

The New York State School of Clay-Working and Ceramics



ALFRED, NEW YORK

1923-1924

PUBLISHED BIMONTHLY BY ALFRED UNIVERSITY
OCTOBER, 1923

Entered January 25, 1902, as second-class matter
Post Office, Alfred, N. Y.

Under Act of Congress of July 16, 1894

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Calendar

September, 1923 — August, 1924

First Semester 1923-1924

Entrance Examinations.....	Tuesday.....	Sept. 18
Registration.....	Tues. and Wed.....	Sept. 18-19
Instruction begins.....	Thursday.....	Sept. 20
Armistice Day.....	Sunday.....	Nov. 11
Mid-semester grades.....	Friday.....	Nov. 16
Thanksgiving Recess begins.....	Wednesday evening..	Nov. 28
THANKSGIVING RECESS		
Instruction resumed.....	Monday morning.....	Dec. 3
Founders' Day.....	Wednesday.....	Dec. 5
Holiday Recess begins.....	Thursday evening....	Dec. 20
HOLIDAY RECESS		
Instruction resumed.....	Tuesday morning....	Jan. 8
Mid-year examinations begin.....	Monday.....	Jan. 28
Examinations end, semester ends.....	Friday evening.....	Feb. 1

Second Semester

Instruction begins.....	Tuesday.....	Feb. 5
Mid-semester grades.....	Thurs. and Fri.....	Mar. 27-28
Easter Recess begins.....	Tuesday evening....	April 15
EASTER RECESS		
Instruction resumed.....	Wednesday morning..	April 23
Memorial Day.....	Friday.....	May 30
Senior examinations begin.....	Monday.....	June 2
Senior examinations end.....	Wednesday.....	June 4
Final examinations begin.....	Thursday.....	June 5
Final examinations end.....	Friday.....	June 13
EIGHTY-SIXTH COMMENCEMENT		
Annual Sermon before Christian Association.....	Saturday morning....	June 7
Commencement play.....	Saturday evening....	June 7
Baccalaureate Sermon.....	Sunday evening.....	June 8
Alumni Association, Directors' meeting.....	Monday afternoon...	June 9
Annual Concert.....	Monday evening....	June 9
Class breakfasts and reunions.....	Tuesday morning....	June 10
Annual meeting of Trustees.....	Tuesday morning....	June 10
Annual meeting of Corporation.....	Tuesday afternoon..	June 10
Class-day Exercises.....	Tuesday afternoon..	June 10
Alumni Banquet.....	Tuesday evening....	June 10
Commencement Exercises.....	Wednesday morning..	June 11
Alumni Association, Public Session.....	Wednesday afternoon	June 11
President's Reception.....	Wednesday evening..	June 11

SUMMER VACATION

*Summer Session 1924

Session begins.....	Tuesday.....	July 1
Session ends.....	Thursday.....	Aug. 14

* Equivalent to one-third semester.

BOARD OF MANAGERS

(Appointed annually by the Trustees of Alfred University)

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Janitor and Machinist.

NEW YORK STATE SCHOOL OF CLAY- WORKING AND CERAMICS

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 Design and Applied Art and on the third floor a lecture room and a studio for advanced work.

The motive power is supplied by two Otto gas engines, of 36 and 8 horse power, respectively.

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.

Co-operation with New York State Manufacturers

The school desires to co-operate to the fullest extent possible with the Ceramic interests of the State and to that end a Short Course in Ceramic Engineering is given every year, consisting of lectures by eminent ceramists brought to the school for the course which lasts three or four days.

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.

The course in Applied Art is intended to fit the student for the designing and producing of artistic pottery.

Benefits of the School

The demand for trained clay-workers has grown to considerable proportions during the last few years, 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.

Students who conscientiously pursue the course in Applied Art will be able to design and make artistic pottery, preparing their own clays and compounding their own glazes, if necessary.

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. The gymnasium floor is in Alumni Hall. It is equipped with chest weights, dumb bells, wands, Indian clubs, horizontal and parallel bars, and mats. Dressing rooms with individual lockers, are provided.

ATHLETIC FIELD. The athletic field embraces over three 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-sixth of a mile). Appropriate apparatus for field sports is provided.

