MINUTES
Graduate Council
September 18, 2014

Present: Ex officio: M. Gallo (Chair), S. Koksal


Guests: U. Abdulla, M. Glicksman, H. Hefazi, E. Kalajian, H. Miller, C. Norris, C. Young

The meeting was called to order at 1:01 p.m.

1) CALL TO ORDER – Dr. Michael Gallo

Dr. Gallo welcomed returning and new members to Council and introduced five new members: Dr. Anagnostopoulos representing Electrical and Computer Engineering and replacing Dr. Grossman, Dr. Cosentino representing Civil Engineering and replacing Dr. Pinelli, Dr. Martinez-Diaz representing the School of Behavior Analysis and replacing Dr. Harvey, Dr. Rice representing the College of Aeronautics and replacing Dr. Cusick, and Dr. Shoaff representing Computer Science and Cybersecurity, which now incorporates Computer Information Systems, replacing both Dr. Silaghi and Dr. Baggs. He noted that as a result, voting membership now stands at 19, one fewer than last year. At least 10 voting members are still needed for quorum.

He stated that in the event a voting member is unable to attend a meeting, it would be beneficial to have someone attend in their stead for information exchange purposes. This will ensure the academic unit has input in discussions and also has someone who can communicate proceedings back to the academic unit. He noted that Robert’s Rules of Order does not permit the substitute to submit a proxy vote on the absent person’s behalf.

2) MINUTES OF THE APRIL 2014 GRADUATE COUNCIL MEETING

Unanimously Approved

The minutes of the April 17, 2014 meeting were unanimously approved on a motion by Dr. Maul and a second by Dr. Jennings.

3) INFORMATIONAL ITEM – BEH 6303
Request is made by School of Behavior Analysis to notify council members of numerical modification to previously-approved course BEH 6303 Experimental Analysis Behavior.

Dr. Gallo provided the following background information: at the February 2012 meeting, Graduate Council approved BEH 6303 Experimental Analysis Behavior. During the interim between the time the course was approved and the time the catalog director established it, the School of Psychology detected that the course should have been a 5000-level course (BEH 5303), and not a 6000-level course. The academic unit notified the catalog director of this error before she built the course and therefore it was established as BEH 5303. The purpose of informing Council of this item is so the minutes reflect the correction. He noted that BEH 5303 serves as a core course for three master’s degree programs and one PhD program in the School of Behavior Analysis, and that all programs that require this course have it listed as BEH 5303, so no other changes are necessary.

4) **GRADUATE FACULTY APPOINTMENT – RAJ, Anil**

*Unanimously Approved at Master’s Level*

Request is made by the Human-Centered Design Institute to appoint Dr. Anil Raj to the master’s level of Graduate Faculty.

Dr. Gallo noted that this is consistent with Graduate Council’s practice with respect to graduate faculty appointments for faculty external to the university.

On a motion by Dr. Strother and a second by Dr. Jennings the request made by the Human-Centered Design Institute to appoint Dr. Anil Raj to the master’s level of Graduate Faculty was unanimously approved.

5) **GRADUATE FACULTY APPOINTMENT – READ, Janet**

*Unanimously Approved at Master’s Level*

Request is made by the Human-Centered Design Institute to appoint Dr. Janet Read (who is external to the university) to the master’s level of Graduate Faculty.

On a motion by Dr. Maul and a second by Dr. Cosentino, the request made by the Human-Centered Design Institute to appoint Dr. Janet Read to the master’s level of Graduate Faculty was unanimously approved.

6) **GRADUATE FACULTY APPOINTMENT – SPRINKLE, Evelyn**

*Unanimously Approved at Master’s Level*
Request is made by the School of Behavior Analysis to appoint Dr. Evelyn Sprinkle to the master’s level of Graduate Faculty.

Although not specified on the original request memo, Dr. Gallo clarified and confirmed that Dr. Wilder, Chair, Behavior Analysis Programs, sent a follow-up email requesting master’s-level appointment.

On a motion by Dr. Maul and a second by Dr. Jennings, the request made by the School of Behavior Analysis to appoint Dr. Evelyn Sprinkle to the master’s level of Graduate Faculty was unanimously approved.

7) **GRADUATE FACULTY APPOINTMENT – COX, Philip**

**Unanimously Approved at Master’s Level**

Request is made by the Department of Chemical Engineering to appoint Dr. Philip Cox to the master’s level of Graduate Faculty.

On a motion by Dr. Strother and a second by Dr. Maul, the request made by the Department of Chemical Engineering to appoint Dr. Philip Cox to the master’s level of Graduate Faculty was unanimously approved.

