

## IS 315 Computer Sys Analysis & Design I

McGinnis, Jacob

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**Mission Statement:** The mission of Park University, an entrepreneurial institution of learning, is to provide access to academic excellence, which will prepare learners to think critically, communicate effectively and engage in lifelong learning while serving a global community.

**Vision Statement:** Park University will be a renowned international leader in providing innovative educational opportunities for learners within the global society.

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<b>Course</b>	IS 315 Computer Sys Analysis & Design
<b>Semester</b>	Portfolio
<b>Faculty</b>	McGinnis, Jacob
<b>Title</b>	Senior Instructor
<b>Degrees/Certificates</b>	BS Electricity/Electronics MS Industrial Management Cisco CCSI 94-100
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<b>E-Mail</b>	<a href="mailto:jacob.mcginnis@park.edu">jacob.mcginnis@park.edu</a> <a href="mailto:chipmckcmo@aol.com">chipmckcmo@aol.com</a>
<b>Class Days</b>	TBA
<b>Class Time</b>	TBA
<b>Credit Hours</b>	3

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### **Textbook:**

Whitten, Bently and Dittman. Systems Analysis and Design Methods, 7th Ed. Irwin/McGraw Hill. ISBN: 0-07-305233-7

Textbooks can be purchased through the [MBS bookstore](#)

Textbooks can be purchased through the [Parkville Bookstore](#)

### **Additional Resources:**

Outside Handouts and Case Studies

[McAfee Memorial Library](#) - Online information, links, electronic databases and the Online catalog. Contact the library for further assistance [via email](#) or at 800-270-4347.

[Career Counseling](#) - The Career Development Center (CDC) provides services for all stages of career development. The mission of the CDC is to provide the career planning tools to ensure a lifetime of career success.

[Park Helpdesk](#) - If you have forgotten your OPEN ID or Password, or need assistance with your PirateMail account, please email [helpdesk@park.edu](mailto:helpdesk@park.edu) or call 800-927-3024

[Resources for Current Students](#) - A great place to look for all kinds of information <http://www.park.edu/Current/>.

### **Course Description:**

This course presents various philosophies, terminology, and techniques used in the analysis and implementation of the system development life cycle. The student will investigate such

areas as project proposals, logical systems, flow diagrams, data modeling, dictionaries, and documentation. The student will learn how to use a CASE tool. 3:0:3 Prerequisite: IS205.

### **Educational Philosophy:**

*The facilitator's educational philosophy is one of interactiveness based on lectures, readings, quizzes, demonstrations, dialogues, examinations, internet, videos, web sites, case exercises and writings. The facilitator will engage each learner to encourage the lively exploration of ideas, issues and contradictions.*

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### **Learning Outcomes:**

#### **Core Learning Outcomes**

1. Identify stakeholders and describe their roles and individual needs in system development.
2. Explain the Information Systems professional's role and the user's role in system development in order to achieve user acceptance and a solution that fits both the user's needs and satisfies the business objective.
3. Evaluate strengths/weaknesses and applicable roles of several strategies/methodologies for design of information systems including Model Driven, RAD, Agile, OO development, and Prototyping.
4. Evaluate problem/opportunity/directive, cause/effect and business requirements for a given problem scenario.
5. Illustrate and explain project management life cycle, approaches to scheduling, measuring of project progress and relationship to the system development life cycle.
6. Identify the responsibilities of the Project Manager and discuss why they are important to the success of the project.
7. Practice systems analysis traditional tasks: Problem analysis, Requirements analysis. Decision analysis
8. Build process and data models for analysis within the system development life cycle.
9. Differentiate between logical and physical models.
10. Communicate both orally and in writing as an individual and as a member of a team.

