

Objectives of the Course

It is to give the students who are in the thesis stage the ability to follow, evaluate and discuss the literature on the subject they will work with the advisor. In addition to this, students can apply and modify the current techniques that will be used in their thesis study by complying with the principles of scientific ethics and laboratory work, and to become competent in the interpretation of the findings and enable them to produce a scientific study.

Course Contents

The Master Thesis consists of a report based on an independent piece of research to be completed following the completion of the thought courses. The thesis is based on a pre-defined set of problems and lead by a supervisor in the same academic unit. The supervision ensures that the student gets advice regarding literature, approaches towards solving the problems being dealt with, the acquisition and treatment of data, and ethical guidelines in research. The final exam consists of the thesis and an oral exam.

Recommended or Required Reading

Books, Computer, Online Database, Referencing Software (Mendeley) Corse Books: Karasar N. (2014). Bilimsel araştırma yöntemi: Kavramlar, ilkeler, teknikler (26. baskı). Nobel. Creswell, J. W. (2015). Nitel araştırma yöntemleri: Beş yaklaşıma göre araştırma ve araştırma deseni (M. Bütün ve S. B. Demir, Çev.). Siyasal Büyüköztürk, Ş., Kılıç Çakmak, E., Akgün, E. A., Karadeniz, Ş., & Demirel, F. (2010), Bilimsel araştırma yöntemleri (5. baskı) Pegem Akademi.

Planned Learning Activities and Teaching Methods

Literature review, reading, writing, analysis, discussiion, question and answer

Recommended Optional Programme Components

MMZ541 Scientific Research and Ethics, MMZ500 Seminar

Instructor's Assistants

There is no instructor's assistant

Presentation Of Course

lecturing, discussion, question-answer, presentation

Dersi Veren Öğretim Elemanları

Prof. Dr. Cemal Çarboğa Prof. Dr. Bülent Kurt Dr. Öğr. Üyesi Fatma Zehra Koçak Dr. Öğr. Üyesi Serkan Dal Assoc. Prof. Dr. Mehmet Çağrı Tüzemen Dr. Öğr. Üyesi Nilüfer Küçükdeveci Assoc. Prof. Dr. Gülbahar Bilgiç Tüzemen

Program Outcomes

1. learn doing literature review
2. can apply the ethical and formatting principles with academic writing rules
3. can gain the critical reading, understanding, synthesis and comparison skills
4. can develop skills of following recent studies and thesis writing
5. can investigate synthesis and characterization methods and apply them practically by developing new protocols. in laboratory
6. The presentation and discussion of the research findings verbally

Weekly Contents

Order	PreparationInfo	Laboratory	TeachingMethods	Theoretical	Practise
1	Presentation of weekly work report regarding the thesis work		Source scanning, reading, analysis, writing Literature review, reading, analysis, writing	Literature review related to thesis topic Literature review related to thesis subject	
2	Presentation of weekly work report regarding the thesis work		Source scanning, reading, analysis, writing Literature review, reading, analysis, writing	Literature review related to thesis topic Literature review related to thesis subject	
3	Presentation of weekly work report regarding the thesis work		Source scanning, reading, analysis, writing Literature review, reading, analysis, writing	Literature review related to thesis topic Literature review related to thesis subject	