8) **ADDING A NEW COURSE TO THE CURRICULUM – BME 5500 Tissue Engineering and Regeneration**

**Unanimously Approved**

Before opening discussion on the six new course requests, Dr. Gallo provided a point of information: in some of the corresponding preliminary course syllabi, grading information that is provided contains grading weights, such as a midterm is weighted 30%, but lacks information on the grading system to denote what constitutes grades of A, B, C, D, F. In the absence of a specific grading system, Council is to imply that the course will follow the university’s undergraduate grading system of A = 90–100, B = 80–89, C = 70–79, D = 60–69, and F < 60, which is defined on p. 33 of the current catalog. He stressed that when submitting a new course proposal, it is helpful to identify what program the new course supports. Also, if the new course is going to impact an existing program, a Change in Graduation Requirements form must be submitted.

Discussion then ensued to address the request made by the Department of Biomedical Engineering to add new course: **BME 5500 Tissue Engineering and Regeneration.**

Dr. Carroll stated that some Biology students might be interested in taking this course. Dr. Kaya noted that although there are two course prerequisites, he believes that
Biology students will have sufficient knowledge to understand the course material. Dr. Shoaff added that students “enter at their own risk” when they do not meet restricted prerequisites.

On a motion by Dr. Carroll and second by Dr. Maul, the request made by the Department of Biomedical Engineering to add new course **BME 5500 Tissue Engineering and Regeneration** was unanimously approved.

9) **ADDING A NEW COURSE TO THE CURRICULUM – ECE 5119 Wireless Communications**

**Unanimously Approved**

Request is made by the Department of Electrical and Computer Engineering to add new course: **ECE 5119 Wireless Communications**

Dr. Gallo noted that the “term to be added” should reflect Spring 2015, not Fall 2014 as listed on the form.

Dr. Aneiros suggested that this new course was requested and developed by new faculty members, reflecting their area of expertise.

On a motion by Dr. Maul and second by Dr. Kaya, the request made by the Department of Electrical and Computer Engineering to add new course **ECE 5119 Wireless Communications** was unanimously approved.

10) **ADDING A NEW COURSE TO THE CURRICULUM – MAE 5135 Dilute Multiphase Flow**

**Unanimously Approved**

Request is made by the Department of Mechanical and Aerospace Engineering to add new course **MAE 5135 Dilute Multiphase Flow**.

On a motion by Dr. Maul and second by Dr. Vamosi, the request made by the Department of Mechanical and Aerospace Engineering to add new **MAE 5135 Dilute Multiphase Flow** was unanimously approved.

11) **ADDING A NEW COURSE TO THE CURRICULUM – BIO 5511 Topics in Evolution**

**Unanimously Approved**

Request is made by the Department of Biological Sciences to add new course **BIO 5511 Topics in Evolution**.
Dr. Carroll noted that an exciting evolution course, at the undergraduate level, covers a broader base of the topic. He stated that this proposed course covers the material at a deeper level, suited for graduate students.

On a motion by Dr. Strother and second by Dr. Carroll, the request made by the Department of Biological Sciences to add new course **BIO 5511 Topics in Evolution** was unanimously approved.

12) **ADDING A NEW COURSE TO THE CURRICULUM – BIO 5531 Biology of Aging**

*Unanimously Approved*

Request is made by the Department of Biological Sciences to add new course **BIO 5531 Biology of Aging**.

On a motion by Dr. Maul and second by Dr. Vamosi, the request made by the Department of Biological Sciences to add new course **BIO 5531 Biology of Aging** was unanimously approved.

13) **ADDING NEW COURSES TO THE CURRICULUM – MTH 6230 Partial Differential Equations 2 and MTH 6330 Calculus of Variation and Optimal Control**

*Both Courses Unanimously Approved*

Discussion opened regarding the request made by the Department of Mathematical Sciences to add two new courses **MTH 6230 Partial Differential Equations 2** and **MTH 6330 Calculus of Variation and Optimal Control**.

Dr. Gallo noted that QEP was not indicated as “no” on both forms and Dr. Abdulla confirmed that these two high-level courses are not QEP.

On a motion by Dr. Maul and second by Dr. Vamosi, the request made by the Department of Mathematical Sciences to add two new courses **MTH 6230 Partial Differential Equations 2** and **MTH 6330 Calculus of Variation and Optimal Control** was unanimously approved.

