

9-25-2014

Curriculum minutes 09/25/2014

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UMM CURRICULUM COMMITTEE
2014-15 MEETING #3 Minutes
September 25, 2014, 10:50 a.m., MFR

Members Present: Bart Finzel (chair), Sarah Ashkar, Donna Chollett, Stephen Crabtree, Dan Demetriou, Janet Ericksen, Pieranna Garavaso, Sara Haugen, Peh Ng, Ricky Rojas, Gwen Rudney, Emily Sunderman

Members Absent: Carol Cook, Clare Dingley, Pilar Eble, Maryanna Kroska, and Sonja Swanson

Visitors: Nancy Helsper and Jeri Squier

In these minutes: Science and Mathematics catalog course changes, and Education catalog course changes

Approval of Minutes – September 18, 2014

Finzel noted that the six priorities for summer 2015 EDP funding were discussed at the last meeting. By approving the minutes for that meeting, members are confirming that those are the six priorities we are prepared to support. When the call for proposals is sent out, he will make it clear that there are two levels of award: \$3,000 for course development, and a lesser amount for course revisions.

MOTION (Ericksen/Garavaso) to approve the September 18, 2014 minutes. Minutes were approved by unanimous voice vote.

Catalog Course Changes

Finzel noted that we began the process two years ago in which divisions first present courses and course revisions for approval, and after those changes have been made in ECAS, the program revisions are presented. Because courses feed the programs, it is logical to look at the courses first. This is the first of those discussions, and Finzel expressed gratitude that the Division of Science and Mathematics had agreed to be first in the process and asked Peh Ng, chair of the division to present the course changes.

Division of Science and Mathematics Catalog Course Changes

Biology (Biol)

Biol 4191 – Freshwater Biology (revised course)

A prerequisite of Stat 1601 or 2601 is being added because the instructor of Biol 4191 has determined that students would be better prepared to succeed in the course if they are familiar with statistics. Rudney asked if there are other courses in Biology that already require statistics, and whether adding the prerequisite will add another course to the major. Ng made it clear that this is not an attempt to add another course to the major.

Biol 4331 – Global Change Ecology (deactivated course)

This course will be replaced in the electives of the major by a new course, Biol 4333.

Biol 4332 – Ecology of Agriculture and Forestry (4 cr; ENVT) (new course)

Finzel asked if there was a rationale for an additional advanced elective in Environmental Studies. Will Environmental Studies majors be expected to take it? If so, would a typical Environmental Studies student take it prior to their senior year? Ng answered that if they want an emphasis in ecology, they would want to take it as an elective. Crabtree added that he has a couple of Environmental Studies majors that are already planning to take the ecology course. Very few students wait to take it in their senior year.

Biol 4333 – Biogeochemistry and Global Change (4 cr) (new course)

Biol 4331 is being deactivated and replaced by two new courses: Biol 4332 and 4333. Chollett noted that Biol 4333 appears to be more specific than 4331 was. Issues of water, community, and ecosystem have been deleted. Biol 4332 appears to be broader, and 4333 is more concentrated and offers more depth.

MOTION (Rudney/Garavaso) to approve the Biology course changes.
The motion passed unanimously (10-0-0).

Chemistry (Chem)

Chem 1101 – General Chemistry I (course change)

Chem 1102 – General Chemistry II (course change)

The number of credits is being increased from 4 to 5 for each of these courses. These have always been offered with 65-minute lectures on MWF, and a 3-hour lab. This change is all about student workload and the request came from students. Ericksen asked if this affects the total credits required of the major. Ng answered that the electives will be reduced by 2 credits. Finzel asked if the total number of credits will be increased for all majors that require General Chemistry. Ng replied that they will increase by 2 credits. Some are at 58 and will be at 60. Biochemistry is already above the 60 credit limit. Finzel stated that we have a limit of 60 and he would like to know which programs will be over the 60 credit limit as a result of this change. Ericksen noted that such increases put other majors at a disadvantage. Do the Biology and Chemistry's program truly require that much of their students as opposed to other majors? Ng replied that it is important in the science disciplines to take courses outside their disciplines but within the division. Every Biology major at any institution requires the same General Chemistry, Biology, Organic Chemistry, Calculus, Statistics, etc., courses. Increasing this course is simply being honest about the workload that it requires of students. Splitting the course from the lab keeps the credits low but it is not honest. Ashkar asked whether having such a thick major impacts a student's ability to take part in study abroad or other such programs. Ng replied that students can take advantage of those programs during the summer. They are also trying to design courses that have an international perspective. Ng noted that if you look at data, among majors in Science and Mathematics programs, students are liberally educated, taking the required GenEds. Finzel concluded that when programs are reviewed, if more than 60 credits are required in any major, this body will call them out. Ng stated again that the Chemistry discipline is not only interdisciplinary it is also intradivisional. Regardless, Finzel replied, there is currently only one exception on campus to the 60 credit limit rule.

