UNIVERSITY OF CINCINNATI BULLETIN

ANNOUNCEMENT OF THE

Graduate School of Arts and Sciences

1946-1947

PUBLISHED BY THE UNIVERSITY OF CINCINNATI
VAN WORMER ADMINISTRATION BUILDING
CINCINNATI 21, OHIO

s140b. American Literature of the Twentieth Century: Fiction and Poetry.— Mr. Kreider

s250. Research.— Departmental Staff

For further information, see the Summer Session Announcement.

GEOLOGY AND GEOGRAPHY

Head of Department: Professor J. L. Rich, Room 29, Old Tech Building

Professors Case, Barbour, Coulter; Associate Professors von Schlichten, Rittenhouse; Assistant Professors Caster†, ————; Acting Assistant Professor Cross; Instructor ————

This Department offers work in geology leading to the degrees of Master of Arts, Master of Science, and Doctor of Philosophy, and work in geography leading to the degree of Master of Arts.

Not all students admitted to graduate courses are accepted as candidates for degrees. Personal acquaintance and preliminary examinations must first determine their aptitude for self-directed effort. With an adequate basis of undergraduate study it may be possible to finish the work for a master's degree in one year, but the requirement cannot be stated in terms of time or credits.

The thesis required for the master's degree may represent either original research or a compilation and analysis of the literature on the chosen subject, of such a nature as to demonstrate the student's ability to sum up existing knowledge and to organize and express it in an approved manner.

For Graduate and Advanced Undergraduate Students

‡107. Mineralogy.—Tu., Th., 10:30-11:30; M., 1:10-4:00. Lectures and laboratory. Three credit hours each semester. 34 Old Tech.
Mr. von Schlichten

‡108. Invertebrate Paleontology.—Tu., Th., 11:30-12:30; F., 1:10-4:00; and one laboratory to be arranged. Lectures, laboratory, and conferences. Four credit hours each semester. 38 Old Tech. Mr. Cross

A systematic survey of the important groups of invertebrate fossils with special emphasis on their zoological character and importance as index fossils.

‡109. Historical Geology.—Tu., Th., 8:30-9:30; S., 8:30-10:30; and one laboratory to be arranged. Four credit hours each semester. 38 Old Tech.
Mr. Cross

The development of the earth and its life, with particular emphasis on the geologic history of North America.

†Absent on leave.

‡Supplementary work is required of graduate students electing these courses.

111b. Principles of Geomorphology.—Tu., Th., 10:30-11:30; F., 1:10-4:00. Three credit hours. 37 Old Tech. Mr. Barbour

The interpretation of landscapes, especially as governed by geologic conditions and climate. Reading of topographic maps and aerial photographs.

117. Physiography of North America.—M., 1:10-4:00, or at hours adjusted to schedules of class. Three credit hours each semester. 37 Old Tech. Mr. Barbour

First semester: Eastern North America. Second semester: Western North America. Adequately qualified students may enter in February with the instructor's permission. Prerequisite: At least one course in elementary geology.

***121b, *122b, *123b. Geologic Demonstration Trips.**—Three credit hours. Mr. Rich

A two-weeks' field excursion, immediately after spring examinations and before summer school; generally in the Appalachian highland. Conferences once a week during the following semester, and the preparation of a comprehensive report to be submitted at the end of the first semester. The three numbers designate different routes followed in successive years.

125a. Structural Geology.—M., W., 10:30-11:30; W., 1:10-4:00 and three additional hours of laboratory to be arranged. Four credit hours. 32 Old Tech. Mr. Rich

Principles of rock deformation; geologic measurements, applications of descriptive geometry, methods of determination of structure in the field, including practice in field work.

Courses 125a and 226b are given once in two years, beginning in September of the even-numbered years and alternating with Course 256.

130b. Interpretation of Aerial Photographs.—Lectures and laboratory. Hours to be arranged. Three credit hours. 37 Old Tech. Mr. Rich

The geologic and geographic interpretation of aerial photographs, and their use in mapping.

***148a. Common Minerals and Rocks.**—Tu., Th., 10:30-11:30; Th., 1:10-4:00. Three credit hours. 32 Old Tech. Mr. ————

Common minerals and rocks and their mode of occurrence. Identification by means of hand lens.

157a. Sedimentation.—Tu., Th., 9:30-10:30; F., 8:30-11:30. Lectures and laboratory. Three credit hours. 34 Old Tech. Mr. Rittenhouse

Factors influencing the supply, transportation, and deposition of sediments.

170. Seminar.—Th., 4:10.

Expected of all advanced students in geology and geography.

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*Supplementary work is required of graduate students electing these courses.

