

GEOL 101: OPTICAL MINERALOGY

In Workflow

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Approval Path

1. Fri, 11 Oct 2019 20:01:28 GMT
Brian Hausback (hausback): Approved for GEOL Committee Chair
2. Fri, 11 Oct 2019 20:37:16 GMT
Kevin Cornwell (cornwell): Approved for GEOL Chair
3. Mon, 21 Oct 2019 22:30:46 GMT
Thomas Krabacher (tsk): Approved for NSM College Committee Chair
4. Wed, 23 Oct 2019 18:01:06 GMT
Shannon Datwyler (datwyler): Approved for NSM Dean

Date Submitted: Fri, 11 Oct 2019 19:56:54 GMT

Viewing: GEOL 101 : Optical Mineralogy

Last edit: Mon, 21 Oct 2019 22:30:33 GMT

Changes proposed by: Brian Hausback (101033396)

Contact(s):

Name (First Last)	Email	Phone 999-999-9999
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Catalog Title:

Optical Mineralogy

Class Schedule Title:

Optical Mineralogy

Academic Group: (College)

NSM - Natural Sciences & Mathematics

Academic Organization: (Department)

Geology

Will this course be offered through the College of Continuing Education (CCE)?

No

Catalog Year Effective:

Fall 2020 (2020/2021 Catalog)

Subject Area: (prefix)

GEOL - Geology

Catalog Number: (course number)

101

Course ID: (For administrative use only.)

190118

Units:

2

Changes to a course's units impact any related programs. As a result, a corresponding change must also be submitted for those programs

In what term(s) will this course typically be offered?

Fall, Spring

Does this course require a room for its final exam?

Yes, final exam requires a room

Does this course replace an existing experimental course?

No

This course complies with the credit hour policy:

Yes

Justification for course proposal:

This is a new course for the BS Geology degree program. The content of the course was previously part of the Geology 100 Mineralogy course that has been reformed into the new Earth Materials - Rocks and Minerals course.

Course Description: (Not to exceed 80 words and language should conform to catalog copy.)

Introduction to advanced mineral identification by physical and optical properties. Techniques and theory of optical mineral analysis and crystallography.

Lecture 1 hour; laboratory 3 hours.

Are one or more field trips required with this course?

No

Fee Course?

No

Is this course designated as Service Learning?

No

Does this course require safety training?

No

Does this course require personal protective equipment (PPE)?

No

Does this course have prerequisites?

Yes

Prerequisite:

Prerequisite: CHEM 1A, GEOL 5 or GEOL 10 + GEO 10L, GEOL 100 (GEOL 100 can be taken concurrently)

Prerequisites Enforced at Registration?

Yes

Does this course have corequisites?

No

Graded:

Letter

Approval required for enrollment?

No Approval Required

Course Component(s) and Classification(s):

Laboratory

Lecture

Laboratory Classification

CS#16 - Science Laboratory (K-factor=2 WTU per unit)

Laboratory Units

1

Lecture Classification

CS#02 - Lecture/Discussion (K-factor=1WTU per unit)

Lecture Units

1

Is this a paired course?

No

Is this course crosslisted?

No

Can this course be repeated for credit?

No

Can the course be taken for credit more than once during the same term?

No

Description of the Expected Learning Outcomes: Describe outcomes using the following format: "Students will be able to: 1), 2), etc."

1. reliably identify minerals in hand sample using physical properties
2. apply a basic understanding of optics theory to identifying minerals in thin section
3. report the chemical make-up of rock-forming minerals
4. relate chemical variability in minerals to variability in physical and optical properties
5. differentiate crystal systems based on external symmetry
6. relate a mineral's crystalline structure and symmetry to its physical and optical properties
7. analyze the relationship between chemical bonds in minerals and physical properties such as optical characteristics, hardness, melting point, electrical conductivity, and cleavage

Attach a list of the required/recommended course readings and activities:

Geology 101 Text and Activities.docx

Assessment Strategies: A description of the assessment strategies (e.g., portfolios, examinations, performances, pre-and post-tests, conferences with students, student papers) which will be used by the instructor to determine the extent to which students have achieved the learning outcomes noted above.

Lab assignments: (ELO 1-7)
 Quizzes (ELO 1-7)
 Lecture exams: (ELO 3, 4, 6)
 Lab exams: (ELO 1, 2, 5, 7)

Is this course required in a degree program (major, minor, graduate degree, certificate?)

Yes

Has a corresponding Program Change been submitted to Workflow?

Yes

Identify the program(s) in which this course is required:

Programs:

BS in Geology

Does the proposed change or addition cause a significant increase in the use of College or University resources (lab room, computer)?

No

Will there be any departments affected by this proposed course?

No

I/we as the author(s) of this course proposal agree to provide a new or updated accessibility checklist to the Dean's office prior to the semester when this course is taught utilizing the changes proposed here.

I/we agree

University Learning Goals

Undergraduate Learning Goals:

Competence in the disciplines

Knowledge of human cultures and the physical and natural world

Intellectual and practical skills

Is this course required as part of a teaching credential program, a single subject, or multiple subject waiver program (e.g., Liberal Studies, Biology) or other school personnel preparation program (e.g., School of Nursing)?

No

GE Course and GE Goal(s)

Is this a General Education (GE) course or is it being considered for GE?

No

Please attach any additional files not requested above:

G101SyllabusProposal_v4.docx

Key: 9179