

DEPARTMENT OF OCEANOGRAPHY

PROCEDURES FOR ADMITTING AND ADVISING INCOMING GRADUATE STUDENTS

1. Existing admission standards concerning math and other sciences will be rigorously enforced. Promising applicants with deficiencies may be encouraged to enroll as unclassified graduate students while correcting such deficiencies.
2. Faculty are encouraged to verbally interview applicants when appropriate. A separate space for a synopsis of the interview will be provided on the applicant evaluation form.
3. Upon acceptance, the incoming students will be sent:
 - a. A letter emphasizing the need to review both mathematics (college algebra and geometry, and differential and integral calculus) and other sciences (biology/ ecology, chemistry, geology, and physics) prior to arrival at UHM.
 - b. A description of the level of skill expected of incoming students in the areas of mathematics, basic science, and oral English comprehension. The instructors of the core courses, in consultation with the members of their sub disciplines, will provide a brief synopsis of the skill levels required in their areas of basic science.
 - c. A list of reference books suitable for remedial study.
 - d. Instructions to arrive at UHM in time for a scheduled orientation meeting (approximately 3 days before registration).
4. The Assistant Chair, or his/ her designee, will meet with all of the incoming students in an orientation meeting to explain departmental procedures, answer questions, and set up advising sessions. Each sub discipline will designate an interim advisor for its incoming students.
5. Each student will meet with the appropriate interim advisor to discuss the student's working knowledge of mathematics, biology/ ecology, chemistry, geology, and physics, and to determine the adequacy of the student's oral English comprehension. The results of this discussion will be reported on a standardized form, copies of which will be given to the student and the Assistant Chair; a copy will also be kept in the student's file. For each of the six subject areas there will be two possible outcomes: a) satisfactory preparation, or b) required remedial action. Any required remedial action will be specified on the form, and may be appealed to the Department chair in the case of serious disagreement between the student and the interim advisor.
6. Students will register for their first semester courses after the meeting with their interim advisors. Core courses may need to be delayed if remedial work is required.

Recommendation 5

That each subfield develop and publish some structured curriculum guidelines for its students. These need not be hard-and-fast requirements, but they should be definite enough to give faculty and students some common understanding about the type, level, and amount of coursework generally considered good/necessary/sufficient for MS and PhD students in each sub discipline.

Curriculum Guidelines for Physical Oceanography Students

This discussion has been designed by the physical oceanography faculty to assist you in planning your course selections.

It might be helpful to start by describing the overall pattern. We expect you to take every opportunity to prepare for your professional career, your curriculum plans should be based on doing as much as possible. Moreover, you must expect to take fewer courses as your personal research load grows. So the basic pattern is a large course load at first, gradually tapering off as you approach graduation. More specific guidelines are as follows:

First year

Fall	620, 623 – required. 630 – very strongly recommended (regard as required unless you have a special background or an unusual problem). Basic elective
Spring	621, 622 – required. 662 – required (basic to most other advanced courses and therefore to be taken in the first year). Basic elective

First year, basic elective would generally be advanced courses in fundamental skills (e.g. various applied math topics), or first-level grad course in allied fields (e.g. physics, meteorology). Whether to take elective and which one to pick are for you and your advisor to decide—with an eye toward making best use of your first year to strengthen your background for advanced work.

Second and Succeeding years

The advanced physical oceanography courses (number 640 and above) are usually offered in a two-year cycle, with one or two appearing each semester (662 is given every year). Things are design so that all departmental offerings may be taken within any two-year period, as in this example schedule.

	Second Year	Third Year
Fall	665, 760, Advanced elective	Fall 660, 661
Spring	640, 666, Advanced elective	Spring 667

The faculty requests that you look ahead at the courses you'll probably want and the schedule you'll need. If you think you'll need some particular course in a year when it isn't normally offered, let your advisor know now so the faculty can make plans to accommodate this.

Ph.D. Students

A Ph.D. student will probably take all, or almost all, of the advanced offerings, and the example schedule given above might be typical. Notice the course load is

designed to taper off, reflecting the expectation that your research will occupy increasing amounts of time from the third year on.

The advanced electives represent courses offered by other departments and should be chosen according to your research and career interests. Moreover, it might be appropriate for you to add further out-of-department courses or to substitute some for oceanography offerings. Your overall curriculum should be a subject of careful planning, with your advisor's help.

