy machinery for the manufacture of brick, tile, hollow blocks and roofing tile, the slip-making plant, cylinders for glaze preparation, and a workshop fitted with modern appliances for pottery and porcelain manufacture. There are also rooms for mold making and drying.

In the sub-basement are located the heating plant and fuel storage.

On the principal floor are the executive offices, the technical laboratories and a lecture room. On the second floor is the department of chemistry and on the third floor a lecture room. The departments of Design and Ceramic Art are temporarily housed in the buildings of the State School of Agriculture.

The motive power is supplied by several electric motors.

The school maintains a complete technical library for reference and for the encouragement of independent reading and research. It also encourages membership and activity in the New York State Students' Branch of the American Ceramic Society, which was chartered at Alfred in 1915, and in the Ceramic Guild organized by the students in Art.

### Courses Offered

The courses of study which lead to a degree extend over a period of four years and embrace the science, technology, and art special to ceramics.

The course in Ceramic Engineering is designed to qualify men to occupy positions as superintendents, scientific experts, and ceramic chemists.

Two courses are given in the Department of Applied Art. The first is for those wishing to major in Ceramic Art. The second is a course in Normal Art for those wishing to do intensive work in Drawing and Design, relative to teaching in the public schools. With the second course the student is required to take all the educational subjects which lead to the procuring of a Teacher's Professional Certificate.

### Benefits of the School

The demand for trained clay-workers has grown to considerable proportions, nor is there any likelihood that this demand will decrease.

Hitherto, no student who has passed through the school successfully has remained unemployed, and the director is continually in receipt of applications for persons qualified to fill responsible positions. Every effort is made by the faculty to place the students in communication with manufacturers desiring to offer them employment.

The student successfully pursuing the technical course will be able, presuming that his personal capacity is good, to take up the practical work of manufacturing ceramic wares. He will have had experience with every description of clay, and with the minerals and oxides used in preparing bodies and glazes, glasses and enamels. He will have acquired a knowledge of machinery and practical operations which he will find of the greatest value; in short, he will be a trained man as regards the problems of the ceramic industries.

### Physical Training

The aim of the work in physical training is to bring the whole body to its normal condition, to acquire ease and precision in movement, and to develop the health and strength of the student.

**GYMNASIUM.** A new gymnasium, now under construction, is located on the east side of Kanakadea Creek. The building as planned comprises two sections, one to face the street, and a rear section, now complete, provides the basketball court and an indoor running track, together with bleachers to seat about 1000 people. The plans for the front section call for boys' and girls' locker rooms, a general gymnasium, girls' gymnasium, athletic offices, trophy room, small indoor field, jumping pits, and heating plant.

**ATHLETIC FIELD.** The Merrill athletic field embraces over four acres of level land. All local intercollegiate contests in football, baseball, and track athletics are held on this field. The field affords a running track (one-fifth of a mile). Appropriate apparatus for field sports is provided.

### Expenses

Matriculation .....	\$5 00
Graduation .....	10 00
<b>COLLEGE FEES per semester:</b>	
Tuition (10 to 18 hours) per semester* .....	125 00
Tuition, per hour (under 10 and over 18 hours), per semester ..	12 50
Medical and Infirmary, per semester .....	3 00
Reading Room .....	2 00
Athletics .....	10 00
College Paper (Fiat Lux) .....	1 25
<b>EXTRA FEES per semester, for the use of instruments, apparatus and laboratory materials:</b>	
Chemistry 1, 5 .....	8 00
Chemistry, 2, 3 .....	10 00
Drafting .....	2 00
Gymnasium (Freshmen, Sophomores) .....	2 00
Machine Shop .....	5 00
Physics 1b .....	5 00
Physics 4 .....	5 00
Surveying .....	5 00
Woodshop .....	8 00

\* Tuition free to residents of New York State.

**MISCELLANEOUS FEES AND DEPOSITS:**

Chemistry Breakage Deposit, Chemistry 1.....	\$10 00
Chemistry Breakage Deposit, Chemistry 2, 3, 4, 5.....	15 00
Room Deposit (all students in College dormitories).....	10 00
Special Examinations (final and mid-semester), each.....	5 00
Late Registration (all students not registering on Registration days, and all students who are absent from all classes on the first day of a semester).....	5 00

Students who register for more than eighteen hours will be charged seven dollars and fifty cents for each additional hour.

