Illinois State University
University Curriculum Committee

TO: Lane Crothers, Chairperson
Academic Senate

FROM: University Curriculum Committee

DATE: December 6, 2004

RE: Proposal for new Earth and Space Science Education Sequence in the Major in Geology

The Department of Geography/Geology proposes a new Earth and Space Science Education sequence within the Geology major. Currently, students wishing to teach Earth Sciences go through the Geography Teacher Certification sequence. The proposal to add the new sequence shifts the responsibility for preparing students to teach Earth Sciences to the Geology program. The Geography Teacher Certification sequence will remain and continue to serve students who will be teaching Human Geography and other social sciences. Revision of the Geography Teacher Certification sequence was approved by the University Curriculum Committee under a separate proposal.

Because no new courses are to be created, the department does not foresee the need for additional faculty or library resources at this time. Please see the attached summarization of the University Curriculum Committee's review of this proposal. The UCC supports this proposal with no dissenting votes.

jr
Enclosures

Cc: David Malone

University Curriculum Committee, November 17, 2004

Summary of request from the Department of Geography-Geology to add a new sequence in Earth and Space Science Education to the Geology Major.

Currently students wishing to teach Earth Sciences go through the Geography teacher education sequence. This proposal is to shift the responsibility for preparing students to teach earth sciences to the Geology program. The Geography Teacher Certification Sequence will remain and will continue to serve students who will be teaching human geography and other social sciences. The new effect of the proposed change is to revise the existing curriculum to create a new, more focused sequence that will be administered within the same department.

Rationale for change:

1. Creating an Earth and Space Science Education sequence within the Geology major takes advantage of the broad overlap in courses with the current Geology major.

2. Creating this sequence ties in with the Earth and Space Science teacher education standards and exam developed by the IBHE, and ISU will be the only teacher education program with a sequence of this name.

3. The current Earth Science component of the Geography teacher education sequence is heavily concentrated on geography courses with fewer courses from other sciences than the proposed sequence. The proposed sequence better addresses the new state standards and better prepares students for the state Earth and Space certification test which tests both the specialty area and a common core of all sciences (Earth systems, astronomy, life science and physical science).

4. The new sequence should strengthen the Geology program by attracting more students. Geology historically has been a small program (40 students). “Anecdotal evidence from prospective students indicates we are losing good students to other state universities that have clearly defined existing Earth Science Teaching programs.” Adding teacher education students to core Geology major courses will increase numbers and diversity.

5. The new sequence will better utilize the interdisciplinary strengths of the Geography-Geology Department and other science departments including Chemistry, Biology, and Physics, especially the Physics Teacher Education sequence.

Expected Impact:

1. No new courses are created – all specified courses are currently taught. No new funding or other resources, including staff and library resources, are needed initially.
2. Plan is to eventually serve 30 majors per year, graduating 8-10 annually.
3. Expect a short-term (1-2 years) decline in Geography majors. Currently there are 55 geography majors with 21 teacher education majors. Of the 21 teacher education majors, one-half are geography/social science and the remaining half are earth science. Loss of the 10 earth science majors represents a 20% reduction in geography majors. Hopes are that this will be offset by an increase in geography, social sciences teacher education majors.
4. Future plans could include new courses (Ocean Science) and the need for more staff and funds for student teacher supervision as the number of majors grows.

Support:

Letters from Biology and Physics are attached to the proposal. There is no letter from Chemistry (only one course is required – CHE 140). The Geology/Geography department chair notified the Chemistry chair and did not receive negative feedback.

UCC Concerns:

The sequence requires 59 hours which is higher than the 55 hours specified for a major but less than many sequences/majors on campus require. Total required undergraduate hours is 120, well within the guidelines.

NEW, REVISED, OR DELETED PROGRAM COVER SHEET
2004-2005
University Curriculum Committee
Undergraduate Programs (Majors, Minors, Sequences)

DEPARTMENT/SCHOOL _____**Geography-Geology**_____ DATE __**9/28/04**_____

A. **Proposed Action:** (more than one item may be checked if a revision).

_____ New Major CIPS CODE _____ (obtain from Planning, Policy Studies and Info Systems)

_____ New Minor CIPS CODE _____ (obtain from Planning, Policy Studies and Info Systems)

___**X**____ New Sequence

_____ Change in requirements for major

_____ Change in requirements for minor

_____ Change in requirements for sequence

_____ Other program revisions

_____ More than 50% of courses in this program are distance education.

_____ Program deletion

B. **Summary of proposed action** (see Part A), including title and exact *Undergraduate Catalog* copy for a new or altered program. (See *Catalog* and Program Checklist for format and examples.) Provide a summary of the revisions in addition to the exact current *Catalog* copy.

