

**Minutes**  
**Graduate Council Curriculum Committee**  
**June 10, 2020**  
**2:00 p.m., Zoom**

**Members Present:** Art Weeks, Jihe (Jackie) Zhao, Axel Schülzgen, Elsie Olan, Olga Molina, Wei Wei, Patricia Bockelman, Terrie Sypolt, Jascinth Lindo

**Administrators and Guests Present:** Devon Jensen, Alan Fyall, Jim Moharam, Laurence von Kalm, Ali Gordon, Sevil Sonmez, Ana Navarro, Clay Posey, Joon Park, Kelley Dietrich, Meredith Smart, Qiyu Sun, Tarek Elgohary, Yaser Pourmohammadi Fallah, Dan Eilen, Tonya Walker, Amanda Miller, Libby Mustaine

**Recorder:** Emily Stettner

**Welcome and call to order.** Dr. Patricia Bockelman, chair, called the meeting to order at 2:00p.m. A quorum was established.

**General Business.**

Dr. Devon Jensen informed the Committee about the reason to hold this special summer session of the Committee. The graduate proposals the Committee reviewed today are in response to a few issues related to COVID-19 and graduate education. First, the creation of new graduate certificates that will provide the training and education necessary to better deal with a variety of issues related to COVID-19. Second, curriculum changes that need to be made to accommodate the needs of graduate students. Third, the creation of new tracks and certificates that will attract a wide variety of new applicants to help enrollment shortfalls due to COVID-19.

**Addition of CBA Cyber Risk Management Graduate Certificate.**

Dr. Clay Posey and Dr. Sevil Sonmez explained the certificate will provide skills and knowledge to fill a large employment gap in this area. The certificate will complement the technical approaches to the field. Students in this certificate could eventually be accepted to the Cyber Security MS. The certificate addition received unanimous approval.

**Addition of CBA FinTech Graduate Certificate.**

Dr. Sevil Sonmez and Dr. Ali Gordon explained the certificate is a subset of the FinTech MS and is a joint effort by the College of Business Administration and the College of Engineering and Computer Science. The objective of the certificate is to introduce students to the foundations of FinTech and teach them employable technical skills including artificial intelligence and the development of algorithms. The certificate addition received unanimous approval.

**Addition of CBA Supply Chain Management Graduate Certificate.**

Dr. Clay Posey and Dr. Sevil Sonmez explained in this certificate students will learn to manage the supply chain in different industries, for different products and services, and with a diverse group of customers and colleagues. The certificate addition received unanimous approval.

**Addition of CECS Guidance Control and Dynamics Tracks: Aerospace Engineering MSAE and Mechanical Engineering MSME.**

Dr. Tarek Elgohary explained these tracks are created in response to industry feedback. Most of the audience for these tracks will be working professionals in space-related industries around Central Florida. The curriculum was developed with strong emphasis in courses

related to guidance control and dynamics and includes courses from the Electrical Engineering department. The track additions received unanimous approval.

#### **Addition of CECS Data Analytics Graduate Certificate.**

Dr. Dan Eilen explained the certificate is in response to large growth and increasing demand in this field. Data Analytics is concerned with both computational techniques for managing data and resources efficiently and statistical techniques that measure validity. The Committee would like the wording clarified on how students demonstrate pre-requisite knowledge on the catalog copy. The College of Graduate Studies will work with Dr. Eilen to add this language. The certificate addition received unanimous approval.

#### **Addition of CECS Technologies for Smart Communities Graduate Certificate.**

Dr. Yaser Pourmohammadi Fallah explained the certificate is designed from the need to educate engineers on this topic which is typically only learned by trial and error or self-taught once in the industry. This program aims at offering an interdisciplinary curriculum focusing on the needs of engineers and professionals who will deal with the technological aspects of the emerging smart and connected communities. The certificate addition received unanimous approval.

#### **Addition of CREOL Applied Photonics Graduate Certificate and Optical Imaging Systems Graduate Certificate.**

Dr. Jim Moharam explained the certificates reflect the current tracks in the Master's degree. These certificates were developed with Lockheed Martin and Harris Corporation and are taught at these sites. Dr. Moharam received feedback from engineers at these sites and they would like to start their educational experience with the shortened length of the certificate versus starting with the time commitment of a full Master's degree. The certificate additions received unanimous approval.

#### **Addition of COS Data Modeling Graduate Certificate and Financial Mathematics Graduate Certificate.**

Dr. Qiyu Sun explained the Data Modeling certificate will be offered to meet the high demand from the data science industry and is possible due to the expertise of faculty hired in last few years. The purpose of the certificate is for students to gain working knowledge on math modeling and master practical techniques for careers in data analysis, data architecture, and data engineering.

The Financial Mathematics certificate will be offered to meet the high demand from the financial industry and financial data analysis. The certificate will use the expertise of faculty with existing courses in the math department that have been recently added to support the new financial mathematics tracks in the Master's and PhD programs. This certificate mainly targets those students who may or may not have had financial industry experience but who need to learn updated working knowledge and skills in financial mathematics.

The certificate additions received unanimous approval.

#### **Addition of COS Research Smarts Graduate Certificate.**

Dr. Libby Mustaine explained the certificate will teach students how to use data analysis strategies and understand research methods to base knowledge on empirical findings. There was discussion on the interdisciplinary nature of this certificate and that it can be applied to a variety of disciplines and can be used by general consumers even though the courses are based in the Sociology department. The certificate addition received unanimous approval.

**Course.**

Please see the attached course minutes.

**Adjournment.** The meeting adjourned at 3:15p.m. This is the last meeting for the 2019-2020 academic year.

**Graduate Council Curriculum Committee  
Summer 2020  
Zoom**

## **1. College of Business Administration**

*College of Business Administration certificate additions*

1. Cyber Risk Management Graduate Certificate- *Approved*
2. FinTech Graduate Certificate (joint CBA & CECS) - *Approved*
3. Supply Chain Management Graduate Certificate- *Approved*

## **2. College of Engineering and Computer Science**

*College of Engineering and Computer Science course revision*

1. EAS 5407 Mechatronic Systems- *Approved*
  - Removing lab component due to limited lab space in department.
  - Course number changed from 5407C to 5407.
  - Lab credit hours removed.

*College of Engineering and Computer Science certificate and track additions*

1. Aerospace Engineering MSAE, Guidance Control and Dynamics Track- *Approved*
2. Mechanical Engineering MSME, Guidance Control and Dynamics Track- *Approved*
3. Data Analytics Graduate Certificate- *Approved. Program will work with the College of Graduate Studies to add catalog language in the pre-requisite area clarifying how students demonstrate required knowledge in the field.*
4. Technologies for Smart Communities Graduate Certificate- *Approved*

## **3. College of Optics and Photonics**

*College of Optics and Photonics certificate additions*

1. Applied Photonics Graduate Certificate- *Approved*
2. Optical Imaging Systems Graduate Certificate- *Approved*

## **4. College of Sciences**

*College of Sciences certificate additions*

1. Data Modeling Graduate Certificate- *Approved*
2. Financial Mathematics Graduate Certificate - *Approved*
3. Research Smarts Graduate Certificate - *Approved*