**THE UNIVERSITY OF WISCONSIN-MILWAUKEE**
**College of Engineering and Applied Science**

**F A C U L T Y   M E E T I N G**

**Friday, February 1, 2019   10:30 A.M.   EMS E180**

**A G E N D A**

**I.   DEAN UPDATE**

**II.   INTRODUCTIONS**

    **A.  Visiting Faculty**

        1.  Andrew Greene, Visiting Professor, Biomedical Engineering

        2.  Mahsa Dabaghmeshin, Visiting Assistant Professor, Biomedical Engineering

**III.   ANNOUNCEMENTS**

    A.  Sexual Violence Prevention Policy Changes – Paul Klajbor and Jane Martell

**IV.  INFORMAL REPORTS** – See Attachment 1

    A.  Opportunity for questions regarding Informal Reports

**V.   DETERMINATION OF THE PRESENCE OF A QUORUM FOR FACULTY MEETING**

**VI.  AUTOMATIC CONSENT BUSINESS**

    A.  Minutes of the December 7, 2018 meeting

    B.  Computer Science Program and Computer Engineering Program Changes – See Attachment 2

    C.  Applied Mathematics and Computer Science Program Changes – See Attachment 3

**VII. NEW BUSINESS**

    A.  Awards and Recognition Committee Charter – See Attachment 4

**VIII. GENERAL DISCUSSION**

**IX.   ADJOURNMENT**

                John R. Reisel, Secretary
                CEAS Faculty

JRR
Attachments

**INFORMAL REPORTS**

*Office of Student Services* – Todd Johnson
No Report

*Career Services* – Juli Pickering
No Report

*Curriculum Committee* – Prof. A. Rahman
No Report

*Graduate Program Subcommittee* – Prof. Liao
No Report

*Academic Planning Committee* – Prof. Patrick
No Report

*Faculty Senate* – Prof. Reisel

In its December meeting, the Senate conducted routine business, such as revisions of committee charters.

**COMPUTER SCIENCE PROGRAM AND COMPUTER ENGINEERING PROGRAM CHANGES**

**Computer Engineering**

Summary of Change:   Commun 105 Business and Professional Communication   is no longer required as part of the 6 credit GER Social Science requirement.  Students can select any campus approved GER Social Science course to satisfy the 6 credits.

Rationale:  The Commun 105 requirement was put into place prior to the campus Oral & Written Communication Part B (OWCB) GER requirement.  The OWCB requirement is sufficient. Commun 105 no longer needs to be required.

**Computer Science**

Summary of Changes:

1.      Commun 105 Business and Professional Communication is no longer required as part of the 6 credit GER Social Science requirement.  Students can select any campus approved GER Social Science course to satisfy the 6 credits.

2.      Add Math 222 Honors Calculus II to the Applied Mathematics Elective List.

Rationale:

1.      The Commun 105  requirement was put into place prior to the campus Oral & Written Communication Part B (OWCB) GER requirement.  The OWCB requirement is sufficient. Commun 105 no longer needs to be required.

2.      The standard calculus courses (Math 232, 233) are already approved math electives.   This change adds the calculus for Honors students.

# Proposed: (As of Jan 17, 2019)

~~Deletions are strikethrough and dark red.~~

Additions are bright red.

Highlighted on page 1, in 3rd paragraph – changes due to L&S Assoc Dean modifications 1/16/19. [We'd asked the 80 cr in L&S be removed, she said make it 75, and we'd asked all the breadth in the paragraph be removed, she said keep the 8 cr in NS outside of math/stat.]

Highlights on pages 2,3: ActSci – the math dept has asked that some of our courses be converted to a new ActSci curricular area (the actuarial science courses). If that is approved we need the ActSci courses to count toward AMCS. If it is not approved those portions of this motion would be automatically deleted.

# Applied Math and Computer Science Major Requirements

Students who intend to complete the program in four years will need to begin taking mathematics in their first semester. Such students should have a University of Wisconsin-Milwaukee mathematics placement level of 30 (ready for precalculus) or better.

## Admission

As soon as students realize their interest in the AMCS degree, they should consult with an AMCS advisor either in College of Engineering and Applied Science or College of Letters and Science, who assists in planning a program. ~~Students may be given the AMCS classification at any point in their studies; however, they are not formally admitted to the major until their junior year.~~ Admission to ~~the junior year of~~ the program requires a GPA of at least 2.500 in 8 credits of mathematics courses at or above the 200 level and 6 credits of computer science courses at or above the 200 level.

## Degree Requirements

For the BS (AMCS) degree, 120 credits are required, of which 75 ~~80~~ must be taken from the College of Letters and Science. Students must satisfy the general education requirements (GER) of the University. ~~They must complete at least 6 credits each from humanities and social sciences, 3 credits from the arts, and 6 additional credits in any of these three areas or in foreign languages.~~ Students also must take at least 8 credits of natural sciences outside of mathematics or mathematical statistics. ~~, including at least one laboratory course from biological sciences, chemistry, or physics. A cultural diversity course must be included among the humanities and social science courses selected.~~

An overall GPA of 2.000 on all coursework attempted at UWM is required for this degree. In addition, students must achieve a 2.000 GPA on all coursework attempted, including transfer work. A minimum 2.000 GPA must be earned on all 300-level and above courses taken to satisfy the advanced requirements. Students satisfy the residency requirement for the degree by completing at UWM both a minimum of 15 credits of the required advanced courses and one of the following:

- The last 30 credits;
- 45 of the last 60 credits;
- Any 90 credits.