Students taking fewer than ten hours will be charged seven dollars and fifty cents for each hour.

Semester bills for college 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. Failure to comply with this regulation renders the student liable to suspension.

No tuition is charged to residents of New York State who are prepared to enter the regular courses, but no student is entitled to free tuition in any college class not forming part of a course in the School of Ceramics, nor are students registered in the college entitled to free tuition in the School of Ceramics in respect of any subject for which college credit is given.

**Rooms and Board**

Rooms and board, including fuel, can be obtained in private families from \$7 to \$8 per week. Board in clubs organized and managed by the students themselves varies from \$4.50 to \$8 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 \$450; and by exercising care upon \$500. An allowance of \$650 is comfortable.

Board, \$3.00 to \$6.00 per week.....	\$175 00 to \$250 00
Rooms .....	60 00 to 110 00
Laundry .....	20 00 to 30 00
Books .....	25 00 to 35 00
Class dues, etc.....	10 00 to 25 00
College tuition, incidentals and extras.....	275 00 to 325 00
(Tuition free to residents of New York State).....	

Total for year..... \$565 00 to \$725 00

**Self-Help**

Many of the graduates have been persons of very limited means who worked their way through college. While the school 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 should lengthen their term of study.

**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 at Easter, and a summer vacation of about thirteen weeks.

**Class Exercises**

The class period is one hour in length; in laboratory work, however, the class period is two hours. There are no classes on Saturday or Sunday.

**Unit of Credit**

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

The work of the 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.

### Absences.

The maximum number of absences allowed per hour credit per semester is three (3). That is, in a two-hour course, six (6) absences are allowed; in a three-hour course, nine (9); in a five-hour course, fifteen (15). Overcutting will reduce the student's grade to F.

### 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 at other times than those appointed for the class examinations.

## ADMISSION

Candidates for admission to the freshman class must be at least sixteen years of age and must present certificates of good moral character. The particular requirements for entrance are explained below. 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 must be offered.

### Entrance Requirements

**ENGLISH.** Three 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.** Four units. Latin grammar and composition; Caesar, four books of the *Gallic 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.** Two 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.** One unit. Biology, Botany, Physiology, Zoology, Physical Geography, Physics, or Chemistry. Any one may be offered.

**ELECTIVE.** Five units in addition to the above subjects. Candidates may substitute two units of science or one unit of science and one unit of advanced mathematics for two units of foreign language. Candidates for the degree in Ceramic Engineering should offer Solid Geometry and Intermediate Algebra.



## Summary

English .....	3 units
Mathematics .....	2 units
Foreign Languages .....	4 units
Science .....	1 unit
Elective .....	5 units

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

### Admission on Certificate

**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 they cover these requirements. (For description of subjects, see *Entrance Requirements*.)

**PRINCIPAL'S CERTIFICATE.** Certificates are also received from principals of preparatory or high schools outside of New York State, provided such schools are known to the faculty for thoroughness of instruction. Such certificate must specify, in connection with each subject, the extent to which it has been pursued, by giving the text-book used, the method of instruction, the amount of time given to it, the date of the final examination, the degree of the applicant's proficiency, and must clearly show that the student has met the requirements in every detail. The school furnishes blank forms for such certificates upon application of principals of approved schools. Principals of preparatory schools who desire to have their students admitted on certificate are invited to correspond with the director.

### 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.

## Conditioned Students

No student can enter the freshman class conditioned in any subject.

### Admission to Advanced Standing

Students from other schools, having a course equivalent to that of the New York State School, may enter at the point from which they take dismissal, upon presentation of satisfactory certificates of standing and character, including an honorable dismissal.

### Industrial Experience

Each candidate for a degree in Ceramic Engineering is required to spend two summer periods of ten weeks each, or the equivalent, in an approved industrial plant and to turn in a satisfactory report, together with a certifying letter from the person in charge of the work. For each summer period one hour credit will be given.

With the approval of the director, which should be obtained not later than the close of the Sophomore year, a candidate for a degree may offer a thesis in some branch of ceramic research. The title of the thesis must be chosen before November 1st of the Senior year and a typewritten copy of the completed work must be deposited with the director not later than May 1st next following.

### Graduation

Upon students who satisfactorily complete the course in Ceramic Engineering, Alfred University will confer the degree of Bachelor of Science (in Ceramic Engineering), and upon students who satisfactorily complete the course in Applied Art the degree of Bachelor of Science (in Applied Art).