EXPENSES

Matriculation.....	\$5 00
Graduation.....	10 00
COLLEGE FEES per semester	
Tuition, per semester*.....	60 00
Reading Room.....	2 00
Athletics.....	5 00
College Paper (Fiat fax).....	1 25
EXTRA FEES per semester, for the use of instruments, apparatus and laboratory materials:	
Chemistry 1, 5.....	6 00
Chemistry 2, 3.....	8 00
Gymnasium (Freshman, Sophomores).....	1 00
Machine Shop.....	3 00
Physics 1b.....	3 00
Physics 4.....	2 00
Surveying.....	3 00
Woodshop.....	3 00
MISCELLANEOUS FEES AND DEPOSITS:	
Chemistry Breakage Deposit, Chemistry 1, 5.....	5 00
Chemistry Breakage Deposit, Chemistry 2, 3.....	10 00
Room Deposit (all students in College dormitories).....	5 00
Special Examinations, each.....	1 00
Late Registration (all students not registering on Registration days).....	2 00

Students who register for more than eighteen hours will be charged four dollars for each additional hour.

* Tuition free to residents of New York State.

Students taking fewer than eight hours will be charged three dollars 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 \$7.00 to \$8.00 per week. Board in clubs organized and managed by the students themselves varies from \$4.75 to \$6.00 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 \$400.00; and by exercising care, upon \$450.00. An allowance of \$550.00 is comfortable and \$650.00 is liberal.

Board, \$4.75 to \$8.00 per week.....	\$171 00	to	\$288 00
Rooms.....	44 00	to	110 00
Laundry.....	18 00	to	23 00
Books.....	20 00	to	35 00
Class dues, etc.....	5 00	to	20 00
College tuition, incidentals and extras.....	135 00	to	260 00
(Tuition free to residents of New York State).....			
Total for year.....	\$403 00	to	\$676 00

Self-Support

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 eighteen weeks each. There is a vacation at the holidays 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. Each student is expected to have at least sixteen hours per week, and may not register for more than seventeen with the following exceptions: (1) If a student has no standing less than B in the preceding term he may register for eighteen hours. (2) Students who have a grade of A in more than half their work may register for more than eighteen hours upon the approval of the faculty.

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 F, 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.

Unit of Credit

One class period per week for one semester is taken as the unit of credit and is called a semester hour. In each course one hundred and thirty-two semester hours are required.

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

Absences and Excuses

It is expected that no student will be absent from any class period except in case of necessity. Reasons for absence from classes are submitted to a committee of the faculty known as the Committee on Absences. All excuses are granted with the understanding that the work missed will be made up to the satisfaction of the instructor. Unexcused absences equal to the number of recitation periods per week will lower the grade one letter, and in excess of twice that number will lower the grade to F (failure). Two tardinesses count as one absence.

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. 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.

Each student must be able to pass an examination upon ten books selected from the list prescribed by the college entrance associations. The following ten are recommended: Shakespeare, *Julius Caesar*, and *The Merchant of Venice*; *The Sir Roger de Coverly Papers*; Goldsmith, *The Deserted Village*; Scott, *Ivanhoe*; Hawthorne, *The House of the Seven Gables*; Irving, *Sketch Book*; Ruskin, *Sesame and Lilies*; Lowell, *The Vision of Sir Launfal*; Longfellow, *Courtship of Miles Standish*.

In addition to the above a thorough study of each of the works named below is required. The examination will be upon subject matter, form, and structure.

Shakespeare, *Macbeth*; Milton, *L'Allegro, Il Penseroso, and Comus*, or Tennyson, *Idylls of the King*; Burke, *Speech on Conciliation with America*, Washington, *Farewell Address* and Webster, *Bunker Hill Oration*; Macaulay, *Life of Johnson*, or Carlyle, *Essay on Burns*.

FOREIGN LANGUAGES. 4 units. Latin grammar and composition; Caesar, four books of the *Gallie War*; Cicero, six orations; Vergil, 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 may be offered.

ELECTIVE. 5 units in addition to the above subjects. Candidates may substitute 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 day preceding Registration Day.

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.

