MEMORANDUM

TO: Jayanth Banavar  
    Dean, College of Computer, Mathematical, & Natural Sciences

FROM: Elizabeth Beise  
      Associate Provost for Academic Planning and Programs

SUBJECT: Proposal to Modify the Minor in Surficial Geology (PCC log no. 13066)

The proposal to modify the Minor in Surficial Geology has been administratively approved. A copy of the approved proposal is attached.

The change is effective Fall 2014. Please ensure that the change is fully described in the Undergraduate Catalog and in all relevant descriptive materials.

MDC/

Enclosure

cc: Marilee Lindemann, Chair, Senate PCC Committee  
    Barbara Gill, Office of Student Financial Aid  
    Reka Montfort, University Senate  
    Erin Howard, Division of Information Technology  
    Pam Phillips, Institutional Research, Planning & Assessment  
    Anne Turkos, University Archives  
    Linda Yokoi, Office of the Registrar  
    Doug Roberts, Undergraduate Studies  
    Roberta Rudnick, Department of Geology
This is a proposal for the modification of the minor in Surficial Geology. See attached.

To bring Geology’s minor in Surficial Geology up to date by inclusion of recently developed curriculum.

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APPROVAL SIGNATURES

1. Department Committee Chair

2. Department Chair

3. College/School PCC Chair

4. Dean

5. Dean of the Graduate School (if required)

6. Chair, Senate PCC

7. Chair of Senate

8. Vice President for Academic Affairs & Provost

DATE

9/18/13

9/18/13

2/14/14

5/7/2014

VPAAP Rev. 3/1/04
Proposal for changes to the Minor in Surficial Geology

1. This is a proposal to change an existing minor.

2. Catalog Description is unchanged.

Courses currently required for the minor:

Required:

One of the following:
- GEOL 100/110 Physical Geology/Physical Geology Lab (4)
- GEOL 120/110 Environmental Geology/Physical Geology Lab (4)
- GEOL 123 Causes and Implications of Global Change (3)
- GEOL 340 Geomorphology (4)

Plus two from:

- GEOL 342 Sedimentation and Stratigraphy (4)
- GEOL 451 Groundwater (3)
- GEOL 452 Watershed and Wetland Hydrology (3)
- GEOL 331 Principles of Paleontology (4)
- GEOL 499 Special Problems in Geology (3)

Proposed courses for the revised minor (new/changed requirements are boldfaced):

Required:

One of the following:
- GEOL 100/110 Physical Geology/Physical Geology (4)
- GEOL 120/110 Environmental Geology/Physical Geology Lab (4)
- GEOL 123 Causes and Implications of Global Change (3)
- GEOL 340 Geomorphology (4)

Plus two from:

- GEOL 331 Principles of Paleontology (4)
- GEOL 342 Sedimentation and Stratigraphy (4)
- GEOL444 Low-Temperature Geochemistry (4)
- GEOL435 Environmental Geochemistry (3) – Not yet through VPAC
- GEOL 437 Global Climate Change – Past and Present (3)

One of the following:
- GEOL 451 Groundwater (3)
- GEOL 452 Watershed and wetlands hydrology (3)
- GEOL 499 Special Problems in Geology (3)

Geology’s existing minor in Surficial Geology was developed in 2004 when the existing citation in this field was converted into a minor. This minor emphasizes Earth surface and
environmental processes. Targets students in environmental sciences and related fields seeking general geological background. Since 2008, however, Geology has hired several new faculty members who have brought in new expertise and significantly increased its range of course offerings. We now propose revisions to four of our minors in order to bring them up to date with our current curriculum resources.

Specific changes to the Surficial Geology minor include:

- The replacement of separate elective options for GEOL451 – Groundwater, and GEOL452 – Watershed and wetlands hydrology with a single elective option for either of these courses.

- The inclusion of GEOL444 – Low-Temperature Geochemistry, GEOL437 – Global Climate Change Past and Present, and GEOL435 – Environmental Geochemistry, in the list of electives.

The proposed changes to the elective list reflect two factors: First, in the current curriculum, a student might select as electives both GEOL451 and GEOL452 – courses that address the flow of water across or beneath Earth’s surface. Although hydrogeology is an important element in the study of Earth surface processes, we do not feel that it should be allowed to dominate a minor’s choice of electives, especially considering that a separate minor in Hydrology is available. We therefore propose that a student be allowed to count only one of these toward the minor. Second, we propose the inclusion of relevant courses in the geochemistry of Earth surface processes (GEOL444 and GEOL435) and environmental evolution (GEOL437) that have been developed or significantly modified since the minor was created. The proposed changes do not alter that course load or general prerequisites needed to complete the minor.