## Course Outline

<table>
<thead>
<tr>
<th>Course Number</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>IST 251</td>
<td>Management of Computer Technology</td>
<td>3</td>
</tr>
</tbody>
</table>

**Hours:**
- Lecture/Lab/Other: 2/2/0

**Pre-requisite:**
- Completion of 30 credits toward Information Systems or Information Technology program

**Implementation:**
- Semester & Year: 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:
- 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 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

<table>
<thead>
<tr>
<th>Item</th>
<th>Percent</th>
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<tbody>
<tr>
<td>Excel Application Lab Assignments</td>
<td>15%</td>
</tr>
<tr>
<td>Quizzes</td>
<td>20%</td>
</tr>
<tr>
<td>Case Studies (Projects)</td>
<td>25%</td>
</tr>
<tr>
<td>Midterm Exam</td>
<td>20%</td>
</tr>
<tr>
<td>Final Exam</td>
<td>20%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>100%</strong></td>
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