Order	PreparationInfo	Laboratory	TeachingMethods	Theoretical	Practise
4	Presentation of weekly work report regarding the thesis work		Determining the thesis content and creating the thesis table of contents template Literature review, brainstorming, classification, writing bullet points	Determining the thesis content and creating the thesis table of contents template The formation of content page of thesis structure by determination of thesis contents	
5	Presentation of weekly work report regarding the thesis work	Carrying out experimental studies by receiving laboratory training from the advisor on the thesis topic. performing experimental studies after taking laboratory training related to the thesis subject from the supervisor	experimental skills, practical applications, observation, analysis experimental skills, practical applications, observations, analysis		
6	Presentation of weekly work report regarding the thesis work	Carrying out experimental studies by receiving laboratory training from the advisor on the thesis topic. performing experimental studies after taking laboratory training related to the thesis subject from the supervisor	experimental skills, practical applications, observation, analysis experimental skills, practical applications, observations, analysis	Completion of the writing of the first part of the thesis, the literature review, and editing it according to the advisor's feedback. The completion of writing the literature research section which is first chapter of the thesis	
7	Presentation of weekly work report regarding the thesis work	Carrying out experimental studies by receiving laboratory training from the advisor on the thesis topic. performing experimental studies after taking laboratory training related to the thesis subject from the supervisor	experimental skills, practical applications, observation, analysis experimental skills, practical applications, observations, analysis		
8	Presentation of weekly work report regarding the thesis work	Carrying out experimental studies by receiving laboratory training from the advisor on the thesis topic. performing experimental studies after taking laboratory training related to the thesis subject from the supervisor	experimental skills, practical applications, observation, analysis experimental skills, practical applications, observations, analysis		
9	Presentation of weekly work report regarding the thesis work	Carrying out experimental studies by receiving laboratory training from the advisor on the thesis topic. performing experimental studies after taking laboratory training related to the thesis subject from the supervisor	experimental skills, practical applications, observation, analysis experimental skills, practical applications, observations, analysis		
10	Presentation of weekly work report regarding the thesis work	Carrying out experimental studies by receiving laboratory training from the advisor on the thesis topic. performing experimental studies after taking laboratory training related to the thesis subject from the supervisor	experimental skills, practical applications, observation, analysis experimental skills, practical applications, observations, analysis		

Order	PreparationInfo	Laboratory	TeachingMethods	Theoretical	Practise
11	Presentation of weekly work report regarding the thesis work	Carrying out experimental studies by receiving laboratory training from the advisor on the thesis topic. performing experimental studies after taking laboratory training related to the thesis subject from the supervisor	experimental skills, practical applications, observation, analysis experimental skills, practical applications, observations, analysis		
12	Presentation of weekly work report regarding the thesis work	Carrying out experimental studies by receiving laboratory training from the advisor on the thesis topic. performing experimental studies after taking laboratory training related to the thesis subject from the supervisor	experimental skills, practical applications, observation, analysis experimental skills, practical applications, observations, analysis	Writing the method section of the thesis and editing it according to the advisor's feedback Writing the methods part of the thesis and corrections according to the feedback of the supervisor	
13	Presentation of weekly work report regarding the thesis work		Source scanning, reading, analysis, writing Literature review, reading, analysis, writing	Writing the method section of the thesis and editing it according to the advisor's feedback Writing the methods part of the thesis and corrections according to the feedback of the supervisor	
14	Presentation of weekly work report regarding the thesis work		Analysis of research data by graphing Literature review, reading, analysis, writing the analysis of research data by plotting graphs	Analysis of the research data in the results section of the thesis by graphing The arrangement of data in the results section and their analysis in results section of thesis	
15	Presentation of weekly work report regarding the thesis work		the analysis of research data by plotting graphs	Writing the results and discussion sections of the thesis and editing them according to the advisor's feedback. The arrangement of data in the results section and their analysis in results section of thesis Writing the results and discussion part of the thesis and corrections according to the feedback of the supervisor	Source scanning, reading, data presentation and analysis, writing Literature review, reading, data presentation and analysis, writing
16	Presentation of weekly work report regarding the thesis work			Writing the results and discussion sections of the thesis and editing them according to the advisor's feedback. Writing the results and discussion part of the thesis and corrections according to the feedback of the supervisor	Source scanning, reading, data presentation and analysis, writing Literature review, reading, data presentation and analysis, writing
17	Presentation of weekly work report regarding the thesis work		Source scanning, reading, analysis, writing Literature review, reading, analysis, writing, format and referencing corrections	Writing the abstract and conclusion of the thesis, checking the references and format, and making final corrections. Writing the abstract and conclusions parts of the thesis, checking references and formatting and making final changes	Source scanning, reading, data presentation and analysis, writing Literature review, reading, data presentation and analysis, writing
18	Presentation of weekly work report regarding the thesis work		Analysis, software usage, format correction The analysis, software usage, formatting corrections	Checking the similarity of the thesis with the Turnitin program and sending the final version to the institute. The doing similarity check by Turnitin software and giving the final state of thesis to the Science Institute	

