CHANGE IN CURRICULUM

COLLEGE OF GEOSCIENCES
DEPARTMENT OF GEOLOGY AND GEOPHYSICS
BA IN GEOLOGY AND MS IN OCEANOGRAPHY 3+2
Texas A&M University
Request for a Change in Curriculum
Undergraduate • Graduate • Professional

1. Program request type: [✓] Undergraduate [✓] Graduate [ ] First Professional (e.g., DVM, JD, MD, etc.)

2. Request change for:
[✓] Degree Program [ ] Minor [ ] Certificate

3. Request submitted by (Department or Program Name):
Oceanography

4. Program Designation and Name
(e.g., B.A. in History, Minor in History, Certificate in European Union):
Geology - 5-Year Bachelor of Arts/Master of Science in Oceanography

5. Brief description of change:
Adjust the catalog program requirements to match the degree evaluation and clarify options for students.

Includes change to GR program (attached). sw

6. Rationale for change:
There were errors associated with the entering of the program requirements into the new electronic catalog. These need to be corrected. A few corrections were also made to the degree evaluation to account for the change in the MATH requirements to 8 credits from 6 credits.

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Use the checkboxes below to make sure that all information is included.

a. Proposed curriculum attached. [✓] Yes [ ] No
b. Current catalog curriculum with handwritten edits attached. [✓] Yes [ ] No
c. Current Howdy degree evaluation with handwritten edits attached. [✓] Yes [ ] No

Please make sure the attached proposed curriculum, catalog and Howdy degree evaluation match.

8. a. Will degree program hours change (increase/decrease) due to the proposed curriculum changes? [ ] Yes [✓] No
b. If yes, degree program hours will change from: _________ to: _________

8. c. If yes, is the Texas Higher Education Coordinating Board form attached? [ ] Yes [✓] No

http://www.thecb.state.tx.us/index.cfm?objectid=A9F9F7FA-9A92-4F11-2756AD3BBFF01D60

9. If proposed changes affect other unit(s), are letters of support attached? [✓] Yes [ ] No

IMPORTANT NOTE: Curriculum changes submitted through the approval process and fully approved by February (December-UCC/GC, January-Faculty Senate, February-President) will be effective in the next academic year. Changes requiring approval beyond the University should complete the internal approval process early in the fall semester whenever possible in order to ensure timely implementation.

Approval recommended by:

Department Head or Program Chair (Type Name & Sign) Date

Dean of College Date

Chair, College Review Committee Date

Chair, GC or UCC Date

RECEIVED

NOV 06 2015

Curricular Services – 04/14

Questions regarding this form should be directed to Curricular Services at 845-8201 or currenforms@tamu.edu.
23 November 2015

MEMORANDUM

To:    Dr. Chris Houser, Associate Dean, Undergraduate and Faculty Affairs, College of Geosciences
To:    Dr. Eric Riggs, Assistant Dean, Graduate Affairs and Diversity, College of Geosciences
From:  Dr. Debbie Thomas, Department Head, Oceanography
        Dr. Ping Yang, Department Head, Atmospheric Sciences
        Dr. Michael Pope, Department Head, Geology and Geophysics
        Dr. Christian Brannstrom, Director Environmental Programs, College of Geosciences

RE: Revisions to the BS-METR-GOC, BS-GEOL-GOC, BA-GEOL-GOC and BS-ENGS-GOC programs.

We are requesting revisions to the 3+2 programs combining the non-thesis MS in Oceanography with the undergraduate METR, GEOL and ENGS degrees. They have been modified to swap out the non-thesis MS in Oceanography with the newly approved non-thesis Master of Ocean Science and Technology. This is simply a swap in the designation of the non thesis Master's degree.

The degree plans remain as modified in the by the corrections recently submitted for approval.

If you have any questions, please contact the assistant department head, Dr. Shari Yvon-Lewis (979-458-1816; syvon-lewis@tamu.edu).
Geology - 5-Year Bachelor of Arts/Master of Science in Oceanography

The Fast Track Program offers motivated and exceptional students the opportunity to achieve aspirations in an efficient program at Texas A&M, completing the Bachelor of Arts (B.A.) degree in the Department of Geology and Geophysics Geology Program and the Oceanography non-thesis M.S. degree in 5 years. There will be only two courses used for dual credit in this program. There is a total of 150 hours of coursework. The concurrent degree program will enable these motivated students to coordinate the required B.A. coursework (60 undergraduate credit hours, 6 dual credit graduate courses) and non-thesis M.S. coursework (36 credit hours including the 6 dual credit graduate courses) to complete the required credit hours for each degree without diminishing scope or quality of work and within 5 years.

