



COURSE INFORMATION				
Course Code	MSN 590	Course Title	Research Seminar	
<i>Semester</i>	<i>Credits</i>	<i>ECTS</i>	<i>C + P + L Hour</i>	<i>Prerequisites</i>
Fall-Spring	0	2	0+0+0	-

Language of Instruction	Course Level	Course Type
English	Graduate	Core
Course Coordinator	Asst. Prof. Dr. Nebahat ARAL	
Instructors	Asst. Prof. Dr. Nebahat ARAL	
Assistants	-	
Goals	The aim of this course is to expand students' horizons in current affairs through seminars given by graduate students in any field of Materials Science and Nanotechnology Engineering.	
Content	The subject is determined by the instructor and the student. The student about the subject completes the literature review. As a result of these researches, the student prepares and presents the seminar.	
Contribution of the Course to the Professional Education		

Course Learning Outcomes	Detailed Program Outcomes	Teaching Methods	Assessment Methods
Students can obtain basic information based on the research topic	1a, 6c, 8a, 9a, 11b	1, 2, 9	G
Students can analyze and report this information	1a, 7c	2	G
Students prepare and present a seminar in which information is compiled and discussed	7b	2	G



Teaching Methods:	1: Lecture by instructor, 2: Lecture by instructor with class discussion, 3: Problem solving by instructor, 4: Use of simulations, 5: Problem solving assignment, 6: Reading assignment, 7: Laboratory work, 8: Term research paper, 9: Presentation by guest speaker, 10: Sample Project Review, 11: Interdisciplinary group working, 12: ...
Assessment Methods:	A: Written exam, B: Multiple-choice exam C: Take-home quiz, D: Experiment report, E: Homework, F: Project, G: Presentation by student, H: ...

COURSE CONTENT

Week	Topics	Study Materials
1	Introduction about Research and Scientific Methodology	Lecture Notes
2	Principles of Presentation: Content and Visualization	Lecture Notes
3	Seminar by instructor	-
4	Seminar by guest speaker	-
5	Presentation by students	-
6	Presentation by students	-
7	Presentation by students	-
8	Seminar by guest speaker	-
9	Presentation by students	-
10	Presentation by students	-
11	Presentation by students	-
12	Presentation by students	-
13	Presentation by students	-
14	Seminar by guest speaker	-



15	-	-
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RECOMMENDED SOURCES

Textbook	
Additional Resources	

MATERIAL SHARING

Documents	Lecture Notes
Assignments	-
Exams	-

ASSESSMENT

IN-TERM STUDIES	NUMBER	PERCENTAGE
Seminar	1	100
Total		100
CONTRIBUTION OF FINAL EXAMINATION TO OVERALL GRADE		-
CONTRIBUTION OF IN-TERM STUDIES TO OVERALL GRADE		-
Total		100

COURSE CATEGORY	Field Course
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COURSE'S CONTRIBUTION TO PROGRAM OUTCOMES

No	Program Learning Outcomes	check
		✓
1a	Adequate knowledge in mathematics, science and engineering subjects pertaining to the relevant discipline,	✓
1b	Ability to use theoretical and applied knowledge in these areas in complex engineering problems.	
2a	Ability to identify, formulate, and solve complex engineering problems,	
2b	Ability to select and apply proper analysis and modeling methods for this purpose.	
3a	Ability to design a complex system, process, device or product under realistic constraints and conditions, in such a way as to meet the desired result,	



3b	Ability to apply modern design methods for this purpose.	
4a	Ability to devise, select and use modern techniques and tools needed for analyzing and solving complex problems encountered in engineering practice.	
4b	Ability to employ information technologies effectively.	
5a	Ability to design experiments for investigating complex engineering problems or discipline specific research questions,	
5b	Ability to conduct experiments, gather data, analyze and interpret results for investigating complex engineering problems or discipline specific research questions.	
6a	Ability to work efficiently in intra-disciplinary teams,	
6b	Ability to work efficiently in multi-disciplinary teams,	
6c	Ability to work individually.	✓
7a	Ability to communicate effectively in Turkish, both orally and in writing,	
7b	Knowledge of a minimum of one foreign language,	✓
7c	Ability to write effective reports and comprehend written reports, prepare design and production reports,	✓
7d	Ability to make effective presentations,	✓
7e	Ability to give and receive clear and intelligible instructions.	
8a	Recognition of the need for lifelong learning, ability to access information, ability to follow developments in science and technology,	✓
8b	Ability to continue to educate him/herself.	
9a	Consciousness to behave according to ethical principles and professional and ethical responsibility.	✓
9b	Knowledge on standards used in engineering practice.	
10a	Knowledge about business life practices such as project management, risk management, change management.	
10b	Awareness in entrepreneurship and innovation.	
10c	Knowledge about sustainable development.	
11a	Knowledge about the global and social effects of engineering practices on health, environment, and safety,	
11b	Knowledge about contemporary issues of the century reflected into the field of engineering.	✓
11c	Awareness of the legal consequences of engineering solutions.	



ECTS ALLOCATED BASED ON STUDENT WORKLOAD BY THE COURSE DESCRIPTION			
Activities	Quantity	Duration (Hour)	Total Workload (Hour)
Course Duration	14	3	42
Hours for off-the-classroom study (Pre-study, practice)	2	4	8
Total Work Load			50
Total Work Load / 25 (h)			2
ECTS Credit of the Course			2

Prepared by: Asst. Prof. Dr. Nebahat ARAL	Preparation date: 15/12/2020
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