İndirilme Tarihi

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MAT802 - SPECIAL AREA COURSE - Fen Bilimleri Enstitüsü - Matematik Ana Bilim Dalı

General Info

Objectives of the Course

The aim of this course is to support students in the master's thesis phase in developing a comprehensive knowledge of their research topics and developing scientific thinking and research skills through literature review. Furthermore, students are encouraged to plan their thesis process through ongoing academic interaction with their advisors and acquire skills in data collection, analysis, and reporting within the framework of scientific ethics.

Course Contents

This course covers the academic research processes conducted by students preparing their master's theses under the guidance of their advisors. The course is conducted in collaboration with all thesis students and focuses on students reviewing the literature related to their thesis topic, examining scientific publications, and identifying and discussing appropriate research methods. Furthermore, they regularly meet with their advisors to create their thesis progress reports, update their research strategies, and develop solutions to enhance the academic contribution of their work.

Recommended or Required Reading

Existing studies such as sources, articles, theses in the literature related to the students' thesis topic.

Planned Learning Activities and Teaching Methods

In this course, students participate in theoretical sessions conducted under the guidance of their thesis advisors, and, if applicable, with other thesis students of their advisors. Students conduct literature reviews on their thesis topics, analyze scientific publications, and conduct practical work by identifying appropriate research techniques. Throughout the course, research outputs are reviewed, and the resulting data is evaluated from an academic perspective. Students prepare reports on their thesis process, deliver interim presentations, and refine their work based on advisor feedback. Course instructional methods include guided literature reading, topic studies, group discussions, and question-and-answer sessions.

Recommended Optional Programme Components

This course is taught in collaboration with all thesis students under the advisor's supervision, and regular student participation and active contribution are crucial. Students are expected to meet regularly with their advisors throughout the semester, maintain a structured research process, and adhere to scientific ethics. Progress within the course is evaluated based on advisor feedback and academic outcomes.

Instructor's Assistants

There is no assistant instructor teaching the course.

Presentation Of Course

Courses are conducted face-to-face, with research, presentations, discussions and questions and answers.

Dersi Veren Öğretim Elemanları

Prof. Dr. Sezer Sorgun Prof. Dr. Yasin Yazlık Prof. Dr. Seydi Battal Gazi Karakoç Prof. Dr. Mehmet Şenol Dr. Öğr. Üyesi Esma Demir Çetin Dr. Öğr. Üyesi Sure Köme Assoc. Prof. Dr. Cahit Köme Dr. Öğr. Üyesi Çağla Ramis İlgüz Dr. Öğr. Üyesi Hayrullah Özimamoğlu Dr. Öğr. Üyesi Sevda Atpınar Dr. Öğr. Üyesi İbrahim Şanlıbaba Assoc. Prof. Dr. Zarife Zararsız Assoc. Prof. Dr. Samed Özkan Dr. Öğr. Üyesi Ahmet Kaya

Program Outcomes

1. Can effectively scan and analyze literature related to the thesis topic.
2. Can select and apply appropriate research methods.
3. Can evaluate and interpret the data obtained during the research process from an academic perspective.
4. Can prepare thesis reports and interim presentations in accordance with scientific rules.
5. Can plan and develop their work in line with consultant feedback.
6. Conduct academic research by acting in accordance with scientific ethical rules.

Weekly Contents

Order	PreparationInfo	Laboratory	TeachingMethods	Theoretical	Practise
1	They need to do preliminary research on the topics they want to work on.		Face to face, Discussion, Question-Answer	Course Introduction and suggestion of research topics for students	
2	Conducting a literature search, taking into account the thesis topic suggestions made in the first week.		Face to face, Discussion, Question-Answer	Determining students' research problems	
3	Examination of the resources obtained as a result of the literature review		Face to face, Discussion, Question-Answer	Literature review and resource management related to students' research topics	
4	Examination of the resources obtained as a result of the literature review		Face to face, Discussion, Question-Answer	Literature review and resource management related to students' research topics	