Application and Eligibility:

- Applications to the Fast Track program will be submitted by July 1 after the completion of the student's junior year. Applications submitted after that time will be evaluated on a case by case basis.
- Applicants must have a minimum undergraduate GPR of 3.0. Applicants must also earn a C or better in all Chemistry, Calculus and Physics courses. Once admitted to the program, students must maintain a minimum 3.0 GPR.
- A faculty advisor will be assigned to each student. Students may seek additional mentors, but a formal committee is not required.
- Students admitted into the Fast Track program must finish the entire 150 credit hours to obtain both the Bachelor's and Master's degrees. These students will be conferred with two degrees once they complete the 5th year of the concurrent program.
- Students admitted to the program will change from U4 to G7 status when they are admitted having completed at least 102 hours (end of spring semester, year 3).
- Students not accepted or not allowed to continue with the Fast Track Program will complete the 120 hour Bachelor's degree under the standard 4 year curriculum. These students may still apply to the traditional graduate program.
- Students will graduate at the completion of the 5th year in the Fast Track Program coursework (150 credit hours) with both Bachelor's and Master's degrees. Students will complete the coursework in May of the 5th year.

Program Requirements

First Year

Fall

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>GEOL 104</td>
<td>Physical Geology</td>
<td>4</td>
</tr>
<tr>
<td>CHEM 101</td>
<td>Fundamentals of Chemistry I</td>
<td>4</td>
</tr>
<tr>
<td>&amp; CHEM 111</td>
<td>Fundamentals of Chemistry Laboratory I</td>
<td>4</td>
</tr>
<tr>
<td>MATH 152</td>
<td>Engineering Mathematics I</td>
<td>4</td>
</tr>
<tr>
<td>ENGL 104</td>
<td>Composition and Rhetoric</td>
<td>3</td>
</tr>
</tbody>
</table>

| Term Semester Credit Hours | 16 |

Spring

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>GEOL 106</td>
<td>Historical Geology</td>
<td>4</td>
</tr>
<tr>
<td>CHEM 102</td>
<td>Fundamentals of Chemistry II</td>
<td>4</td>
</tr>
<tr>
<td>&amp; CHEM 112</td>
<td>Fundamentals of Chemistry Laboratory II</td>
<td>4</td>
</tr>
<tr>
<td>MATH 152</td>
<td>Engineering Mathematics II</td>
<td>4</td>
</tr>
<tr>
<td>Communication electivé</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

| Term Semester Credit Hours | 15 |

Second Year

Fall

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>GEOL 203</td>
<td>Mineralogy</td>
<td>4</td>
</tr>
<tr>
<td>GEOL 311</td>
<td>Principles of Geological Writing</td>
<td>1</td>
</tr>
<tr>
<td>GEOP 341</td>
<td>Global Geophysics</td>
<td>3</td>
</tr>
<tr>
<td>PHYS 218</td>
<td>Mechanics</td>
<td>4</td>
</tr>
<tr>
<td>Minor electivé</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

| Term Semester Credit Hours | 15 |

Spring

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>GEOL 302</td>
<td>Introduction to Petrology</td>
<td>4</td>
</tr>
<tr>
<td>GEOL 306</td>
<td>Sedimentology and Stratigraphy</td>
<td>4</td>
</tr>
<tr>
<td>PHYS 208</td>
<td>Electricity and Optics</td>
<td>4</td>
</tr>
<tr>
<td>American History or Government/Political Science elective</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

| Term Semester Credit Hours | 15 |

Third Year

Fall

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>GEOL 330</td>
<td>Geologic Field Trips</td>
<td>3</td>
</tr>
<tr>
<td>GEOL elective</td>
<td>Geology and Tectonics</td>
<td>3</td>
</tr>
<tr>
<td>American History or Government/Political Science elective</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

| Term Semester Credit Hours | 18 |

Spring

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>GEOL 309</td>
<td>Introduction to Geological Field Methods</td>
<td>3</td>
</tr>
<tr>
<td>GEOL 312</td>
<td>Structural Geology and Tectonics</td>
<td>4</td>
</tr>
<tr>
<td>GEOL elective</td>
<td>Oceanography</td>
<td>3</td>
</tr>
<tr>
<td>Creative arts elective</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

| Term Semester Credit Hours | 17 |

Fourth Year

Fall

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Social and behavioral sciences</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>American History or Government/Political Science elective</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

| Term Semester Credit Hours | 3 |
OCNG 604 Ocean Observing Systems
OCNG 608 Physical Oceanography
OCNG 603 Communicating Ocean Science

