Summary of Decisions – Undergraduate Programs
Faculty In-Serve Planning Workshop – 8 May 2016, 8:30a – 4:00p

Prior Undergraduate Program meetings: 2016: 24 March; 2015: 5 May, 8 October, 3 December.

Information used to support planning at the meeting:
IDEA surveys for individual courses and department summary: 2014/2015 and 2015/2016 academic years
2016 Graduating Senior surveys and exit interviews with Department Head
Enrollment, graduation, and placement for all WATS majors: 2005-2016
Draft degree requirements and 4-yr plan for revised major: Mgt. and Restoration of Aquatic Ecosystems
Current degree requirements and 4-yr plan for major in Fisheries and Aquatic Sciences
Syllabus for proposed new courses:
   - Principles of Aquatic Ecosystem Restoration
   - Ecology and Management of Wetland and Riparian Plants
Proposals for new courses:
   - Capstone I & II: Management and Restoration of Aquatic Ecosystems
   - Climate Science for a West Without Water

Principal Decisions

1. Courses

   Principles of Aquatic Ecosystem Restoration: new course, to be taught by Kettenring. Extensive discussion and inputs on topics. Wilcock and Wheaton will contribute to developing modules for course. Decision to add course based primarily on faculty judgement of the needs for a professionally-relevant program.

   Ecology and Management of Wetland and Riparian Plants: new course, to be taught by Kettenring. Expands previous course on wetland ecology and management to riparian zone. Decision based on consensus student and faculty opinion that more riparian coursework is needed.

   Fluvial Geomorphology: The previous two courses: one lecture (3 credit) and one field (2 credit) will be combined into one 3 credit course with an emphasis on field observation. Decision based on student feedback concerning (i) the difficulty of fitting 5 credits into schedule and (ii) the effectiveness of the field component and on faculty assessment of the important material that should be offered to students not in geomorphology.

   Capstone I & II: Management and Restoration of Aquatic Ecosystems: A two semester course will be developed for AY 2017-2018. The fall semester will cover professional topics and an introduction to the design projects. The spring semester will focus on the design project. Existing courses used to provide capstone experience are either no longer offered or not specifically directed to providing a capstone experience.
2. Advising

Interviews with graduating seniors revealed that students had not met with the faculty advisor as often as would be useful, sometimes only once or twice over their entire tenure. Students should meet with both academic and faculty advisors each semester. Faculty advisors for 2016-2017 will be Gaeta (FAAS) and Wilcock (MRAE), who will contact advisees individually to set up meetings each semester.

3. Program Assessment

Current learning objectives are too specific and should be reduced in number to broadly define achievement of program goals. More specific topics will be treated as examples of the broader learning objectives and will be implemented as key elements used to evaluate achievement. A stronger linkage is needed regarding topics crossing different courses, which will be achieved using a formal assessment of key topics, separate from course grades.

Action: Wilcock and Mesner will develop a new set of learning objectives that will be agreed upon at a faculty meeting at the start of the fall semester, implemented throughout the 2016-2017 AY, and evaluated at the May 2017 in-service day.

4. Degree Requirements for MRAE

We have changed the major in Watershed and Earth Systems to Management and Restoration of Aquatic Ecosystems. Based on a multi-year assessment of student enrollment and placement, including interviews with current, past, and prospective students, we concluded that the old title was ambiguous and did not adequately convey the nature of the program to prospective students. We also observed a high level of student satisfaction and a strong placement record, but that enrollment in the major was small. Based on senior exit interviews, college advisor interviews with prospective students, and faculty assessment of the strengths of our program and prospects for student employment, we moved this spring to change the name of the major to Management and Restoration of Aquatic Ecosystems. This name more clearly indicates the content, skills, and abilities of students in the program. The new title is also consistent with the deep expertise of departmental faculty in management and restoration of aquatic ecosystems. The revised major will offer Areas of Emphasis that will be recorded on the final transcript which will serve to encourage and document achievement in a way that we believe will help to attract, focus, and employ majors.

MRAE will share the same departmental core courses with FAAS. Additional major requirements will be 21 elective credit hours (grouped into Areas of Emphasis) and the following courses:
- APEC 3012 Intro to NR and Regional Economics
- ENVS 3010 Fundamentals of NR and Env Policy
- WATS 3810 Climate Science for a West Without Water
- WATS 4530 Water Quality & Pollution
WATS 5150  Fluvial Geomorphology  
WATS 5300  Principles of Aquatic Ecosystem Restoration  

Supporting information: evaluations of Undergraduate Curriculum Committee, P. Belmont (faculty advisor) and S. Kotynek (QCNR academic advisor), IDEA evaluations, graduating senior surveys regarding effective courses.  

**Action:** R401 for revised degree requirements will be submitted for immediate approval early in Fall 2016, allowing for immediate advising guidance and official implementation Fall 2017.  

5. Degree Requirements for Fisheries and Aquatic Sciences  

One recent change was noted. In order to address an imbalance between large numbers of majors in *Wildlife Science* and small numbers of majors in *Fisheries and Aquatic Sciences*, the Department of Wildland Resources added a minor in Wildlife Science in order to expand opportunities, which now include a Wildlife Science major plus Fisheries minor as well as a Fisheries major plus Wildlife Science minor.  

Second, based on transcript reviews, exit interviews with graduating seniors, and career placement records, we agreed on the need to strengthen the capstone experience in FAAS. It was decided to require the new, two-semester MRAE capstone class for FAAS majors as well. This will provide a broader capstone experience covering aquatic ecosystem applications. Input on course modules and case studies will be provided by ELR staff and faculty.  

**Action:** Changes in degree requirements for FAAS major:  
Replace *Wetland Management and Ecology* with *Ecology and Management of Wetland and Riparian Plants*  
Replace existing capstone options with *Management and Restoration of Aquatic Ecosystems* capstone.  
Replace ENVS 2340 with ENVS 3010: 2340 is not an effective course for our students, based on IDEA evaluations and student feedback in senior survey. Input from ENVS DH indicates that 2340 is needed along with ENVS 3010 and ENVS 4000.  
Numerous edits and additions to elective list to reflect changes in available classes.  

Submitted by  

[Signature]

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Professor and Department Head