### **Core Assessment:**

All Park University courses must include a core assessment that measures the relevant Departmental Learning Outcomes. The purpose of this assessment is to determine if expectations have been met concerning mastery of learning outcomes across all instructional modalities. *The core assessment for this course is a project which counts for 20% of the grade. The course project will be an information system plan for a system chosen by the student.* Emphasis will be on developing the basic components of a system using system analysis tools and methodology. The system may be stand alone or integrated with other systems in the organization. Each week portions of the project will be developed including a system description, needs analysis, feasibility analysis, data analysis, process analysis, and financial analysis. Computer aided software engineering (CASE) tools will be used where

needed in support of the weekly assignments. The final project document is due at the end of the course with all assignments integrated into one document.

[Link to Class Rubric](#)

### **Academic Honesty:**

Academic integrity is the foundation of the academic community. Because each student has the primary responsibility for being academically honest, students are advised to read and understand all sections of this policy relating to standards of conduct and academic life. [Park University 2007-2008 Undergraduate Catalog](#) Page 85-86

### **Plagiarism:**

Plagiarism involves the use of quotations without quotation marks, the use of quotations without indication of the source, the use of another's idea without acknowledging the source, the submission of a paper, laboratory report, project, or class assignment (any portion of such) prepared by another person, or incorrect paraphrasing. [Park University 2007-2008 Undergraduate Catalog](#) Page 85

### **Attendance Policy:**

Instructors are required to maintain attendance records and to report absences via the online attendance reporting system.

1. The instructor may excuse absences for valid reasons, but missed work must be made up within the semester/term of enrollment.
2. Work missed through unexcused absences must also be made up within the semester/term of enrollment.
3. Work missed through unexcused absences must also be made up within the semester/term of enrollment, but unexcused absences may carry further penalties.
4. In the event of two consecutive weeks of unexcused absences in a semester/term of enrollment, the student will be administratively withdrawn, resulting in a grade of "F".
5. A "Contract for Incomplete" will not be issued to a student who has unexcused or excessive absences recorded for a course.
6. Students receiving Military Tuition Assistance or Veterans Administration educational benefits must not exceed three unexcused absences in the semester/term of enrollment. Excessive absences will be reported to the appropriate agency and may result in a monetary penalty to the student.
7. Report of a "F" grade (attendance or academic) resulting from excessive absence for those students who are receiving financial assistance from agencies not mentioned in item 5 above will be reported to the appropriate agency.

[Park University 2007-2008 Undergraduate Catalog](#) Page 87-88

### **Disability Guidelines:**

Park University is committed to meeting the needs of all students that meet the criteria for special assistance. These guidelines are designed to supply directions to students concerning the information necessary to accomplish this goal. It is Park University's policy to comply fully with federal and state law, including Section 504 of the Rehabilitation Act of 1973 and the Americans with Disabilities Act of 1990, regarding students with disabilities. In the case of any inconsistency between these guidelines and federal and/or state law, the provisions of

the law will apply. Additional information concerning Park University's policies and procedures related to disability can be found on the Park University web page: <http://www.park.edu/disability> .

