Course Number	Course Title	Credits
IST 251	**Management of Computer Technology**	**3**

Hours: Lecture/Lab/Other	Pre-requisite	Implementation Semester & Year
2/2/0	**Completion of 30 credits toward Information Systems or Information Technology program**	**FALL 2022**

Catalog description:
Explores solutions to the challenges facing a typical computer technology manager, including project life-cycles, security, access, end-user computing, project planning, scheduling, staffing, employee development, and external threats to private computers.

General Education Category: **Not GenEd**	**Course coordinator:** Terry Voldase, Associate Professor of Computer Information Systems, 609-570-3481, voldaset@mccc.edu

Required texts & Other materials:
- Introduction to Information Systems, 4th Edition, Patricia Wallace, Johns Hopkins University
- Microsoft Excel Office 2019 – free software provided by MCCC
- PC and Mac computers with software downloads permission

Course Student Learning Outcomes (SLO):
Upon successful completion of this course, the student will be able to:
1. Demonstrate conceptual and working knowledge of the basic principles of managing computer technology through discussion questions, application exercises utilizing Microsoft Excel spreadsheets, and chapter case studies emphasizing these concepts [**Supports ILGs 2, 4, 11; PLOs 1, 5, 6, 7**]
2. Use and apply case study approaches to develop innovative approaches utilizing information technology to address the challenges facing the enterprise in day-to-day operations and strategic positioning within the marketplace [**Supports ILGs 1, 2, 4, 9, 11; PLOs 2, 3, 4, 7**]
3. Approach information systems as tools for the probability and efficiency of the enterprise [**Supports ILGs 2, 4, 11; PLOs 2, 3, 7**]
4. Knowledgeable and familiar with an understanding of information resources and new hardware and software technologies [**Supports ILGs 1, 4, 9, 11; PLOs 2, 3, 4**]

Course-specific Institutional Learning Goals (ILG):

Institutional Learning Goal 1. Communication. Students will communicate effectively in both speech and writing.

Institutional Learning Goal 2. Mathematics. Students will use appropriate mathematical and statistical concepts and operations to interpret data and to solve problems.

Institutional Learning Goal 4. Technology. Students will use computer systems or other appropriate forms of technology to achieve educational and personal goals.

Institutional Learning Goal 9. Ethical Reasoning and Action. Students will understand ethical frameworks, issues, and situations.

Institutional Learning Goal 11. Critical Thinking: Students will use critical thinking skills understand, analyze, or apply information or solve problems.

Program Learning Outcomes for: Computer Information Systems (A.S.) and Information Technology – Cybersecurity Concentration (A.A.S.)

1. Transfer to a four-year college as a junior;
2. Explain, interpret, and develop computer information policies and procedures;
3. Understand business organizations and practices, and the role of information technology in organizations;
4. Develop, describe, understand, and apply network protocols and technology;
5. Design, program, implement, and document a computer application or website to install and implement computer systems;
6. Work effectively individually and in workgroups to install and implement information systems;
7. Communicate in written documents and in oral presentations in technical or business settings.

Units of study in detail – Unit Student Learning Outcomes:

Unit I   [Unit I Information Systems and People] [Supports Course SLO #1]
Learning Objectives
The student will be able to:

- Describe the main roles that information systems play in organizations.
- Identify research areas in the discipline of management information systems (MIS).
- Describe how business, nonprofit, and government managers and information technology departments depend on information systems knowledge.
- Explain how information systems present both promises and perils, and pose ethical questions.

Unit II   [Unit II Information Systems and Strategy] [Supports Course SLOs #1, 4]
Learning Objectives
The student will be able to:

- Describe Porter's five competitive forces that shape industry competition.
- Explain how disruptive innovations, government policies, complementary products and services, and other factors affect how the competitive forces operate.
- Identify the components of the value chain.
- Describe how information systems apply to competitive strategies for businesses, nonprofit organizations, and governments.

Unit III   [Unit III Information and Communications Technologies – The Enterprise Architecture]
[Supports Course SLOs #3, 4]
Learning Objectives
The student will be able to:

- Describe the four hardware components of a computer and providing examples of each component.
- Identify the two major types of software and how they were created.

- Describe the major types of networks and the transmission media they use and provide examples of network protocols.
- Explain the importance of the enterprise architecture and trends.

