

4.16.2020

Information Technology and Management Graduate Certificate Revisions

1. The following are revisions to Graduate Certificates in Information Technology and Management. None should require U.S. Department of Education or Trustee approval.
2. This proposal was approved by the ITM Curriculum Committee and the ITM Faculty on April 16, 2020.

No change to the certificate (prerequisites expanded)

Certificate in Advanced Software Development

Required Courses		(12)
ITMD 515	Advanced Software Programming	3
ITMM 571	Project Management for ITM ¹	3
Select a minimum of two courses from the following:		6
ITMD 511	Application Dev Methodologies	3
ITMD 513	Open Source Programming	3
ITMD 519	Topics in Software Development	1-6
ITMD 532	UML-Based Software Development	3
ITMD 534	Human/Computer Interaction	3
ITMD 536	Software Testing & Maintenance	3
ITMO 556	Intro to Open Source Software	3
ITMS 518	Coding Security	3
Total Credit Hours		12

The prerequisite path for this certificate is completion of coursework, training, or certification equivalent to ITM 311 (Beginning Java) and ITMD 510 (Intermediate Java.) Equivalent certification may be Oracle Certified Associate (OCA) Java Programmer + two years industry experience or Oracle Certified Professional (OCP) Java Programmer.

¹ Students who have already completed coursework, training, or certification equivalent to ITMM 471 or ITMM 571 (Certification may be PMI PMP, PMI PMA, or CompTIA Project+) may substitute a fourth course from the above list.

No change to the certificate (prerequisites expanded)

Certificate in Cyber Security Management

Required Courses		(12)
ITMS 548	Cyber Security Technologies	3
ITMS 578	Cyber Security Mgmt	3
Select a minimum of two courses from the following:		6
ITMM 586	IT Auditing	3
ITMS 543	Vulnerability Analys and Ctrl	3
ITMS 579	Topics in Information Security	1-6
ITMS 588	Incdnt Rspnse Disaster Rcvry	3
Total Credit Hours		12

The prerequisite path is for this certificate is completion of coursework, training, or certification equivalent to ITMO 540 (Networking). Equivalent certification may be CompTIA Network+ or Cisco CCNA.

No change to the certificate (prerequisites expanded)

Certificate in Cyber Security Technologies

Required Courses		(12)
ITMS 543	Vulnerability Analys and Ctrl	3
ITMS 548	Cyber Security Technologies	3
Select a minimum of two courses from the following:		6
ITMS 518	Coding Security	3
ITMS 528	Database Security	3
ITMS 538	Cyber Forensics	3
ITMS 539	Steganography	3
ITMS 549	CST: Projects & Adv Methods	3
ITMS 555	Mobile Device Forensics	3
ITMS 558	Operating Systems Security	3
Total Credit Hours		12

The prerequisite path for this certificate is completion of coursework, training, or certification equivalent to ITMO 540 (Networking) and ITMO 556 (Linux). Equivalent certification may be CompTIA Linux+, LPI Linux Essentials or LPIC-1, or Red Hat Certified System Administrator; and CompTIA Network+ or Cisco CCNA.

Suspend this certificate as we are not currently staffed to deliver it.

Certificate in Data Center Operations and Management

Required Courses		(12)
ITMM 576	Data Center Management	3
ITMO 540	Intro Data Networks & Internet	3
ITMO 554	Operating Sys Virtualization	3
ITMT 535	Data Center Architecture	3
Students who have already completed coursework, training, or certification equivalent to ITMO 540 may substitute a fourth course from the list below.		
ITMO 544	Cloud Computing Technologies	3
ITMO 557	Storage Technologies	3
ITMS 548	Cyber Security Technologies	3
ITMS 588	Incdnt Rspnse Disaster Rcvry	3
Total Credit Hours		12

See proposed revision below.

Certificate in Data Management and Analytics

Required Courses		(12)
ITMD 421		3
ITMD 422	Advanced Database Mgmt	3
ITMD 527	Data Analytics	3
Select a minimum of one course from the following:		3
ITMD 526	Data Warehousing	3
ITMD 529	Advanced Data Analytics	3
ITMS 528	Database Security	3
ITMT 531	OO Syst Anlys Mod & Des	3
Total Credit Hours		12

Proposed Revision (Further revision is in work)

Certificate in Data Management and Analytics (revised)

Required Courses		(12)
ITMD 514	Programming for Data Analytics	3
ITMD 523	Advanced Topics in Data Management	3
ITMD 527	Data Analytics	3
Select a minimum of one course from the following:		3
ITMD 526	Data Warehousing	3
ITMD 529	Advanced Data Analytics	3
ITMS 528	Database Security	3
ITMT 531	OO Syst Anlys Mod & Des	3
Total Credit Hours		12

The prerequisite path for this certificate is completion of coursework, training, or certification equivalent to ITM 311 or 313 (Introductory programming) and ITMD 321 (Introductory database and SQL). Equivalent certification may be PCEP – Certified Entry-Level Python Programmer, or Oracle Certified Associate (OCA) Java Programmer; and Oracle MySQL Database Administration, or Oracle Database Certified Associate, or Microsoft Certified Solutions Associate (MCSA): SQL Server.

