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GRADUATE STUDIES

November 12, 2013

Memorandum

To: Dr. Sarah Bednarz

Approved by CG:
[Signature]
Mark J. Zorn, Chair
12-12-13

From: Debbie Thomas, Interim Department Head, Oceanography
Don Collins, Director of Environmental Programs

[Signature]
DANIEL THORNTON FOR DEBBIE THOMAS

Re: Joint Degree Program with Environmental Geosciences and Oceanography

I have attached the proposal for the Environmental Geosciences/ Oceanography 5 year program. The proposal has been approved by Environmental Programs director, Don Collins. It has also been approved by the Oceanography faculty.

We are submitting this for approval from both the undergraduate and graduate curriculum committees.

Thank you for your consideration. Please notify me if more information is needed.

3+ 2 Program for ENGS and Ocean Sciences and Technology: A Concurrent Degree program for the Environmental Geosciences Bachelors and Ocean Sciences and Technology Masters

Purpose:

The 3+2 Program offers motivated and exceptional students the opportunity to achieve their career aspirations in an efficient “fast track” program at Texas A&M, completing the Bachelor of Science degree in the College of Geosciences Environmental Geosciences and the non-thesis Master of Science in Oceanography in 5 years (to be replaced by the new Ocean Sciences and Technology degree when this degree has been formally approved). The concurrent degree program will enable these students to coordinate the required BS coursework, elective coursework within the Coastal and Marine Environments theme, and the graduate coursework to reduce the number of credit hours required for completing each degree independently, without diminishing the scope or quality of the training.

BS-ENGS:	108 credits
<u>MS-OCNG:</u>	<u>38 credits</u>
3+2 Program =	146 credits (vs. traditional BS and MS of 156 credits)

Application and Eligibility:

- The typical application process to the 3+2 program begins with submission of applications by July 1 after the student’s sophomore year (after 63 undergraduate credits). Admissions decisions will be made by August 15 prior to the start of the junior year. Applications submitted out of this normal cycle (e.g., for transfer students, students who began their studies during the Spring semester, etc) will be assessed on a case-by-case basis.
- Applicants must have a minimum undergraduate GPA of 3.25. Applicable students also must earn a B or better in all Chemistry, Calculus, and Physics courses. Once admitted to the program, students must maintain a minimum 3.25 GPA in order to receive graduate credit for 600 level courses.
- Students will select a Chair from within the Oceanography Department by the end of their 5th semester to advise them on course selection for Year 4. The Chair will serve as their advisor. Students may seek additional mentors but a formal committee is not required.
- Students will be required to take the GRE by the end of their 3rd year.
- Students will follow graduate application procedures as well as Departmental requirements for a second tier of admission into the 4th year of the 3+2 program based on competitive GRE scores, acceptance by TAMU Office of Graduate and Professional Studies, and maintaining a 3.25 GPA. Applying students that have a 3.25 or better GPA, at least a B in all OCNG courses, and submit a strong letter of intent for graduate-level study will be admitted to the remainder of the program automatically.
- Students must complete 90 hours with a minimum of 3.25, including a B or better in all OCNG courses, before enrolling in any 600-level courses.

- Students continuing into the 4th year of the 3+2 Program must finish the entire 146 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 continuing in the 3+2 Program will change from U4 to G7 status when they complete 124 hours (end of semester 2, year 4).
- Students not accepted or not allowed to continue with the 3+2 Program will complete the 120 hour ENGS BS under the standard 4 year curriculum. These students may apply to the traditional graduate degree program.
- Students will graduate at the completion of the fifth year in the 3+2 Program coursework (146 credit hours) with both Bachelor's and Master's degrees. Students will complete the coursework by the end of the second semester, year 5.

Program of Study:

The 3+2 curriculum has the following groupings of:

1) Undergraduate degree credit hours (=120)

General Education Requirements	55 credits
BS-ENGS Required courses	27 credits
Undergraduate emphasis area electives (that include <u>MS courses</u>)	18 credits
Undergraduate electives (policy and tech)	<u>20 credits</u>
TOTAL BS-ENGS course credits	120 credits

2) Graduate degree credit hours (=38):

MS OCNG core courses	17 credits
<u>MS emphasis area electives</u>	<u>19 credits</u>
TOTAL MS OCNG course credits	36 credits

Change of Major and Transfer Students:

Students who have transferred into the ENGS major are eligible to apply for the 3+2 degree program after completing 63 credit hours toward the ENGS degree. Given the broad range of coursework with which transfer students enter A&M or the ENGS program, case-by-case advising will be required for most transfer students.

3+2 Time Line:

Apply to 3+2 Program: End of sophomore year after 4 semesters, minimum of 63 credits. Later applications determined on a case-by-case basis.

First Tier admission decision: August prior to starting 3+2 in Fall of Junior Year.

GRE exam: Take by end of junior year

Apply to Office of Graduate and Professional Studies: After completion of Junior Year

Second Tier admission decision: August prior to Fourth year based on competitive GRE scores, admission to TAMU graduate studies, and maintaining a 3.25 GPA.

Change to graduate status (G7) after completion of 124 credits, summer following Year 4.

Apply for graduate degree plan upon approval of G7 status.

Graduation: Both Bachelor's and Master's degrees conferred upon completion of Year 5.

Draft 5-year degree program¹**Year 1 – Semester 1**

GEOS 105 Intro to Geosciences (3)

BIOL 111 Introductory Biology I (4)

MATH 151 Engineering Math 1 (4)

ENGL 104 Comp and Rhetoric (3)

GEOS First Year Seminar (1)

Total: 15 Credit hours (undergraduate)

Year 1 – Semester 2

POLS 206 American National Government (3)

BIOL 112 Introductory Biology II (4)

MATH 152 Engineering Math II (4)

History elective (3)

Total: 14 Credit hours (undergraduate)

Year 2 – Semester 1

Introductory Geoscience course and associated lab (4)

CHEM 101/111 Fundamental Chemistry (4)

GEOG 201 Intro to Human Geography (3)

History elective (3)
Environmental Policy elective (3)
Total: 17 Credit hours (undergraduate)

Year 2 – Semester 2

Introductory Geoscience course and associated lab (4)
CHEM 102/112 Fundamental Chemistry II (4)
Communications elective (3)
POLS 207 State and Local Government (3)
Technical elective (3)
Total: 17 Credit hours (undergraduate)

Year 3 – Semester 1

STAT 303 Statistical Methods (3)
PHYS 218 Mechanics (4)
GEOG 330 Resources and Environment (3)
2 Courses from Coastal & Marine Environments theme (6)
Total: 16 Credit hours (undergraduate)

Year 3 - Semester 2 (modified from BS Environmental Geosciences)

GEOL 420 Environmental Geology (3)
Environmental Policy elective (3)
Visual and Performing Arts elective (3)
PHYS 208 Electricity and Optics (4) [ENGS tech elective]
1 Course from Coastal & Marine environments theme (3)
Total: 16 Credit hours (undergraduate)

Year 4 – Semester 1

GEOS 405 Environmental Geosciences (capstone experience) (3)
GEOG 390 Principles of GIS (4) [ENGS tech elective]
Technical electives (3)
OCNG 604 Ocean Observing Systems (3) [ENGS theme elective]
OCNG 608 Physical Oceanography (3) [ENGS theme elective]
Total: 16 credit hours (7 undergraduate, 6 graduate)

Year 4 – Semester 2

Humanities elective (3)
OCNG 657 Data Methods and Graphical Representation in Oceanography (3) [GEOS 470 substitute]
Fundamentals of Ocean science course (e.g. OCNG 620, 640, 630)² (3) [ENGS theme elective]
Oceanography 600-level elective course (3)
OCNG 681 Oceanography Seminar (1)
Total: 13 credit hours (3 undergraduate, 10 graduate)

Year 5 – Semester 1

Fundamentals of Ocean science course (e.g. OCNG 620, 640, 630)² (3)

Advanced specialized OCNG graduate course (3)

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Total: 12 credit hours (graduate)

Year 5 – Semester 2

Advanced specialized OCNG graduate course (3)

Capstone research/self-directed learning experience (non-thesis capstone course to be created) (6)

OCNG 681 Oceanography Seminar (1)

Total: 10 credit hours (graduate)

Total undergraduate credit hours: 108 (of the 120 normally required for an undergraduate degree)

Total graduate credit hours: 38 (minimum required for MS is 36)

Notes:

1. Any of the required courses may be taken during the Summer Sessions to diminish the heavy semester loads during Years 2 and 3.
2. 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 (OCNG 440/640; GEOS 470/OCNG 657)