COURSE #: NUCL 449	**COURSE TITLE:** Senior Design Proposal
TERMS OFFERED: Fall	**PREREQUISITES:** NUCL 310 & NUCL 402
TEXTBOOKS: None	**COGNIZANT FACULTY:** All NE Faculty **DATE OF PREPARATION:** 5-30-07
INSTRUCTORS: T. Jevremovic	**SCIENCE/DESIGN:**
CATALOG DESCRIPTION: This course consists of the preparation of a proposal for the senior design project (NUCL 450). The tasks include the selection of teams, background literature and patent surveys, identification and familiarization with computer tools, writing a short report and making a presentation	**COURSE TOPICS:** Formation of teams (1 hr), Selection of a Project Topic (3 hr), Literature Review & Design Review #1 (4 hr), Identification and Familiarization of Computer Tools & Design review #3 (2 hrs), Oral Presentation & Design Review #4 (1 hr)

COURSE OBJECTIVES:
1. Organize a team and select a topic for the senior design project (NUCL-450).
2. Consult the literature and patent files to determine the current state-of-the-art.
3. Identify and learn the use of computation and design tools required for the design project.
4. Write a formal design proposal and defend it in a team oral presentation.

COURSE OUTCOMES:
1. Learn the principles of team building. (2,8)
2. Learn how to develop design requirements, objectives, goals, and schedule. (1, 2)
3. The ability to identify and marshal resources necessary to develop and implement a proposal. (3, 4, 6)
4. Learn how to conduct preliminary economic analyses and options analysis to satisfy design requirement. (11, 12)
5. Develop proficiency in the use of computer and communication skills. (7)

ASSESSMENT TOOLS:
1. Four design reviews will be conducted to evaluate design requirements, goals, objectives, schedules and progress in developing an engineering project proposal.
2. The faculty advisor and course instructor will evaluate a formal written design proposal.
3. The faculty at large will evaluate the quality and competency of the proposal oral defense.
4. The team members will be evaluated on their team performance and effectiveness.
5. The course and instructor are evaluated by formal student evaluation.
6. Student exit interviews, alumni assessments, and the Advisory Committee evaluate course objectives and outcomes. (1-5)