MINUTES
Graduate Council
April 18, 2019

Present: Ex officio: R. Bonhomme, M. Gallo

Voting Members: W. Allen, C. Bashur, D. Carstens, N. Daher (via phone),
J. Du (alternate for T. Kiguradze), H. Edwards, V. Follette,
J. Martinez-Diaz, E. Perez, E. Perlman (alternate for J. Perez),
P. Sahoo (alternate for C. Bostater),
M. Archambault (alternate for Y. Sharaf-Elddeen)

Guests: C. Johnston, T. Marcinkowski, R. Sippel

The meeting was called to order at 1:04 p.m.

1) CALL TO ORDER – Dr. Michael Gallo

Dr. Gallo reminded everyone that Dr. Nick Daher was present via telephone representing
Extended Studies. He said three substitutes were present: Dr. Du as the designated alternate for the
Department of Mathematical Sciences; Dr. Perlman representing the Department of Aerospace,
Physics and Space Sciences; and Dr. Archambault representing the Department of Mechanical and
Civil Engineering.

He announced he would be working from a restructured agenda.

2) MINUTES OF THE FEBRUARY 2019 GRADUATE COUNCIL MEETING

Unanimously Approved

The minutes of the February 21, 2019 meeting were unanimously approved on a motion
by Dr. Carstens and a second by Dr. Edwards.

3) INFORMATION ITEM – COES Fast Track Master’s Program Information

College of Engineering and Science requested to inform Graduate Council that it now
elects to make all of its master’s programs available to Fast Track applicants.

4) GRADUATE FACULTY APPOINTMENT – WHITE, Ryan

Unanimously Approved

Request is made by Department of Mathematical Sciences to appoint Dr. Ryan White to
the Master’s level of Graduate Faculty.

Dr. Gallo asked Council to note that although Dr. White currently is a full-time faculty
member, his academic rank is Instructor and therefore per Graduate Policy 4.1.2, Council must
approve his appointment to the graduate faculty.
On a motion by Dr. Carstens and a second by Dr. E. Perez, the request by Department of Mathematical Sciences to appoint Dr. Ryan White to the Master’s level of Graduate Faculty was unanimously approved.

5) **GRADUATE FACULTY APPOINTMENT – NAG, Ambarish**

*Unanimously Approved*

Request is made by Department of Computer Engineering and Sciences to appoint Dr. Ambarish Nag to the Master’s level of Graduate Faculty.

Dr. Gallo said, consistent with Graduate Council practice with respect to graduate faculty appointments for adjunct faculty and individuals external to the university, the request was made to appoint Dr. Nag at the master’s level.

On a motion by Dr. Allen and a second by Dr. Martinez-Diaz, the request by Department of Computer Engineering and Sciences to appoint Dr. Ambarish Nag to the Master’s level of Graduate Faculty was unanimously approved.

6) **CHANGING REQUIREMENTS FOR A COURSE – AHF 5990 Directed Research**

*Unanimously Approved*

Request is made by the College of Aeronautics to change the grade mode for AHF 5990 *Directed Research* by replacing current grade mode of Satisfactory/Unsatisfactory with Pass/Fail.

Dr. Layne provided background information on Satisfactory/Unsatisfactory grades and noted Graduate Policy 4.8 provides information on when a grade changes from S to P and that a U grade is a failing grade.

On a motion by Dr. Carstens and a second by Dr. E. Perez, the request made by College of Aeronautics to change the grade mode for AHF 5990 *Directed Research* by replacing current grade mode of Satisfactory/Unsatisfactory with Pass/Fail was unanimously approved.

7) **CHANGING REQUIREMENTS FOR A COURSE – EDS 6999 Dissertation-Science Education**

*Unanimously Approved*

Request is made by the Department of Mathematical Sciences to change course requirement for EDS 6999 *Dissertation-Science Education* by replacing current restriction of instructor approval with successful completion of the doctoral comprehensive exam.

Dr. Gallo said the request is to change the course requirement for EDS 6999 *Dissertation-Science Education* by replacing the current restriction of “Instructor Approval” with “Successful Completion of the Doctoral Comprehensive Exam.”

Ms. Johnston stated the restriction “instructor approval” is intended to prevent students from registering for 6999 dissertation courses when it is not needed. Although this restriction cannot be Banner enforced, registration staff can remove the student from the course, if needed.

