



Senior Project

21:198:491 (3 credits)

COURSE DESCRIPTION:

Senior Project is intended to provide a real-world project-based learning experience for seniors in the computer science and information science undergraduate program. The overall objectives of this course are to investigate the nature and techniques of a business and computing development project. Projects are either provided by industry partners or proposed by students who wish to become entrepreneurs. The course involves business analysis, business modeling, project management, feasibility analysis, risk analysis, R&D, requirements engineering, system design, implementation, quality assurance, documentation and presentation of a real world business problem and solution. The course is interdisciplinary in nature where students use their collective knowledge in business and technology to provide creative solutions in collaboration with real world project stakeholders.

COURSE FEATURES AND OBJECTIVES:

This course has unique features that are not currently offered through any other course on campus.

Specific features are: - To provide hands-on multidisciplinary real world experiences that integrate business applications with information technology areas such as multimedia and network security.

- Strengthens the 4-year college curriculum by enabling students to use what they learn collectively and creatively.
- Simulates the real-world environment
- Offers dynamic market-driven training that reflects hot topics highly demanded by industry but not usually covered through a regular college curriculum.
- Enables students to master career-oriented skills such as leadership, presentation, entrepreneurship, social and communication skills.
- Shows how both IT and business knowledge are used to solve real-world IT problems.
- The experience gained working on such projects will make students more employable by industry including the ability of building businesses through the entrepreneurship track.

Specific goals for the course:

- Ability to breakdown complex problems into manageable pieces (using WBS and Gantt).
- Ability to identify project risks and suggest strategies to minimize them.
- Ability to define project stakeholders, scope & requirements (including the use of FDD).
- Ability to capture, map and visualize the design of the proposed solution identifying key components and their relationships (examples: class diagram, ERM, network diagram, system architecture, etc.)
- Ability to implement the solution successfully using software and/or hardware technologies or other project-related tools (via prototypes).
- Ability to test (validate and verify) the quality of the executed solution using user feedback and other testing techniques.

PREREQUISITE: 28:198:490 Guided design in software engineering

TEXT BOOK: Systems Analysis and Design, 11th Edition, Tilley and Rosenblatt, Cengage Learning, ISBN 13-978-1-305-49460

DEPARTMENT WEBSITE: <http://www.ncas.rutgers.edu/math>

THIS COURSE COVERS THE FOLLOWING:

Week 1 : Introduction o Systems Analysis and Design, Analyzing the Business Case

Week 2: Managing Systems Projects, Requirement Modeling

Week 3: Senior Project Open House – Meet the Corporate Sponsors

Week 4: Project Work as a Team, User Interface Design

Week 5 : Project Work as a Team, Data Design and System Architecture

Week 6 : Submit Deliverables and Present

Week 7: Progress report 1 due

Week 8 : Midterm Presentations and submit prototype 1 to sponsors

Week 9 : Project work as a team

Week 10: Progress report 2 due

Week 11: Discuss project specific issues

Week 12: Submit deliverables and present them With Prototype 2

Week 13: Showcase poster and draft of the final PowerPoint presentations due

Week 14: Final Showcase - Submit deliverables and present them With Final Product Release

Week 15 : Final report due

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