## COURSES OF STUDY

### Course in Ceramic Engineering

First Year			
<i>First Semester</i>		<i>Second Semester</i>	
Mathematics 1.....	5	Mathematics 1.....	4
Chemistry 1.....	4	Chemistry 1.....	4
English 1.....	3	English 1.....	3
Ceramics 1.....	1	Ceramics 1.....	3
Drafting.....	3	Drafting.....	3
Physical Training.....	1	Physical Training.....	1
Ethics.....	1	Ethics.....	1
18		18	
Second Year			
<i>First Semester</i>		<i>Second Semester</i>	
Mathematics 3a.....	3	Mathematics 3b.....	3
Physics 1.....	5	Physics 1.....	4
Chemistry 2.....	4	Chemistry 3.....	4
Ceramics 2.....	3	Ceramics 2.....	2
Economics.....	2	Economics.....	2
Physical Training.....	1	Physical Training.....	1
18		18	
Third Year			
<i>First Semester</i>		<i>Second Semester</i>	
Mechanics.....	3	Mechanics.....	3
Chemistry 6.....	3	Chemistry 6.....	3
Ceramic Engineering 1.....	3	Ceramic Engineering 1.....	3
Geology.....	3	Mineralogy.....	3
Chemistry 4.....	3	Chemistry 5.....	3
Elective.....	3	Elective.....	3
18		18	
Fourth Year			
<i>First Semester</i>		<i>Second Semester</i>	
Ceramic Engineering 2.....	4	Ceramic Engineering 2.....	4
Physics 2.....	3	Power and Machinery.....	2
Power and Machinery.....	2	Professional English.....	2
Ceramic Calculations.....	2	Summer Practice.....	1
Summer Practice.....	1	Elective.....	3
Elective.....	6		
18		18	

The elective is to be chosen, with the consent of the Director, from the following subjects: Assembly, four hours; Chemistry 7, six hours; Chemistry 8, four hours; German or French, twelve hours; Introduction to Economics, six hours; Labor Problems, three hours; Music, six hours; Principles of Public Finance, three hours; Surveying, four hours; Thesis, four hours.

## Course in Applied Art

First Year			
<i>First Semester</i>		<i>Second Semester</i>	
Drawing 1, Studio Practice....	2	Drawing 1, Studio Practice....	2
Pottery Making 1.....	1	Pottery Making 1.....	1
Design 1, Lecture and Studio...	2	Design 1, Lecture and Studio...	2
Ceramics 1, Lecture.....	1	Ceramics 1, Lecture.....	1
English 1, English Composition and Rhetoric.....	3	English 1, English Composition and Rhetoric.....	3
Modern Language.....	3	Modern Language.....	3
Chemistry 1.....	3	Chemistry 1.....	3
Physical Training.....	1	Physical Training.....	1
Ethics 1.....	1	Ethics 1.....	1
17		17	
Second Year			
<i>First Semester</i>		<i>Second Semester</i>	
Drawing 2, Studio Practice....	2	Drawing 2, Studio Practice....	2
Pottery Making 2, Studio Practice	2	Pottery Making 2, Studio Practice	2
Design 2, Lecture and Studio...	2	Design 2, Lecture and Studio...	2
Ceramics 2, Lecture and Laboratory.....	3	Ceramics 2, Lecture and Laboratory.....	3
English 2.....	3	English 2.....	3
Modern Language.....	3	Modern Language.....	3
Physical Training.....	1	Physical Training.....	1
Elementary Psychology.....	2	Elementary Psychology.....	2
18		18	
Third Year			
<i>First Semester</i>		<i>Second Semester</i>	
Drawing 3, Studio Practice....	2	Drawing 3, Studio Practice....	2
Pottery Making 3, Studio Practice	3	Pottery Making 3, Studio Practice	3
Design 3, Lecture and Studio...	2	Design 3, Lecture and Studio...	2
Ceramic Craft 2, Lecture and Studio.....	2	Ceramic Craft 2, Lecture and Studio.....	2
Educational Psychology.....	3	Principles of Education.....	3
History of Western Europe....	3	History of Western Europe....	3
Ceramics 7, Laboratory.....	2	Ceramics 7, Laboratory.....	2
17		17	