The Department of Geography-Geology wishes to add a new sequence in *Earth and Space Science Education* to our Geology major. The rational and details of this program are provided in the narrative.

C. **Routing and action summary:**

1. _____ Department/School Curriculum Committee Chair	_____ Date Approved	4. _____ College Dean	_____ Date Approved
2. _____ Department Chair/School Director	_____ Date Approved	5. _____ Teacher Education Council Chair if appropriate (10 copies to the Dean of the College of Education)	_____ Date Approved
3. _____ College Committee Chair	_____ Date Approved	6. _____ University Curriculum Committee Chair (8 copies to the Catalog Editorial Assistant)	_____ Date Approved

Submit 20 copies of **NEW** Undergraduate proposals to University Curriculum Committee

Submit 8 copies of **REVISED** Undergraduate proposals to University Curriculum Committee c/o the Undergraduate Catalog Editorial Assistant in 109 Moulton.
All new and deleted programs (majors, minors, sequences) are routed by the U.C.C. to the Academic Senate. **The Senate rules mandate electronic submission (in MS Word or HTML format) of all materials for Web site posting.**

ILLINOIS STATE UNIVERSITY

UNDERGRADUATE PROGRAMS
REQUEST FOR NEW PROGRAM APPROVAL
(Reporting of Financial Implications)

Purpose: Proposed new undergraduate programs (degrees, sequences, certificates) must include information concerning how the program will be financially supported to proceed through the curriculum proposal process**.** Signatures of the College Dean and Provost/Provost Representative are required prior to submission of the new program to the College Curriculum Committee.

Procedure: This completed form, with all necessary signatures, is to be attached to new program curricular proposals.

Definition: A "program" can be either a degree, a sequence as part of a degree or a certificate.

Complete the following information:

Department: Geography-Geology Date: October 25, 2004

Proposed New Program: Earth and Space Science Education Sequence

Person Completing Form: David Malone Contact #: 438-2692

Complete Table I to show student enrollment projections for the program.

Table I

STUDENT ENROLLMENT PROJECTIONS FOR THE NEW PROGRAM

	1st Year (July – June)	2nd Year	3rd Year	4th Year	5th Year
Number of Program Majors (Fall headcount)	6	12	18	24	24
Annual Full-Time-Equivalent Majors	6	12	18	24	24
Annual Credit Hours in EXISTING Courses[1]	180	360	540	720	720
Annual Credit Hours in NEW Courses[1]	0	0	0	0	0
Annual Number of degrees Awarded	2	4	6	6	6

[1]Include credit hours generated by both majors and non-majors in courses offered by the academic unit directly responsible for the proposed program.

Complete Table II (even if no new funding is requested). Show all required resources including amounts and sources of funds reallocated from other programs or units.

Table II

PROJECTED RESOURCE REQUIREMENTS FOR THE NEW PROGRAM

	1st Year (July – June)	2nd Year	3rd Year	4th Year	5th Year
FTE Staff[1] (FTE)	0	0	0	0	0
Personnel Services ($)	0	0	0	0	0
Equipment and Instructional Needs ($)	0	0	0	0	0

Library ($)	0	0	0	0	0
Other Support Services[2] ($)	0	0	0	0	0

[1]Reflects the number of FTE staff to be supported with requested funds. Not a dollar entry.

[2]Other dollars directly assigned to the program. Do not include allocated support services.

Budget narrative listing projected sources of program funding (including sources of reallocated funds).

As this is a revision to an undersubscribed, existing program, we have no expectations for additional resources earmarked for this particular sequence.

Routing and action summary:

1. _____
   Department/School Curriculum Committee Chair Date Approved
2. _____ _____
   Department Chairperson/School Director Date Approved
3. _____ _____
   College Dean Date Approved
4. _____ _____
   Provost/Provost Representative Date Approved
5. _____ _____
   College Curriculum Committee Chairperson Date Approved
6. _____ _____
   Teacher Education Council Chair Date Approved
7. _____ _____
   University Curriculum Committee Chairperson Date Approved

Once approved, include this form with the curricular proposal for the new program. Please also submit an electronic copy of this form.