**Rubric**

<b>Competency</b>	<b>Exceeds Expectation (3)</b>	<b>Meets Expectation (2)</b>	<b>Does Not Meet Expectation (1)</b>	<b>No Evidence (0)</b>
<b>Synthesis</b> Outcomes 8	The artifact demonstrates student ability to synthesize various components of an information system into a cohesive statement describing system characteristics using a computer aided software engineering (CASE) tool. Synthesis is performed with 0 rework and 0 errors to show consistency and design compatibility between: (1) needs analysis (2) data analysis (3) process analysis.	The artifact demonstrates student ability to synthesize various components of an information system into a cohesive statement describing system characteristics using a computer aided software engineering (CASE) tool. Synthesis is performed with 1 rework and 0 errors to show consistency and design compatibility between: (1) needs analysis (2) data analysis (3) process analysis.	The artifact demonstrates student ability to synthesize various components of an information system into a cohesive statement describing system characteristics using a computer aided software engineering (CASE) tool. Synthesis is performed with more than 1 rework and 1 or more errors to show consistency and design compatibility between: (1) needs analysis (2) data analysis (3) process analysis.	The artifact demonstrates student ability to synthesize various components of an information system into a cohesive statement describing system characteristics using a computer aided software engineering (CASE) tool. Synthesis is not performed to show consistency and design compatibility between: (1) needs analysis (2) data analysis (3) process analysis.
<b>Analysis</b> Outcomes 1,2	The artifact demonstrates student ability to conduct and document a system needs analysis using a prescribed methodology and a computer aided software engineering (CASE) tool. The needs analysis will be documented with 0 rework and 0 errors and	The artifact demonstrates student ability to conduct and document a system needs analysis using a prescribed methodology and a computer aided software engineering (CASE) tool. The needs analysis will be documented with 1 rework and 0 errors and	The artifact demonstrates student ability to conduct and document a system needs analysis using a prescribed methodology and a computer aided software engineering (CASE) tool. The needs analysis will be documented with more than one rework and 1 or more errors and include (1) system	The artifact demonstrates student ability to conduct and document a system needs analysis using a prescribed methodology and a computer aided software engineering (CASE) tool. The needs analysis is not documented to include all categories: (1)

	include (1) system requirements (2) role of the analyst in system development and (3) methodology and tools to be used.	include (1) system requirements (2) role of the analyst in system development and (3) methodology and tools to be used.	requirements (2) role of the analyst in system development and (3) methodology and tools to be used.	system requirements (2) role of the analyst in system development and (3) methodology and tools to be used.
<b>Evaluation</b>  Outcomes 3	The artifact demonstrates student ability to evaluate analysis of system features as they relate to system architectural design alternatives. System features are shown with 0 rework and 0 errors describing: (1) system interfaces (2) processes the system must perform (3) process definition with input and output and (4) data stores.	The artifact demonstrates student ability to evaluate analysis of system features as they relate to system architectural design alternatives. System features are shown with 0 rework and 0 errors describing: (1) system interfaces (2) processes the system must perform (3) process definition with input and output and (4) data stores.	The artifact demonstrates student ability to evaluate analysis of system features as they relate to system architectural design alternatives. System features are shown with 1 rework and 0 errors describing: (1) system interfaces (2) processes the system must perform (3) process definition with input and output and (4) data stores. re than 1 rework and 1 or more errors describing: (1) system interfaces (2) processes the system must perform (3) process definition with input and output and (4) data stores.	The artifact demonstrates student ability to evaluate analysis of system features as they relate to system architectural design alternatives. System features are shown with moThe artifact demonstrates student ability to evaluate analysis of system features as they relate to system architectural design alternatives. System features are shown with 1 rework and 0 errors describing: (1) system interfaces (2) processes the system must perform (3) process definition with input and output and (4) data stores. re than 1 rework and 1 or more errors describing: (1) system interfaces (2) processes the system must perform (3) process definition with input and output and (4) data stores.

