

College of Liberal Arts & Sciences
Committee on Curricula & Courses
Minutes of the meeting of 14 October 2008
[revised 23 October; not yet approved]

Chair John Manning called the meeting to order in Room 162 of the Thomas Dodd Research center at 3:31 p.m., 14 October 2008.

Present: Bayulgen, Oksan (POLS); Breen, Margaret (WS); Caner, Dan (HIST); Clark, Austen (PHIL); Crespi, Jean (GEOSCI); Cromley, Robert (GEOG); Gajerski, Jon (LING); Gallo, Bob (PNB); Goldman, Jane (HDFS); Hamilton, Doug (CLAS); Henning, Robert (PSYCH); Knecht, David (MCB); Kuo, Lynn (STAT); Langlois, Dick (ECON); Leibowitz, Gerald (MATH); Linnekin, Jocelyn (ANTH); Manning, John (Chair); Michel, Robert (CHEM); Rawitscher, George (PHYS); Robbins, Mark (DPP); Schultz, Eric (EEB); Skoog, Annelie (MARN); Smith, Katherine (ENGL); Travis, Roger (MCL); Worcester, Wayne (JOUR). Guests: Gross, David (MATH); Roby, Tom (MATH)

I. Preliminaries

- a. Eric Schultz was appointed secretary *pro tem*.
- b. The minutes of the 30 September 2008 meeting have been delayed due to illness, and should be posted for committee consideration and approval by e-mail.
- c. Chair's report
 1. Chair reported approval of ANTH 3095 (2008-132, below). MCB 3895 Translational Research (approved earlier by chair for the present semester as 2008-56) is now resubmitted for permanent approval effective January as (2008-125, below)..
 2. Chair introduced Dean Jeremy Teitelbaum. Wide ranging discussion ensued regarding the university and college academic plan, college and university budget rescissions, and the curriculum. Chair Manning requested again the self-identification of those interested in serving on an ad hoc group to develop a response to Dean Teitelbaum's letter to Chair Manning of 15 September.
 3. Catalogue Listing change: MCL. Name change is still under consideration to consolidate disparate undergrad subject areas.

II. Departmental Proposals

1. Proposals postponed earlier:

2008 - 55 Add SOCI 20XX & 20XXW Postponed at department's request

2008 - 69 Change the Latino Studies Minor Postponed for revision

2008 – 90 Change MCB 3246.

Approved catalog copy

MCB 3246. Virology

(246) Second semester. Three credits. Three lecture periods. Prerequisite: MCB 2610 and 2210. Recommended preparation: MCB 2211 or 3010.

Biological, biochemical, physical, and genetic characteristics of viruses, with an emphasis on molecular and quantitative aspects of virus-cell interactions.

2008 – 94 Change the MCB Major.

Approved catalog listing:

Molecular and Cell Biology

This B.S. program is suitable for students with interests that integrate the organismal, cellular and subcellular levels of biology, including the areas of biochemistry, cell biology, developmental biology, genetics and genomics, and microbiology, as well as their applications in biotechnology

and medical science. Many opportunities for independent research projects in these areas are open for undergraduates.

The following 1000's level courses are required: BIOL 1107; CHEM 1124Q, 1125Q, 1126Q or 1127Q, 1128Q; MATH 1120Q, 1121Q, 1122Q, or 1131Q, 1132Q; and PHYS 1201Q, 1202Q, or 1401Q, 1402Q or 1601Q, 1602Q.

Courses required for the major: at least 24 credits in MCB, including:

Group 1: All of the following core courses

MCB 2410, 2210, 2610, and 2000 or 3010

Group 2: CHEM 2443 and 2444

Group 3: Laboratory requirement: One laboratory course- chosen from the following list: MCB 2225W, 3414, 3633, 3640W, 3989, 4989, 4026W, 4624, or 3 credits of 3989 or 4989'. Only 3 credits of 3989 plus 4989 may count toward the 24 credits of required MCB courses.