Narrative

Institution
Illinois State University

Responsible department/school or administrative unit
Department of Geography-Geology

Proposed Title of New Sequence

Earth and Space Science Education

Previous Program Title

Training students to teach Earth Science has traditionally occurred in our Geography Teacher Education program. We now propose to shift this responsibility to our Geology program by developing the proposed Earth and Space Science Education Sequence. Our Geography Teacher Education sequence will remain, and it will continue to

serve students who seek to in Human Geography and other Social Sciences.

Description of Proposed Change

We wish to develop a separate sequence under our traditional Geology (CIP Code: 40.0601) major that will focus on Earth and Space Science Education. Appropriate existing coursework from Geology, Geography, Chemistry, Physics, and Biological Sciences have been packaged together into a coherent sequence that will prepare students for a career as a teacher in the Earth or Physical Sciences. It is important to note that the proposed sequence will replace the Earth Science component of our existing Geography Teacher Education program. Thus, in reality we are revising an existing curriculum into a different program which also is administered by our Department. This proposed program is to be sequenced in Geology rather than Geography because the overlap with our current Geology major is broader than it is in Geography, but all faculty in our department will be able to participate. We will be the only teacher education program in the Illinois that uses the name Earth and Space Science. This name was selected because it is identical to the name of the standards and exam developed by the IBHE.

A spreadsheet that outlines the proposed sequence, teacher education requirements, and general education requirements is attached. A four-year plan also is provided. It is important to note that this sequence exceeds the 55-hour recommended limit for major programs, but many of these hours are from outside of our Department. This is necessary to ensure a proper breadth of coursework. All sequence, teacher education, and education coursework amount to 120 hours.

We want the minimum GPA for this major set at 2.50, which is in line with the other sciences. This is reduced from the current 2.75 for Geography Teacher Education majors.

Rationale of Proposed Change

The existing Physical Geography/Earth Science component of our current sequence in our Geography Teacher Education program consists largely of Geography courses and lesser amounts of course work from other disciplines. During the past few years, the state standards for the teaching of Earth Science and Physical Science have been modified substantially. The Earth and Space Science certification test written by the state of Illinois in 2003 has two parts: the actual Earth and Space Science test and also a test that all secondary science teachers must take covering a common core of all sciences. Earth and Space Science teachers, and all science teachers, now must have background in Earth Systems, Astronomy, Life Science, and Physical Science (chemistry and physics) (see attached test framework). The current Geography Teacher Education sequence will not prepare students to successfully complete the Earth and Space Science certification test, or the General Science Test. Our proposed change in Earth Science Teacher Education program at Illinois State University is a goal in our current Departmental five-year strategic plan and it is hoped that approval will allow for the inclusion in the *2005/2006 Undergraduate Catalog.*

A secondary purpose of this sequence is to strengthen our Geology program by attracting additional students. The Geology program has historically been small, and has served about 40 students annually. Anecdotal evidence from prospective students indicates we are losing good students to other state Universities that have clearly defined existing Earth Science Teaching programs (e.g. NIU, WIU, and EIU). Our traditional Geology program will be strengthened by the added diversity of Teacher Education students in several of our core courses.

A tertiary purpose of this proposal is to utilize the interdisciplinary strengths of our Department and that of the other sciences. Unlike some other state Universities (e.g. NIU and WIU), Geography and Geology are within the same Department. Thus the various aspects of Earth Science (Atmospheric Science, Geology, Geomorphology, Climatology, Oceanography, etc.) are all under the same roof. We also will be able to take advantage of existing strengths and coursework in Biology, Chemistry, and in particular Physics Teacher Education.

This new sequence will be excellent training for aspiring Earth and Space Science teachers as well as science teachers in general.

Anticipated staffing arrangements

Jill Thomas will continue to be our Departmental Teacher Education Coordinator and student teacher supervisor. Curriculum advising will be done by Jill, and assistance will be provided by Geology advisors Liz King and Dave Malone. Our Methods in Teaching Geography and Earth Science course will continue to be taught by Beth Schlemper.