Senior Thesis

There is required of each candidate for a degree a thesis, for which a credit of two hours in each semester of the Senior year is given. The title of the thesis must be chosen in the field of Ceramics not later than November 1, and must be approved by the director. The thesis shall embody the results

of actual independent research, and must be submitted for approval not later than May 1. A typewritten copy must be deposited with the Director.*

Graduation

While no student will be permitted to graduate with a smaller credit than one hundred and thirty-two semester hours, four full years of resident work will be required in either course. 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.

* Any student electing to work in the summer time at an approved manufacturing plant may be excused from a thesis and will receive due credit at the discretion of the Director.

COURSES OF STUDIES

Course in Ceramic Engineering

First Year

<i>First Semester</i>		<i>Second Semester</i>	
Algebra.....	5	Solid Geom., Trig.....	5
Chemistry 1.....	3	Chemistry 1.....	3
German or French.....	3	German or French.....	3
English 1.....	3	English 1.....	3
Ceramics 1.....	1	Ceramics 1.....	1
Physical Training.....	1	Physical Training.....	1
Sociology.....	1	Ethics.....	1
	17		17

Second Year

<i>First Semester</i>		<i>Second Semester</i>	
Calculus.....	3	Calculus.....	3
Physics 1a, 1b.....	5	Physics 1.....	5
Chemistry 2.....	3	Chemistry 2.....	3
German or French.....	2	German or French.....	2
Ceramics 2.....	3	Ceramics 2.....	3
Physical Training.....	1	Physical Training.....	1
	17		17

Third Year

<i>First Semester</i>		<i>Second Semester</i>	
Mechanics and App. Physics.....	3	Mechanics and App. Physics.....	3
Chemistry 3.....	3	Chemistry 3.....	3
Chemistry 6.....	3	Chemistry 6.....	3
Ceramics 3.....	3	Ceramics 3.....	3
Geology 1.....	2	Geology 3.....	2
Drafting.....	2	Drafting.....	2
	16		16

Fourth Year

<i>First Semester</i>		<i>Second Semester</i>	
Chemistry 5.....	3	Surveying.....	3
Ceramics 4.....	3	Mineralogy.....	3
Ceramics 6.....	4	Ceramics 5.....	4
Thesis.....	2	Thesis.....	2
Drafting.....	2	Drafting.....	2
Elective.....	2	Elective.....	2
	16		16

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, Eng. Composition and Rhetoric.....	3	English 1, Eng. 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 8.....	2	English 8.....	2
Modern Language.....	3	Modern Language.....	3
Physical Training.....	1	Physical Training.....	1
History of Art.....	2	History of Art.....	2
17		17	

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
Elective.....	3	Elective.....	3
Elective.....	2	Elective.....	2
Ceramics 7, Laboratory.....	2	Ceramics 7, Laboratory.....	2
16		16	

Fourth Year

<i>First Semester</i>		<i>Second Semester</i>	
Drawing 4, Studio Practice.....	2	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
Ceramic Guild Management, Lecture and Studio.....	2	Ceramic Guild Management, Lecture and Studio.....	2
Elective.....	3	Elective.....	3
Ceramics 8, Thesis.....	2	Ceramics 8, Thesis.....	2
16		16	

DEPARTMENTS OF INSTRUCTION

Description of Courses

CERAMICS

Professor Binns

Professor Shaw

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

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.

Professor Binns.

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.

Professor Binns.

3. Lectures on the winning and preparation of clays. The technology of the ceramic industries. The mineralogical,

chemical, and physical changes which take place in clays, bodies, and glazes during their preparation, drying, and burning. The theory and practice of pyrometry.

Laboratory practice in the production and application of slips, engobes, enamels, glazes, and colors. The production, decoration, and firing of finished wares.

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

Professor Shaw.

4. Recitations on the calculations involved in the mixing and blending of ceramic materials in bodies, glazes, and colors. The use of analyses. The designing of series for glaze study. Chemical and physical problems related to ceramic operations such as drying, burning, crushing, etc.

Fourth year, first semester. Three hours recitation. *Three hours.*

Professor Shaw.

5. Lectures on the raw materials, preparation, compounding and manufacture of the various types of glass and enamel. Laboratory practice in the production and testing of various types of glass and enamel, special emphasis being laid on the refractories used in these industries.