For breadth of study in biology, it is recommended that students take PNB 2250 and EEB 2244 or 2245.

BIOL 2289 may be used to count toward the 24 credits of required MCB courses.

To satisfy the MCB writing in the major and information literacy competency requirements, students must take one of the following courses: MCB 2225W, 3022W, 3640W, 3841W, 3996W, 4026W, 4997W; EEB 2244W or 2245W; or any 2000- level W course approved for this major.

A minor in Molecular and Cell Biology is offered. A minor in Bioinformatics is offered jointly by the School of Engineering and the College of Liberal Arts and Sciences. Both programs are described in the "Minors" section of this *Catalog*.

2. New departmental proposals:

2008 – 102 Change EEB 3247. Postponed for departmental revision

2008 – 103 Change PNB 3279.

Approved catalog listing:

PNB 3279. Insights into Dental Science and Clinical Medicine

(279) Second semester. One credit. Weekly 2 hour lecture for ten weeks. Open to honors students, to others with consent of instructor.

Presentations by Med and Dental School faculty on basic sciences supporting dental and medical clinical practices. Students taking this course will be assigned a final grade of S (satisfactory) or U (unsatisfactory).

2008 – 104 Change the GEOG Major.

Approved catalog listing:

Requirements for the Major. The geography major requires 24 credits in 2000-level or above geography courses and 12 credits of related course work in other departments. Majors complete a basic core of 3 courses: GEOG 2100, 2300, and one methods course (choice of GEOG 2510, 3110, 3300, 3500Q, 3510, 4500), and 15 additional credits, including at least one "W" course in geography in consultation with their departmental advisor.

2008 – 105 Proposal to Change the Geography Minor

Approved catalog listing:

The requirements for this minor are GEOG 2100, GEOG 2300, and an additional 9 credits of 2000-level and higher Geography courses selected in consultation with an advisor to form a coherent program of study.

The minor is offered by the Geography Department

2008 – 106 Proposal to Add POLS 5615

Approved catalog listing:

POLS 5615. Seminar in Qualitative Methods of Political Science

3 credits. Seminar. Open to graduate students in Political Science. Prerequisite: POLS 5600,

POLS 5605, and POLS 5610; or consent of instructor

A survey of qualitative research methods. Training in use of case studies, comparative historical approach, interviewing and focus groups, ethnography, and interpretive methods.

2008 -- 107. Proposal to Drop GEOL 1000 Approved

2008 – 108 Proposal to Drop GEOL 1001 Approved

2008 – 109 Proposal to Change GEOL 3010.

Approved catalog listing:

GEOL 3010. Earth History and Global Change

(250) Second semester. Three credits. Two class periods and one 3-hour laboratory period.

Prerequisite: GEOL 1050; or GEOL 1051 and 1052.

Reconstruction of earth history from geological data. Processes and events responsible for the stratigraphic record, and techniques used to decipher it. An integrated survey of earth history. One or more weekend field trips may be required.

2008 – 110 Proposal to Change GEOL 3020

Approved catalog listing:

GEOL 3020. Earth Surface Processes

(251) First semester. Three credits. Two class periods and one 3-hour laboratory period.

Prerequisite: GEOL 1050; or GEOL 1051 and 1052.

Processes responsible for the formation of the unconsolidated materials, landforms, and soils which constitute the Earth's surface. Introduction to surface-water and groundwater hydrology, geological hazards and the effects of climatic change. One or more weekend field trips may be required.

2008 – 111 Proposal to Change GEOL 3030

Approved catalog listing:

GEOL 3030. Earth Structure

(252) Second semester. Three credits. Two class periods and one 3-hour laboratory period.

Prerequisite: GEOL 1050; or GEOL 1051 and 1052.

Structure and composition of the earth, including a survey of plate tectonics and crustal evolution. Gravitational, thermal and tectonic processes associated with the earth's surface and interior. One or more weekend field trips may be required.