Order	PreparationInfo	Laboratory	TeachingMethods	Theoretical	Practise
5	Examination of the resources obtained as a result of the literature review		Face to face, Discussion, Question-Answer	Literature review and resource management related to students' research topics	
6	Preparing students for their presentations		Face to face, Discussion, Question-Answer	Presentation of Research Topics	
7	Preparing students for their presentations		Face to face, Discussion, Question-Answer	Presentation of Research Topics	
8	Preparing students for their presentations		Face to face, Discussion, Question-Answer	Presentation of Research Topics	
9	Examining the FBE thesis writing guide		Face to face, Discussion, Question-Answer	Thesis writing rules determined by the Institute of Science	
10	Examining scientific research and publication ethics guidelines		Face to face, Discussion, Question-Answer	Information about academic ethics and scientific integrity	
11			Oral presentation	Interim evaluation presentations regarding the thesis study	
12			Oral presentation	Interim evaluation presentations regarding the thesis study	
13	Conducting improvement studies after consultant feedback		Face to face, Discussion, Question-Answer	Making improvements based on consultant feedback on interim evaluation presentations	
14	Conducting improvement studies after consultant feedback		Face to face, Discussion, Question-Answer	Making improvements based on consultant feedback on interim evaluation presentations	
15	Conducting improvement studies after consultant feedback		Face to face, Discussion, Question-Answer	Making improvements based on consultant feedback on interim evaluation presentations	
16	Making final checks of the prepared report and presentation		Oral presentation	Research Presentation and Report Submission	
17	Carrying out improvement work as a result of consultant feedback		Face to face, Discussion, Question-Answer	Making improvements to the research presentation and report as a result of consultant feedback	
18	Carrying out improvement work as a result of consultant feedback		Face to face, Discussion, Question-Answer	Making improvements to the research presentation and report as a result of consultant feedback	
19	Carrying out improvement work as a result of consultant feedback		Face to face, Discussion, Question-Answer	Making improvements to the research presentation and report as a result of consultant feedback	
20	Carrying out improvement work as a result of consultant feedback		Face to face, Discussion, Question-Answer	Making improvements to the research presentation and report as a result of consultant feedback	
21	Carrying out improvement work as a result of consultant feedback		Face to face, Discussion, Question-Answer	Making improvements to the research presentation and report as a result of consultant feedback	
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23	Carrying out improvement work as a result of consultant feedback		Face to face, Discussion, Question-Answer	Making improvements to the research presentation and report as a result of consultant feedback	
24	Carrying out improvement work as a result of consultant feedback		Face to face, Discussion, Question-Answer	Making improvements to the research presentation and report as a result of consultant feedback	
25	Carrying out improvement work as a result of consultant feedback		Face to face, Discussion, Question-Answer	Making improvements to the research presentation and report as a result of consultant feedback	

Order	PreparationInfo	Laboratory	TeachingMethods	Theoretical	Practise
26	Carrying out improvement work as a result of consultant feedback		Face to face, Discussion, Question-Answer	Making improvements to the research presentation and report as a result of consultant feedback	
27	Carrying out improvement work as a result of consultant feedback		Face to face, Discussion, Question-Answer	Making improvements to the research presentation and report as a result of consultant feedback	
28	Carrying out improvement work as a result of consultant feedback		Face to face, Discussion, Question-Answer	Making improvements to the research presentation and report as a result of consultant feedback	
29	Carrying out improvement work as a result of consultant feedback		Face to face, Discussion, Question-Answer	Making improvements to the research presentation and report as a result of consultant feedback	
30	Carrying out improvement work as a result of consultant feedback		Face to face, Discussion, Question-Answer	Making improvements to the research presentation and report as a result of consultant feedback	

Workload

Activities	Number	PLEASE SELECT TWO DISTINCT LANGUAGES
Derse Katılım	20	4,00
Ders Öncesi Bireysel Çalışma	20	2,00
Ders Sonrası Bireysel Çalışma	20	3,00
Araştırma Sunumu	1	2,00

Assesments

Activities	Weight (%)
Araştırma Sunumu	40,00
Final	60,00

Matematik Ana Bilim Dalı / MATEMATİK (YÜKSEK LİSANS - TEZLİ) X Learning Outcome Relation