*161a. **Geography of South America.**—M., W., F., 11:30-12:30. Three credit hours. 30 Old Tech. Mr. Case

The natural regions and political divisions are studied with regard to the social, political, and economic developments as related to geographic conditions.

*163b. **Geography of Europe.**—Tu., Th., S., 9:30-10:30. Three credit hours. 26 Old Tech. Mr. ————

The natural regions and political divisions are studied with regard to the social, political, and economic developments as related to geographic conditions.

*164a. **Geography of Asia.**—M., W., F., 9:30-10:30. Three credit hours. 26 Old Tech. Mr. Coulter

A regional study of eastern Asia with emphasis on the culture of the people and their ways of earning a living.

*166b. **Economic Geography and International Trade.**—M., W., F., 0-12:30. Three credit hours. 50 Old Tech. Mr. Case

A study of the distribution of the more important raw materials, of industry, and of the principles of world trade.

*167. **Geography of North America.**—M., W., F., 2:10-3:00. Three credit hours each semester. 37 Old Tech. Mr. Case

The natural regions of North America; present economic development and future possibilities as related to climate, relief, and resources.

*169a. **Meteorology.**—Tu., Th., S., 10:30-11:30. Three credit hours. 26 Old Tech. Mr. ————

The basic physical laws pertaining to the atmosphere, and their application to observed weather phenomena.

172b. **Climatology.**—Tu., Th., S., 10:30-11:30. Three credit hours. 26 Old Tech. Mr. ————

The major climatic regions of the world. Description, explanation, and the distribution of each type.

Primarily for Graduate Students

212. **Petrography.**—M., W., 9:30-10:30; M., 1:10-4:00, and three additional hours of laboratory to be arranged. Four credit hours each semester. 32 Old Tech. Mr. von Schlichten

Principles of crystal optics. Rocks in thin sections; qualitative and quantitative classification.

213. **Advanced Megascopic Paleontology.**—Hours to be arranged. Three credit hours each semester. 38 Old Tech. Mr. Cross

*Supplementary work is required of graduate students electing these courses.

226b. **Metamorphism.**—M., W., 10:30-11:30; W., 1:10-4:00, and three additional hours of laboratory to be arranged. Four credit hours. 32 Old Tech. Mr. Rittenhouse

A study of the changes produced in rocks through weathering and metamorphism, including laboratory practice in the microscopic study of metamorphic rocks.

Courses 125a and 226b are given once in two years beginning in September of the even-numbered years and alternating with Course 256, Economic Geology.

251b. **Petrology of Igneous Rocks.**—Hours to be arranged. Three credit hours. 32 Old Tech. Mr. von Schlichten

The crystallization and differentiation of igneous magmas interpreted from equilibrium diagrams and field relations.

This course is given once in two years, alternating with Course 249b, Advanced Crystallography.

257b. **Methods of Sedimentary Analysis.**—Tu., 9:30-10:30, and two laboratory periods to be arranged. Three credit hours. 34 Old Tech. Mr. Rittenhouse

Lectures on, and practice in, the most useful methods of sedimentary analysis.

271. **Individual Work in Geology.**— Geology Staff

Credit depends on amount of work done. May be entered either semester.

273. **Field Research in Geology.**—

Summer work in the field under direction of the staff. One to six credit hours.

275. **Individual Work in Geography.**— Geography Staff

Credit depends on amount of work done. May be entered either semester.

Courses Omitted in 1946-1947

The following courses, offered in alternate years or at longer intervals, will not be given in 1946-1947: 110a, Ancient Life: Animals of the Past; 115, Stratigraphy; 118, World Physiography; 152b, Glacial Geology; 162b, Geography of Africa and Australia; 165a, International Struggle for Raw Materials; s167, Geography of North America; 168b, Political Geography; 216, Advanced Physiography of the United States; 249b, Advanced Crystallography; 256, Economic Geology.

Courses Offered in the Summer Session of 1946

s163b. **Geography of Europe.**— Mr. ————

For further information, see the Summer Session Announcement.

UNIVERSITY OF CINCINNATI BULLETIN

ANNOUNCEMENT OF THE

McMICKEN COLLEGE OF LIBERAL ARTS

1 9 4 6

PUBLISHED BY THE UNIVERSITY OF CINCINNATI
VAN WORMER ADMINISTRATION BUILDING
CINCINNATI 21, OHIO

FINE ARTS

Associate Professor Coops (Woman's Building); Lecturer Adams (Art Museum)

1. (3, 3) **Introduction to Art.**—T 3:30-5:00; S 9:30-11:00. The Saturday meeting will be held at the Art Museum; the Tuesday meeting, on the University campus. A study of the principles underlying the arts of sculpture and painting, and their historic implications, with especial reference to the collections of the art museums of Cincinnati; collateral reading. Mr. Adams

2. (3, 3) **Music Appreciation.**—M W 1:10-2:30. 101 Wilson. General approaches to music and study of musical form and expression; trends in musical art; selected musical literature. Miss Coops

For statements regarding credit for work in the Art Academy of Cincinnati' the Cincinnati Conservatory of Music, and the College of Music of Cincinnati, see page 30.