2008 – 112 Proposal to Change GEOL 3040

Approved catalog listing:

GEOL 3040. Earth Materials

(253) Second semester. Four credits. Two class periods and two 3-hour laboratory periods.

Prerequisite: GEOL 1050 or GEOL 1051, 1052. Recommended preparation: CHEM 1124-1126; or CHEM 1127 and 1128.

Principles of symmetry and crystal chemistry and the identification of minerals by hand sample, petrographic and x-ray methods. Description of the mineralogy and texture of igneous, sedimentary and metamorphic rocks and the application of contemporary petrogenetic models to the interpretation of the geologic environments they record. One or more weekend field trips may be required.

2008 – 113 Proposal to Change GEOL 3980

Approved catalog listing:

GEOL 3980. Field Geology

(212) Second semester. Six credits. Four weeks intensive study following final examination period. Prerequisite: GEOL 1050 or GEOL 1051, 1052.

Field methods for geological and environmental geoscience studies, including electronic surveying techniques, aerial photograph interpretation, geological mapping, description and measurement of sedimentary sections, techniques of underground mapping, and geophysical

surveying.

2008 – 114 Proposal to Change GEOL 3510

Approved catalog listing:

GEOL 3510. Applied Geophysics for Geologists and Engineers (228) Second semester, alternate years. Three credits. One 3-hour lecture period during which geophysical field demonstrations may be performed. Prerequisite: GEOL 1050 or 1051. *Liu*
Introductory survey of surface and borehole geophysical methods and their application to hydrogeologic, environmental monitoring, and geotechnical engineering studies. Demonstrations involve geophysical field measurement, data reduction and geologic interpretation.

2008 – 115 Proposal to Change GEOL 3710

Approved catalog listing:

GEOL 3710. Engineering and Environmental Geology (229) Second semester. Three credits. Recommended preparation: GEOL 1050 or 1051. *Liu*
Application of geological principles to engineering and environmental problems. Topics include site investigation, geologic hazards, slope processes, earthquakes, subsidence, and the engineering properties of geologic materials. Intended for both geoscience and engineering majors.

2008 – 116 Proposal to Change GEOL 4735C

Approved catalog listing:

GEOL 4735C. Introduction to Ground-Water Hydrology (234C) (Also offered as NRME 4135C.) First semester. Four credits. Three class periods and one 2-hour laboratory for which occasional field trips will be substituted. Prerequisite: MATH 1122 or 1132; GEOL 1050 or GEOL 1051 and 1052; or instructor consent. Open to juniors and higher. *Robbins*
Basic hydrologic principles with emphasis on ground water flow and quality, geologic relationships, quantitative analysis and field methods.

2008 – 117 Proposal to Change GEOL 4050W

Approved catalog listing:

GEOL 4050W. Geoscience and Society (290W) Second semester. Three credits. Prerequisite: GEOL 1050 or 1051; at least two 2000-level or higher GEOL courses one of which may be taken concurrently; ENGL 1010 or 1011 or 3800; or instructor consent. Open to juniors or higher.
Application of fundamental geological principles to issues of concern to society such as global climate change; wildfires; drought and water resources; earthquake, volcano, and tsunami hazards; medical geology; energy resources; sustainability; and coastal processes.

2008 – 118 Proposal to Change The GEOL Minor

Approved catalog listing:

The minor in Geoscience provides instruction in the core concepts and principal methods of investigation in the study of the Earth. This course of study complements a major in the biological or marine sciences, chemistry, physics, civil and environmental engineering, anthropology, geography, or natural resources management and engineering.

Students wishing to take this minor must complete the requirements of either the Geology Option or the Geophysics Option.

The Geology Option consists of the following four courses:

GEOL 3010, 3020, 3030, 3040

An additional 2000-level and higher Geoscience course, chosen in consultation with the Geology Option minor advisor, must also be completed so that the total number of credits is at least 15.

The Geophysics Option consists of the following four courses:

GEOL 4510, 4520, 4550, 4560

An additional 2000-level and higher Geoscience course, chosen in consultation with the

Geophysics Option minor advisor, must also be completed so that the total number of credits is at least 15.

The minor is offered by the Center for Integrative Geosciences.

2008 – 119 Proposal to Change GEOL 4989

Approved catalog listing:

GEOL 4989. Undergraduate Research in Geoscience (296) Either semester. Three credits. Hours by arrangement. Prerequisite: Open to juniors or higher. Open only with consent of instructor. Independent research for the advanced undergraduate student interested in investigating a special problem involving field and/or laboratory observations in geoscience. The student is required to give an oral presentation in a departmental seminar at the end of the semester.

2008 – 120 Proposal to Change GEOL 4996W

Approved catalog listing:

GEOL 4996W. Undergraduate Research Thesis in Geoscience (297W) Either semester. Three credits. Hours by arrangement. Prerequisite: GEOL 4989; ENGL 1010 or 1011 or 3800; open to juniors or higher. Open only with consent of instructor. Writing of a formal thesis based on independent research conducted by the student.

2008 – 121 Proposal to Change GEOL 4990

Approved catalog listing:

GEOL 4990. Internship in Geoscience - Field Study (293) Either semester. One to three credits. May not be repeated. Internship contract must be formulated before internship work begins. Students with summer internship must preregister for GEOL 4990 for the fall semester. Prerequisite or corequisite: GEOL 3010, 3020, 3030, and 3040. Must be taken concurrently with GEOL 4991; no credit will be given for one course without the other. Students taking this course will be assigned a grade of S (satisfactory) or U (unsatisfactory).

An internship program under the direction of Geoscience faculty. Students will be placed with government agencies or businesses where academic training will be applied in a program of activities to be planned and agreed upon in advance by the job site supervisor, the faculty coordinator, and the intern. One credit may be earned for each 42 hours of pre-approved activities up to a maximum of three credits.

2008 – 122 Proposal to Change GEOL 4991

Approved catalog listing:

GEOL 4991. Internship in Geoscience - Research Paper (294) Either semester. One credit. May not be repeated. Students with summer internship must preregister for GEOL 4991 for the fall semester. Prerequisite or corequisite: GEOL 3010, 3020, 3030, and 3040. Must be taken concurrently with GEOL 4990; no credit will be given for one course without the other.

Preparation of written report and oral presentation to Department summarizing internship experience and evaluating the applicability of academic experience to job situations and the impact of the internship experience on academic and career plans.

2008 -- 123 Proposal to Cross List GEOL 3710 & CE 3530 & ENVE 3530

Approved catalog listing:

GEOL 3710. Engineering and Environmental Geology

(also offered as CE 3530 and ENVE 3530). Second semester. Three credits. Recommended preparation: GEOL 1000 or 1001 or 1050 or 1051. *Liu*

Application of geological principles to engineering and environmental problems. Topics include site investigation, geologic hazards, slope processes, earthquakes, subsidence, and the engineering properties of geologic materials. Course intended for both geology and engineering majors.

CE 3530. Engineering and Environmental Geology

Approved catalog listing:

(also offered as ENVE 3530 and GEOL 3710). Second semester. Three credits. Recommended preparation: GEOL 1000 or 1001 or 1050 or 1051. *Liu*

Application of geological principles to engineering and environmental problems. Topics include site investigation, geologic hazards, slope processes, earthquakes, subsidence, and the engineering properties of geologic materials. Course intended for both geology and engineering majors.

ENVE 3530. Engineering and Environmental Geology

Approved catalog listing:

(also offered as CE 3530 and GEOL 3710). . Second semester. Three credits. Recommended preparation: GEOL 1000 or 1001 or 1050 or 1051. *Liu*

Application of geological principles to engineering and environmental problems. Topics include site investigation, geologic hazards, slope processes, earthquakes, subsidence, and the engineering properties of geologic materials. Course intended for both geology and engineering majors.

