

MSE 8803T - TEACHING PRACTICUM (3 credit hours)

Fall 2019

Tuesday and Thursday, 1:30 to 2:45 pm, 150 Clough

Instructor:

Prof. Naresh Thadhani; Love 286; 404-894-2651; naresh.thadhani@mse.gatech.edu

Learning Objectives and Goals:

The Teaching Practicum course is for Ph.D. students who have successfully completed their qualifying examination and are interested in learning about what it takes to be a faculty in an academic setting. The course will involve gaining skillsets needed for “delivery of lecture” via the practice of teaching. Active in-class discussions during weekly meetings will focus on various topics related to the role and functions of being a faculty. Examples of topics include effective teaching methods and best practices; course/program accreditation and assessment; proposals, publications, and presentations; intellectual property and NDAs; preparing for academic career and interview; academic career path (tenure/promotion); Entrepreneurship/IP; and lifestyle.

Instructional Strategy:

Each student will work in close collaboration with a faculty member (**Teaching Mentor**) for delivery of an undergraduate MSE course. Students will be required to teach a sequence of at least **three lectures** over a complete subject area in the presence of the **Teaching Mentor**. The student may also help with developing and grading homework assignments and/or examination problems and have regular office hours for students, to supplement those of the faculty instructor. The required delivery of lectures and other duties are useful as “teaching” provides the best opportunity for “learning.” Each student’s presentation of the sequence of lectures will be evaluated, for teaching effectiveness by students taking the class, as well as by the teaching mentor. Weekly in-class sessions will involve discussions on problems and challenges experienced with classroom teaching, student learning, and lectures presented by the instructor and other guest faculty on a variety of topics including their experiences as a faculty, and how they got to where they are today.

Assessment and Grading: Classroom participation (15%), Evaluation of sequence of **3** in-class lectures (35%), and Mid-term (15%) and Final (35%) Oral Presentations on topic of your choice.

Attendance: Attendance will be required during all weekly meetings.

Reference Textbooks:

- *Teaching Engineering*, by P.C. Wankat & F.S. Oreovicz, McGraw-Hill, Inc., 1993, downloaded free https://engineering.purdue.edu/ChE/aboutus/publications/teaching_eng.
- *A Ph.D. is Not Enough! A Guide to Survival in Science*, by Peter J. Feibelman, 2nd ed., 2011.

Tentative Schedule and Agenda of Meetings

DATE	SPEAKER	SUBJECT
Tue, Aug 20	Naresh Thadhani	Introductions, Expectations, Logistics
Thu, Aug 22	Naresh Thadhani	Teaching Assignments & Discussion on Academics
Tue, Aug 27	Naresh Thadhani	Academic Career – Path and Process
Thu, Aug 29	Naresh Thadhani	Academic Profession – Activities
Tue, Sep 3	Kate Williams, CTL	Effective teaching in ways students learn
Thu, Sep 5	Naresh Thadhani	Discussions on Effective Teaching
Tue, Sep 10	Chris Muhlstein	Effective Teaching and Small and Large Classes
Thu, Sep 12	Naresh Thadhani	Discussions on Effective Teaching
Tue, Sep 17	Mark Losego	Academic Career Path
Thu, Sep 19	Juan-Pablo Correa-Baena	Research Interests and Steps to a Faculty Position
Tue, Sep 24	Naresh Thadhani	Discussions on Career Paths
Thu, Sep 26	Zhiqun Lin	Path to Faculty and Success with NSF Proposals
Tue, Oct 1	Wayne Whiteman, ME	Teaching Online Courses (MOOCs)
Thu, Oct 3	Naresh Thadhani	Presentations and Publications
Tue, Oct 8	Nelson Baker, DLPE	Teaching with Technology – Distance Learning
Thu, Oct 10	Eric Vogel	Academic career - path through national lab, and leading collaborative research
Tue, Oct 15	No Class	Mid-semester break
Thu, Oct 17	All Students	Midterm Presentations
Tue, Oct 22	Josh Kacher	Path to Faculty Position and Experience
Thu, Oct 24	Industry Day Event	No Class
Tue, Oct 29	Matt McDowell	Path to an Academic Career & Experience
Thu, Oct 31	Naresh Thadhani	Open Discussions on MOOCs and Distance Learning
Tue, Nov 5	TBD	Entrepreneurship and Start-ups
Thu, Nov 7	Naresh Thadhani	Diversity, Equity, and Inclusion
Tue, Nov 12	Russell Blythe, IPAB Atlanta	Intellectual Property
Thu, Nov 14	All Students	Final Presentations (Location TBD)
Tue, Nov 19	Rampi Ramprasad	Academic Career Path through Industry
Thu, Nov 21	Karl Jacob	ABET Accreditation and Assessment
Tue, Nov 26	Valeria Milam	Academic Career and Lifestyle
Thu, Nov 28	No Class	Thanksgiving Break
Tue, Dec 3	Naresh Thadhani	Open Discussions

*Naresh Thadhani will be unavailable on dates in red