

Syllabus for ITM 740 - IT Operations

NOTE: This syllabus document contains the basic information of this course. The most current syllabus is available in the full course.

Prerequisite

None

Course Description

This course explores best practices and techniques for ensuring the smooth functioning of the IT infrastructure and operational environments to support development and deployment of applications and services within the organization. Coverage includes network infrastructure; servers and devices; computer operations; service management; facilities; help desk services, DevOps, and process automation.

Course Alignment with Program Outcomes:

This course addresses the following competencies and program outcomes of the Master of Science in Information Technology Management:

- Competency E: Investigate and plan innovative solutions for business challenges
 - Program Outcome 15: Analyze data to address organizational challenges and create competitive advantages
 - Program Outcome 16: Analyze requirements and propose technical solutions

- Competency F: Engineer, develop and deploy strategies for enterprise system
 - Program Outcome 17: Develop appropriate data management technologies
 - Program Outcome 19: Plan and implement projects related to infrastructure, security, software development or data analysis

Course Learning Objectives:

At the end of this course, students will be able to:

1. Describe the importance of, and challenges associated with organizing the IT infrastructure
2. Describe the tasks and techniques used to optimize the availability of production systems
3. Describe techniques to improve or optimize the throughput and minimize response time in the major resource environments of a typical IT infrastructure
4. Explain change management processes to control and coordinate changes to an IT production environment
5. Describe processes to identify, log, track, resolve, and analyze problems impacting IT services within the enterprise

6. Describe storage management processes used to optimize the use of storage devices and to protect the integrity of data for any media where it resides
7. Describe network management processes used to maximize reliability and utilization of network components and optimize network availability and responsiveness
8. Discuss strategies and techniques to ensure continuous operation of critical systems in the event of disasters impacting the infrastructure environment
9. Describe facility management processes to ensure an appropriate physical environment to enable continuous operation of all critical infrastructure equipment
10. Describe process automation and the risks and benefits of its implementation
11. Describe DevOps techniques, tools, and principles to optimize and automate the application delivery pipeline

Course Activities and Assessments

This course uses a variety of discussions, assignments, written assignments, and a final project. The final project is a group project working collaboratively with your peers.

Lesson	Topics
1	Organizations
2	Service Operations Principles
3	Operational Excellence
4	Asset, Change, Release & Knowledge Management
5	Event, Incident, Problem & Access Management
6	Network & Telecom
7	Compute Infrastructure & Monitoring
8	Database & Middleware
9	Securing Information Systems
10	Designs
11	Managing Projects and Decision Making
12	Business Continuity & Disaster Recovery
13	Final Project Q&A
14	Final Project Written Assignment and Group Presentation
15	Final Week Debrief Session

Grading

The following grading scale will be used to evaluate all course requirements and to determine your final grade:

Grade	Percentage Range
A	90% - 100%
A-	85% - 89%
B+	80% - 84%
B	75% - 79%
B-	70% - 74%
C+	65% - 69%
C	60% - 64%
C-	55% - 59%
F	0 - 54%

Assignments	Weight
Discussions:	40%
Written Assignments	30%
Final Project	30%
Total Percent	100%