



Fall Semester 1397 (2018)

Sharif University of Technology
School of Mechanical Engineering, Tehran, IRAN

COURSE TITLE: GRADUATE SEMINAR for Mechatronics Students

This is a **two-credit hour** graduate level course on how to prepare and deliver an effective scientific seminar. The course is designed to have minimal lecture material and provide maximum presentation practice for each student. Lecture and practice topics will include writing your abstract, searching for literature, speaking skills and preparing quality illustrations. In addition, we shall also cover methodologies for preparing a research/project proposal which may lead to a M.Sc./Ph.D. Thesis proposal.

COURSE OBJECTIVES:

- ❖ To prepare students to present a full scientific seminar.
- ❖ Guide students through selection of good primary journal/conference articles suitable for a seminar presentation.
- ❖ Guide students through proper presentation of data for a seminar.
- ❖ Help students develop a good speaking style suitable for a broad scientific audience.
- ❖ Guide students through proper preparation of a research/project proposal.

TIME & CLASS: Mondays, 17:00 to 18:45

INSTRUCTOR: Ali Meghdari, Ph.D., Professor; <http://meghdari.sharif.edu>
Tel: (021) 6616-5541, Email: meghdari@sharif.edu

TEXT BOOK: Lecture Notes, Handouts, Presentations, and Data available on the Internet.

COURSE ASSIGNMENTS*: Each student will be graded on **attendance and six class exercises:**

No.	Exercise	points
1	Presentation I: Sample Seminar (5 Minutes)	5
2	Presentation II: Published Abstracts (3 Topics) (6 Minutes, 2 Min. each topic)	10
3	Presentation III: Introduction & Background (6 Minutes)	10
4	Presentation IV: Methods/Results Discussion/Conclusion/Acknowledgments (10 Minutes)	15
5	Presentation: Final Seminar Project (12-15 Minutes)	30
6	Full M.Sc. Research Proposal Presentation (8-10 Minutes)	20
7	Class/Seminar Attendance	10
	Total	100

* Homework may be assigned and collected every session, and penalties for unexcused absences will be deducted from the gross course score to yield the final course grade.



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Assignment 1: Text and Data Slides: Each student will prepare **3 slides (5 Minutes Max.)** that demonstrate their ability to present scientific information using **Microsoft Office PowerPoint**. All students will be provided text and data to be used for the slide design. This assignment will be used to discuss proper slide design for a formal scientific presentation based on the students' current computer ability.

Assignment 2: Selection of Topic and Published Abstracts. Each student must collect **three or more** abstracts from **peer-reviewed** scientific publications in an area of his/her research interest to be used as the basis of a full seminar. Full credit will be awarded only for full-text abstracts of articles published in highly valued journals/conferences within the **last five years** with appropriate citations. Students must prepare **3 slides (6 Minutes Max.)** to present the three abstracts.

Assignment 3: Presentation of Introduction & Background. Each student will prepare and present a **6 Minutes'** seminar presentation that is an overview of the introductory material needed to provide adequate background for their research topic.

Assignment 4: Presentations of Methods, Results, Discussion, Conclusions. Each student will prepare and present a **10 Minutes'** presentation of the methods and research, and discusses the results presented and provide overall conclusions about the research articles reviewed. Each presentation must include and integrate data from **at least two** peer-reviewed research articles.

Assignment 5: Full Seminar Slide Set along with an Abstract. Each student will submit their revised set of PowerPoint slides to be used for their final presentation in about **12 to 15 Minutes**. **In addition, he/she will submit a final pdf of the seminar to the instructor and his/her classmates via email.**

Assignment 6: Each student will prepare a Full Research Proposal based on the given guidelines on a topic of his/her interest with an approved faculty by Graduate Committee (must contact your thesis adviser for technical advice and approval). **(8-10 Minutes Presentation)**

Assignment 7: Each student is required to attend all class sessions. Full credit (10 points) will be given to students missing not more than 1 class. After 1 absence, 2 points will be deducted for each absence.

COURSE POLICIES:

Attendance: This course depends very little on lecture material and very heavily on class participation. Therefore, it is important that students attend all of the scheduled class meetings. Attendance will be recorded at each meeting, and *two points will be deducted from your gross course score for each unexcused absence.*

Electronic Devices: All electronic devices such as mobile phones, etc. **must** be turned off during class.

Responsibility: This is a graduate level class. It is time to start critically examining the information that you encounter, and incorporating it into the context of your knowledge base. It requires much effort on your part. More importantly, it requires that you take full responsibility for your learning experience. The amount that you get out of this course will depend upon the amount of work you are willing to put into it.

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