COURSE OUTLINE

IST 251 Management of Computer Technology 3 Credits

<table>
<thead>
<tr>
<th>Course Number</th>
<th>Course Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>IST 251</td>
<td>Management of Computer Technology</td>
<td>3</td>
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<thead>
<tr>
<th>Class or Lecture Hours</th>
<th>Laboratory Work Hours</th>
<th>Clinical or Studio Hours</th>
<th>Practicum, Co-op, Internship</th>
<th>Course Length</th>
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<tbody>
<tr>
<td>2</td>
<td>2</td>
<td>14 week</td>
<td>14 week, 10 week, etc.</td>
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<tr>
<th>Performance on an Examination/Demonstration</th>
<th>Alternate Delivery Methods</th>
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<tbody>
<tr>
<td>(Placement Score (if applicable); minimum CLEP score)</td>
<td>(Online, Telecourse [give title of videos])</td>
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3 lecture/0 Lab hours

Prerequisite/Co-requisite:
Minimum 30 credits completed in program

Last Revised: 2020

Catalog Description:
This course focuses on situations facing a typical information systems manager: Security, Planning, Personnel, Scheduling, Training, Electronic Commerce, Hardware and Software Upgrades. The course is based on the fundamental premise that the major role of information technology is to facilitate problem solving, increase quality of information and its availability, provide solutions to business problems, and enabling business process reengineering. Use of the Web, the Internet, intranets, extranets, and electronic commerce in organizations. Explore where information systems are going and the impact on education and business.

Required texts/materials: Reference Division Booklist

Other Materials:
- Microsoft Office Excel

Course Coordinator
Terry Voldase, voldaset@mccc.edu x3481
Course Competencies/Goals.
Upon Successful Completion of the 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.

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.

3. Approach information systems as tools for the probability and efficiency of the enterprise

4. Knowledgeable and familiar with an understanding of information resources and new hardware and software technologies.

Institutional Learning Goals (ILGs)

Goal 1. Communication. Students will communicate effectively in both speech and writing.
Goal 2. Mathematics. Students will use appropriate mathematical and statistical concepts and operations to interpret data and to solve problems.
Goal 4. Technology. Students will use computer systems or other appropriate forms of technology to achieve educational and personal goals.
Goal 8. Diversity and Global Perspective. Students will understand the importance of a global perspective and culturally diverse peoples.
Goal 10. Information Literacy. Students will recognize when information is needed and have the knowledge and skills to locate, evaluate, and effectively use information for college level work.
Goal 11. Critical Thinking. Students will use critical thinking skills to understand, analyze, or apply information or solve problems.
**Units of Study**

**I Information Systems and People**
The student will be able to:
1. Describe the main roles that information systems play in organizations. *(CG2; ILGs 1, 4, 9, 10, 11)*
2. Identify research areas in the discipline of management information systems (MIS). *(CG2; ILGs 1, 4, 9, 10, 11)*
3. Describe how business, nonprofit, and government managers and information technology departments depend on information systems knowledge. *(CG2; ILGs 1, 4, 9, 10, 11)*
4. Explain how information systems present both promises and perils, and pose ethical questions. *(CG2; ILGs 1, 4, 9, 10, 11)*

**II Information Systems and Strategy**
The student will be able to:
1. Describe Porter’s five competitive forces that shape industry competition. *(CG2; ILGs 1, 4, 9, 10, 11)*
2. Explain how disruptive innovations, government policies, complementary products and services, and other factors affect how the competitive forces operate. *(CG4; ILGs 4, 10, 11)*
3. Identify the components of the value chain. *(CG4; ILGs 4, 10, 11)*
4. Describe how information systems apply to competitive strategies for businesses, nonprofit organizations, and governments. *(CG4; ILGs 4, 10, 11)*

**III Information and Communications Technologies – The Enterprise Architecture**
The student will be able to:
1. Describe the four hardware components of a computer and providing examples of each component. *(CG4; ILGs 4, 10, 11)*
2. Identify the two major types of software and how they were created. *(CG4; ILGs 4, 10, 11)*
3. Describe the major types of networks and the transmission media they use and provide examples of network protocols. *(CG4; ILGs 4, 10, 11)*
4. Explain the importance of the enterprise architecture and trends. *(CG4; ILGs 4, 10, 11)*

**IV Databases and Data Warehouses**
The student will be able to:
1. Compare file processing systems to the database. *(CG2; ILGs 1, 4, 9, 10, 11)*
2. Describe how a relational database is accessed and managed through the normalization process. *(CG4; ILGs 4, 10, 11)*
3. Describe how data warehouses are created, their challenges, and the value of big data. *(CG4; ILGs 4, 10, 11)*

**V Information Systems for the Enterprise**
The student will be able to:
1. Explain the role financial and asset management information systems play in an organization and the importance of financial reporting. *(CG2; ILGs 1, 4, 9, 10, 11)*
2. Define human capital management, supply chain management, and customer relationship management and describe the metrics that support each processes. *(CG2; ILGs 1, 4, 9, 10, 11)*
3. Explain the importance of ERP systems and describe how they are created, integrated, and implemented. *(CG4; ILGs 4, 10, 11)*

**VI The Web, Social Media, E-Commerce, and M-Commerce**
The student will be able to:
1. Identify the goals an organization chooses to develop its web and social media strategies. *(CG2; ILGs 1, 4, 9, 10, 11)*
2. Explain the importance of usability and accessibility, and describe how websites are created with various software tools. (CG2; ILGs 1, 4, 9, 10, 11)
3. Explain e-commerce and m-commerce, how they work, and how security and trust are critical ingredients for them. (CG4; ILGs 4, 10, 11)