Dr. Layne added that most xxx6999 *Dissertation* courses have a restriction. Ms. Johnson advised that “admission to candidacy” is common, but not Banner enforced. Starting Fall 2020, it
is important to ensure that catalogs match with courses and the system for 2020/2021. She said that some 6999 course restrictions include major advisor approval or department head approval that are not being enforced. She said that while there is not a way to physically stop students from registering; however, there is a way to review and remove students who have registered for the course inappropriately.

On a motion by Dr. Edwards and a second by Dr. E. Perez, the request made by the Department of Mathematical Sciences to change course requirement for EDS 6999 Dissertation-Science Education by replacing current restriction requirement of instructor approval with successful completion of the doctoral comprehensive exam was unanimously approved.

8) **CHANGING REQUIREMENTS FOR A COURSE – EDS 6095 Research-Science Education and EDS 6999 Dissertation-Science Education**

*Unanimously Approved*

Request is made by the Department of Mathematical Sciences to change course titles **EDS 6095 Research-Science Education** and **EDS 6999 Dissertation-Science Education** to **EDS 6095 Research-STEM Education** and **EDS 6999 Dissertation-STEM Education**.

Dr. Marcinkowski said that in Fall 2018 Graduate Council approved the MS and PhD program name shift to STEM Education. The current course titles reflect only one specialization (science education) but not the other two specializations (mathematics education, education technology).

On a motion by Dr. Sahoo and a second by Dr. Perlman, the request made by the Department of Mathematical Sciences to change course titles **EDS 6095 Research-Science Education** and **EDS 6999 Dissertation-Science Education** to **EDS 6095 Research-STEM Education** and **EDS 6999 Dissertation-STEM Education** was unanimously approved.

9) **DUAL NUMBER COURSE LISTING – AHF 5101 Human Factors in Man-Machine Systems, AHF 5201 Human Performance I, and AHF 5991 Sensation and Perception**

*AHF 5101 Human Factors in Man-Machine Systems – Approved*

*AHF 5201 Human Performance I – Approved*

*AHF 5991 Sensation and Perception – Item Withdrawn*

Request is made by the College of Aeronautics to approve the following courses to be dual-numbered with their undergraduate course counterpart: **AHF 5101 Human Factors in Man-Machine Systems**, **AHF 5201 Human Performance I**, and **AHF 5991 Sensation and Perception**.

Dr. Gallo said the request to designate the three courses as dual-numbered with their respective undergraduate counterparts is intended to help facilitate teacher economy. He reminded all that **AHF 5101** and **AHF 5201** are available as both on-campus and online courses. He advised that this request has not yet been approved by the Undergraduate Curriculum Committee, but is an agenda item for UGCC’s meeting on Friday, April 26.

Dr. Gallo addressed the first course, **AHF 5101 Human Factors in Man-Machine Systems ⇔ AHF 3104 Human-Machine Systems**.
Dr. Gallo noted that the difference in course requirements between graduate and undergraduate students is with respect to a Final Project listed in the sample syllabus. He added that this is also an agenda item for UGCC, slated to meet on April 26, 2019.

Dr. Perlman said that while 4000-5000 course pairs are common, 3000-5000 pairings are a larger difference. Dr. Carstens said there are different levels of rigor for all three course pairs in terms of student workload and grading. Dr. Perlman was concerned that the material delivered to the class would be graduate level and that undergraduates would get graduate level material with an adjusted workload. He added that it’s tougher to imagine that for a 3000-5000 level pairing.

Dr. Sahoo questioned the increased rigor for graduate students and asked if there might be additional responsibilities such as publishing a major paper of research. Dr. Carstens responded that these projects are pretty significant. Dr. Gallo reminded Council that graduate students may take undergraduate courses (3000-4000 level) and must submit a form to document rigor as noted in graduate policy. Dr. Layne provided policy clarification and noted that the permission form needs to be submitted in advance, which would include explanation of the advanced work/standards and why it is academically appropriate for a graduate student to take an undergraduate course. Dr. E. Perez asked if dual-number versus cross-listed is published anywhere. Dr. Gallo said it does not get reflected in the catalog, but is maintained in the curriculum. Ms. Johnston said this terminology is used for Banner purposes to note how classes meet together. Dr. Edwards asked about the difference between dual and cross listed.