Expected impact of proposal on existing campus programs

All courses that are envisioned to be part of this program are already taught or are approved. It is hoped that this sequence will eventually serve as many as thirty majors per year, and graduate 8-10 annually. It is hoped that it will not negatively impact the number of majors in Geography or Geology, and that we will see a significant increase in the number of majors our Department serves overall.

It is important to note that the Geography program will likely see a decline in the number of majors in the short term. Presently, the Geography program has about 55 majors, 21 of whom are in the Teacher Education sequence. About half of these 21 seek to specialize in the Social Sciences, and the balance in the Sciences. Thus, the loss of about ten majors in Geography over the next year or two is likely. This is significant, because it represents about 20% of the current major count. It is hoped that this number is at least partially off-set by an increase in our number of Geography (Social Science) Teacher Education majors. Curricular revisions to this program also are planned.

Also, as noted above, our Teaching Methods course is taught by Beth Schlemper, a social scientist. It is possible that if our number of Earth and Space Science students grows as expected, additional faculty support may be necessary. One possibility is teaming with Physics, as discussed above.

Expected curricular changes including new courses

No new courses will be proposed at this time. It is likely that additional courses will be proposed in the future. For example, it is likely that we will eventually ask to resurrect our Ocean Science course, which we have been unable to staff since the implementation of General Education in 1998.

Anticipated funding needs and source of funds

No additional funding is requested at this time. We will, however, continue to support Physics' request for additional staffing for their excellent teacher education program. Such an individual also would be able to serve the Space Sciences part of the proposed program. Should our number of majors grow significantly larger than what we envision, additional base budget monies for student teacher supervision will be requested.

Milner contacted to determine sufficient resources

Milner resources in Geology, Geography, and Education needed by the new program are sufficient.

COE Conceptual Framework

Earth Science Teacher Education is currently occurring in our Geography Teacher Education program, which has been within the COE conceptual framework for decades. The proposed sequence will continue in the spirit of this tradition.

PROPOSED CATALOG COPY

Geography Programs

Degrees Offered: B.A., B.S.

MAJOR IN GEOGRAPHY

Teacher Certification in Earth and Space Science Sequence:

-

— 59 hours in Geology, Geography, Physical Chemistry, and Biological Sciences required.

— Required courses: GEO 200, 201, 202, 203, 280, 285, 295, and 307; CHE 140; PHY 108, 200, 310; BSC 196 or 197; two of the following CHE 141, PHY 109, and BSC 197 (if not taken to satisfy the requirement); and 5-6 credits selected from upper division GEO science courses.

— NOTE: To qualify for certification, the student must complete the Professional Education requirements and the General Education requirements as described in the Teacher Education Requirements-High School section of this *Undergraduate Catalog.*

— NOTE: Students desiring Middle School or Junior High employment should also complete C&I 233 and PSY 302.

— NOTE: Teacher certification students must present a 2.50 GPA to qualify for placement in student teaching and to graduate with a teacher certification degree

PROPOSED COURSE LISTING FOR EARTH AND SPACE SCIENCE EDUCATION MAJOR

Dept	course #	title	Credits	Gen Ed
Required courses				
CHE*	140	General Chemistry I	4	IC-NSA
PHY*	108	College Physics I	5	IC-NSA
PHY	205	Origin of the Universe	3	
BSC	196 or 197	Biological diversity	4	
GEO	200	Physical Geography I	3	
GEO	201	Physical Geography II	3	
GEO*	202	Evolution of the Earth	3	OC-KD/SMT
GEO*	203	Minerals, Rocks, Fossils and Maps	3	
GEO*	295	Sedimentary Geology 1	3	
GEO*	280	Mineralogy	4	
GEO*	285	Igneous and Metamorphic Petrology	4	
			39	
Two of the following				
CHE*	141	General Chemistry II	4	
PHY*	109	College Physics II	5	
BSC	197	Molecular and cellular basis of life	4	
			8 or 9	
METHODS COURSES				
GEO	307	Teaching Geography/Earth Science	3	
PHY	310	Readings for teaching high school physics	3	
			6	
Electives 5-6 credits from 200 or 300 level courses in geology or physical geography				
			For a total of	**59**
* denotes courses in traditional Geology major.				
Education courses				
EAF	228 or 231	or 235	3	
Psychology	215	Educational Psychology	3	
C&I	212	Issues in Secondary Education	2	
C&I	214	Reading in the Content Areas of secondary Ed	3	
C&I	216	Instructional and Evaluative methods in Secondary Ed	3	
STUDENT TEACHING	399.18		12	
Inner core				
ENG 101			3	
COM 110			3	
IC-M		MAT 145 Recommended	4	
IC-NS/NSA		CHE 140, PHY 108, BSC 196, BSC 197	In program	
Middle core				
MC-QR		MAT 146 Recommended	4	
MC-LH			3	
MC-UST			3	
MC-ICL			3	
MC-IS		PSY 110 Recommended	3	
Outer core				
OC-KD/SMT		GEO 202	"Opt out" Provision	
OC-KD/SS		GEO 135 Recommended (Global Studies)	3	
OC-KB/FA OR OC-DKCC/FA			3	
OC-KD/H OR OC-DKCC/H			3	

