

## CIS 248 Advanced Application Development Course Syllabus

**COURSE:** CIS 248 Advanced Application Development  
**CREDIT:** 4 Credits

**INSTRUCTOR:** Gary Kappenman  
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**PREREQUISITE:** CIS 130, plus a minimum of 4 credits in one programming language.

**DESCRIPTION:** Provides experience in computer information project management and development. A student working alone or a small group of students working together will design and develop a complete information systems project from start to finish. This will include utilizing the complete system development life cycle, with emphasis on the analysis and design phases of development. Students will be exposed to concepts such as project analysis, data flow diagrams, selection of design tools, creation of project schedules, project budgeting, prototyping, system proposals, user feedback, graphical user interface (GUI) design, and testing/quality assurance procedures. The student will prepare video presentations demonstrating their project along with PowerPoint presentations with audio during the course and submit them for review.

**REQUIRED TEXT:** Essentials of System Analysis & Design, Fifth Edition or Sixth Edition  
By Valacich – George – Hoffer (ISBN 13: 978-0-13-706711-4 or 978-0-13-354623-1)

**COMPETENCIES:** The student should have the following skills upon successful completion of this course:

- An understanding of the Systems Development Life Cycle (SDLC) and how to apply it to the planning, selection, design and implementation of a software development project
- An understanding of project planning and project selection activities including a general understanding of when an organization should develop an IT application vs. when it should acquire the application
- An understanding of user requirements as they relate to an IT project and how to determine and document the requirements
- The ability to create Gantt/PERT charts, Project Status Reports, and Time Sheets and to use them to plan and track progress on projects
- The ability to create Data Flow Diagrams (DFDs), Entity Relationship Diagrams (ERDs) and UML Class Diagrams and to utilize them in the project design process
- The ability to fully develop the software for a computer application using their choice of programming languages & IDE.
- A basic understanding of software application test and implementation procedures
- An understanding of application software documentation requirements including creating PowerPoint project presentations and product demonstration videos

### BASIS FOR EVALUATION:

Final project (50% of grade) – A working final project is expected to be at least prototyped (preferably completed) by the end of the semester. The project grade will include measures of the level of difficulty and

professionalism of the design effort, the working project prototype/application, presentations on the project including videos of slide presentations and product demonstrations and a self-assessment memo.

Weekly reports (25% of grade) – Weekly reports must include **both a status report** which describe the project, the progress made on each project each week and the goals for next week's project activities **and a time sheet** which tracks the time utilized on each project activity each week along with the total accumulated time spent on the project. Status report due dates are provided on STInet. Late status reports will not be accepted unless mutually agreed to and scheduled on or before the due date.

Exams & Quizzes (25% of unit grade) – Four exams will be given after major topics. Exam dates will be assigned on STInet. Make-up exams are not available unless mutually agreed to and scheduled BEFORE the related test date. Exams are proctored, closed book exams without access to the Internet. Questions may consist of short-answer, multiple choice, true/false, logic questions, fill-in-the-blank, and matching exercises.

## GRADING

Grades will be earned on a point system, and will be determined by using the following formula:

$$(\text{PointsEarned} - \text{Deductions}) / \text{PointsPossible}$$

The grading scale is as follows:

A+ = 99 to 100	A = 94 to 98.99	A- = 89.5 to 93.99
B+ = 89 to 89.49	B = 84 to 88.99	B- = 79.5 to 83.99
C+ = 79 to 79.49	C = 74 to 78.99	C- = 69.5 to 73.99
D = 63 to 69.49	D- = 59.5 to 62.99	F = 0 to 59.49

The +/- designators are not used to calculate Grade Point Average (GPA) on STI transcripts

## STUDENT RESPONSIBILITY

It is the student's responsibility to be an active participant in class. Integrity and professional work ethics will be demonstrated by the instructor and required from the students. Excessive misuse of the computer resource will result in disciplinary action. Please refer to your Student Handbook for more details. Cheating and plagiarism will result in a zero for that work. Further unethical behavior will result in a failing grade for the course. \*

*Violations of safety to self and others and/or violation of safe operating practices of equipment may result in: the reduction or loss of your daily grade; removal from class; and/or other disciplinary action.*

*The instructors and the faculty members in this course will act with integrity and strive to engage in equitable verbal and nonverbal behavior with respect to differences arising from age, gender, race, handicapping conditions and religion. If you have special needs as addressed by the American with Disabilities Act and need course materials in alternative formats, notify your instructor immediately. Reasonable efforts will be made to accommodate your special needs.*

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\*Refer to your SETI Student Handbook for additional school policies.

***STUDENT SUCCESS***

Student success is important to our faculty, and all faculty are involved in assessing learning. Upon completion of a degree, Southeast graduates will have demonstrated competence in the following areas:

Science and Technology: Technical competence including knowledge of technology and/or scientific principles as these apply to programs.

Problem Solving & Critical Thinking: The ability to select and use various approaches to solve a wide variety of problems – scientific, mathematical, social and personal. Graduates will also be able to evaluate information from a variety of perspectives, analyze data, and make appropriate judgments.

Communication: The ability to communicate effectively in several forms – oral, written, nonverbal and interpersonal. Graduates will also demonstrate knowledge of how to manage and access information.

Professionalism: Strong work ethic, including responsible attendance; skill in teamwork and collaboration, as well as an ability to work with others, respecting diversity; ability to adapt to change; commitment to lifelong learning; adherence to professional standards; and positive self-esteem and integrity.