2008 – 124 Proposal to Change the Environmental Science Major (Geoscience concentration only)

Approved catalog listing:

Environmental Science

The major in Environmental Science is based in the physical and biological sciences, but also includes course work in selected areas of the social sciences. The major leads to a Bachelor of Science degree, and may be adopted by students in either the College of Agriculture and Natural Resources or the College of Liberal Arts and Sciences. This curriculum offers a comprehensive approach to the study of environmental problems, including not only a rigorous scientific background, but also detailed analyses of the social and economic implications of environmental issues. The complexity and interdisciplinary nature of environmental science is reflected in the core requirements of the major. These courses, assembled from several different academic departments representing two colleges, provide both breadth and depth, preparing students for careers that deal with environmental issues, and for graduate study in environmental science and related fields.

A. Required courses in Basic Science: ARE 1150; BIOL 1107, BIOL 1108 or 1110; CHEM 1124Q, 1125Q, 1126Q or 1127Q, 1128Q; MATH 1120Q, 1121Q or 1122Q, 1131Q, 1132Q; PHYS 1201Q, 1202Q, 1230 or 1401Q, 1402Q ; STAT 1000Q, or 1100Q or 3025Q

B. Required Courses in Introductory Environmental Science: Select any two from GEOG 2300, GEOL 1050, MARN 1002, NRME 1000.

C. Required Courses in 2000-level or above in Environmental Science: AH 3175, EEB 2244 or 2244W, GEOL 3020, MARN 3000, NRME 3145

D. Capstone course: GEOG 3320W

E. General Education competency requirements: Completion of GEOG 3320W will satisfy the writing in the major and information literacy competency requirements. Completion of BIOL 1108 and EEB 2244 will satisfy the Computer Literacy requirement.

F. Concentration requirements. All students majoring in Environmental Science must also fulfill the requirements of a concentration in a discipline associated with the program before graduation. Approved concentrations are listed below.

Environmental Biology - Students must complete: EEB 2245 or 2245W; EEB 3307 or 4230W; and at least one course from each of the following groups:

Group I -- Ecological Systems and Processes: EEB 2208, 3230, 3247, 4215, 5301, 5302, 5310

Group II -- Plant Diversity: EEB 3203, 3204, 3220/W, 3240, 3250, 3256, 3271, 4272, 4276

Group III -- Animal Diversity: EEB 2214, 3254, 3265, 3273, 4200, 4250, 4252, 4274, 4275, or 4260 and 4261

Environmental Chemistry - Students must complete at least 15 credits including CHEM 2443, 2444, 2445 or 2446, and 3332, with remaining credits from CHEM 3210; CHEM 3334; MATH 2110Q and CHEM 3563; or CHEM 5370.

Environmental Geography - Students must complete: [GEOG 3510](#) or [4500](#); and at least four of: [GEOG 3300](#), [3310](#), [3330W](#), [3410](#), [3500Q](#), [4300](#), [4510](#)

Environmental Geoscience - Students must complete five courses from the following list with at least two courses from each group.

Group I [GEOL 3010](#), [3030](#), [3040](#)

Group II [GEOL 3710](#), [4110](#), [4120](#), [4130](#), [4210](#), [4330](#), [4735C](#)

Marine Science - Students must complete five courses (fifteen credits) from the following list with at least one course from each group.

Group A: [MARN 3014](#), [3015](#), [3016](#), [3017](#), [4010](#) Group B: [MARN 3003Q](#), [3030](#), [4030W](#), [4050W](#)

Group C: [MARN 3060](#), [3061](#), [4060](#)

Environmental Science also offers the following concentrations through the College of Agriculture and Natural Resources: Environmental Health, Natural Resources, Resource Economics, Soil Science. For the complete requirements, refer to the Environmental Science description in the "College of Agriculture and Natural Resources" section of this Catalog.