14) **CHANGING GRADUATION REQUIREMENTS IN A MAJOR – MS Programs in Applied Aviation Safety, Aviation Human Factors, and Airport Development and Management Program**

*Unanimously Approved*
Request is made by the College of Aeronautics to change core course requirements in MS programs. Applied Aviation Safety and Aviation Human Factors programs will replace AVM 5101 *Legal and Ethical Issues in Aviation* with AVS 6000 *Quantitative Research Designs*, and Airport Development and Management program will replace AVM 5101 *Legal and Ethical Issues in Aviation* with AVS 5207 *Aviation Safety Management Systems*.

Dr. Rice stated that AVM 5101 *Legal and Ethical Issues in Aviation* will still be offered as an elective, rather than a core course.

On a motion by Dr. Vamosi and a second by Dr. Maul, the request made by the College of Aeronautics to change core course requirements in MS programs Applied Aviation Safety, Aviation Human Factors, and Airport Development and Management was unanimously approved.

15) **CHANGING GRADUATION REQUIREMENTS IN A MAJOR – PhD Programs in Applied Mathematics and Operations Research**

*Unanimously Approved*

Request is made by Department of Mathematical Sciences to change graduation requirements in PhD programs in Applied Mathematics and Operations Research.

Dr. Galo explained that the request is two-fold. The first is to reduce the graduation requirements for both the PhD program in Applied Mathematics and the PhD program in Operations Research from a minimum of 75 to 72 credit hours for the Bachelor’s-to-PhD track, and from a minimum of 45 to 42 credit hours for the Master’s-to-PhD track. The second is to reduce by 3 credit hours (from 21 to 18) the minimum coursework requirement for these two PhD programs, and to add 3 credit hours (from 21 to 24) to the minimum credits required for dissertation research.

Dr. Abdulla explained that the increase in dissertation hours is better aligned with common practice in the mathematics discipline. He also noted that formal coursework consists of 5000-6000 level courses and that a combination of dissertation and research can be used to meet the required 21-24 credit hour range for dissertation.

On a motion by Dr. Vamosi and a second by Dr. Jennings, the request made by the Department of Mathematical Sciences to change core course requirements in PhD Programs in Applied Mathematics and Operations Research was unanimously approved.

16) **CHANGING GRADUATION REQUIREMENTS IN A MAJOR – MS Program in Flight Test Engineering**

*All New Courses and Changes Unanimously Approved*
Reques: is made by Department of Mechanical and Aerospace Engineering to add three new courses in support of the program: MAE 5701 Airplane Performance Flight Test Engineering, MAE 5702 Airplane Stability and Control Flight Test Engineering, and MAE 5703 Airplane Avionics Flight Test Engineering; reformulate core courses to comprise MAE 5701, MAE 5702, MAE 5703, and ENM 5200; add existing MAE courses 5801, 5802, 5803, and 5804 as electives; add a thesis option; and add two existing courses MTH 5201 and MTH 5202 into the mathematics course list.

Dr. Gallo explained the several proposed changes to the current MS program in Flight Test Engineering, approved at the April 2014 Graduate Council meeting. Requested changes include, a 3-hour reduction in the number of core credit hours (from 15 to 12) and a 3-hour increase in the number of elective hours (from 9 to 12), replacing all five core courses of the current program with three newly proposed MAE courses (MAE 5701, 5702, 5703) and an engineering management course (ENM 5200), adding two additional mathematics courses (MTH 5201 and 5202) to the current list of mathematics course electives; reconstituting the list of courses for the 12-hour elective component by deleting one course from the current program (AVF 5303) and adding six MAE courses (MAE 5318, 5350, 5801, 5802, 5803, and 5804), adding a thesis option (which supplants 6 hours of the 12-hour elective component with 6 hours of thesis credit) and voiding the AVF courses as needed in the Graduate Certificate in Flight Test Evaluation option.

On a motion by Dr. Cosentino and a second by Dr. Maul, the request made by the Department of Mechanical and Aerospace Engineering to approve six new courses in the MS Program in Flight Test Engineering was unanimously approved.

Dr. Webster offered an information point regarding a registration challenge for ENM 5200. In the last couple of years, Engineering Systems students have to be diverted to other courses due to a full class, often filled with students from other majors. Dr. Hefazi stated that he is open to discussing a way to mitigate the course enrollment issue for Engineering Systems students.

On a motion by Dr. Maul and a second by Dr. Hamed, the request made by the Department of Mechanical and Aerospace Engineering to change core course requirements in the MS Program in Flight Test Engineering was unanimously approved.