Order	PreparationInfo	Laboratory	TeachingMethods	Theoretical	Practise
19	Presentation of weekly work report regarding the thesis work		Analysis, software usage, format correction	Checking the similarity of the thesis with the Turnitin program and sending the final version to the institute. The preparation of the presentation of thesis viva and its correction according to the supervisor's feedback	
20	Presentation of weekly work report regarding the thesis work			Preparation of the presentation for the thesis defense exam and its organization according to the advisor's opinions The performance of the thesis defend	
21				Conducting the thesis defense exam	

Workload

Activities	Number	PLEASE SELECT TWO DISTINCT LANGUAGES
Araştırma Sunumu	3	1,00
Proje	2	20,00
Seminer	1	1,00
Ders Öncesi Bireysel Çalışma	14	20,00
Uygulama / Pratik	0	0,00
Uygulama / Pratik Sonrası Bireysel Çalışma	10	4,00
Laboratuvar	12	20,00
Tartışmalı Ders	4	1,00
Final Sınavı Hazırlık	5	20,00
Final	1	1,00

Assesments

Activities	Weight (%)
Final	100,00

	P.O. 1	P.O. 2	P.O. 3	P.O. 4	P.O. 5	P.O. 6	P.O. 7	P.O. 8	P.O. 9	P.O. 10
L.O. 1	1	1	1		1		1	1		
L.O. 2							2	2		
L.O. 3	3	3	3		3	3	3			
L.O. 4	4	4					4	4		
L.O. 5	5	5				5				
L.O. 6						5	5	5		

Table :

- P.O. 1 :** Mühendislik alanında bilimsel araştırma yaparak bilgiye genişlemesine ve derinlemesine ulaşır, bilgiyi değerlendirir, yorumlar ve uygular.
- P.O. 2 :** Sınırlı ya da eksik verileri kullanarak bilimsel yöntemlerle bilgiyi tamamlar ve uygular; değişik disiplinlere ait bilgileri bütünleştirir.
- P.O. 3 :** Mühendislik problemlerini kurgular, çözmek için yöntem geliştirir ve çözümlerde yenilikçi yöntemler uygular.
- P.O. 4 :** Çok disiplinli takımlarda liderlik yapar, karmaşık durumlarda çözüm yaklaşımları geliştirir ve sorumluluk alır.
- P.O. 5 :** Mesleğinin yeni ve gelişmekte olan uygulamalarının farkındadır; gerektiğinde bunları inceler ve öğrenir.
- P.O. 6 :** Tanımlanmış teknoloji problemlerini çözmek için yöntem geliştirir ve çözümlerde yenilikçi yöntemleri uygular.
- P.O. 7 :** Çalışmalarının süreç ve sonuçlarını, o alandaki veya alan dışındaki ulusal ve uluslararası ortamlarda sistematik ve açık bir şekilde yazılı ya da sözlü olarak aktarır.
- P.O. 8 :** Verilerin toplanması, yorumlanması, duyurulması aşamalarında ve mesleki tüm etkinliklerde toplumsal, bilimsel ve etik değerleri gözetir.
- P.O. 9 :** bilimsel bulguları analitik değerlendirebilir
- P.O. 10 :** Eğitim sürecinde edindiği bilgi ve deneyimi endüstriye aktarabilir.
- L.O. 1 :** Kaynak taraması yapmayı öğrenir
- L.O. 2 :** Akademik yazım kuralları ile ilgili etik ve biçimsel ilkeleri uygulayabilir.
- L.O. 3 :** eleştirel okuma, anlama, sentez yapma, karşılaştırma ile ilgili becerileri uygulayabilir
- L.O. 4 :** Çalışma konusuyla ilgili güncel bilgileri takip etme ve tez yazabilme becerisi geliştirir
- L.O. 5 :** Uzmanlık alanındaki sentez ve karakterizasyon yöntemlerini inceler ve yorumlar, yeni protokoller geliştirerek pratik olarak laboratuvarında uygulayabilir
- L.O. 6 :** Araştırma sonuçlarını yorumlama, sözlü olarak sunma ve tartışma