				with input and output and (4) data stores.
<b>Terminology</b> Outcomes 4	The artifact demonstrates student ability to analyze and document feasibility of a system with 0 rework and 0 errors in terms of: (1) operational, (2) technical, and (3) economic feasibility.	The artifact demonstrates student ability to analyze and document feasibility of a system with 1 rework and 0 errors in terms of: (1) operational, (2) technical, and (3) economic feasibility.	The artifact demonstrates student ability to analyze and document feasibility of a system with more than 1 rework and 1 or more errors in terms of: (1) operational, (2) technical, and (3) economic feasibility.	The artifact demonstrates student ability to analyze and document feasibility of a system. Feasibility is not described for all categories: (1) operational, (2) technical, and (3) economic.
<b>Concepts</b> Outcomes 5,6	The artifact demonstrates student ability to perform and document a financial analysis for a system. Results are documented with 0 rework and 0 errors for: (1) break even analysis (2) cash flow analysis (3) and present value analysis.	The artifact demonstrates student ability to perform and document a financial analysis for a system. Results are documented with 1 rework and 0 errors for: (1) break even analysis (2) cash flow analysis (3) and present value analysis.	The artifact demonstrates student ability to perform and document a financial analysis for a system. Results are documented with more than 1 rework and or more errors for: (1) break even analysis (2) cash flow analysis (3) and present value analysis.	The artifact demonstrates student ability to perform and document a financial analysis for a system. Results are not documented for all categories: (1) break even analysis (2) cash flow analysis (3) and present value analysis.
<b>Application</b> Outcomes 9	The artifact demonstrates student ability to perform a process analysis and document the results. Results are demonstrated with 0 rework and 0 errors in (1) process flow narrative (2) context diagrams and (3) data flow diagram decomposition.	The artifact demonstrates student ability to perform a process analysis and document the results. Results are demonstrated with 1 rework and 0 errors in (1) process flow narrative (2) context diagrams and (3) data flow diagram decomposition.	The artifact demonstrates student ability to perform a process analysis and document the results. Results are demonstrated with 1 rework and 0 errors in (1) process flow narrative (2) context diagrams and (3) data flow diagram decomposition.	The artifact demonstrates student ability to perform a process analysis and document the results. Results are not demonstrated in all categories: (1) process flow narrative (2) context diagrams and (3) data flow diagram decomposition.

			process analysis and document the results. Results are demonstrated with more than 1 rework and 1 or more errors in (1) process flow narrative (2) context diagrams and (3) data flow diagram decomposition	
<b>Whole Artifact</b> Outcomes 10	The artifact as a whole demonstrates the ability to effectively communicate a system analysis and design to system stakeholders. Systems analysis and design is communicated with 0 rework and 0 errors through: (1) needs, (2) feasibility, (3) data, (4) process, and (5) financial analysis.	The artifact as a whole demonstrates the ability to effectively communicate a system analysis and design to system stakeholders. Systems analysis and design is communicated with 1 rework and 0 errors through: (1) needs, (2) feasibility, (3) data, (4) process, and (5) financial analysis.	The artifact as a whole demonstrates the ability to effectively communicate a system analysis and design to system stakeholders. Systems analysis and design is communicated with more than 1 rework and 1 or more errors through: (1) needs, (2) feasibility, (3) data, (4) process, and (5) financial analysis	The artifact as a whole demonstrates the ability to effectively communicate a system analysis and design to system stakeholders. Systems analysis and design is not communicated in all categories: (1) needs, (2) feasibility, (3) data, (4) process, and (5) financial analysis.
<b>Component</b> Outcomes 7	Various components of the artifact demonstrate the ability to effectively analyze and document a system from different perspectives. The system is analyzed and documented with 0 rework and 0 errors using: (1) needs, (2) feasibility, (3) data, (4) process, and (5) financial analysis.	Various components of the artifact demonstrate the ability to effectively analyze and document a system from different perspectives. The system is analyzed and documented with 1 rework and 0 errors using: (1) needs, (2) feasibility, (3) data, (4) process, and (5) financial analysis.	Various components of the artifact demonstrate the ability to effectively analyze and document a system from different perspectives. The system is analyzed and documented with more than 1 rework and 1 or more errors using: (1) needs, (2) feasibility, (3) data, (4) process, and (5) financial analysis. Various components of the artifact demonstrate the ability to effectively analyze and	Various components of the artifact demonstrate the ability to effectively analyze and document a system from different perspectives. The system is not analyzed and documented in all categories: (1) needs, (2) feasibility, (3) data, (4) process, and (5) financial analysis.

			document a system from different perspectives. The system is analyzed and documented with more than 1 rework and 1 or more errors using: (1) needs, (2) feasibility, (3) data, (4) process, and (5) financial analysis.	
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