Hypothetical four-year plan for Earth and Space Science Education Major

Freshman fall	**Freshman spring**	
MC-ICL	3COM 110	3

ENG 101	3	IC-M (MAT 145)	4
PHY 108	5	PSY 110 (MC-IS)	3
CHE 140 (IC-NSA)	4	CHE 141	4
	3	MC-LH	3
	15		17
Sophomore Fall		**Sophomore Spring**	
GEO 200	3	GEO 201	3
GEO 202 (OC-SMT)	3	GEO 203	3
PSY 215	3	EAF 231	3
MC-UST	3	BSC 196	4
MC-QR	3	GEO 2XX OR 3XX	3
	15		16
Junior Fall		**Junior Spring**	
PHY 205	3	GEO 285	4
GEO 280	4	GEO 295	3
C&I 212	2	PHY 310	3
GE0 2XX OR 3XX	3	C&I 214	3
GEO 135 (OC-SS)	3	OC-FA	3
	15		16
Senior Fall		**Senior spring**	
OC-KD OR OC-DKCC	3	STUDENT TEACHING	12
GEO 307	3		
C&I 216	3		
BSC 197	4		
Elective	3		
	16		12

Current Catalog Copy

GEOGRAPHY-GEOLOGY (GEO) 440

206 Felmley (309) 438-7649
Web address: www.geo.ilstu.edu/
Chairperson: David Malone
Tenured/Tenure-track Faculty:
Professors: Carter, Day, Sublett.
Associate Professors: Hammel, Malone, Nelson.
Assistant Professors: Bloom, Budikova, Evered, King, Peterson, Schlemper, Van der Hoven, Zintambila.

General Department Information

MAJOR IN SOCIAL SCIENCES EDUCATION
The Major in Social Sciences is administered by the Department of History in cooperation with the Departments of Economics; Geography-Geology; Politics and Government; and Sociology-Anthropology. For further information see Social Sciences Programs.

MINOR IN ENVIRONMENTAL STUDIES
The Department of Geography-Geology participates in the Minor in Environmental Studies program. Course work offered by the Department contributes to this Minor. For further information, please consult the Department advisor as well as the section entitled “Minor in Environmental Studies” under University-Wide Curriculum in this *Undergraduate Catalog.*

MINOR IN URBAN STUDIES
The Department of Geography-Geology participates in the Minor in Urban Studies program. Course work offered by the Department contributes to this Minor. For further information, please consult the Urban Studies Minor Advisor as well as the section entitled “Minor in Urban Studies” under University-Wide Curriculum in this *Undergraduate Catalog.*

HONORS IN GEOGRAPHY-GEOLOGY
The Department of Geography-Geology invites qualified Geography and Geology majors to distinguish themselves by earning Honors through approved course work and independent study. Students who enroll in the Honors program will have the opportunity to work closely with selected faculty. Those students who complete the requirements will graduate with Departmental Honors--which will be indicated on their transcript and diploma.

Admissions Requirements
Students majoring in the Geography-Geology Department may be admitted to the Departmental Honors Program if they have (1) completed at least 45 hours of college-level courses, (2) a cumulative GPA of 3.30 and at least 3.50 in the major, and (3) are a member of the University Honors Program.