Fourth Year

<i>First Semester</i>		<i>Second Semester</i>	
Drawing 4, Studio Practice.....	3	Drawing 4, Studio Practice.....	2
Pottery Making 4, Studio Practice	3	Pottery Making 4, Studio Practice	3
Design 4, Lecture and Studio...	2	Design 4, Lecture and Studio...	2
Ceramics 8, Thesis.....	2	Guild Management, Lectures and Studio	2
History of Art.....	2	Ceramics 8, Thesis.....	2
Methods of Education.....	3	History of Art.....	4
History of Education.....	2	Practice of Education.....	2
	17	History of Education.....	2
			17

DEPARTMENTS OF INSTRUCTION

Description of Courses

CERAMIC TECHNOLOGY

Professor Binns

1. Lectures on the origin, properties, and uses of clays and other ceramic materials. Types of ware and methods of manufacture. Elementary glaze and body composition. History of Ceramics.

Laboratory practice in the operations involved in manufacture. The preparation and use of forms, molds, and dies. Making saggers, jiggering, pressing, and casting pottery. Making brick and tile. The general use of the machine equipment.

First year. One hour lecture and two hours laboratory. *One hour.*

2. Lectures on the occurrence, classification, and identification of clays. The manufacture of all classes of ceramic products. The theory and practice of drying and burning. The compounding of clay mixtures, and the production and use of glazes and colors. The glaze formula.

Laboratory practice in clay testing. The measurement of the physical properties of clays and the compounding of bodies and glazes. Kiln firing.

Second year. Two hours lecture and four hours laboratory. *Three hours.*

3. Laboratory practice for art students. The production of form by molding. The preparation of glazes for decorative pottery. Technical problems.

Third year. Four hours laboratory. *Two hours.*

4. Thesis in applied art.

Fourth year. Four hours laboratory. *Two hours.*

## PROFESSIONAL ENGLISH

A course in the use of English in the Engineering profession. Technical descriptions and the writing of reports.

Fourth year. Two hours lecture and recitation. *Two hours.* II

## CERAMIC ENGINEERING

Professor Westendick

1. Lectures are given on the chemical, physical, and mineralogical changes which take place in clays, bodies, and glazes during their preparation, drying and burning. Details of different types of plants, such as brick, pottery, refractory, etc., are discussed.

Laboratory practice includes the testing of clays and other ceramic materials and the production of bodies, glazes, and completed wares.

Third year. Two hours lecture and four hours laboratory. *Three hours.*

2. The theory and practice of methods employed in enameling cast iron and steel. Laboratory exercises in production.

The making, calibration and use of various instruments; pyrometers, gauges and testing apparatus.

Fourth year. Two hours lecture and recitation and four hours laboratory. *Four hours.* I.

3. The application of general engineering principles to the ceramic industry. The topics studied include refractories, glass, lime, plasters and cements; drying, heat reactions and kiln construction.

The laboratory work consists of methods of testing and, so far as possible, methods of production.

Fourth year. Two hours lecture and recitation and four hours laboratory. *Four hours.* II.

**GEOLOGY.** A course in general geology especially arranged for the ceramic engineer. It deals with the development and the

features of the earth's surface, with special reference to the geology of ceramic materials.

Third year. Three hours lecture and recitation. *Three hours.* I.

**MINERALOGY.** This course includes an introduction to crystallography, microscopic mineralogy and the identification of minerals and rocks by inspection and simple tests.

Third year. Two hours lecture and one hour laboratory. *Three hours.* II.

## CERAMIC CALCULATIONS

Professor Westendick

Solution of chemical and physical problems involved in compounding ceramic mixtures including wet blending, and slip corrections. The solving of every day factory problems occurring in the manufacture of clay wares. Lecture and recitations.

Prerequisite, Mathematics 6 or equivalent. Fourth year. *Two hours.* I.

## POWER AND MACHINERY

The aim of this course is to familiarize the student with the installation, maintenance and repair of shop power and machinery. With this end in view, a study will be made of internal combustion engines, ceramic machinery and methods of power transmission. Under repair will come bearing removal, shaft straightening, belt lacing, valve grinding and such other operations as are necessary to the proper maintenance of a shop. Laboratory exercises will be carried on in which each student will be required to perform the different operations. During the last half of the second semester a study of the Strength of Materials will be taken up. This will include elastic and ultimate strength, general properties, moments for beams and columns, torsion of shafts, elastic deformities, reinforced concrete, combined stresses, and resilience. *Two hours.*

## CHEMISTRY

Professor Rice

1. **INORGANIC CHEMISTRY.** The fundamental principles of chemistry are taught by a systematic study of the non-metallic elements during the first semester, followed by a broadening of the student's knowledge by study of the metallic elements during the second half of the year. The laboratory work, in which the student is expected to demonstrate facts and principles for himself, follows closely upon class room discussion. Lectures and recitations, three periods; laboratory, two periods. Textbook, Deming, *General Chemistry*. *Four hours*.