No change to the certificate (Revised Bulletin listing as shown below.)

Certificate in Information Technology Innovation, Leadership, and Entrepreneurship

Required Courses		(12)
ITMM 571	Project Management for ITM ¹	3
ITMM 581	IT Entrepreneurship	3
ITMM 582	Business Innovation	3
Select a minimum of one course from the following:		3
Any ITMM Elective		3
INTM 511	Industrial Leadership	3
INTM 515	Advanced Project Management	3
INTM 522	Modeling for Decision-Making	3
INTM 543	Purchasing	3
TECH 581	Consulting for Technical Prof	3
Total Credit Hours		12

¹ Students who have already completed coursework, training, or certification equivalent to ITMM 571 may substitute a fourth course from the above list. Only one INTM course may be applied to the certificate.

No change to the Certificate but Bulletin listing revised as shown
Certificate in Information Technology Innovation, Leadership, and Entrepreneurship

Required Courses		(12)
ITMM 581	IT Entrepreneurship	3
ITMM 582	Business Innovation	3
Select a minimum of one course from the following:		3
ITMM 570	Fund. of Mngment for Tech Professionals	3
ITMM 572	Process Engineering for I.T. Managers	3
ITMM 573	Building and Leading Effective Teams	3
ITMM 574	Info Tech Management Frameworks	3
ITMM 585	Legal and Ethical Issues in Info Tech	3
ITMM 586	Information Technology Auditing	3
Any 500-level ITMM elective		3
INTM 511	Industrial Leadership	3
INTM 515	Advanced Project Management	3
INTM 522	Modeling for Decision-Making	3
INTM 543	Purchasing	3
TECH 581	Consulting for Technical Prof	3
Total Credit Hours		12

¹ Students who have already completed coursework, training, or certification equivalent to ITMM 571 may substitute a fourth course from the above list. Only one INTM course may be applied to the certificate.

No change to the certificate
Certificate in System Administration

Select one of the following:		6
ITMO 556	Intro to Open Source Software	6
& ITMO 553	and Open Source System Admin	
ITMO 550	Enterprise End-User Sys Admin	6
& ITMO 533	and Enterprise Server Admin	
Select a minimum of two courses from the following:		6
ITMM 571	Project Management for ITM	3
ITMO 544	Cloud Computing Technologies	3
ITMO 554	Operating Sys Virtualization	3
ITMS 558	Operating Systems Security	3
Total Credit Hours		12

No change to the certificate (prerequisites expanded)

Certificate in Systems Analysis

Required Courses		(12)
ITMM 571	Project Management for ITM 1	3
ITMM 572	Process Engrng for IT Managers	3
ITMT 531	OO Syst Anlys Mod & Des	3
Select a minimum of one course from the following:		3
INTM 522	Modeling for Decision-Making	3
ITMD 511	Application Dev Methodologies	3
ITMD 532	UML-Based Software Development	3
ITMD 534	Human/Computer Interaction	3
ITMD 536	Software Testing & Maintenance	3
TECH 581	Consulting for Technical Prof	3
Total Credit Hours		12

The prerequisite path is for this certificate is completion of coursework, training, or certification equivalent to ITM 311(Beginning Java), ITMD 510 (Intermediate Java), and ITMD 321 (Introductory database and SQL). Equivalent certification may be PCEP – Certified Entry-Level Python Programmer, or Oracle Certified Associate (OCA) Java Programmer; and Oracle MySQL Database Administration, or Oracle Database Certified Associate, or Microsoft Certified Solutions Associate (MCSA): SQL Server.

¹ Students who have already completed coursework, training, or certification equivalent to ITMM 471 or ITMM 571 (Certification may be PMI PMP, PMI PMA, or CompTIA Project+) may substitute a fourth course from the above list.

No change to the certificate (prerequisites expanded)

Certificate in Web Design and Application Development

Required Courses		(12)
ITMD 562	Web Site App Development	3
ITMD 565	Rich Internet Applications	3
Select a minimum of two courses from the following:		6
ITMD 534	Human/Computer Interaction	3
ITMD 553	Enterprise Intelligent Device	3
ITMD 554	Mass-Market Intelligent Device	3
ITMD 555	Open-Source Intelligent Device	3
ITMD 563	Intermediate Web App Dev	3
ITMD 564	Adv Web Site App Development	3
ITMD 566	Service-Oriented Architectures	3
ITMD 567	Web Systems Integration	3
ITMD 569	Topics in Application Devlmpnt	3
Total Credit Hours		12

The prerequisite path is for this certificate is completion of coursework, training, or certification equivalent to ITM 311 or 313 (Introductory programming) and ITMD 361 (Introductory web development including HTMS, CSS, and Javascript). Equivalent certification may be PCEP – Certified Entry-Level Python Programmer, or Oracle Certified Associate (OCA) Java Programmer; and Microsoft Programming in HTML5 with JavaScript and CSS3 or Udemy HTML, CSS, & JavaScript Certification Course for Beginners.