Honors Study Requirements
In order to graduate with honors in the Geography-Geology Department, a student must complete (1) all university graduation requirements, (2) all regular requirements for the major, (3) at least 12 hours of Honors work in the major, including at least 3 hours of Honors Independent Study (GEO 299) with the other 9 hours distributed among incourse honors in Geography for Geography majors or Geology for Geology majors, (4) maintain a cumulative GPA of at least 3.30 and at least 3.50 in the major, and (5) apply to the Honors Office during the first month of the graduation semester for Honors Degree designation.

Geography Programs

Degrees Offered: B.A., B.S.

MAJOR IN GEOGRAPHY
Programs must be planned in consultation with the program advisor.
Advisor: Daniel Hammel (309) 438-8112
— Minimum of 43 hours required. All Geography majors should consult with program advisor concerning appropriate elective coursework in related fields. The faculty also recommends that students consider National Student Exchange and Study Abroad programs as a means of experiencing different cultural settings.
— Required courses: GEO 140; 200, 201, 204, 300, 303, 315, 398 (4 hours); 1 course from GEO 215, 220, 240, 245; 1 course from GEO 250, 255; 2 courses from GEO 150, 205, 208, 331, 332, 334, 336, 341; 1 course from 305, 308, 310, 370; 1 course from GEO 130, 276, 287 (3 hours), 304, 306 (3 hours), 351, 380.
Teacher Certification Sequence:
Advisor: Jill Freund Thomas (309) 438-8403
— Minimum of 42 hours required. Part of entitlement program leading to certification: secondary 6-12. Student should plan program in consultation with an advisor.
— Required courses: GEO 140; GEO 200, 201, 204, 300, 303, 307, 315, HIS 390; 1 course from GEO 215, 220, 240, 245; 1 course from GEO 250, 255; 2 courses from GEO 150, 205, 208, 331, 332, 334, 336, 341; 1 course from GEO 130, 145, 276, 287 (3 hours), 304, 305, 306 (3 hours) 308, 310, 351, 370, 380.
— NOTE: To qualify for certification, the student must complete the Professional Education requirements and the General Education requirements as described in the Teacher Education Requirements-High School section of this *Undergraduate Catalog*.
— NOTE: Students desiring Middle School or Junior High employment should also complete C&I 233 and PSY 302.
— NOTE: If a student chooses to focus on Physical Geography/ Earth Science, he or she should also certify to teach Biology, Chemistry, Geology, or Physics. If a student chooses to focus on Human/Regional Geography, she or he should also certify to teach World History and U.S. History and/or related fields.
— NOTE: Teacher certification students must present a 2.75 GPA to qualify for placement in student teaching and to graduate with a teacher certification degree.
MINOR IN GEOGRAPHY
— 21 hours in Geography required.
— Required courses: GEO 135 or 140; GEO 200 or 211; GEO 204; 1 course from GEO 215, 220, 235, 240, 245, 250, or 255; 1 course from GEO 150, 205, 208, 331, 332, 334, 336, 341; 1 course from GEO 300, 303, 305, 308, 310; 3 hours of electives chosen from any Geography course except GEO 265.
MINOR IN GEOGRAPHY
For Teacher Education:
— 24 hours in Geography required.
— Required courses: GEO 135 or 140; GEO 145, 204, 307; 1 course from GEO 215, 220, 235, 240, 245, 250, 255; 1 course from GEO 150, 205, 208, 331, 332, 334, 336, 341; 1 course from GEO 200 or 211; 1 course from GEO 300, 303, 305, 308, 310.
MINOR IN TOURISM STUDIES
Advisor: Jill Freund Thomas
Department of Geography-Geology
200B Felmley Hall
(309) 438-8403
Jointly developed and sponsored by the department of Geography-Geology and the School of Kinesiology and Recreation, the Minor in Tourism Studies is available to students in any undergraduate major. Students should

plan their minor program with the assistance of the Tourism Studies advisor, who resides in the Department of Geography-Geology.
— 24 hours required.
— Required courses: GEO 130, 135, 215, 265; KNR 271, 277, 377; POL 140.
— Recommended courses: GEO 315; KNR 374, 375.

CLINICAL EXPERIENCES IN TEACHER EDUCATION

Clinical Experiences are provided in off-campus clinical teaching centers, in local schools and in campus laboratory schools, in agencies and other approved non-school settings. All students will show verification of having completed pre-student teaching field experiences commensurate with attaining local, state, and national standards.
Students must provide their own transportation to Clinical Experience sites.
The approximate number of clinical hours and type of activity associated with each course offering can be found with the appropriate course description. The following legend relates to the type and kind of activity related to a specific course.