Dr. Archambault said cross listed involve two different prefixes (i.e. two different departments).

[Definitions for Dual-Numbered and Bi-Level Courses (GP 4.5.3) attached to these minutes].

Dr. Layne read aloud excerpts from Graduate Policy 1.9 Undergraduate Courses for Graduate Credit and Graduate Policy 2.2.2 Credit Hour Requirements. [Exerpts from GP 1.9 and GP 2.2.2 are attached to these minutes]. Dr. Gallo reminded all that if there is not sufficient evidence of graduate-level rigor, Council members can cast a vote if they agree or not. On a motion by Dr. Carstens and a second by Dr. E. Perez, the request made by the College of Aeronautics to approve course AHF 5101 Human Factors in Man-Machine Systems to be dual-numbered with its undergraduate course counterpart, AHF 3104 Human-Machine Systems, was approved with seven votes in favor, including three abstentions, and two opposed.

Dr. Gallo then addressed the second course, AHF 5201 Human Performance 1 ⇔ AHF 4301 Human Performance 1.

Sample syllabi for the second course for the on-campus component and for the online component were provided. Dr. Gallo noted that 1) the difference in course requirements between graduate and undergraduate students for the on-campus component is with respect to the research project and 2) the difference in course requirements between graduate and undergraduate students for the online component is with respect to the discussion board assignments and includes the corresponding scoring rubric.

Dr. Archambault said the rigor and the literature review on the sample syllabus was confusing. Dr. Carstens elaborated that undergraduates do a presentation and graduates do a presentation and a 40-page paper. The project is entered in a national competition for aviation executives.*

On a motion by Dr. Hamed and a second by Dr. Bostater, the request made by the College of Aeronautics to approve course AHF 5201 Human Performance 1 to be dual-numbered with its
undergraduate course counterpart AHF 4301 Human Performance I, was approved with 10 votes in favor, including two abstentions.

Dr. Gallo addressed the third course, AHF 5991 Sensation and Perception ⇔ AHF 3103 Sensation & Perception in Aviation.

He noted on the sample syllabus, that the difference in course requirements between graduate and undergraduate students is with respect to the discussion board assignments provided in the sample syllabus, and includes the corresponding scoring rubric.

On a motion by Dr. Archambault, and a second by Dr. E. Perez, discussion was opened for the third course, AHF 5991 Sensation and Perception.

After initial discussion, Dr. Carstens will take Council’s comments under advisement and will withdraw the request made by the College of Aeronautics to approve course AHF 5991 Sensation and Perception to be dual-numbered with its undergraduate course counterpart AHF 3103 Sensation and Perception in Aviation.

10) ANNOUNCEMENTS

Dr. Gallo announced that the next Graduate Council meeting is September 19, 2019, and the submission deadline for materials is September 5, 2019.

With no further business, the meeting adjourned at 2:04 p.m.

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

*Subsequent to the meeting a revised AHF 5201/4301 syllabus was submitted to clarify the distinction between the undergraduate research project requirements and the graduate research requirements (i.e., Undergraduate students will give a presentation while graduate students will give a presentation and submit a paper)
Definitions for Dual-Numbered and Bi-Level Courses (Graduate Policy 4.5.3)

1. **Dual-numbered courses** are defined as courses in which undergraduate and graduate students meet in the same class at the same time but register under two different course numbers—undergraduate students register for the undergraduate-numbered course and graduate students register for the graduate-numbered course. One purpose of dual-numbered courses is to facilitate teacher-economy. Examples of dual-numbered courses are as follows: *(Note: Courses extracted from 2013–14 University Catalog.)*
   - BIO 4904 / BIO 5904 Field Biology and Evolution of the Galapagos Islands
   - EDS 4051 / EDS 5051 Methods and Management of Middle and High School Teaching
   - EDS 4071 / EDS 5071 Methods and Strategies for Teaching Middle and High School Science
   - EDS 4072 / EDS 5072 Methods and Strategies for Teaching Middle and High School Mathematics
   - MAE 4250 / MAE 5250 Physical Principles of Nuclear Reactors
   - MAE 4260 / MAE 5260 Nuclear Reactor Engineering
   - MAE 4270 / MAE 5270 Nuclear Criticality and Reactor Safety
   - MAE 4280 / MAE 5280 Radiological Engineering
   - MTH 4101 / MTH 5101 Introductory Analysis

2. **Bi-level courses** are defined as dual-numbered courses that have been identified by an academic unit to be *equally appropriate at either the undergraduate or graduate level*. The added emphasis (in italics) in this definition implies that undergraduate students may enroll in bi-level courses without having to satisfy any minimum GPA requirement, but still must satisfy any corresponding prerequisites and similar requirements, including permission of the instructor. The added emphasis in this definition also implies that a bi-level course may be designated as a *required* undergraduate course, which would then permit undergraduate students with GPAs less than 2.75—and without special permission—to meet in the same class with students who have registered for the course for graduate credit. The following is an example of a graduate course (bi-level) approved at the October 17, 2013 Graduate Council Meeting and its undergraduate counterpart approved by the Undergraduate Curriculum Committee.
   - BIO 5413 (3 credits) Applied Geographic Information Systems for Biological Research
   - BIO 4413 (4 credits) Applied Geographic Information Systems for Biological Research

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Independent of dual-numbered and bi-level courses, we also have courses that are *cross-listed* in two or more departments for collaboration and interdisciplinary purposes. In such cases a separate three-letter prefix aligned to the corresponding academic unit is used so the transcript is denoted correctly with respect to the student’s major. Examples of cross-listed courses are as follows: *(Note: Courses extracted from 2013–14 University Catalog.)*
   - EDS 5070 Educational Statistics / MTH 5070 Educational Statistics
   - MTH 5009 Introduction to Probabilistic Models / ORP 5002 Stochastic Operations Research Models
   - MTH 5007 Introduction to Optimization / ORP 5001 Deterministic Operations Research Models
Undergraduate Courses for Graduate Credit (Graduate Policy 1.9)

With the approval of the academic unit head, a graduate student may apply a maximum of six (6) semester hours of undergraduate credits taken at Florida Tech while enrolled as a graduate student (provided that graduate rigor is documented) toward partial fulfillment of the requirements for a master’s degree as follows:

- 4000-level courses in the student’s major field of study
- 3000 and 4000 level courses in other than the student’s major field of study

In the instance of four-hour 4000-level courses, a maximum of two such courses (for a maximum of eight semester hours) may be applied to the graduate program in lieu of the six semester hours mentioned above.

The proper usage of these courses is to enrich the master’s program, not dilute it. Undergraduate courses taken as an undergraduate student (even if not applied to the undergraduate degree) cannot be applied to any graduate degree at Florida Tech. Requirements in courses not exclusively designed for graduate credit but that allow both undergraduate and graduate enrollment must ensure that there is a clear distinction between the requirements of undergraduate students and graduate students.*

Courses that are considered deficiencies in a student’s prior education cannot be used in fulfilling the requirements for a master’s degree; they should be identified on the program plan as deficiencies and taken above and beyond the requirements for the master’s degree and do not count in any graduate GPA. It is up to each academic unit to develop a list of courses that the faculty agree represents the basic essentials for entry into each graduate degree program or option offered by the academic unit. Courses on this list should be designated as deficiencies any time a student has not taken comparable courses.

*Consistent with accreditation requirements of SACSCOC Standard 9.6 (Resource Manual, 2018).

Credit Hour Requirements Effective Fall 2009 (Applicable to students who began Fall 2006 or later) (Graduate Policy 2.2.2)

Although the doctoral degrees are awarded primarily on the basis of creative accomplishment...

1. **Total Credit Hours:** At least 72 semester credit hours beyond the bachelor’s degree...
2. **Coursework (Formal):** At least 18 semester credit hours for the 72-hour program or at least 12 semester credit hours for the 42-hour program of formal courses (i.e., any classroom-based course or equivalent in which grades of A, B, C, D, or F are given).
   - At least 12 semester credit hours must be taken at Florida Tech that have never applied to a Florida Tech degree; and
   - Up to six semester credit hours of 4000-level undergraduate courses, with academic unit approval, may be taken while enrolled as a graduate student at Florida Tech provided that graduate rigor is documented. Requirements in courses not exclusively designed for graduate credit but that allow both undergraduate and graduate enrollment must ensure that there is a clear distinction between the requirements of undergraduate students and graduate students...*

*Consistent with accreditation requirements of SACSCOC Standard 9.6 (Resource Manual, 2018).