Chem 2312 – Organic Chemistry Lab II (deactivated course)

The Chemistry discipline has no plans to offer this course.

Chem 4751 – Advanced Inorganic Chemistry (course change)

The course is being reduced from a 4-credit course to a 2-credit course. The reduced credits should give the course some flexibility and a greater chance the course will be taught.

Chem 1553 – Global Perspectives on Chemical Applications (4 cr; IP) (new course)

Chem 4553 – Physical Chemistry Applications and Global Perspectives (4-6 cr) (new course)

These are new study abroad courses. Two years ago the division was asked to do a course on global perspectives. With an international grant from the Twin Cities campus, Professor Alia went to Thailand and talked to chemists there to develop the courses. These courses will be taught in Thailand or other countries. The 1553 course has a Gen Ed of IP. Chem 4553 has the flexibility after a 3-week May session to come back to campus and work during the summer for the extra two credits. Garavaso asked how being abroad affects the content of the course. Ashkar asked what the advantage would be of taking the course in Thailand. Is there a cultural component? Finzel suggested that the two courses be tabled until a later meeting when the questions can be answered or the course description can be revised to reflect the advantage of taking the course in Thailand or other countries.

MOTION (Ashkar/Garavaso) to approve the Chemistry course changes (omitting Chem 1553 and 4553).

The motion passed unanimously (10-0-0).

Computer Science (CSci)

CSci 3401 – Models of Computing Systems (deactivated course)

CSci 4408 – Systems: Computer Forensics (deactivated course)

The deactivation of 3401 makes clear that the lab and lecture components are separate. They are split into two new courses: 3402 and 3403. CSci 4408 is being deactivated because the instructor retired.

CSci 4406, 4409, 4451, 4452, 4456, 4459 (course changes)

The prerequisite is being updated from CSci 3401 (which is being deactivated) to the two new proposed courses, CSci 3402 and 3403.

CSci 4457, 4458 (course changes)

The prerequisite is being updated from CSci 3401 (which is being deactivated) to CSci 3403.

CSci 4604 – Programming and Languages: Graphical User Interfaces

CSci 4605 – Programming and Languages: Refactoring

CSci 4651 – Programming and Languages: Programming Languages

CSci 4652 – Programming and Languages: Compilers

CSci 4653 – Programming and Languages: Software Engineering

CSci 4654 – Programming and Languages: Modern Functional Programming

CSci 4655 – Programming and Languages: Software Design and Development II

CSci 4656 – Programming and Languages: Human-Computer Interaction and Interface Design

CSci 4657 – Programming and Languages: Programming Languages for Client-Server Systems

CSci 4658 – Programming and Languages: Usability, Design, and Mobile Technologies

The titles of these 10 courses should all be preceded by “Processes,” to reflect increased emphasis on processes in modern software development.

CSci/Stat 2701 – Introduction to Data Science (4 cr; M/SR) (new course)

Finzel asked if it had been considered to have the course listed in only one of the two disciplines and have it listed as an elective in each discipline. Cross-listing courses can result in confusion when tracking faculty workload and FTE count. Squier added that it affects enrollment as well when giving permission numbers. Ng stated that this course is truly interdisciplinary, literally taught half in each discipline by a faculty member whose position is housed in both computer science and statistics, as well as a third discipline. Placing it in two disciplines is intentional in this case.

CSci 3402 – Computing Systems: Concepts (3 cr) (new course)

CSci 3403 – Computing Systems: Practicum (2 cr) (new course)

These two courses are the result of the deactivation of 3401 and creating two separate courses, providing clarity and scheduling flexibility for faculty and students.

CSci 4557 – Theory: Quantum Computing (4 cr) (new course)

This course will cover material not covered by current courses. It also satisfies a 4000-level elective requirement.

MOTION (Garavaso/Rudney) to approve the Computing Services course changes.

The motion passed unanimously (10-0-0).

Mathematics (Math)

Math 1001 – Survey of Math (course change)

The course title is changing to Excursions in Math. The title change should eliminate confusion with the Survey of Calculus course. The course description is also being revised to more accurately describe the course content. Rudney stated that the course has been a huge service to Elementary Education majors and asked if the content would remain the same. Ng replied that only the name is changing.

Math 1012 – PreCalculus I: Functions (course change)

Math 1013 – PreCalculus II: Trigonometry (course change)

The prerequisite for these two courses is clarified. It originally stated “Prereq- placement” but will now state “Prereq-Math 0901 or placement.”

Math 1021 – Survey of Calculus (course change)

The change in prerequisites prevents students who have passed Math 1101 (Calculus I) from subsequently taking Math 1021. The material in 1021 is a subset of the material in 1101.

Math 1993, 2993, 3993, and 4993 (course changes)

These are Directed Study courses. The course description is revised to remove the problem solving in mathematics option, which is no longer offered. Consequently, Math 2993, 3993, and 4993 will reduce the number of maximum credits to 10 to be consistent with other directed studies.