GEOLOGY AND GEOGRAPHY

rofessors Rich (Head of Department, 29 Old Tech), Case (25 Old Tech), Barbour (508 Library), Coulter (8 Old Tech); Associate Professors von Schlichten (33 Old Tech), Rittenhouse (31 Old Tech); Assistant Professors Caster*, ————; Acting Assistant Professor Cross (5 Old Tech); Instructors ————, ————; Museum Curator ————

Fields of concentration, leading to the degree of B.A. or B.S., are offered in geology and in geography. The beginning course in Geology (Geology 1) is planned as a broad cultural survey of the earth and its history—the processes which shape its surface and mold its landscapes; minerals and rocks; some of the more important mineral resources; and the history of development of life as revealed by the fossil record. It is also the basic course preliminary to the more advanced courses in the Department.

The beginning semester of geography (Geography 60R a, b) deals with the basic principles of location, topography, and climate which are necessary for all further studies in that field. On its completion, the student is permitted to enter any of the other courses in geography except Geography 75. For students desiring only a single year of geography it is recommended, though not required, that 60R a, b be followed by 60b for a well-rounded survey of the geography of the world as a whole.

*Absent on leave.

A student wishing to major in geology must present Geology 1, including laboratory, or its equivalent. A student wishing to major in geography must present Geography 60a or Rb or its equivalent. Suggested sequences of courses following Geology 1 are:

(a) For those interested in mineralogy and petrography: 7, 48a, 12;

(b) For those interested in historical geology and paleontology: 9, 8;

(c) For those interested in geomorphology: 48a, 11, 17, 30.

Among the courses, outside the Department, recommended to students who will concentrate in geology are the following (preferences depending in part on fields of concentration): Chemistry 1; Physics 1; Zoology 1, 5, and 7; Botany 1, 22, 33, 52, 21; Geography 60 or 501; mathematics through calculus; Astronomy 1, 2; German 1, 2; Economics 1; Philosophy 2.

Among the courses, outside the Department, recommended to students who will concentrate in geography are the following: Geology 1; History 1 or 10; Economics 1, 24; Political Science 12; Botany 1, 22, 33, 52, 21; Sociology 3, 5, 20.

Five-year Co-ordinated Program in Geology.—Students looking toward a *professional career* in geology are urged to follow a special co-ordinated program (described on page 29) especially designed to meet their needs, particularly if they intend to seek work involving applications of geology to the search for oil and gas, to mining, or to engineering. In this program, a student receives training in geology, the fundamentals of mathematics through calculus, chemistry through quantitative analysis, physics, mechanics, mechanical drawing, and surveying. Some of the work will be chosen from the "Degree" courses in engineering offered by the Evening College. All courses have been so scheduled as to provide a logical sequence of subjects and produce a uniformly distributed load. A certain latitude of choice is possible, but changes should be made only after consultation with the Head of the Department of Geology. On the satisfactory completion of four years' work, the student will receive the degree of *Bachelor of Science in Geology*, and after an additional year of successful study in the Graduate School he will receive the degree of Master of Science. (See also page 29). Students contemplating entering this course should consult in advance the Head of the Department of Geology and Geography who serves as their adviser throughout the course.

Geology

1. (3, 3) Introduction to Earth Sciences.—M W F 8:30. 6 Old Tech. This course is designed primarily for beginners. It is prerequisite to all other geology courses except Courses 7 and 10. It is not required for any geography courses, but is required of geography majors. Mr. Rich

(2, 2) Laboratory.—24, 26 Old Tech.

Sec. I: M W 1:10-4:00. Mr. Rich and assistants

Secs. II and III: T Th 1:10-4:00. Mr. Rich and assistants

With the permission of the instructor, students who do not offer geology in fulfillment of the science requirement may omit the laboratory course.

