Computer Information System (CIS) Career Pathways

**Business Applications Development**
- Investigate specific business problems for automation (ex: inventory control, after-sales services)
- Convert business processing/operational rules into application code for end-user support
- Select appropriate development tools for application development, testing, and final system implementation

**Job Titles:** Business Application Liaison, Business Application Programmer

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**Business Intelligence and Reporting**
- Analyze and explore information hidden in data sets in order to identify business performance, trends, and relationships or associations between data items that can create new business opportunities
- Aggregate data and report in graphic presentation (ex: dashboard) in order to inform business executives

**Job Titles:** Business Intelligence Analyst, Business Reporting Specialist, Dashboard Designer, Business Analyst

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**Business Process Integration and Management**
- Conduct business process analysis by pinpointing current business operations, and find possible improvements through process analysis, integration and work-flow redesign
- Use modern tools (ex: SAP and Microsoft Dynamics) to support business process analysis, modeling and generating of process maps

**Job Titles:** Business Process Analyst, Business Process Modeler, Business Process Architect

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**Database Administration and Management**
- Translate business data requirements into corporate-wide logical and physical data models
- Approve database design specifications; provide design services, database tuning, recovery and restructuring
- Establish control, integrity and accessibility of database file structures for use with multiple, concurrent users

**Job Titles:** Data Designer, Database Developer, Database Systems Administrator

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**Enterprise Systems**
- Develop and integrate different computerized business functions into an integrated software system
- Review industrial enterprise-wide packages and the enterprise approach in applications development

**Job Titles:** Enterprise Applications Analyst, Enterprise Systems Developer

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The Career Center
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Computer Information Systems (CIS) Career Pathways

**Information Technology Project Management**
- Manage IT resources and projects using state-of-the-art project management tools, techniques and methodologies
- Initiate, plan, execute, monitor control and close IT projects
- Identify different approaches to the planning and administration of IT projects
- Manage relationships with clients and other stakeholders

*Job Titles: Project Estimator and Analyst, IT Project Manager, Business Analyst, Planning Coordinator, IT Project Management Specialist*

**Knowledge Management**
- Execute detailed data mining projects on large databases using analytical tools to discover new information and create knowledge to tap into new business opportunities
- Provide trends and forecasts with scenario analysis and graphic presentation to aid executives in decision making

*Job Titles: Data Mining Specialist, BI Analyst, Data Acquisition Analyst, Data Modeler*

**System Analysis and Design**
- Explore possible automation of business operations for a defined business problem via formal system design methodologies
- Conduct business requirements analysis; investigate end-user work behavior and system needs
- Determine system configuration and software/hardware for implementation

*Job Titles: Business Analyst, System Analyst, Project Manager*

**Telecommunication and Network Administration**
- Design, configure and manage an organization's networking system including wired and wireless network resources
- Monitor and maintain network performance to ensure 24/7 service for all users
- Provide network support for all end users
- Implement network security measures

*Job Titles: Network Administrator, Systems Administrator, Networking Specialist, IT/Networking Manager*

**Web Application Development**
- Develop and design secure and effective Web-based business applications in support of e-business
- Use Internet-based tools and services (ex: Web 2.0, mashup, web services, etc.) to provide online business and administration interfaces that are considered essential to both e-business and e-commerce

*Job Titles: Web Application Developer, E-Commerce Professional, Internet Business Analyst*