CHE 6810 Syllabus
Senior Research Project, Winter 2017
Tuesdays, 11:30-12:20 PM, Room 1118 Engineering
Prerequisite: CHE 4200, CHE 5811, and consent of advisor.

Instructor: Howard Matthew, Ph.D. Office: 1119 Engineering
Tel: 313-577-5238 Email: hmatthew@wayne.edu
Office hours: by appointment

Objectives:
Upon completion of this course, you should be able to:

1) Communicate the results of your original research project in a clear and concise oral (PowerPoint assisted) presentation.
2) Critique relevant research papers in technical journals and discuss their relevance to your project.
3) Report the results of your original research project in the form of a publication ready, technical manuscript.

Course Description:
This course accompanies the completion of a senior research project that is selected and carried out under the direction of the research advisor. You will deliver three oral presentations. You will also generate a written research paper based on your research results in a format suitable for submission to a professional journal.

General outline of the course:

1) Your first formal talk (not that at the introductory session) will last 10 minutes, with another 5 minutes for questions. You will explain what your research project is and how you plan to do it. Include a very brief rationale for picking that topic. Do this at a level that junior CHE students can understand. Avoid jargon and acronyms. You may use PowerPoint presentations or employ a whiteboard and markers. The main point is that the instructors, your fellow students, and in particular, you, all know what you are planning to do. Feel free to consult your advisor ahead of time about this talk.

2) The second talk will be a presentation of a published paper whose contents are closely related to your research, but one that has neither a WSU origin nor your advisor’s name as an author. This should be 15 minutes long, with a 5 minute
Q&A. Your advisor should either select a suitable paper for you, or at least agree to your choice. You must evaluate the paper and explain its relevance and/or importance to your research project (Note – do not include anything in the presentation that you don’t understand.)

3) Prepare a 20-minute talk that presents the results from your own research. It is a good idea to do a practice presentation with your advisor.

4) Using the your results prepare a written paper in the format of a professional journal that is selected by your advisor. The paper should be at least 1500 words long plus any graphics. When you submit the paper, also attach a copy of the journal’s manuscript preparation instructions. Your advisor will be asked to evaluate the technical content of your paper.

5) The Instructors will discuss with your advisor regarding the research quality itself.

**Grading**

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Meeting Dates and Location:
Monday - Wednesday, 2:30-3:20 PM, Room 1118 Engineering

Jan. 10 – Introduction: Informal Discussion (5 min) of Projects

Jan. 24 – Formal Project Presentations (10 min)

Feb. 21 – Journal Article Review Presentations (15 min)

Mar. 21 – Research Progress Update (5 minutes each)

April 18 – Final Project Presentations

April 26 – Final Reports Due

Note: Alternate class meetings may be scheduled, as needed.