7. (3, 3) Mineralogy.—T Th 10:30; M 1:10-4:00. 34 Old Tech. Prerequisite: High-school or elementary college chemistry. Mr. von Schlichten

8. (4, 4) Invertebrate Paleontology.—T Th 11:30; F 1:10-4:00; and one laboratory to be arranged. 38 Old Tech. A systematic survey of the important groups of invertebrate fossils with special emphasis on their zoological character and importance as index fossils. Prerequisites: Geology 1 or a course in biology, zoology, or botany. Mr. Cross

9. (4, 4) Historical Geology.—T Th 8:30; S 8:30-10:30 and one laboratory to be arranged. 38 Old Tech. The development of the earth and its life, with particular emphasis on the geologic history of North America. Prerequisite: Geology 1 or equivalent. Mr. Cross

11b. (3) Principles of Geomorphology.—T Th 10:30; F 1:10-4:00. 37 Old Tech. The interpretation of landscapes, especially as governed by geologic conditions and climate. Reading of topographic maps and aerial photographs. Prerequisite: Geology 1 or equivalent. Mr. Barbour

12. (4, 4) Petrography.—M W 9:30; M 1:10-4:00 and three additional hours of laboratory to be arranged. 32 Old Tech. Principles of crystal optics. Rocks in thin sections; qualitative and quantitative classification. Prerequisite: Geology 7 or equivalent. Mr. von Schlichten

13. (3, 3) Advanced Megascopic Paleontology.—Three hours a week to be arranged. 38 Old Tech. Prerequisite: Geology 8 or a course in zoology. By permission of the instructor. Mr. Cross

17. (3, 3) Physiography of North America.—M 1:10-4:00, or at hours to be arranged. 37 Old Tech. First semester: Eastern North America. Second semester: Western North America. May be entered in February with instructor's permission. Prerequisite: Geology 1 or its equivalent. Mr. Barbour

21b, 22b, 23b. (3) Geologic Demonstration Trips.—A two-week field excursion, immediately after spring examinations and before summer school; generally in the Appalachian highland. Conferences once a week during the following semester and the preparation of a comprehensive report to be submitted at the end of first semester. Special work required for graduate credit. The three numbers designate different routes followed in successive years. Prerequisite: Geology 1 or equivalent. Mr. Rich

25a. (4) Structural Geology.—M W 10:30; W 1:10-4:00 and three additional hours of laboratory to be arranged. 32 Old Tech. Principles of rock deformation; geologic measurements; applications of descriptive geometry; methods of determination of structures in the field, including practice in field work. This course is given once in two years, beginning in September of the even-numbered years. Prerequisite: Geology 1 or equivalent. Mr. Rich

26b. (4) Metamorphism.—M W 10:30; W 1:10-4:00 and three additional hours of laboratory to be arranged. 32 Old Tech. A study of the changes produced in rocks through weathering and metamorphism, including laboratory practice in the microscopic study of metamorphic rocks. This course is given once in two years, beginning in February of the odd-numbered years. Prerequisite: Course 12 or equivalent. Mr. Rittenhouse

30b. (3) Interpretation of Aerial Photographs.—Lectures and laboratory. Hours to be arranged. 37 Old Tech. The geologic and geographic interpretation of aerial photographs, and their use in mapping. Prerequisite: Course 1 or equivalent. Mr. Rich

48a. (3) Common Minerals and Rocks.—T Th 10:30; Th 1:10-4:00. 32 Old Tech. Common minerals and rocks and their mode of occurrence. Identification by means of hand lens. Primarily a cultural study for non-professional students. Prerequisite: Geology 1. Mr. ————

51b. (3) Petrology of Igneous Rocks.—Hours to be arranged. 32 Old Tech. The crystallization and differentiation of igneous magmas interpreted from equilibrium diagrams and field relations. This course is given once in two years, alternating with Course 49b. Prerequisite: Geology 12 or equivalent. Mr. von Schlichten

57a. (3) Sedimentation.—Lectures and laboratory. T Th 9:30; F 8:30-11:20. 34 Old Tech. Factors influencing the supply, transportation, and deposition of sediments. Prerequisite: Geology 1 or equivalent. Mr. Rittenhouse

57b. (3) Methods of Sedimentary Analysis.—Tu 9:30 and two laboratory periods to be arranged. 34 Old Tech. Lectures on, and practice in, the most useful methods of sedimentary analysis. Prerequisite: Geology 12 or equivalent. Mr. Rittenhouse

50. (3, 3) Readings for Seniors.—Required of all seniors majoring in geology; not open to other students.

70. Seminar.—Th 4:10. Expected of all majors in geology and geography.

71. Individual Work in Geology.—Credit depends on amount of work done. May be entered either semester. Geology Staff

Omitted during 1946-1947: 2a, Geology of Mineral Resources; 5b, Topographic Mapping; 6, Geology of Cincinnati; 10a, Ancient Life: Animals of the Past; 15, Stratigraphy: Principles and Regional; 16, Advanced Physiography of the United States; 18, World Physiography; 49b, Advanced Crystallography; 52b, Glacial Geology; 56, Economic Geology.

Geography

The following year-courses may be entered in February by permission of the instructor: 67, 75.