	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	P.O. 11	P.O. 12	P.O. 13	P.O. 14	P.O. 15	P.O. 16	P.O. 17	P.O. 18
L.O. 1	5	4	4	4	5	5	5	4	4	5	4	4	5	5				
L.O. 2	4	5	5	5	5	5	5	4	3	5	4	4	5	5				
L.O. 3	4	5	5	5	5	5	4	4	3	5	4	4	5	5				
L.O. 4	4	5	4	4	4	5	4	4	3	5	5	5	5	5				
L.O. 5	5	5	5	5	4	5	4	4	3	5	5	5	5	5				
L.O. 6	4	4	4	4	4	5	4	5	3	5	4	4	5	5				

Table :

P.O. 1 : Analiz, Uygulamalı matematiğin, Geometri ve Cebirin bazı alt toerileri hakkındaki temel teoremleri yeni problemlere uygulayabilir.

P.O. 2 : programcıktısı 2

P.O. 3 : Matematik, fen bilimleri ve kendi dalları ile ilgili konularda yeterli alt yapıya sahiptir ve bu alanlardaki teorik ve uygulamalı bilgileri jmatematik problemlerin çözümleri için kullanır.

P.O. 4 : Bilimsel, matematiksel düşünme yeteneği kazanabilme ve ilgili alanlarda bu bilgiyi kullanabilme.

P.O. 5 : Bilimsel, matematiksel düşünme yeteneği kazanabilme ve ilgili alanlarda bu bilgiyi kullanabilme.

P.O. 6 : Temel matematiksel beceriler (problem çözme, akıl yürütme, ilişkilendirme, genelleme) ve bu becerilere dayalı yetenekler edinebilme. (Rasyonel düşünme tekniği kazandırabilme)

P.O. 7 : Bilim ve teknolojideki gelişmeleri izleme ve kendini sürekli yenileme becerisi kazanabilme.

P.O. 8 : Bilgiye erişebilme ve bu amaçla kaynak araştırması yapabilme, veri tabanlarını ve diğer bilgi kaynaklarını kullanabilme becerisine sahip olabilme.

P.O. 9 : Çalışma hayatında etik sorumlulukların gereklerini yerine getirebilme.

P.O. 10 : Bilim tarihi ve bilimsel bilginin üretimiyle ilgili bilgi edinebilme.

P.O. 11 : Eleştirel ve yaratıcı düşünmenin ve problem çözme becerilerinin gelişimi için uygun yöntem ve tekniklerle etkinlikler düzenleyebilme.

P.O. 12 : Çalışma hayatı ve sosyal yaşam ile ilgili konularda bireysel ve takım çalışmaları yapabilme.

P.O. 13 : Alanı ile ilgili konularda düşüncelerini ve konulara ilişkin çözüm önerilerini yazılı ve sözlü olarak aktarabilme.

P.O. 14 : Matematiksel bilgi birikimlerini teknolojide kullanabilme.

P.O. 15 : Alanındaki bilgileri izleyebilecek ve meslektaşları ile iletişim kurabilecek düzeyde bir yabancı dili geliştirebilme.

P.O. 16 : Gerçek dünya problemlerinde Matematiksel prensipleri uygulayabilme.

P.O. 17 : Farklı disiplinlerin yaklaşım ve bilgilerini Matematikte kullanabilme.

P.O. 18 : Matematik alanındaki bir problemi, bağımsız olarak kurgulayabilme, çözüm yöntemi geliştirebilme, çözebilme, sonuçları değerlendirebilme ve gerektiğinde uygulayabilme.

L.O. 1 : Tez konusuyla ilgili literatürü etkin bir şekilde tarayabilir ve analiz edebilir.

L.O. 2 : Uygun araştırma yöntemlerini seçip uygulayabilir.

L.O. 3 : Araştırma sürecinde elde edilen verileri akademik bir bakış açısıyla değerlendirebilir ve yorumlayabilir.

L.O. 4 : Tez raporlarını ve ara sunumları bilimsel kurallara uygun biçimde hazırlayabilir.

L.O. 5 : Danışman geribildirimi doğrultusunda çalışmalarını planlayabilir ve geliştirebilir.

L.O. 6 : Bilimsel etik kurallarına uygun hareket ederek akademik araştırma yürütebilir.