Seminar Course Syllabus
Winter 2017

Instructor/Coordinator contact information: Prof. Guangzhao Mao, 1103 Engineering (office), 313-577-3804 (phone), ad5223@wayne.edu (electronic mail).

Course Objectives:
(1) Students will develop an understanding of current issues and current research areas in chemical engineering including focus areas of nanoengineering and sustainability.
(2) Students will develop awareness of professional and career awareness in these research and technology areas.
(3) Students will develop an understanding of the role of graduate education, continuing professional development, and life-long learning in chemical engineering and nanoengineering practice.
(4) Students will develop skills in written communications by submitting a summary report.

There are two requirements for these seminar courses:
(1) Attendance
   You are required to attend the scheduled seminars. A sign-up sheet is located at the entrance to the Welcome Center Auditorium. Please sign your name on the class-list.
(2) Memorandum
   Students must submit a memorandum on or before the deadline. The memorandum should include a paragraph about each attended seminar. Students are required to comment on the significance of the topic, the speaker’s presentation style, and the technical content of the seminar.

Grading:
You will receive S (satisfactory) if you meet these two requirements. Otherwise, you will receive U (unsatisfactory).

The deadline for submitting the memorandum is: April 21, 2017. Submit your memorandum electronically via the Blackboard memorandum submission link.
Seminar Winter 2017 Schedule

The Department of Chemical Engineering and Materials Science at Wayne State University is pleased to offer the following seminar series for department faculty, graduate students, undergraduate students, and guests. Seminars are held on Tuesdays at 2:30–3:30 p.m. followed by a reception. All seminars are held at the Bernath Auditorium, Undergraduate Library, unless specified.

January 10, 2017
Presenter: Dr. Mei Cai, General Motors Research and Development Center
Title of Presentation: “Advanced Electrochemical Energy Storage Systems for Vehicle Electrification”
* Location: Engineering Development Center Auditorium

January 17, 2017
Presenter: Dr. Jeremy Rickli, Director of the NSF REU Site: Summer Academy in Sustainable Manufacturing, Wayne State University
Title of Presentation: “Research Experience for Undergraduates: Wayne State’s 2017 Summer Academy in Sustainable Manufacturing”

January 31, 2017
Presenter: Hebab Quazi, Technical Director, Center for Automation, Safety & Sustainability, MARTECH International Inc.
Title of Presentation: “Sustaining “Sustainability” Requires Enabling Technologies: Challenges Encountered in Transforming Lab Data to Products”

February 7, 2017
Presenter: Dr. Israel Wachs, Professor, Chemical and Biomedical Engineering, Lehigh University
Title of Presentation: “Hunting for Active Sites in Nano-catalytic Materials”

February 14, 2017
To be determined
February 21, 2017
Presenter: Dr. Mark Hersam, Professor, Materials Science and Engineering, Northwestern University
Title of Presentation: “Chemically Functionalized Two-dimensional Nanoelectronic Heterostructures”

February 28, 2017
Presenter: Dr. Sanjay Kumar, Professor, Bioengineering, UC Berkeley
Title of Presentation: “Cells and Biomaterials as Micro– and Nanoscale Force Transduction Machines”

March 7, 2017
To be determined

March 28, 2017
To be determined

April 4, 2017
Presenter: Dr. Marianthi Ierapetritou, Professor and Chair, Chemical and Biochemical Engineering, Rutgers University
Title of Presentation: “Process Intensification for Biomass-based Chemical Production Using Techno-economic and Life-cycle Analysis”

April 11, 2017
Presenter: G.V. Reklaitis, Professor, Chemical Engineering, Purdue University
Title of Presentation: “Water-energy Nexus and Sustainable Shale Gas Supply Chain Development”

April 18, 2017
Presenter: Dr. Kristala L. J. Prather, Associate Professor, Chemical Engineering, MIT
Title of Presentation: “Biology for Chemistry’s Sake”

April 21, 2017
Final memo due