M.S. Students

An M.S. curriculum is basically a foreshortened version of the Ph.D. curriculum. You will normally begin your research in the second year, completing it in that year or the next. During this same period you will take several (three or more) advanced oceanography courses or electives. Since you will have time for fewer courses, it is especially important to plan with your advisor so that you can select things having maximum benefit for your research and career. (Not there are credit-hour requirements for the M.S., see Graduate Bulletin).

A Word on the Scheme of Things

The Graduate Bulletin and the departmental Bulletin (Degree Requirements and Procedures in Oceanography) give all the technical requirements, deadlines, etc., that are involved in obtaining a degree. But they provide little guidance about actual course selection. The present document is intended to help fill that gap by giving you an overall idea about what should be in your curriculum. You must still refer to the other documents to make sure you are meeting all departmental and university graduation requirements.

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Ed Laws, 12:00 AM 9/ 11/ 99, undergraduate calculus deficiency

X-Sender: laws@iniki.soest.hawaii.edu

X-Mailer: QUALCOMM Windows Eudora Light Version 3.0.6 (32)

Date: Sat, 11 Sep 1999 00:00:52 -0600

To: oceanfac@akule.soest.hawaii.edu

From: Ed Laws laws@soest.hawaii.edu

Subject: undergraduate calculus deficiencies

This year several of the students in our program have been found to have an undergraduate deficiency in mathematics. Our degree requirements and procedures state that "an applicant must have completed mathematical training including calculus through first-order ordinary differential equations (equivalent to Calculus IV at UH)." The current UH Graduate Division Manual Policies and Procedures states (p.35), "Students granted provisional admission and others whose preparation is found deficient may be required, as part of their program, to take appropriate course work as a prerequisite to graduate study. Such courses will carry no credit toward the degree but will be included when computing the final GPR."

I have been handed several FORM I's in which the calculus deficiency was to be made up by taking MATH 231 (Calculus III). Our policies make it clear that this is not sufficient. In at least one case the intention of not listing MATH 232 (Calculus IV) was that the student would take OCN 650 after taking MATH 231. However, the prerequisite for OCN 650 is MATH 232 (see the UH General and Graduate Information Catalog, p.357). There is a good reason for this prerequisite. OCN 650 is a difficult course. It is not a course for students who are struggling with mathematics. A nontrivial number of students who have enrolled in the course have never finished it. OCN 650 assumes the student has a good working knowledge of first-order ordinary differential equations.

Even if a student with a calculus deficiency were allowed to enroll in OCN 650, the above cited Graduate Division Policy and Procedures make it clear that OCN 650 could not be used to make up the student's calculus deficiency and at the same time be credited toward the student's degree. Students concentrating in marine geochemistry are required to take OCN 650 as part of their graduate degree. Hence marine geochemistry students cannot use OCN 650 to complete the makeup of their calculus deficiency, because they need to be able to credit OCN 650 toward their graduate degree. OCN 650 is also listed among the possible courses that a student could take in Group V. If a student were to use OCN 650 to complete the makeup as part of the makeup of his/her calculus deficiency, the student could not use OCN 650 as a Group V course, because under those circumstances OCN 650 could not be credited toward the student's degree.

According to our Degree Requirements and Procedures, students who elect to take MATH 231 and/or MATH 232 to make up their calculus deficiency must make a grade of at least a B in each course. One alternative to taking MATH 231 and/or MATH 232 is to pass the relevant portions of the calculus proficiency exam that is given each fall. There is nothing to prevent a student who has not had adequate calculus preparation from

studying on his/her own and then taking the calculus proficiency exam. Telu Li has generously agreed to work with such students, either informally or as part of a formal directed reading course.

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In principle, courses can be listed as CR/ NC courses (via course proposal). Student would know from our announcement and through computer, but the course is not listed as such. CR/ NC courses do not contribute to CPA's, and they do not count towards the 18 credits of course work required as a minimum for the M.S. degree (+ 12 for thesis research to add up to 30 credits minimum).

Concerning OCN 780, it can be CR/ NC and still count towards our departmental seminar requirement. But it cannot count towards the overall M.S. minimum credit requirement.

Concerning OCN 699 can be taken as letter grade or CR/ NC option. But credits of OCN 699 can be transferred to OCN 700 only if 699 is taken with letter grade. Again, CR/ NC does not apply toward minimum credit count.

(Student can register for 700 Progress Form IV, thesis proposal, has been filed and approved; credit for 700 has grade S, satisfactory, when final thesis is into Grad. Div.).