2. **QUALITATIVE ANALYSIS.** The purpose of this course is not primarily, to teach the student to make analyses: it is intended in the classroom, to give a further and more thorough training in the fundamentals of chemistry and in the laboratory to acquire a better technique in the handling of apparatus and materials and to learn the chemistry of the metals. The writing of equations and the solution of problems is emphasized. The analysis of simple unknown solutions and salts is followed by the analysis of industrial products, alloys, minerals, glass, etc. Lectures and recitations, one period; laboratory, three periods. Textbooks, Stieglitz, *Qualitative Chemical Analysis*, Vol. I; Cornog and Vosburgh, *Introductory Qualitative Analysis*. Prerequisite, Chemistry I. *Four hours*. I.

3. **QUANTITATIVE ANALYSIS.** This course is devoted to volumetric and elementary gravimetric analysis. In the laboratory emphasis is placed upon integrity, accuracy and the development of a good analytical technique. In the classroom the principles of stoichiometry, law of mass action, solubility product, etc., are covered. Numerous problems are assigned. Lectures and recitations, one period; laboratory, three periods. Text book, Popoff, *Quantitative Analysis*. Prerequisite Chemistry 2. *Four hours*. II.

4. **QUANTITATIVE ANALYSIS.** This is an advanced course, covering the analysis of silicate rocks, clays, etc. Lectures and recitations, one period; laboratory two periods. Textbooks, Fales, *Inorganic Quantitative Analysis*; Hillebrand, *The Analysis of Silicate and Carbonate Rocks*. Prerequisite, Chemistry 3. *Three hours*. I.

5. **FUELS AND COMBUSTION.** The analysis of solid, liquid and gaseous fuels and their products of combustion is discussed in the class room and carried out in the laboratory. Industrial stoichiometry, covering combustion calculations on furnaces and kilns, heat losses, etc., is included in the course. Lectures and recitations, two periods; laboratory, one period. Textbooks, Parr, *Fuel, Gas, Water and Lubricants*; Lewis and Radasch, *Industrial Stoichiometry*. Prerequisite, Chemistry 3. *Three hours*. II.

6. **PHYSICAL CHEMISTRY.** The characteristics of chemical substances which determine their properties and reactions, such as the pressure-volume relations of gases, the properties of solutions, the equilibria and rate of chemical changes, heterogeneous equilibrium in terms of the phase rule, thermo-chemistry and colloidal chemistry are considered in this course. The student is required to solve a large number of problems pertaining to the subjects discussed. Lectures and recitations, three periods. Textbook, Washburn, *Principles of Physical Chemistry*. Prerequisite, Chemistry 3, Mathematics 3a and 3b and Physics 1a and 1b. *Three hours*. I and II.

## APPLIED ART

Miss Fosdick

Miss Nelson

Mr. Harder

Public and private schools are requiring well trained teachers of crafts. Although pottery is the craft in which the school offers exceptional facilities for production, a crafts course for the better understanding of color and design in Applied Art has been added

in the junior and senior years. This includes block printing and batik.

The electives allowed in the junior and senior years may be utilized in the department of education as required work for the teacher's professional certificate and in further study in college subjects, or they may be used in additional craft work.

### Drawing

1. Freehand perspective, value study.  
First year. Four hours studio. *Two hours.*
2. Composition, lettering.  
Second year. Four hours studio. *Two hours.*
3. Kanakadea drawings, pen and ink, charcoal.  
Third year. Four hours studio. *Two hours.*
4. Figure drawing.  
Fourth year. Two hours studio.  
Two hours. Public school art methods.  
Two hours. Practice teaching. *Three hours.*

### Pottery Making

1. The first semester is given over to a course in appreciation leading to discrimination in design for pottery. Building of pottery commences with the second semester, which includes glazing with hand ground glazes.  
First year. Three hours studio. *One hour.*
2. Continuation of building of pottery with elementary work on the wheel. Use of varied types of glazes in connection with laboratory work in glaze preparation and mold-making.  
Second year. Four hours studio. *Two hours.*
3. Processes of pottery decoration, slip treatment, underglaze and overglaze, modeling and incising. Kiln management and firing.  
Third year. Six hours studio. *Three hours.*
4. Advanced work in decorating and glazing. Advanced wheel work.  
Fourth year. Six hours studio. *Three hours.*

### Design

1. Design theory.  
First year. Four hours studio. *Two hours.*
2. Color theory.  
Second year. Six hours studio. *Two hours.*
3. Design and color applied to block printing and batik.  
Third year. Four hours studio. *Two hours.*
4. Thesis in applied design.  
Fourth year. Four hours studio. *Two hours.*

### Ceramic Craft

Special decorative processes for pottery, the making and renewal of equipment, and care of machinery.  
Third year. Four hours studio. *Two hours.*

### Guild Management

Production of pottery with special reference to commercial problems and economy of production. The problem of the sales room and private studio. Kiln management. Ceramic craft a prerequisite.

Fourth year. Four hours studio. *Two hours.*

### History of Art

Lectures and recitations illustrated with photographs, slides and casts on the history of Art and the appreciation of beauty.

### Modern Art

The beginnings of art as seen in the work of primitive peoples and of children. Egyptian architecture and decorative arts. The architecture and sculpture of Greece. Roman achievement in civic art. The great cathedrals and the decorative arts of the Middle Ages. The painting and sculpture of the Renaissance.

The work is done through lectures, supplementary reading and keeping of note books.

Fourth year. Two hours recitation. *Two hours.*

## DEPARTMENT OF INVESTIGATION AND RESEARCH

### Clay Testing

Professor Binns

The State School of Ceramics is fitted, and the experts in charge are qualified, for the professional examination and testing of clays for economic purposes. Such clays may be classified under the following heads:

- (a) Kaolin, white burning residual clay.
- (b) Kaolin, white burning, washed for market, used in the manufacture of pottery, porcelain, and paper.
- (c) Ball clay, white or cream burning, sedimentary clay of high plasticity, used in pottery manufacture.
- (d) Stone ware clay, gray or cream burning, more or less sandy in character, used in stoneware manufacture.
- (e) Fire clay, buff or white burning, refractory, used for manufacture of fire brick.
- (f) Brick clay including colored clays and shales, used for the manufacture of brick and tile of various qualities and descriptions.

For each of the above classes special tests are necessary and the charges made are proportionate to the work required.

A report upon each sample will be furnished and must be understood to refer only to the samples submitted unless the experts are instructed to examine the deposit and prepare their own samples, in which case special charges will be made. The report includes physical tests and chemical analysis where necessary.

Advice as to washing or other preparation of the clay is also given, together with an opinion as to the industry to which the material may be applied.

## Industrial Problems

Professor Binns

Professor Westendick

Assistant Professor Merritt

The problems incidental to the manufacture of clay wares are regularly investigated at the school. Manufacturers are invited to present questions for study. Persons resident within the State are entitled to reasonable services without charge.

# REGISTRATION OF STUDENTS 1927-1928

## SENIORS

NAME	RESIDENCE	COURSE
Ally, Abde	Hyderabad, India	Eng.
Brundige, Helen Bernese	Scotia	Art
Buhrmaster, Viola Caroline	Scotia	Art
Coleman, Beatrice Belle	Hion	Art
Collins, William George	New York City	Eng.
Devitt, Desmond Earl	Malta, Ill.	Eng.
Fulmer, Eugene William	Olean	Art
Holland, Dorothy Evelyn	Hempstead	Art
Luks, Daniel Wynkoop	Towaco, N. J.	Eng.
Saunders, Revere Hamilton	Belmont	Eng.
Saunders, Stanley Spring	Alfred	Art
Selkirk, Elizabeth Whiting	Albany	Eng.
Stolte, Norman Henry	Cleveland, O.	Art
Thorngate, Bruce Whitfield	Cherry Creek	Art
Utrich, Dorothy Elizabeth	Albany	Eng.
Williams, Francis Jesse	Elmira	Eng.