17) CHANGING GRADUATION REQUIREMENTS IN A MAJOR – MS Program in Computer Engineering

All New Courses and Changes Unanimously Approved

Request is made by the Department of Electrical and Computer Engineering to add five new courses to the curriculum: ECE 5520 Computer Architecture, ECE 5540 Cloud Computing, ECE 5550 High Performance Computing, ECE 5565 Embedded and Real-Time Systems, ECE 5575 Field-Programmable Gate Arrays; change graduation requirements to
create four areas of specialization; establish core courses; and delineate elective and specialization courses.

Dr. Gallo explained the requested changes to include changing the number of areas of specialization from zero to four by introducing specializations in embedded systems, mobile and wireless networking, machine intelligence, and speech recognition; requiring students to complete three core courses (9 hours): ECE 5520, 5565, and 5534; requiring students to complete three specific courses within each area of specialization; providing a list of approved elective courses and introducing five new courses in support of the modified program. He noted no grading system or weighting was provided in the corresponding preliminary course syllabi for the five proposed courses.

Dr. Anagnostopoulos offered to address and amend the course syllabi. Dr. Hamed suggested a tentative vote. Dr. Layne added that the vote can be contingent upon getting an acceptable grading system or scheme.

On a motion by Dr. Hamed and a second by Dr. Carroll, the request made by the Department of Electrical and Computer Engineering to add five new courses to the curriculum was unanimously approved (contingent on receipt of an acceptable grading scheme from ECE*).

Discussion ensued regarding the proposed changes to the MS program in Computer Engineering curriculum. Dr. Anagnostopoulos clarified that students are encouraged (but not required) to take specialization, however, the student may work with his/her advisor to customize a program.

On a motion by Dr. Strother and a second by Dr. Vamosi, the request made by the Electrical and Computer Engineering to change requirements in the MS Program in Computer Engineering was unanimously approved.

18) ANNOUNCEMENTS

Dr. Strother shared information about the Writer’s Den, a helpful service for students to practice and improve their writing skills. She provided handouts with information about the group, meeting times, and location.

Dr. Gallo announced that the next Graduate Council meeting is October 16, 2014, and the submission deadline for materials is October 2, 2014.

With no further business, the meeting adjourned at 2:05 p.m.

Rosemary G. Layne, Ed.D.
Director of Graduate Programs

*NOTE: The five new courses now have respective grading schemes that are compliant with Council’s minimum requirements for a proposed new course’s preliminary syllabus (provided via 9/19/14 email and attached as an addendum to these minutes).
ADDENDUM

Addendum to the Electrical and Computer Engineering Department’s submission of proposed changes to its Master’s program in Computer Engineering.

The following information was received via 9/19/14 via email to Dr. Gallo from Dr. Anagnostopoulos:

1. **ECE 5565 “Embedded & Real-Time Systems”**
   - Credit assignment (percentage of total score): Programming Projects (40%), Midterm Exam (30%) and Final Exam (30%).
   - Grading System: The standard Undergraduate Grading System, as specified in Policy No. 5128, will be used. See Undergraduate Grading System on p.33 of the Florida Tech 2014-2015 University Catalog.

2. **ECE 5540 “Cloud Computing Technology”**
   - Credit assignment (percentage of total score): Homeworks (40%), Midterm Exam (30%) and Final Exam (30%).
   - Grading System: The standard Undergraduate Grading System, as specified in Policy No. 5128, will be used. See Undergraduate Grading System on p.33 of the Florida Tech 2014-2015 University Catalog.

3. **ECE 5550 “High-Performance Computing”**
   - Credit assignment (percentage of total score): Homeworks (15%), Programming Labs (15%), Midterm Exam (25%) and Final Exam (25%), and Project (20%).
   - Grading System: The standard Undergraduate Grading System, as specified in Policy No. 5128, will be used. See Undergraduate Grading System on p.33 of the Florida Tech 2014-2015 University Catalog.

4. **ECE 5520 “Computer Architecture”**
   - Credit assignment (percentage of total score): Assignments (20%), Term Paper (15%), Midterm Exam (25%), Final Exam (40%).
   - Grading System: The standard Undergraduate Grading System, as specified in Policy No. 5128, will be used. See Undergraduate Grading System on p.33 of the Florida Tech 2014-2015 University Catalog.

5. **ECE 5575 “Field Programmable Gate Arrays”**
   - Credit assignment (percentage of total score): Assignment (30%), Midterm Exam (15%), Projects (30%), Final Exam (25%).
   - Grading System: The standard Undergraduate Grading System, as specified in Policy No. 5128, will be used. See Undergraduate Grading System on p.33 of the Florida Tech 2014-2015 University Catalog.