

## **SYSE 695 Independent Study Description and Instructions to Enroll**

In order to enroll for this class you need to secure a faculty advisor to help guide you in your project. Please see below for guidance on course expectations and what to begin thinking about when choosing a project topic and/or advisor.

Once you identify your advisor please email [sys\\_engr\\_info@engr.colostate.edu](mailto:sys_engr_info@engr.colostate.edu) noting who your advisor is and for what semester you would like to enroll. **Please Cc the person who will be advising you.**

Upon receipt of this email instructions will be sent to you regarding the registration process.

---

These 5 questions will help inform and direct your initial contact with faculty member(s)

1. What is your professional and/or academic background/experience?
2. Are there specific projects (in school or professionally) you worked on that might be a good fit for a Systems Engineering analysis?
3. What “systems” are you interested in – please be as specific as possible?
4. Where do you see a need for Systems Engineering? (subject areas within your profession, specific projects, a specific community, etc.)
  - a. How do you see Systems Engineering applying to this need?
5. What faculty member (see <http://www.engr.colostate.edu/se/faculty/>) closely aligns with your specific interests and what faculty member would you like to work with on this project?

*Please contact professors directly with information about your intended project to gauge their interest in assisting you.*

---

### **SYSE 695– Systems Engineering Project**

**Course Description:** This course requires the student to complete a systems engineering project, with a formal report on the results. A broad scope of projects may be considered, including design in hardware and/or software, a virtual project, or an analysis/feasibility study. The project should consider the full system life cycle, and take a systems

engineering approach to analysis and/or design.

**Student Learning Objective:** Successful students will develop an understanding of the requirements of a successful systems engineering project, including needs analysis and a life-cycle based approach. They will also broaden their perspective with the real-world experience of taking a systems engineering project from an initial concept through to completion, including analysis/design/testing and formal reporting of the results.

**MS Plan B Project Requirement:** MS Plan B students are required to complete SYSE 695 and their project will be evaluated by their committee to determine their result on their GS24 Result of Final Exam form, required by the Graduate School. MS Plan B students are expected to have a working draft of their project (not final, but enough information to evaluate scope, planning, and progress) by about mid-semester. The student, SE Department, and committee members will coordinate to obtain required signatures for the GS24 by the deadline set by the Graduate School.

### **SYSE 695 Project Report Instructions**

**Report:** The write up should be clear, concise, and complete. You should produce a formal document that includes at least the following:

#### **Title Page**

Include project title, author, and report date.

#### **Table of Contents**

#### **Abstract**

#### **Project Description**

Include a definition of the project and a description of its objectives, motivation, market, customer, etc.

#### **Overview of Proposed Design Process**

Give an overview of the design process that is undertaken for your project. This may include elements from control, optimization etc. as required.

#### **Economic Analysis and Decision Making**

Describe any decision making processes that are used in your project, including analysis of alternatives and economics.

#### **System Test and Evaluation**

Describe the plan for testing and evaluating the product.

#### **Summary**