Spring
GEOL elective
Language, philosophy and culture
OCNG 657 Data Methods and Graphical Representation in Oceanography

OCNG 620 Biological Oceanography
OCNG 640 Chemical Oceanography

Term Semester Credit Hours: 15

Fifth Year
Fall
Advanced specialized OCNG graduate course
Advanced specialized OCNG graduate course
Advanced specialized OCNG graduate course

Term Semester Credit Hours: 9

Spring
Advanced specialized OCNG graduate course
Advanced specialized OCNG graduate course
Capstone Experience II

Term Semester Credit Hours: 9

Total Semester Credit Hours: 18

Any of the required courses may be taken during the summer

If students use a credit allowed OCNG courses (e.g. OCNG 251 or
OCNG 261, OCNG 252, OCNG 350, OCNG 451, OCNG 440) as
minor or free electives, they will receive an OCNG minor with their BA
in GEOL.

A second W course is required. GEOL 312 is offered as a W option
when taught by Dr. Julie Newman, and other GEOL electives also
fulfill the W requirement (including GEOL 491 when arranged with
the permission of the instructor).

Students will not be permitted to receive credit for both the 400-
and 600-level versions of certain courses because the content and
learning outcomes are too similar (e.g. OCNG 410/OCNG 608, OCNG
440/OCNG 640).

Graduate courses will be taken for dual undergraduate/graduate credit
and may contribute to the minor.

Admission Process

Application: End of junior year. After 4 semesters, minimum GPA = 3.0.
Choice: August prior to starting graduate coursework for all of Senior
Year.
Change to graduate status (27)

Choose one:
OCNG 620 Biological Oceanography
OCNG 630 Geographical Oceanography
OCNG 640 Chemical Oceanography
<table>
<thead>
<tr>
<th>Course Title</th>
<th>Credits</th>
<th>Required</th>
</tr>
</thead>
<tbody>
<tr>
<td>Geology 300</td>
<td>3.00</td>
<td>Yes</td>
</tr>
<tr>
<td>Geology 305</td>
<td>3.00</td>
<td>Yes</td>
</tr>
<tr>
<td>Geology 105</td>
<td>3.00</td>
<td>Yes</td>
</tr>
<tr>
<td>Geology 106</td>
<td>3.00</td>
<td>Yes</td>
</tr>
<tr>
<td>Geology 107</td>
<td>3.00</td>
<td>Yes</td>
</tr>
</tbody>
</table>

**Area:** Major Concentration (4.000 credits) - Not Met

**Course Requirements:**

<table>
<thead>
<tr>
<th>Course Title</th>
<th>Credits</th>
<th>Required</th>
</tr>
</thead>
<tbody>
<tr>
<td>Geology 300</td>
<td>3.00</td>
<td>Yes</td>
</tr>
<tr>
<td>Geology 305</td>
<td>3.00</td>
<td>Yes</td>
</tr>
<tr>
<td>Geology 105</td>
<td>3.00</td>
<td>Yes</td>
</tr>
<tr>
<td>Geology 106</td>
<td>3.00</td>
<td>Yes</td>
</tr>
<tr>
<td>Geology 107</td>
<td>3.00</td>
<td>Yes</td>
</tr>
</tbody>
</table>

**Total Required:** 12.000

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**Program Evaluation:**

**Program:** Geology

**Department:** Geology

**Advisor:** Undergraduate

**Degree:** Bachelor of Arts

**College:** Geosciences

**Campus:** College Station

**Academic Standing:** Undergraduate

**Limitation:** Correspondence: No correspondence earned through an accredited institution may be used for an undergraduate degree.

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**Change Student Viewing:** Degree Evaluation (DEGREE2, Emaill)

**Occurrence:** Oct 16, 2015, 10:55 am

**Roxanne R. Russell**
Total Credits and GPA 0.000

Unofficial Evaluation

Select from GEOL 300-699, GEOP 400-699.

Area: Supporting coursework (30-60 credits) - Not Met

Area: Mathematics (15 credits) - Met

Area: Communication (6.0 credits) - Not Met

Term Subject Course Title Attribute Credits Grade Source

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Total Credits and GPA 0.000
Select three hours from any course with the Creative Arts attribute (CAA).

Total Credits and GPA 0.000

Select from courses with the Social and Behavioral Sciences attribute (SSCS).