Course List

| Code | Title | Credits |
|------|-------|---------|
| **Core Requirements** | | |
| COMPSCI 250 | Introductory Computer Programming | 3 |
| COMPSCI 251 | Intermediate Computer Programming | |
| COMPSCI 315 | Introduction to Computer Organization and Assembly Language Programming | 3 |
| COMPSCI 317 | Discrete Information Structures | 3 |
| Select the following (or an equivalent sequence): | | 12 |
| MATH 231 | Calculus and Analytic Geometry I | |
| MATH 232 | Calculus and Analytic Geometry II | |
| MATH 233 | Calculus and Analytic Geometry III | |
| MATH 234 | Linear Algebra and Differential Equations | 4 |
| or MATH 240 | Matrices and Applications | |
| MATH 341 | Seminar: Introduction to the Language and Practice of Mathematics | 3 |
| | | |
| **Advanced Requirements** | | |
| COMPSCI 351 | Data Structures and Algorithms | 3 |
| COMPSCI 535 | Algorithm Design and Analysis | 3 |
| Select 9 credits in COMPSCI at the 300 level or above | | 9 |
| Select 6 credits from MATH and/or MTHSTAT and/or ACTSCI at the 300 level or above | | 6 |
| Select one of the following pairs: | | 6 |
| MATH 305 & MATH 405 | Introduction to Mathematical and Computational Modeling and Mathematical Models and Applications | |
| MATH 313 & MATH 315 | Linear Programming and Optimization and Mathematical Programming and Optimization | |
| MATH 320 & MATH 322 | Introduction to Differential Equations and Introduction to Partial Differential Equations | |

Course List

| Code | Title | Credits |
|------|-------|---------|
| MATH 413 & MATH 415 | Introduction to Numerical Analysis and Introduction to Scientific Computing | |
| MATH 413 & MATH 417 | Introduction to Numerical Analysis and Computational Linear Algebra | |
| MATH 415 & MATH 417 | Introduction to Scientific Computing and Computational Linear Algebra | |
| MATH 521 & MATH 522 | Advanced Calculus I and Advanced Calculus II | |
| MATH 431 & MATH 531 | Modern Algebra with Applications and Modern Algebra | |
| MATH 531 & MATH 535 | Modern Algebra and Linear Algebra | |
| MATH 601 & MATH 602 | Advanced Engineering Mathematics I and Advanced Engineering Mathematics II | |
| MATH 621 & MATH 622 | Introduction to Analysis I and Introduction to Analysis II | |
| MATH 631 & MATH 632 | Modern Algebra I and Modern Algebra II | |
| MTHSTAT 361 & MTHSTAT 362 | Introduction to Mathematical Statistics I and Introduction to Mathematical Statistics II | |
| MTHSTAT 361 & MATH 571 | Introduction to Mathematical Statistics I and Introduction to Probability Models | |
| Select 21 additional credits from CompSci, Math, ~~and~~ MthStat, and ActSci courses at the 300 level or above, beyond the "Core" as well as the above "Advanced" Requirements | | 21 |
| Total Credits | | 79 |

## 3.7    AWARDS AND RECOGNITION COMMITTEE

**3.7.1**    Membership:

A.    The Awards and Recognition Committee shall consist of five (5) voting members: three faculty members, one student, and one ex-officio member representing CEAS administration.

B.    The faculty members shall be elected at large.

C.    The student member shall be a CEAS student in good standing. The student will be selected yearly by the Council of Engineering Student Organizations (CESO).

D.    The Office of the Dean shall designate the ex-officio administration member.

3.7.2    Responsibilities:

A.    The Committee shall be responsible for soliciting nominations from faculty, staff, students, alumni, and members of the industrial and business community for the following awards:

1.    Outstanding Teaching Awards (Spring)
2.    Outstanding Research Award (Spring)
3.    Outstanding Service Award (Spring)
4.    Outstanding Staff Service Award (Spring)
5.    Outstanding Student Award (Fall and Spring)

B.    The Committee shall submit its recommendations to the Dean no later than the last day of classes of the spring semester.

C.    The committee shall also make recommendations to the Dean related to establishment and awarding of scholarship funds to students within the College.

3.7.3    Election Procedures:

A.    Nominations may be made by faculty, groups of faculty, or departments.

B.    The Secretary of the Faculty conducts the election in April of each year. Two members are to be elected in even years, and one member is to be elected in odd years.

C.    No faculty may serve successive terms, and no member from the same department may serve concurrent or successive terms.

D.    The first faculty in alphabetical order shall call the first meeting to elect a chairperson.