

Date: 3.22.19

To: University Faculty Council

Via: Graduate Studies Committee

Subj: Changes to Department of Information Technology and Management (ITM)
Graduate Curricula

All actions were forwarded from the ITM Curriculum Committee and have been approved by the ITM Faculty.

This is a major change:

1. Action: Change of the name of the current **Master of Cyber Forensics and Security** degree to **Master of Cyberbersecurity Technology and Digital Forensics**.
 - a) Justification: When we brought our cybersecurity M.S. before the Graduate Studies Committee last year, we were asked why our professional master's had such an awful name, and we explained that we were not permitted to use the term cybersecurity when the degree was initially approved. Clearly this has changed as cybersecurity has become the preferred term in this field. The existing degree name presents marketing problems which this change should solve.

It is not clear if any of the following changes would be considered major changes.

2. Action: In the Master of Information Technology and Management degree, rename the existing **Digital Systems Technology** graduate specialization to **Smart Technology and Innovation** and include the following changes:
 - a) Remove ITMT 533 Operating System Design Implementation, which has not been offered by the department for over 10 years.
 - b) Change the programming requirement from ITMD 512 (C++) to ITMD 510 (Java).
 - c) Add ITMD 556 Intelligent Device Projects to the specialization requirements.
3. Action: In the Master of Information Technology and Management degree, rename the existing **Data Management** graduate specialization to **Data Analytics and Management** and include the following changes:
 - a) Create a new course, which will be listed under two course titles for curricular reasons: *ITMM 514 Programming for Data Analytics* and *ITMS 514 Programming for Cyber Analytics*
 - a. *ITMM 514 Programming for Data Analytics* will replace ITMD 510 as the required Software Development Core Course in the MITM Data Analytics and Management specialization.
 - b. The course will focus on Python and R for analytics so that later analytics courses can be taught with the assumption that students already know the necessary languages. It will be taught as a single course crosslisted to two course numbers. The course description will state that students may not receive credit for both ITMM 514 and ITMS 514.
 - c. The degree previously had an ITM 514 but it was retired prior to 2006.

4. Action: In the Master of Information Technology and Management degree, make the following changes to the **Computer and Information Security** specialization:

a) Remove the following required course options:

Select three credit hours from the following:	3
ITMS 539 Steganography	3
ITMS 549 Cyber Security Technologies: Projects & Advanced Methods	3

b) Change the following two lines from:

Select three credit hours from the following:	3
Any 500-level ITMS elective	3

to:

Select six credit hours from the following:	6
Any 500-level ITMS elective	6

- a. These changes re-align the specialization with recent changes to the Master of Cyber Forensics and Security degree. ITMS 539 and ITMS 549 will still be available as electives for students in this specialization who would like to pursue a research track.
- c) Replace ITMD 510 Object-Oriented Application Development as the required Software Development Core Course in the MITM Computer and Information Security specialization with a new course, *ITMS 514 Programming for Cyber Analytics*. Python, a key element of the course, is frequently used today for development of cybersecurity applications.
- a. *ITMS 514 Programming for Cyber Analytics* will also be available as an elective in the Master of Science in Applied Cybersecurity and Digital Forensics and the Master of Cyber Forensics and Security degrees.