Total Credits and GPA 0.000

Select one course from any course with the Language, Philosophy and Culture attribute (LPC).

Total Credits and GPA 0.000

1. PHYS 218
2. PHYS 208
3. CHEM 102
4. CHEM 101

Select from courses with the Physical Sciences (16.000 credits) - Not met.
MEMORANDUM

To: Dr. Chris Houser, Associate Dean, Undergraduate and Faculty Affairs, College of Geosciences
To: Dr. Eric Riggs, Assistant Dean, Graduate Affairs and Diversity, College of Geosciences
From: Dr. Debbie Thomas, Department Head, Oceanography
Dr. Michael Pope, Department Head, Geology and Geophysics

RE: Revisions to catalog degree requirements for the Joint degree program between Oceanography and the Geology BA program

I have attached a revision to the Fast Track 3+2 program for BA GEOL and the non-thesis MS in Oceanography. It has been modified to fix the errors in the catalog degree requirements and in the degree evaluation.

Catalog changes include:

First Year Fall
- Adding the course title for MATH 151 and including new footnote #1
- Replacing the GEOS 101 Introduction to the Geosciences course with a free elective and indicate that GEOS 101 is recommended for this 1 credit course.

First Year Spring
- Communications elective

Second Year Fall
- Remove references to old footnote 1
- Add a Language/Philosophy/Culture elective and increase semester credits from 15 to 18.
- Correct the footnote for the minor elective

Second Year Spring
- Removing reference to old footnote #1
- Showing the American History elective correctly as 'American History or Government/Political Science Elective'
- Correct the footnote for the minor elective and include the 3 credits for this in the semester total revising the total from 15 to 18

Third Year Fall
- Showing the American History elective correctly as 'American History or Government/Political Science Elective'
- Removing the old footnote references.

Third Year Spring
- Correcting the footnote number for GEOL 312 to footnote #2 in the revised footnote list
- Correcting the footnote number for OCNG 430 to footnote #1 in the revised footnote list
- Remove the old footnote references
- Add the word elective for the creative arts elective
- Change the free elective to a minor elective.

Fourth Year Fall
- Add the word elective for the social and behavioral sciences elective
- Showing the American History elective correctly as ‘American History or Government/Political Science Elective’
- Move OCNG 603 to the spring semester. Replace with choosing one of the fundamental graduate OCNG courses (OCNG 620, OCNG 630 or OCNG 640)

Fourth Year Spring
- Replace the Language/Philosophy/Culture elective with Technical Elective
- Replacing OCNG 620 with OCNG 603 Communicating Ocean Science
- Replace OCNG 640 with choosing one of the fundamental graduate OCNG courses (OCNG 620, OCNG 630 or OCNG 640).

Total Four year hours
- Correcting the total credits for four years to 132. There are 12 credit hours that are graduate only in the fourth year along with 6 credit hour of dual graduate/undergraduate credit.

Fifth Year Spring
- Correcting the Capstone Experience to the actual course ONG 661 Advanced Oceanographic Data Analysis and Communication

Correct footnotes are:

1 If students use up to 9 hours of allowed undergraduate OCNG courses (e.g. OCNG 251, 252, 350, etc) with the two dual credit graduate courses they will also be eligible to receive an oceanography minor with their BA in GEOL.

2 A second W course is required. GEOL 312 is offered as a W option when taught by Dr. Julie Newman, and other GEOL electives also fulfill the W requirement (including GEOL 491 when arranged with the permission of the instructor).

3 Students will not be permitted to receive credit for both the 400- and 600-level versions of certain courses because the content and learning outcomes are too similar (e.g. OCNG 440/OCNG 640).

4 Two graduate courses will be taken for dual undergraduate/graduate credit and will contribute to the minor.

Corrections to the Degree Evaluation include:

Supporting Coursework
- Technical electives becomes 3 hours
- Minor emphasis becomes 16 hours to include the extra 1 credit hour minor elective (recommended OCNG 252, but could be OCNG 281 or OCNG 481).

Mathematics
• Changed from 6 credits to 8 credits to accommodate the MATH 151 and MATH 152 requirements

Life and Physical Sciences
• Added the labs for CHEM (111 and 112) to maintain the 16 credit hours

General Electives
• Reduced to 4 credits to accommodate the increase in MATH from 6 credits to 8 credits.

If you have any questions, please contact the assistant department head, Dr. Shari Yvon-Lewis (979-458-1816; syvon-lewis@tamu.edu).