Clinical Experiences Legend

1. Observation
2. Tutoring one-on-one contact
3. Non-instruction assisting
4. Instructional aiding a group
5. Micro teaching
6. Simulation lab exercises
7. Work with clinic client
8. Graduate practicum
9. Professional meeting
10. Other

Geology Programs

Degrees Offered: B.S.

MAJOR IN GEOLOGY

— 40 hours in Geology required.
— Required courses: GEO 202, 203, 280, 285, 290, 295, 296, 395 and one of the following applied quantitative courses: GEO 360, 362, or 364.
— Required interdisciplinary courses: PHY 108 and 109 (or 110 and 111); CHE 140 or equivalent, and 141; MAT 145 and 146.
— Strongly recommended: GEO 385.

MINOR IN GEOLOGY

— 22 hours in Geology required.
— Required courses: GEO 102, 202 and 203.
— **NOTE:** Students wishing to minor in Geology are requested to inform the Department of their intention and to discuss their program with a Geology advisor.

DEPARTMENT/SCHOOL CURRICULUM COMMITTEE AND COLLEGE CURRICULUM COMMITTEE REVIEW CHECKLIST 2004-2005
NEW/REVISED/DELETED PROGRAMS (MAJORS, MINORS, SEQUENCES) PROPOSALS

Check the following information for INCLUSION and QUALITY. If items are not included, the program proposal must be returned to the department for revision.

~~Cover Sheet~~

__X___ Correct cover sheet: 2004-2005 New, Revised, or Deleted Program Cover Sheet
__X___ Department/school name, and date
__X___ Title of program
__X___ Exact catalog copy for new or altered program attached
__X___ Summary of changes (may reference to attachment)
__X___ Proposed action correctly checked
__ ___ DCC Chair and Department Chair or School Director signatures
_____ CCC Chair and Dean signatures
_____ 20 copies provided (one original signature copy) for new programs; 8 copies for revised programs

Part A: Program Description and Explanations (New or Revised Programs)

__X___ Institution
__X___ Responsible department/school or administrative unit
__X___ Proposed program title
__X___ Previous program title (if applicable)
__X___ CIPS classification (applicable to new programs)
__X___ Date of implementation
__X___ Description of proposed program or name change
__X___ Rationale for proposal
__X___ If for Teacher Education, include reference to COE Conceptual Framework
__X___ Expected impact of proposal on existing campus programs
__X___ Expected curricular changes including new courses
__X___ Milner contacted to determine sufficient resources
__X___ Anticipated staffing arrangements
__X___ Anticipated funding needs and source of funds

Deleted Programs

_____ Institution
_____ Responsible department/school or administrative unit
_____ Program title
_____ CIPS classification (if applicable)
_____ Anticipated date of implementation
_____ Rationale
_____ Arrangements to be made for program faculty and students
_____ Anticipated impact on other campus programs
_____ Anticipated budgetary effect

Part B: Other Requirements

_____ Letter(s) of concurrence from affected departments/schools (e.g., where subjects overlap or prerequisite changes affect other departments/schools), or statement that letter(s) could not be obtained.
__X___ Program does not require more than 124 semester hours of course work**; if 125 or more hours, proposal must go beyond UCC for final action.**
__X___ Major for B.A., B.S., B.E.Ed. should not require more than 55 semester hours in major.
__X___ Major should not mandate more than 76 semester hours excluding General Education.
__X___ Major programs may stipulate specific general education courses offered in the major department/school as a part of the major requirements only if such courses serve as prerequisites for other courses required by the major.
_____ A minor, including all required prerequisite hours, may include 18-36 hours.
_____ A minor may not include more than 24 hours from any major department/school.
_____ No more than 9 hours from major program of study may be applied to minor.

Note: **Items like course title, semester hours, semesters offered, etc., must match exactly each time they are mentioned.**
Note: New and deleted programs (including sequences), as opposed to changes in existing programs, must go beyond UCC for final action and require all materials be submitted in electronic format for posting on the Academic Senate Web site.

_____
Signature of DCC, CCC, or UCC Reviewer / Date; Reviewers' Comments: