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## University of Northern Iowa Graduate College Curriculum Committee Minutes, October 2, 2009

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# MINUTES OF GRADUATE COLLEGE CURRICULUM COMMITTEE

#019

October 2, 2009

Present: R. Boody, S. Coon, J. Gerrath, W. Hoofnagle, J. Li, P. Mackay, J. Marshall, A. Mitra, F. Thompson, D. Wallace

Absent: M. Beall, J. Fecik, B. Hawbaker

Guests: C. Chancey, M. Clayton, S. Giese, J. Haack, C. Lee, J. Ridenhour, D. Saunders, I. Simet, J. Walters

The meeting was called to order by Chair Shoshanna Coon at 3:15 p.m. in Lang 115.

## I. Introduction and Announcements

Chair Coon welcomed all present, and members and guests introduced themselves.

## II. Approval of Minutes

Chair Coon asked members to review GCCC Minutes #018, September 25, 2009.

Gerrath moved, Boody seconded to approve minutes.

Question was called on motion to approve. Motion carried and minutes were approved.

## III. Review of Curriculum Review Procedures

Chair Coon stated College curriculum packets would be reviewed by department as follows: Motion to approve the specified department, a second to that motion, discussion, and vote.

Chair Coon reminded members discussion will be limited to evaluation of university-wide impact and compliance with curriculum policies and procedures.

Chair Coon stated she had been asked by University Registrar Patton to remind departments of university impact and resources as they propose courses.

[As an editorial note, the following are University Registrar Patton's comments excerpted from UCC Minutes September 16, 2009 as regards course proposals.]

[University Registrar Patton stated he would be posing the following two questions to **each** department as their curriculum proposals came forward for approval:

- 1) If changing the title, the description and the prerequisite for a course, how is that not a **new** course? A response similar to "we are updating to new content or technology" is not likely expansive enough, since the course number and, therefore the graduation requirement, have not changed which causes the two versions of the course to be considered the same.
- 2) Do you have any required courses which have waiting lists, or all students desiring to register for a required course cannot do so because of limited seating? If so, explain how you can add a new course when you are not meeting the needs of students in required courses. Does adding this new course not further limit your ability to meet the demand in required courses?

University Registrar Patton stated that in the existing budgetary climate there is an expectation of zero balance between drop and added courses, and a need to be attentive to appropriately servicing our students in their progress toward degree. Patton stated that the

above questions are ones in which the university will need to be able to legitimately respond to students, the Board of Regents, and the Higher Learning Commission (HLC) in the upcoming accreditation process.]

Editorial Notes from GCCC secretary:

- ▶ Per Graduate Council decision, all "g" courses must have "junior standing" designated as a prerequisite (but **not** "junior standing or consent of instructor"). D. Wallace will handle this editorially, and no specific changes in the abstract relative to this will be noted in the minutes.
- ▶ Course numbers which have changed and are denoted in abstract under the old number (as well as those not in abstract but in catalog) will be edited by D. Wallace throughout the curriculum review and catalog process. No specific changes in the abstract relative to this will be noted in the minutes.

#### IV. Review of College of Natural Sciences Curriculum Packet (Graduate)

Chair Coon asked Gerrath to present the College of Natural Sciences graduate curriculum packet.

Gerrath moved, Boody seconded to approve the College of Natural Sciences graduate curriculum packet. It was the consensus of members that there be a separate motion/vote to approve each department.

##### A. Biology Department

Gerrath moved, Boody seconded to approve Biology Department graduate curriculum packet.

Gerrath summarized pertinent graduate curriculum questions/issues within the Department of Biology curriculum packet, and motions, discussion, and voting was as follows:

- ▶ 840:1xxg[116g] *Neurobiology* (new course)
- ▶ 820:295 *Professional Science Master's Internship* (change hours from 4-6 to 1-6)
- ▶ 840:193g *Current Curricula in the Life Sciences* (change title, description, and prerequisites)

##### **Response to Patton question #1 regarding changes to existing courses:**

Wallace indicated University Registrar Patton had questioned whether 840:193g should be dropped and added as a new course since it was changing the title, description, and prerequisites. D. Saunders indicated the title reflects what is being done in the course and the changes provide clarification as to what has been actual practice for some time so it should be considered the same course.

Marshall inquired about the change in hours from 4-6 hours to 1-6 hours. Saunders responded 820:295 hours vary in the PSM degree, but the required minimum is 4 hours in the PSM in Biology.

##### **Response to Patton question #2 regarding new course:**

Saunders indicated the department does have waiting lists but has adequate resources and adjusts sections accordingly to accommodate students.

- ▶ PSM Degree - Major in Ecosystem Management (restatement)
- ▶ PSM Degree - Major in Biotechnology (restatement)

Hoofnagle questioned why the oral comprehensive examination was required in the Major in Ecosystem Management, but not in the Major in Biotechnology.

Saunders responded that statement was an error, and the oral comprehensive examination is not required in either PSM majors. Wallace will correct abstract.

Question was called on the motion to approve as amended. **Motion carried and Department of Biology graduate curriculum was approved as amended.**

## B. Chemistry and Biochemistry Department

Gerrath moved, Boody seconded to approve Department of Chemistry and Biochemistry graduate curriculum packet.

Gerrath summarized pertinent graduate curriculum questions/issues within the Chemistry and Biochemistry Department curriculum packet, and motions, discussion, and voting was as follows:

- ▶ 860:136g *Applied Instrumental Analysis* (drop)
- ▶ 860:138g *Environmental Chemistry* (drop)
- ▶ 860:143g *Physical Chemistry Laboratory* (change hours from 1-3 to 2 hours, and description)

It was noted the department was making only slight changes to the above existing courses, was dropping two courses, and there were no new courses; therefore, members felt Patton's questions/concerns regarding existing courses and new courses were not relevant to Chemistry and Biochemistry.

- ▶ PSM Degree - Major in Applied Chemistry and Biochemistry (restatement)
- Members expressed no questions/concerns regarding this restatement of major.

Question was called on the motion to approve. **Motion carried and Department of Chemistry and Biochemistry graduate curriculum was approved.**

## C. Computer Science Department

Gerrath moved, Boody seconded to approve Computer Science Department graduate curriculum packet.

Gerrath summarized pertinent graduate curriculum questions/issues within the Computer Science Department curriculum packet, and motions, discussion, and voting was as follows:

- ▶ 810:112g *User Interface Design* (change prerequisites)
- ▶ 810:116g *Projects in Information Science* (drop)
- ▶ 810:145g *Projects in Computer Systems* (drop)
- ▶ 810:155g *Translation of Programming Languages* (change prerequisites)
- ▶ 810:162g *Intelligent Systems* (change prerequisites)
- ▶ 810:172g *Software Engineering* (drop "g" and change prerequisites)
- ▶ 810:173g *Project Management* (change prerequisites)
- ▶ 810:174g *Real-Time Embedded Systems* (change prerequisites)
- ▶ 810:240 *Computer Systems* (change description and prerequisites)

It was noted the changes to existing courses were mainly in prerequisites and one course having a change in description and prerequisites, so changes to existing courses were minimal.

Hoofnagle noted 810:172 was dropping "g", and inquired how this change would limit opportunities for graduate students. Chair Coon used the "impact analysis" link to search the impact on graduate majors, and it was confirmed there were no graduate programs which listed 810:172.

It was noted 810:162g listed "(810:060 or equivalent)" as a prerequisite and course 810:060 did not exist. It was confirmed the correct number should be **810:161** instead of 810:060. Wallace will correct the abstract.

Question was called on the motion to approve as amended. **Motion carried and Department of Computer Science graduate curriculum was approved as amended.**

## D. Earth Science Department

Gerrath moved, Boody seconded to approve Earth Science Department graduate curriculum packet.

Gerrath summarized pertinent graduate curriculum questions/issues within the Department of Earth Science curriculum packet, and motions, discussion, and voting was as follows:

- ▶ 870:109g *Fundamentals of Astronomy* (change hours from 3 hours to 4 hours, and change prerequisites)
- ▶ 870:121g *Meteorology* (change prerequisites)
- ▶ 870:154g *Observational Astronomy* (change description)
- ▶ 870:171g *Environmental Geology* (change description)

J. Walters indicated the department made minimal changes to the above existing courses and there were no new courses.

Hoofnagle inquired as to resources for adding the 1 hour to *Fundamentals of Astronomy*. Walters responded the department has been having 4 hours in this course for years, so now this change actually reflects what is being done.

Question was called on the motion to approve. **Motion carried and Department of Earth Science graduate curriculum was approved.**

## E. Physics Department

Gerrath moved, Boody seconded to approve Physics Department graduate curriculum packet.

Gerrath summarized pertinent graduate curriculum questions/issues within the Department of Physics curriculum packet, and motions, discussion, and voting was as follows:

- ▶ 880:155g *Magnetism and Magnetic Materials* (drop)
- ▶ 880:160g *Experiment Design* (drop)
- ▶ 880:205 *Modeling and Simulation of Physical Systems* (change description and prerequisites)

It was noted the department was dropping two 100g-level courses, and making minimal changes to 880:205; therefore, Patton's questions/concerns regarding existing courses was not relevant to Physics.

- ▶ PSM Degree - Major in Applied Physics (restatement)

Members expressed no questions/concerns regarding this restatement.

Question was called on the motion to approve. **Motion carried and Department of Physics graduate curriculum was approved.**

## F. Science

Gerrath moved, Boody seconded to approve Science graduate curriculum packet.

Gerrath summarized pertinent graduate curriculum questions/issues within the Science curriculum packet, and motions, discussion, and voting was as follows:

- ▶ 820:190g *Orientation to Science Teaching* (change description and prerequisites)
- ▶ 820:193g *Current Curricula in the Physical Sciences* (change title, description, and prerequisites)
- ▶ 830:285 *Readings in Environmental Science/Technology* (change title and description)
- ▶ 830:289 *Environmental Science/Technology Seminar* (change title and description)

### Response to Patton's question #1 regarding existing courses:

C. Lee responded 820:193g is changing title, description, and prerequisites to actually depict how the course has been taught over the years and, therefore, should be treated as the same course. C. Lee also indicated the intent for changing the 820:190g prerequisites are to enable post-baccalaureate students to take level 1 and level 2 at the same time, thereby decreasing their time by a semester, and hopefully keeping them in the pipeline. Lee indicated if it takes too long for these post-baccalaureate students to get to actual science courses, they may not stay. Members felt the changes to other courses listed above were minimal.

- ▶ M.S. Environmental Technology Emphasis (drop)
- ▶ M.S. in Environmental Science/Technology and Health (restatement)

M. Clayton indicated the Environmental Technology emphasis is being dropped because of low/no enrollment, and the M.S. in Environmental Science/Technology and Health is being restated because the emphasis is being dropped.

Clayton indicated the core to the discipline differs and that is the reason the emphases are separated so they can be incorporated differently.

Question was called on the motion to approve. **Motion carried and Science graduate curriculum was approved.**

## G. Mathematics Department

Gerrath moved, Boody seconded to approve Mathematics Department graduate curriculum packet.

Gerrath summarized pertinent graduate curriculum questions/issues within the Department of Mathematics curriculum packet, and motions, discussion, and voting was as follows:

- ▶ 800:2xx[250] *Deterministic Operations Research* (new course)
- ▶ 800:2xx[251] *Probaalistic Operations Research* (new course)
- ▶ 800:2xx[252] *Discrete-Event System Simulation* (new course)
- ▶ 800:2xx[253] *Modeling Industrial Systems Using Queueing Networks* (new course)
- ▶ 800:2xx[270] *Applied Linear Statistical Methods for Secondary Mathematics Teachers* (new course)
- ▶ 800:121g *Applied Statistical Methods for Research* (change prerequisites)
- ▶ 800:122g *Statistical Computing* (change prerequisites)
- ▶ 800:124g *Modeling for Industrial Mathematics* (drop)
- ▶ 800:126g *Operations Research Models* (drop)
- ▶ 800:080 *Mathematics of Finance* (add "g", change number to 800:145g, description, and prerequisites)
- ▶ 800:165g *Introduction to Modern Geometries* (change title)
- ▶ 800:166g *Advanced Euclidean Geometry* (change title)
- ▶ 800:171g *Spatial Data Analysis* (change prerequisites)
- ▶ 800:172g *Statistical Methods* (change description)
- ▶ 800:176g *Numerical Analysis I* (change title and prerequisites)
- ▶ 800:177g *Linear and Non-Linear Programming* (drop)
- ▶ 800:178g *Numerical Analysis II* (drop)
- ▶ 800:201 *Mathematical Analysis I* (change prerequisites)
- ▶ 800:240 *Abstract Algebra I* (change prerequisites)
- ▶ 800:271 *Teaching Statistics at the Secondary Level* (change title, description, and prerequisites)
- ▶ 800:274 *Project Management for Science Professionals* (drop course)
- ▶ 800:280 *Mathematics at the Secondary Level* (change hours from 3 hours to 1-3 hours, and description)

### Response to Patton's question #1 regarding existing courses:

Concern was expressed regarding the numerous/types of changes to 800:080 (changing from a 0-level to a 100g-level course, description, and prerequisites). Wallace reported at the UCC meeting 9/30, the UCC stated course 800:080 needs to be dropped and 800:145g proposed as a new course. **J. Ridenhour will proceed with initiating forms to drop 800:080 and add as new course.**

**J. Marshall indicated there was no library consultation for the five new courses, and library consultation would also be needed for the additional new proposed course 800:145g.**

**Members concurred these courses could be approved, pending library consultation.**

Members indicated other changes to existing courses were minimal, and expressed no further questions/concerns.

### Response to Patton's question #2 regarding new courses:

Haack responded there were adequate resources, and indicated the department was dropping 5 courses and adding 5 new courses. He also indicated 800:250 had already been offered as a "Studies in" course and many of the courses are only offered every two years.

- ▶ Certificate in Continuous Quality Improvement (restatement)

Members expressed no questions/concerns regarding this restatement.

- ▶ M.A. in Mathematics-Mathematics Emphasis

Members expressed no questions/concerns regarding this restatement.

- ▶ M.A. Mathematics Secondary Teaching Emphasis

Boody noted the 800:270 course was added and the 800:299 Research course dropped, and questioned whether that was because it was non-thesis.

Mackay responded this emphasis is non-thesis, and it is optional to use "299" for non-thesis programs.

Boody questioned what is being done differently in 800:270 *Applied Linear Statistical Methods for Secondary Mathematics Teachers* and 800:271 *Probability and Statistics for Secondary Mathematics Teachers*. He indicated 800:270 and 800:271 are both now required in this program and they seem similar. He also inquired whether one is a prerequisite to the other.

Ridenhour indicated one of these courses was more of an application course, but the two courses are designed to be taught as stand alone courses so one is not a prerequisite to another. Ridenhour stated ISU has made a big push to have community colleges require 6 hours in statistics before hiring someone to teach mathematics at the community college. Ridenhour stated ISU has already met with college deans at community colleges regarding this issue.

- ▶ PSM Major in Industrial Mathematics (restatement)

Ridenhour indicated the Actuarial Science emphasis was being added to the PSM to meet student needs.

Question was called on the motion to approve, pending library consultation on new courses, course 800:080 being dropped, and 800:145g being proposed as a new course . **Motion carried and Department of Mathematics graduate curriculum was approved pending library consultation on new courses, course 800:080 being dropped, and 800:145g being proposed as a new course.**

## H. Industrial Technology Department

Gerrath moved, Boody seconded to approve Industrial Technology Department graduate curriculum packet.

Gerrath summarized pertinent graduate curriculum questions/issues within the Department of Industrial Technology curriculum packet, and motions, discussion, and voting was as follows:

- ▶ **330:2xx[231] *Thermodynamics of Material Processing* (new course)**
- ▶ 330:143g *Managing Manufacturing Systems* (drop "g", change number, and prerequisites)
- ▶ 330:106g *Geometric Dimensioning and Tolerance* (drop)
- ▶ 330:113g *Manufacturing Tooling* (drop "g", change number and prerequisites)
- ▶ 330:119g *Computer Applications in Industrial Technology* (drop "g", change description, and prerequisites)
- ▶ 330:121g *Manufacturing Technology Systems* (change title, description, and prerequisites)
- ▶ 330:122g *Advanced CAD and Modeling* (change prerequisites)
- ▶ 330:132g *Applied Metallurgy* (drop "g", change description and prerequisites)
- ▶ 330:134g *Molding Practices in Metal Casting* (drop "g", change prerequisites)
- ▶ 330:135g *Product Design* (change prerequisites)
- ▶ 330:136g *Melting Practices in Metal Casting* (drop "g", change prerequisites)
- ▶ 330:137g *Tooling Practices in Metal Casting* (drop "g". change prerequisites)
- ▶ 330:142g *Statistical Quality Control* (drop "g", change prerequisites)
- ▶ 330:144g *Web Publishing* (drop "g", change description and prerequisites)
- ▶ 330:145g *Production Planning and Control* (drop "g", change prerequisites)
- ▶ 330:147g *Computer Aided Manufacturing* (drop "g", change prerequisites)
- ▶ 330:148g *Machine Design* (drop "g", change prerequisites)
- ▶ 330:150g *Graphic Communications Imaging* (change description)
- ▶ 330:151g *Computer Integrated Manufacturing* (drop)
- ▶ 330:152g *Advanced Analog Electronics* (drop "g", change prerequisites)
- ▶ 330:155g *Finite Element Analysis* (change prerequisites)
- ▶ 330:156g *Advanced Digital Electronics* (drop "g", change description and prerequisites)
- ▶ 330:158g *Graphic Communications Foundations II* (change title, description, and prerequisites)

- ▶ 330:163g *Advanced Digital Prepress* (change description)
- ▶ 330:172g *Industrial Materials* (drop)
- ▶ 330:177g *Advanced Manufacturing Processes* (change description and prerequisites)
- ▶ 330:180g *Introduction to Lean Manufacturing* (drop "g", change title and prerequisites)
- ▶ 330:187g *Applied Industrial Supervision and Management* (change prerequisites)
- ▶ 330:192g *Non-Destructive Evaluation of Materials/Scanning Electron Microscopy* (change prerequisites)
- ▶ 330:196g *Industrial Safety* (drop "g", change description and prerequisite)

**J. Marshall indicated the library had not been consulted on new course 330:2xx[231]. Members concurred this course could be approved pending library consultation.**

Hoofnagle noted there were several 100g-level courses which are dropping the "g", and questioned whether this was limiting graduate students.

S. Giese responded this was not limiting graduate students since these were listed as course options and are not necessary anymore.

Coon questioned how the department would accommodate students who may want to use Industrial Technology 100g-level courses on their graduate program. Mackay indicated students could use the common course number for "Studies In" to accommodate those situations.

**Response to Patton's question #2 regarding new course:**

S. Giese indicated there are two professors to teach the new course *Thermodynamics of Material Processing* and the course rotation would be once every 2 years. He indicated there were adequate resources, and potentially there may be collaboration with ISU to share resources for this course.

- ▶ M.S. - Major in Technology (restatement)

Giese indicated Emphasis F Manufacturing Technology Technical emphasis is the only part restated.

The following change needs to be made in abstract:

"Mathematics: 800:121g" needs to be moved under "Select one of the following"

In conclusion, Coon asked Giese to recap the "grand plan" behind all these changes.

Giese responded the Industrial Technology Department wants their graduate students to go into a specific area and have the background going into that specific area. Giese indicated having the core in the bachelor's area to get into the Master's degree, gives the students focus.

Boody inquired as to the difference in the courses dropping the "g" and not dropping the "g". Giese responded the subject area is the deciding factor. Giese indicated the department goal is to evaluate the subject areas over the next 2 years to see if interest picks up and, if not, drop the program.

Question was called on the motion to approve, as amended, pending library consultation for new course 330:231. **Motion carried and Department of Industrial Technology graduate curriculum was approved, as amended, pending library consultation for new course 330:231.**

**V. Common Course Numbers for "359" and "386"**

Wallace indicated there is a need in the Registrar's Office to have the common course numbers "359" (doctoral experimental number) and "386" (doctoral "Studies In" number), and inquired as to which curriculum body would most appropriately address this issue.

Members concurred this issue should be addressed by the Graduate Council. Coon will ask that this be added to the agenda for the next Graduate Council meeting.

## VI. Curricular Items **Tabled/Postponed/Pending/Deferred**

(Originally discussed at September 18 meeting)

### **Economics Department**

[Department graduate curriculum packet approved pending completion of a new form, approvals, and consultation with the library for new course 920:1xx[131g] *Sports Economics* and no outstanding objections. F. Abraham will report back to GCCC when completed.]

(Originally discussed at October 2 meeting)

### **Mathematics Department**

800:2xx[250] *Deterministic Operations Research* (new course)

800:2xx[251] *Probabilistic Operations Research* (new course)

800:2xx[252] *Discrete-Event System Simulation* (new course)

800:2xx[253] *Modeling Industrial Systems Using Queueing Networks* (new course)

800:2xx[270] *Applied Linear Statistical Methods for Secondary Mathematics Teachers* (new course)

800:145g *Mathematics of Finance* (being proposed as a new course instead of just changing number from 800:080)

(Need library consultation on all new courses. Forms for 800:080 drop and new course 800:145g will be brought back to the UCC and GCCC.)

### **Industrial Technology Department**

800:2xx[231] *Thermodynamics of Material Processing*

(Need library consultation.)

Chair Coon announced the next meeting will be Friday, **October 9, 3:15 p.m., Lang 115**, at which time the **College of Education** graduate curriculum packet will be reviewed.

Gerrath moved, Boody seconded to adjourn. Motion carried and meeting adjourned at 5:00 p.m.

Respectfully submitted,  
Diane Wallace, GCCC secretary

dmw

cc: GCCC and Alternates  
UCC and Alternates  
Guests