VII Business Intelligence and Decision Making
The student will be able to:
1. Understand the major source of business intelligence and provide examples of their usefulness. (CG2; ILGs 1, 4, 9, 10, 11)
2. Explain approaches to data mining and analytics that help managers analyze patterns, trends, and relationships to make better data-driven decisions. (CG3; ILGs 1, 4, 8, 10, 11)
3. Understand how digital analytics are used as a source of business intelligence and the value for understanding customers. (CG3; ILGs 1, 4, 8, 10, 11)
4. Describe how dashboards, portals, and mashups help visualize business intelligence. (CG2; ILGs 1, 4, 9, 10, 11)

VIII Collaborating with Technology
The student will be able to:
1. Describe the major collaborative technologies for communications and productivity. (CG2; ILGs 1, 4, 9, 10, 11)
2. Identify and describe Web 2.0 technologies that facilitate collaboration. (CG4; ILGs 4, 10, 11)
3. Identify the features of online environments that affect human behavior and group dynamics, and identify strategies to make virtual teams more productive and successful. (CG4; ILGs 4, 10, 11)

IX Knowledge Management and E-Learning
The student will be able to:
1. Describe the steps in launching a knowledge management program and provide examples for the applicable technologies. (CG4; ILGs 4, 10, 11)
2. Describe the types of intellectual capital and its contribution. (CG4; ILGs 4, 10, 11)
3. Describe the different approaches to e-learning. (CG4; ILGs 4, 10, 11)
4. 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. (CG4; ILGs 4, 10, 11)

X Ethics, Privacy, and Security
The student will be able to:
1. Define ethics and explain the relationship between ethics and the law. (CG2; ILGs 1, 4, 9, 10, 11)
2. Explain how intellectual property and plagiarism pose challenges for information ethics. (CG4; ILGs 4, 10, 11)
3. Describe information privacy and strategies, and why organizations implement surveillance. (CG4; ILGs 4, 10, 11)
4. Explain the steps organizations use to manage security risks, identify threats, assess vulnerabilities, and develop administrative and technical controls. (CG2; ILGs 1, 4, 9, 10, 11)

XI Systems Development and Procurement
The student will be able to:
1. Identify the seven phases of the systems development life cycle (SDLC). (CG2; ILGs 1, 4, 9, 10, 11)
2. Identify three major software strategies. (CG1; ILG 1, 2, 4, 8, 9, 10, 11)
3. Identify several ways in which the human element is important for systems development and procurement. (CG1; ILG 1, 2, 4, 8, 9, 10, 11)

XII Project Management and Strategic Planning
The student will be able to:
1. Define a project and explain how time, cost, and scope affect it. (CG4; ILGs 4, 10, 11)
2. Describe the five processes of project management. (CG4; ILGs 4, 10, 11)
3. Explain how project management software helps managers plan, track, and manage projects. (CG4; ILGs 4, 10, 11)
4. Explain the importance of strategic planning for information systems and how the human element affects strategic planning. (CG4; ILGs 4, 10, 11)
Evaluation of Student Learning.
Achievement of the course objectives will be evaluated through the use of the following tools:

- Excel Application lab assignments. (CG1, 2)
- 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. (CG2)
- Chapter quizzes assessing students’ comprehension of each chapter practices. (CG1)
- Exams assessing students’ comprehension of computer technology and practices. (CG1, 2, 3, 4)

Project Values/Grade Breakdown

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<th>The final grade is based on the following values:</th>
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<tr>
<td>Excel Application Lab Assignments</td>
<td>15%</td>
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<tr>
<td>Quizzes</td>
<td>20%</td>
</tr>
<tr>
<td>Case Studies (Projects)</td>
<td>25%</td>
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<tr>
<td>Midterm Exam</td>
<td>20%</td>
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<tr>
<td>Final Exam</td>
<td>20%</td>
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<tr>
<td>Total</td>
<td>100%</td>
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**Students with Disabilities**

Any student in this class who has special needs because of a disability is entitled to receive accommodations. Eligible students at Mercer County Community College are assured services under the Americans with Disabilities Act and Section 504 of the Rehabilitation Act of 1973.

If you believe you are eligible for services, please contact Arlene Stinson, the Director of Academic Support Services. Ms. Stinson’s office is LB221, and she can be reached at (609) 570-3525.

**Academic Integrity**

As per the student handbook, “A student will be guilty of violating academic integrity if he/she (a) knowingly represents the work of others as his/her own, (b) uses or obtains unauthorized assistance in the execution of academic work, or (c) gives fraudulent assistance to another student.” Students should read the Academic Integrity policy in the MCCC Rights and Responsibilities Student Handbook. **Academic Dishonesty will result in failure of this course.**

**Equal Opportunity Policy**

Mercer County Community College is committed to equal opportunity and affirmative action. Discrimination on the basis of race, creed, color, national origin, ancestry, age, gender, affectional or sexual orientation, marital status, familial status, liability for service in the Armed Forces of the United States, nationality, political views, religion, disability unrelated to job or program requirements or any other characteristic protected by law is prohibited.

Questions regarding the equal opportunity policy and compliance statement may be directed to the Affirmative Action Officer, West Windsor Campus, (609) 586-4800, ext. 3270.