2008 – 125 Proposal to Add MCB 3XXX

Not reviewed

2008 – 126 Proposal to Add PSYC 5799

Not reviewed

2008 – 127 Proposal to Change MATH 1131Q & 1131QC

Approved catalog listing:

MATH 1131Q. Calculus I

(115Q) Either semester. Four credits. Prerequisite: Passing score on the Calculus Placement Survey. Students cannot receive credit for MATH 1131 and either MATH 1120, 1121, 1126, 120, or 1151. (Two credits for students who passed Math 1125). Suitable for students with some prior calculus experience. Substitutes for MATH 1120, 1126, 120, or 1151 as a requirement.

Limits, continuity, differentiation, antidifferentiation, definite integral, with applications to the physical sciences and engineering sciences.

2008 – 128 Proposal to Change MATH 1132Q & 1132QC

Approved catalog listing:

MATH 1132Q. Calculus II

(116Q) Either semester. Four credits. Prerequisite: MATH 1121, 1126, 1131, or 1151, or advanced placement credit for calculus (a score of 4 or 5 on the Calculus AB exam or a score of 3 or better on the Calculus BC exam). Recommended preparation: A grade of C- or better in Math 1121 or 1126 or 1131. Not open to students who have passed MATH 1122, 121, or 1152.

Substitutes for MATH 1122 or 121 as a requirement.

Transcendental functions, formal integration, polar coordinates, infinite sequences and series, vector algebra and geometry, with application to the physical sciences and engineering.

2008 – 129 Proposal to Add MATH 1125Q

Approved catalog listing:

MATH 1125Q. Calculus Ia

Either semester. Three credits. Recommended preparation: some exposure to the content of Math 1060 (Precalculus) or the equivalent. Students cannot receive credit for MATH 1125 and Math 1120, 1131, 120 or 1151. Students who have not passed the Calculus Placement Survey take this course rather than MATH 1131 or 1151.

Limits, derivatives, and extreme values of algebraic, trigonometric, exponential and logarithmic functions, with supporting algebraic topics. Math 1125 covers the content of approximately the first half of Math 1131.

2008 – 130 Proposal to Add MATH 1126Q

Approved catalog listing:

MATH 1126Q. Calculus Ib

Either semester. Three credits. Prerequisite: MATH 1125. Recommended preparation: A grade of C- or better in MATH 1125. Students cannot receive credit for MATH 1126 and MATH 1121, 1131, 120 or 1151. Substitutes for MATH 1131 or 1151 as a requirement.

A continuation of the differential calculus of algebraic, trigonometric, exponential and logarithmic functions of MATH 1125 ending with antidifferentiation, the definite integral, some techniques and applications. MATH 1126 covers the content of approximately the second half of MATH 1131.

2008 – 131 Proposal to Change the CLAS BS Degree Requirement in Mathematics

Approved catalog listing:

Bachelor of Science (B.S.), All of the following:

One of the Chemistry sequences:

CHEM 1124Q, 1125Q, 1126Q

CHEM 1127Q, 1128Q

CHEM 1137Q, 1138Q

CHEM 1147Q, 1148Q

One of the Mathematics sequences:

MATH 1120Q, 1121Q, and either 1122Q or 1132Q

MATH 1125Q, 1126Q, 1132Q

MATH 1131Q (or 1151Q), 1132Q (or 1152Q)

MATH 2141Q, 2142Q

One of the following:

BIOL 1107, 1108, 1110

One of the Physics sequences:

PHYS 1201Q, 1202Q

PHYS 1401Q, 1402Q

PHYS 1501Q, 1502Q

PHYS 1601Q, 1602Q

2008 132 Proposal to offer ANTH 3095 "Special Topics". Approved by chair

Slavery and Freedom: Ethical, political and social dimensions of slavery, and of struggles against human trafficking, debt peonage and other forms of un-free labor, examined in cross-cultural and historical perspectives.

III. The meeting was adjourned at 6:03 p.m. Submitted by Eric Schultz, secretary *pro tem*