## JUNIORS

Burdett, Roy Francis	Hornell	Eng.
Call, John Lloyd	Buffalo	Eng.
Carpenter, Harold Frederick	Canisteo	Art
Claire, Ruth Evelyn	Alfred	Eng.
Fenner, Donald Olin	Coudersport, Pa.	Eng.
Fredericks, Dean Hayes	Flemington, Pa.	Eng.
French, Gordon Elmer	Rochester	Art
Gardner, Paul Vickers	Canisteo	Eng.
Gilder, Charles Louis	Dansville	Eng.
Gridley, Daniel Philo	Wellsville	Art
Hawley, Dorothy Adell	Rochester	Art
Henshaw, Doris May	Alfred	Art
Holmes, Lillian Wald	Alfred	Eng.
Hudse, Walter Thurston	Chester	Eng.
Humphrey, Ingraham	Lima	Eng.
Hyland, David Lee	Lima	Art
Koch, Evelyn Antoinette	Queens Village	Eng.
Lewis, Gordon Evans	Wellsboro, Pa.	Eng.
Lewis, William George	Watertown	Art
Love, Marian Winifred	Cuba	Art
Lyon, Ruth Virginia	Bradford, Pa.	Eng.
Mulroy, James Philip	Buffalo	Eng.
Ostrander, George William	Almond	Art
Post, Helen Margaret	Bloomfield, N. J.	Art
Potter, Florence Sully	Friendship	Art
Saunders, Milderena Lillian	Belmont	Eng.
Shardlow, Laurence Russel	North Bloomfield	Eng.
Sherman, Clark Lester	Little Valley	Eng.
Sisson, Verne Porter	Lima	Eng.
Smith, Kenneth Eugene	Scio	Eng.

NAME	RESIDENCE	COURSE
Stearns, Rhoda Isabel	Warsaw	Art
Thomas, Clarice Marie	Highwood, Conn.	Art
Tredennick, William Treloar	Johnstown, Pa.	Eng.
Tucker, Nathan Fred	Alfred	Eng.
Vores, Adelaide Pearce	New Haven, Conn.	Art
Wells, William Ward	Salamanca	Eng.
Williams, George LaRoutte	Cuba	Eng.
Williams, Leland Ellis	Hornell	Eng.
Willson, Herbert Smith	Addison	Eng.
Witter, Raymond Bawler	Alfred	Eng.

## SOPHOMORES

Armstrong, Leland Reuben	Alfred	Eng.
Baldwin, Everett Eldon	Lakemont	Eng.
Bassett, Robert Bliss	Alfred	Eng.
Burdick, Milton DeWitte	Alfred	Eng.
Chaire, Walton Irving	Alfred	Eng.
Fabianic, William Lewis	Ridgway, Pa.	Eng.
Greene, Fernie Ramona	Alfred	Art
Greene, Frances	Balboa Heights, Canal Zone	Art
Hallock, Dorothy Emma	Oneida	Art
Hill, George Wesley	Pittsford	Eng.
Hillmiller, John Karl	Salamanca	Eng.
Jaquiss, Gerard Johnston	Floral Park	Eng.
Karthauser, Harold Edwin	Greenwich, Conn.	Eng.
Kuld, Waldo Whitney	Lawrenceville, Pa.	Eng.
Langworthy, Jack Rainey	Orchard Park	Eng.
Lent, Olive Alberta	Canisteo	Art
Lynn, Don Carlisle	Smithton, Pa.	Eng.
McGraw, Jack Edgar	Arkport	Eng.
Marley, Ruth Irene	Hornell	Art
Martin, Paulina Mercia	Salamanca	Art
Mays, James Carter	Canisteo	Eng.
Mills, Harriette Janet	Akron	Art
Nielsen, John	Port Chester	Eng.
Olander, Elmer Eli	Jamestown	Eng.
Roberts, Clair Elmer	Scio	Eng.
Rogers, Frances Randolph	Daytona Beach, Fla.	Art
Sheffield, Mary Elsie	Angelica	Art
Smith, Robert Karl	Addison	Eng.
Spencer, Ernest Henry	Friendship	Eng.
Thomson, John Weston	Buffalo	Eng.
Titsworth, Alfred Alberti	Alfred	Art
Van Buren, Wesley Howard	Hempstead	Eng.
Wansley, Delos Herschel	Alfred Station	Eng.
Weisban, Theora Mae	Ellicattville	Art
Williams, John Elton	Hornell	Eng.
Wright, Smith Donald	Preble	Eng.
Young, William Hartzell	Hornell	Eng.
Zschlegner, Emil George, Jr.	Wellsville	Art