Unit IV [Unit IV Databases and Data Warehouses] [Supports Course SLOs #2, 3, 4]
Learning Objectives
The student will be able to:
- Compare file processing systems to the database.
- Describe how a relational database is accessed and managed through the normalization process.
- Describe how data warehouses are created, their challenges, and the value of big data.

Unit V [Unit V Information Systems for the Enterprise] [Supports Course SLOs #2, 3, 4]
Learning Objectives
The student will be able to:
- Explain the role financial and asset management information systems play in an organization and the importance of financial reporting.
- Define human capital management, supply chain management, and customer relationship management and describe the metrics that support each processes.
- Explain the importance of ERP systems and describe how they are created, integrated, and implemented.

Unit VI [Unit VI The Web, Social Media, E-Commerce, and M-Commerce]
[Supports Course SLOs #1, 2, 3, 4]
Learning Objectives
The student will be able to:
- Describe the goals an organization chooses to develop its web and social media strategies.
- Explain the importance of usability and accessibility, and describe how websites are created with various software tools.
- Define e-commerce and m-commerce, how they work, and how security and trust are critical ingredients for them.

Unit VII [Unit VII Business Intelligence and Decision Making] [Supports Course SLOs #2, 3]
Learning Objectives
The student will be able to:
- Understand the major source of business intelligence and provide examples of their usefulness.
- Explain approaches to data mining and analytics that help managers analyze patterns, trends, and relationships to make better data-driven decisions.
- Describe how digital analytics are used as a source of business intelligence and the value for understanding customers.
- Describe how dashboards, portals, and mashups help visualize business intelligence.

Unit VIII [Unit VIII Collaborating with Technology] [Supports Course SLOs #1, 2, 3, 4]
Learning Objectives
The student will be able to:
- Describe the major collaborative technologies for communications and productivity.

- Recognize and describe Web 2.0 technologies that facilitate collaboration.
- Identify the features of online environments that affect human behavior and group dynamics, and identify strategies to make virtual teams more productive and successful.

Unit IX   [Unit IX Knowledge Management and E-Learning] [Supports Course SLOs #2, 3, 4]
Learning Objectives
The student will be able to:
- Distinguish the steps in launching a knowledge management program and provide examples for the applicable technologies.
- Identify the types of intellectual capital and its contribution.
- Describe the different approaches to e-learning.
- Explain how to create an e-learning program, including the learning management system, compare, and contrast corporate and educational e-learning, and classroom-based learning.

Unit X   [Unit X Ethics, Privacy, and Security] [Supports Course SLOs #2, 3, 4]
Learning Objectives
The student will be able to:
- Define ethics and explain the relationship between ethics and the law.
- Explain how intellectual property and plagiarism pose challenges for information ethics.
- Describe information privacy and strategies, and why organizations implement surveillance.
- Recognize the steps organizations use to manage security risks, identify threats, assess vulnerabilities, and develop administrative and technical controls.

Unit XI   [Unit XI Systems Development and Procurement] [Supports Course SLOs #3, 4, 6]
Learning Objectives
The student will be able to:
- Identify the seven phases of the systems development life cycle (SDLC).
- Explain three major software strategies.
- Describe several ways in which the human element is important for systems development and procurement.

Unit XII   [Unit XII Project Management and Strategic Planning] [Supports Course SLOs #3, 4, 6]
Learning Objectives
The student will be able to:
- Define a project and explain how time, cost, and scope affect it.
- Describe the five processes of project management.
- Explain how project management software helps managers plan, track, and manage projects.
- Explain the importance of strategic planning for information systems and how the human element affects strategic planning.

Evaluation of student learning: [Evaluates SLOs #1, 2, 3, 4]

Students' achievement of the course objectives will be evaluated using the following:
- Excel Application lab assignments.
- Case studies documenting the student's reactions to course content, reflections on the various lectures, chapter readings, and projects, and thoughts on their own developing career interests.
- Chapter quizzes assessing students' comprehension of each chapter practices.
- Exams assessing students' comprehension of computer technology and practices.

Grade Criteria

Item	Percent
Excel Application Lab Assignments	15%
Quizzes	20%
Case Studies (Projects)	25%
Midterm Exam	20%
Final Exam	20%
Total	**100%**