Fourth year. Two hours lecture and four hours laboratory.
Four hours.

Professor Shaw.

6. Lectures on the raw materials, preparation, compounding, and manufacture of refractories, lime, plaster, and cements. The theory of hydraulicity and the reactions involved in manufacture. Methods of testing.

Laboratory practice in the production and testing of refractories, lime, plaster, and cement and the study of their physical properties. The use of the electric furnace in the study of dehydration, lag curves, melting points, eutectics, and the viscosity of fused minerals and mineral mixtures.

Fourth year. Two hours lecture and four hours laboratory.
Four hours.

Professor Shaw.

7. Recitations and lectures on Mineralogy. Brief study of the use of the microscope and more detailed study of crystal forms and methods used in identification of minerals.

Laboratory and field work in study and identification of igneous and sedimentary rocks.

Fourth year, second semester. Two hours recitation, two hours laboratory. *Three hours.*

Professor Shaw.

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

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

Professor Binns.
Miss Fosdick.

8. Thesis.

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

Professor Binns.
Professor Shaw.

CHEMISTRY

Professor Radasch

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, two periods; laboratory, one period. Textbook, Norris, *Inorganic Chemistry*. *Three hours.*

2. QUALITATIVE ANALYSIS. This course serves to emphasize the principles involved in chemical analysis, to give the student practice in laboratory manipulation, and to broaden his knowledge of inorganic chemistry. Preliminary experiments

illustrate principles and give practice in writing chemical equations and are followed by the analysis of simple unknown solutions and salts and finally by the complete analysis of several industrial products such as alloys, pigments, minerals, ores, glass, enamels, etc. Lectures and recitations, one period; laboratory, two periods. Textbook, Noyes, *Qualitative Chemical Analysis*. Prerequisite, Chemistry 1. *Three hours.*

3. QUANTITATIVE ANALYSIS. The first semester is devoted to volumetric analysis and elementary gravimetric analysis. This work is regarded as preliminary training for the more advanced work of the second semester. The laboratory work includes the analysis of alkalis, ores, silicates, carbonate rocks, clays, and cements. In this course, accuracy, care, and integrity are emphasized as being necessary for successful analysis. Attention is also given to stoichiometry. Lectures and recitations, one period; laboratory, two periods. Textbooks, Talbot, *Quantitative Chemical Analysis*, Washington, *The Chemical Analysis of Rocks*. Prerequisite, Chemistry 2. *Three hours.*

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. These analyses are applied and interpreted in the calculation of heat balances on boiler-furnaces and kilns. Prerequisite, Chemistry 3. *Three hours. I.*

6. PHYSICAL CHEMISTRY. The general principles of chemistry 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, thermochemistry and colloidal chemistry are considered in this course. The student is required to solve a large number of problems pertaining to these subjects. Lectures and recitations, three periods. Textbook, Millard, *Physical Chemistry for Colleges*. Prerequisite, Chemistry 2, Mathematics 6, and Physics 1a and 1b. *Three hours.*

APPLIED ART

Miss Fosdick
Miss Nelson

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. Frechand perspective, drawing from cast.
First year. Four hours studio. *Two hours.*
2. Frechand perspective, mechanical drawing, composition.
Second year. Six hours studio. *Two hours.*
3. Lettering, sketching.
Third year. Four hours studio. *Two hours.*
4. Still life, sketching.
Fourth year. Four hours studio. *Two 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, under-glaze 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 and color theory.
First year. Four hours studio. *Two hours.*
2. Continuation of theory.
Second year. Six hours studio. *Two hours.*
3. Design and color applied to block printing, weaving 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.*

Honor Courses

Third and fourth year students complying with the requirements for Honor Courses stated in the catalog of Alfred College may do additional work in an Honor Course in pottery making.

History of Art

Lectures and recitations illustrated with photographs, slides and casts on the history of Art and the appreciation of beauty. 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 achievements in civic art. The great cathedrals and the decorative arts of the Middle Ages. The painting and sculpture of the Renaissance. Modern Art.

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

Third 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 stone ware 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 Shaw

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.