FRESHMEN

NAME	RESIDENCE	COURSE
Alford, John Edwin	Buffalo	Eng.
Allen, Mary Brown	Stamford, Conn.	Art
Atwood, Elwin Henry	Bridgewater, Mass.	Eng.
Bartlett, Edward Evans	Allentown	Eng.
Beach, Sterling Guy	Wellsville	Eng.
Beeton, Earl Everett	E. Rochester	Eng.
Bender, Miriam Lewis	Pleasantville	Art
Binneweg, Edward Cornelius	Lynbrook	Eng.
Bird, Kathryn Melissa	E. Rochester	Art
Bottum, William Marvin	Shortsville	Eng.
Breeman, Maria Andrea	Alfred	Art
Brennan, Beth Lee	Bouckville	Art
Brockett, Olive Zoe	Kenmore	Art
Brown, Alfred Stokes	Kenmore	Eng.
Bryant, Eugene Edward	Macedon	Eng.
Carr, John Wilbert	Punxsutawney, Pa.	Eng.
Case, John Leland	Port Jervis	Eng.
Caterina, Salvatore Francis	Niagara Falls	Eng.
Canger, Edward Hassel	Lackawanna	Eng.
Chamberlain, Katharine La Rouette	Belmont	Art
Charles, Orman Goodyear	Horseheads	Eng.
Clarke, William Lewis	Niagara Falls	Eng.
Coleman, Paul Easterbrooks	Almond	Eng.
Cook, John Richard	Corning	Eng.
Crandall, Garland Lynn	Alfred Station	Eng.
Ellison, Henry William	Waverly	Eng.
Gallup, John Lyman	Chatham	Eng.
Gilleran, George Thomas	Hornell	Eng.
Goodwin, Royce Harley	Alfred	Eng.
Green, Wilber Fisk	Horseheads	Eng.
Guild, Thelma Virginia	Bolivar	Art
Henning, William John	Ridgefield Park, N. J.	Eng.
Herritt, Thomas Grayden	Jersey Shore, Pa.	Eng.
Hill, Lee George	Allentown	Eng.
Hill, Paul Rowan	New York City	Eng.
Hyde, Lewis Eugene	Wellsville	Eng.
Keller, Roscoe Watson	Kenmore	Eng.
Kickham, John William	Granville	Eng.
Klem, Myrtle Anue	Hamilton	Art
Kuite, Joseph	Salamanca	Eng.
Lane, Kenneth C.	Friendship	Eng.
Leber, Roberta Naomi	West Nyack	Art
Lyon, Margaret Covert	Elmira	Art
Manieri, Theresa Marie Antoinette	Salamanca	Art
Mannhardt, Otto William	Rochester	Eng.
Maroney, Paul Anthony	Salamanca	Eng.
Messimer, LaVerne Allen	Manchester	Eng.
Monroe, Lloyd Irvin	Friendship	Eng.
Neiger, Frederick Albert	Ridgway, Pa.	Eng.
Owens, Carl Merritt	Watsontown, Pa.	Eng.

NAME	RESIDENCE	COURSE
Perry, Ada Eudora	Jordan	Art
Phelps, Marjorie Frances	Granville	Art
Post, Philip Bramwell	Alfred	Eng.
Regan, Richard Edward	Ridgefield Park, N. J.	Eng.
Reynolds, Grandon Gardner	Wellsville	Eng.
Robinson, Lester Leland	Manchester	Eng.
Rodger, Louis Sands	Rochester	Eng.
Sackett, Harry Nelson	Bolivar	Eng.
Shremp, Raymond Maxwell	Rochester, Pa.	Eng.
Staiman, Martin Gene	Brooklyn	Eng.
Stillman, Ellis Benjamin	Alfred	Eng.
Stortz, Avis	Warsaw	Art
Stuart, Elmer Maurice	Corning	Eng.
Swarthout, Betty Mary	Hornell	Art
Travis, Thurlow Talbot	Hornell	Eng.
Troxell, Deborah Jane	Bolivar	Art
Wahlm, Virginia Deems	Hornell	Art
White, William Frank	Massena	Eng.
Zaffke, Vincent John	Dansville	Eng.

Total	
Seniors	16
Juniors	40
Sophomores	38
Freshmen	69

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