Math 2111 – Linear Algebra (course change)

The prerequisite has been changed from 1101 to 1102. Students have a better success rate in the course if they have taken Calc II rather than Calc I. Finzel asked if the change will limit access to Math 2111. In economics, only Calc I is required for the major. Ng stated that she teaches Linear Algebra and even Economics majors tend to have already taken Calc III, so she doesn't foresee a problem.

Math 2211 – History of Mathematics (course change)

The prerequisite has been updated to Math 1101 or higher.

Math 3211 – Geometry (course change)

The prerequisite is being updated from Calc I to Calc II or #.

Math 3221, Math 4211 (course changes)

The name of Math 3221 will change from Analysis to Real Analysis I, with an updated course description and removal of the redundant Gen Ed. The name of Math 4211 will change from Real Analysis to Real Analysis II.

Math 3231, 3401, 3411, 3501, 3502 (course changes)

The redundant Gen Ed is being removed from these courses. The prerequisite for Math 3411 is also being updated to reflect the need for Math 1102. The prerequisite for Math 3401 should be changed to 1101 or higher.

Math 4901 – Senior Seminar (course change)

The prerequisite is changed to restrict the course to senior Math majors due to resource limitations. Consequently, the grading option is changed to A-F only.

Math 2212 – Introduction to Knot Theory (4 cr; M/SR) (new course)

This course will address the need for more 2000-level math electives.

MOTION (Ericksen/Rudney) to approve the Mathematics course changes.
The motion passed unanimously (10-0-0).

Physics (Phys)

Phys 1064 – High Altitude Ballooning: An Exploration of Near Space (deactivated course)

Phys 1802 – Projects in Physics and Engineering (2 cr/IC) (new course)

Phys 1064 is being replaced by Phys 1802 which will allow more breadth in the projects of the course and will no longer be exclusive to balloons. Phys 1064 has become prohibitively expensive with the rising cost of helium.

MOTION (Ericksen/Rudney) to approve the Physics course changes.
The motion passed unanimously (10-0-0).

Statistics (Stat)

Stat/CSci 2701 – Introduction to Data Science (4 cr; M/SR) (new course)

This course was approved with the course changes in Computer Science.

Division of Education Course Changes

Finzel asked Gwen Rudney, chair of the Division of Education to present the course changes in the division.

Education (Ed)

Ed 3108 – Critical Literacy Trends and Issues (deactivated course)

This course was provisionally approved to be taught by a Pre-doc fellow in education. It will not be taught again. Finzel asked if it is necessary to deactivate provisionally approved courses since they will be deactivated later if they are not brought forward for regular approval. Squier answered that she prefers that provisionally approved courses be brought to the Curriculum Committee for deactivation.

Ed 4903 – Kindergarten Education

The prerequisite of instructor consent has been added to allow the instructor to evaluate non-UMM student transcripts prior to registration.

Elementary Education (EEd)

EEd 3201 – Preprimary Theory: Three-, Four-, and Five-Year-Olds in School (deactivated course)

This course is being replaced with a more comprehensive revised course (EEd 3203).

EEd 3202 – Middle Level Theory (course change)

The course name is changed to Middle Level Theory and Methods. The course description is also changed. All EEd majors will take a new course (EEd 3204) and this course will now be taken only by students pursuing a middle level endorsement.

EEd 3203 - Preprimary Theory and Pedagogy (course change)

The course name is changed, it has increased from 3 credits to 4 credits, and the course description has been revised. It will only be taken by students pursuing a preprimary endorsement.

EEd 3204 – Advanced Childhood and Adolescent Development (2 cr) (new course)

This course will provide extended study of child and adolescent development with a focus on early elementary and middle school learners. This is a required course for students majoring in elementary education.

EEd 3213 – Practicum II: Field Experience in a K-6 Setting (1 cr) (new course)

This course will provide a practicum experience for students obtaining a K-6 license with no endorsement.

Secondary Education (SeEd)

EngE 4122 (deactivated course)

This 1-credit course will no longer be taught. Students will take EngE 4121 (4 cr) instead.

MthE 4122 (deactivated course)

This 1-credit course will no longer be taught. Students will take MthE 4121 (4 cr) instead.

SciE 4122 (deactivated course)

This 1-credit course will no longer be taught. Students will take SciE 4121 (4 cr) instead.

SScE 4122 (deactivated course)

This 1-credit course will no longer be taught. Students will take SScE 4121 (4 cr) instead.

EngE 4121, MthE 4121, SciE 4121, SScE 4121 (deactivated courses)

These courses are now taught to students in both SeEd and EEd programs so EEd program information is included in the prerequisite language of these courses.

MOTION (Ng/Ericksen) to approve the Education Division proposed course changes.

The motion passed unanimously (10-0-0).

Finzel thanked the Science and Mathematics and Education divisions for moving quickly on their course revisions.

Submitted by Darla Peterson