Required Course:	**ECE 49100 Engineering Design Project**
Credit and contact hours:	(1-2 cr.) Class 0, Lab 0
2008 IUPUI Campus Bulletin description:	ECE 491: Engineering Design Project. The student selects an engineering design project and works under the direction of the faculty sponsor. Suitable projects may be from the local industrial, municipal, state and educational communities. May be repeated for a maximum of four credits. **Only one credit hour applies towards graduation.**
Prerequisite or corequisite:	Senior standing and consent of a faculty sponsor.
Prerequisites by topic:	None
Textbook:	None
Coordinator:	Stanley Chien, Professor of Electrical and Computer Engineering
Goals:	To provide the student an opportunity to integrate course material by working on a single multi-faceted project.
Outcomes:	1. Identify and formulate the design problem, including bringing precision to the problem statement through a requirements specification. [e] 2. Use library resources and Internet resources to find information necessary for the project. [l] 3. Use critical thinking in its design process. [e] 4. Use creative approaches when necessary to obtain project objectives. [n] 5. Conduct design using an organized design process, including planning, literature search, requirements specification, consideration of alternative approaches, determination of strategies, and design reviews [c] 6. Conduct design using design principles. [a, c] 7. Apply engineering principles, mathematics, and science in engineering design, not including methods, tools, and techniques. [a] 8. Apply technical knowledge to design, including methods, tools, and techniques. [c, k] 9. Analyze and interpret data. [b2] 10. Determine ways to test a design to determine its functionality (success of the design). [b1] 11. Value quality workmanship into the project, including neatness of the assemblies, neatness of the computer screen displays, and quality of the fit and finish, if applicable. [o] 12. Write a project report, adhering to the specified format using an appropriate writing style, grammar, and spelling [g2]
Topics:	Wide range of topics related to electrical engineering
Computer usage:	Computer usage varies depending on the individual project.
Laboratory projects:	As needed by a specific engineering problem
ABET category:	Engineering Design 100%
Prepared by:	Stanley Chien
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