Meeting Minutes
Department of Materials Science and Engineering
Faculty Meeting

Date: Friday, September 7th, 2018
Time: 1:30pm
Location: The Lodge at Crandall Park

Attendees: Bryan Huey, Mark Aindow, Pamir Alpay, Hal Brody, Avinash Dongare, Lesley Frame, Puxian Gao, Jasna Jankovic, Seok-Woo Lee, Serge Nakhmanson, Volkan Ortalan, George Rossetti, Stefan Schaffoener, Mei Wei, Yuanyuan Zhu, Lorri Lafontaine, Kaitlyn Cullen

2018/19 Initiatives:

• Strengthen connections with industry and alumni
  o This will create opportunities for collaborations, further funding potential, and senior design projects
• Enhance recruitment efforts for both undergraduate and graduate students
  o There is a new set up for the ENGR 1000 courses for engineering freshmen
  o We plan to try to recruit graduate students for the spring 2019 semester
• Creating more opportunities for recognition
  o Potentially create more awards, for example a leadership award for graduate students

Course Capsules:

Core:

2001/2002
• Emphasis on quantum numbers, defects, phase transformations, alloys, lattices, etc.
• Currently incorporates projects related to metals with a range of topics from futuristic to medieval (ex. Demascus steel)
• Another option is to pick an alloy out of a hat to work with on a group project
• Students are not prepared with the basics upon entering this course (ex. physics and differential equations)
  o Instructors are not able to go as in-depth with the topics due to the student underpreparedness

2101/2102
• There are no group projects since the class is so large
• Mostly non-MSE students solely taking the class for credit not necessarily interest
• The department needs to make sure MSE majors are putting in every effort to take MSE 2001 and MSE 2002
  o Past issues with transfers regarding scheduling issues that may require them to take MSE 2101 and/or MSE 2102

3001
• Incorporates some mathematics review in the beginning of the course
• Focus on correct terminology which includes presentation work
• Strong focus on group work and communication
• Suggestion for the inclusion of a field trip
Meeting Minutes
Department of Materials Science and Engineering
Faculty Meeting

3002
- Suggestion to use Alpha Sigma Mu (MSE honors society) or honors students to lead the group projects
- Potentially making a separate section for teams to do their group work to make sure they have time carved out and a place to meet
  - Suggestion to make the lab section an hour longer and incorporate this group section at the beginning or end hour

3004
- Emphasis on the fundamentals, but students want more real world applications

3055
- Lecture section ends up being more review of project work, would like to be able to add more content

3056
- The course starts out with statistics review, then moves into the mechanical behaviors later on in the semester
- Instructor would like the project topics to be more strategic and focused

4001
- Requires review of basics - mathematics, matrices, quantum mechanics, etc.
- Textbook may be out of date, currently focused on devices and applications
- Term project includes choosing a system for a group project

4003
- This course no longer has a lab component due to the request of students conducting characterizations not being feasible
- Currently this course is run with more demos as well as students writing a report on a recited paper
  - Issues are that demos and report writing take more man power to run/grade
  - Demos may now cost money since most of the machines have moved buildings

Electives:

3029
- Introduction to XL chemistry, processing, applications
- Project example is to pick an application and figure out the other parts of the tetrahedron
- Suggestion for more courses on ceramics which would allow more depth into topics

3034
- Incorporates both individual and group project work
  - Has students choose an alloy to work with all semester
- Includes a field trip to Nucor Steel Plant
Meeting Minutes
Department of Materials Science and Engineering
Faculty Meeting

3700
• This is a service course with BME, so very few MSE students take it
• Requires review of the basics

4095 – (Classical Atomic Level Simulations)
• Allows undergrads the opportunity to work with graduate level students on programming
• It is a very hands on course and requires a lot of help from the TA(s)
• Have found students to be underprepared with programming basics for the course

Notes:
• There is no course on electromaterials currently
  o Suggestion for a course on electrochemistry
• Lattices is not taught in any introductory core course, touched upon in 2001/2002
• Corrosion has not been taught in a few years
• University of New Haven offers active learning trainings and workshops to promote entrepreneurship with a focus on communication, presentation, writing, and business skills
• There are also CETL seminars on campus for instructors

Mission statement:
Original:
The Materials Science & Engineering Department (MSE) prepares students for engaging careers in academia and industry. The MSE undergraduate program stands out for its strong collaborations with industry, extensive research opportunities, and an evolving curriculum that covers both engineering fundamentals and emerging technologies. The UConn MSE program mission statement consists of four components:
• Prepare men and women for leadership careers in Materials Science and Engineering
• Perform research that advances the frontiers of engineering and science
• Provide state and national center of materials expertise
• Promote recognition, open communication and personal development among faculty, staff and students

Edited:
The Materials Science & Engineering Department (MSE) prepares students for engaging careers in academia, industry, and the public sector. The MSE program stands out for its strong collaborations with industry, extensive research and design opportunities, and an evolving curriculum that covers both engineering fundamentals and emerging technologies. The UConn MSE program mission statement consists of four components:
• Prepare students for careers in Materials Science and Engineering
• Perform research that advances the frontiers of engineering and science
• Provide state and national center of materials expertise
• Promote recognition, open communication and professional development among faculty, staff and students

Meeting adjourned: 4:30pm