

## MUH116 - RESEARCH METHODS AND TECHNIQUES - Meslek Yüksekokulu - Muhasebe ve Vergi Bölümü

## General Info

## Objectives of the Course

The aim of this course is to teach students the processes of scientific research and to enable them to use effective research methods in their academic work. The course covers fundamental topics such as scientific knowledge, theoretical approaches, hypothesis testing, data collection methods, measurement and evaluation techniques, research design, and analysis methods. Additionally, it aims to develop students' scientific thinking skills and their ability to accurately analyze and interpret collected data.

## Course Contents

This course covers the fundamental research methods and techniques necessary to understand and apply scientific research processes. It begins with an exploration of the basic concepts of science and research, focusing on the definition, purpose, and fundamental characteristics of scientific knowledge. The research process is then examined in detail, including the identification of research problems, hypothesis formulation, and hypothesis testing. Different research approaches, including qualitative, quantitative, and mixed methods, will be introduced, along with their characteristics and applications. As the course progresses, data collection and measurement techniques will be covered, with a focus on surveys, interviews, observations, and experimental methods. The reliability and validity of measurement tools, as well as various sampling techniques, will also be discussed. Subsequently, data analysis and interpretation will be explored using descriptive and inferential statistical methods, employing SPSS and other analytical tools. Finally, the course will address scientific ethics and academic writing principles, including academic integrity, ethical guidelines, citation practices, plagiarism prevention, and the preparation of scientific reports. This course aims to enhance students' scientific thinking skills and enable them to conduct research in a systematic and structured manner.

## Recommended or Required Reading

- **Main Resource:** 1. **Scientific Research Techniques (2024)**,\*\* Istanbul University, Faculty of Open and Distance Education, Istanbul. - **Supporting Materials:** - Lecture notes prepared by the instructor - Use of a projector --- **Recommended References:** 2. **Büyüköztürk, Ş., Çakmak, E. K., Akgün, Ö. E., Karadeniz, Ş., & Demirel, F. (2021).** **Scientific Research Methods.** Ankara: Pegem Academy. 3. **Creswell, J. W., & Creswell, J. D. (2018).** **Research Design: Qualitative, Quantitative, and Mixed Methods Approaches (5th Edition).** Thousand Oaks, CA: Sage Publications.

## Planned Learning Activities and Teaching Methods

In this course, various learning activities and teaching methods will be employed to ensure that students effectively learn the processes of scientific research. The classes will be conducted through theoretical lectures, case study analyses, group discussions, and practical applications. Students will have the opportunity to gain hands-on experience in research design, data collection, and analysis through individual and group projects. Additionally, interactive lectures, project and assignment work, in-class presentations, and academic writing exercises will be incorporated to enhance students' research skills. Throughout the course, the focus will be on developing students' critical thinking, problem-solving abilities, and proficiency in applying the scientific method.

## Recommended Optional Programme Components

For this course to be conducted effectively, students are encouraged to actively participate in class, review relevant materials beforehand, and contribute to discussions during lectures. They are expected to develop critical thinking skills related to research processes, adhere to scientific ethical principles, and follow academic writing guidelines. Additionally, it is important to submit assignments and projects on time, utilize supplementary resources to support course content, and seek academic guidance from the instructor when needed. Throughout the course, students will be encouraged to conduct independent research and effectively apply scientific methods in their studies.

## Presentation Of Course

Bu ders, teorik ve uygulamalı çalışmaların bir arada yürütüldüğü bir yapıdadır. Dersler, öğretim üyesi tarafından yapılan anlatımlarla başlayacak ve temel kavramlar, teorik bilgiler ile araştırma yöntemleri öğrencilere aktarılacaktır. Ders süresince, öğrencilerin aktif katılımını teşvik etmek amacıyla soru-cevap oturumları, tartışmalar ve grup çalışmaları yapılacaktır. Öğrencilerin öğrendiklerini pekiştirmeleri için vaka analizleri, uygulamalı araştırma çalışmaları ve ödevler verilecektir. Ayrıca, proje ve sunumlarla öğrencilerin bilimsel araştırma süreçlerini deneyimlemeleri sağlanacaktır. Dersin ilerleyen aşamalarında, veri toplama, analiz ve bilimsel raporlama süreçlerine yönelik pratik uygulamalar yapılacak, öğrencilerin edindikleri bilgileri kullanarak bağımsız araştırmalar yürütmeleri teşvik edilecektir.

## Dersi Veren Öğretim Elemanları

Assoc. Prof. Dr. Ayhan Kuloğlu Dr. Öğr. Üyesi Oğuz Saygın

## Program Outcomes

1. can do research about the current issues
2. can prepare and present presentations on current issues and problems
3. Can approach the critical aspects of professional issues.
4. Conducts research in accordance with scientific ethical principles and follows academic writing guidelines.
5. Develops scientific thinking and problem-solving skills by conducting independent and group research.
6. Learns data collection techniques and selects suitable research methods.

## Weekly Contents

**Order PreparationInfo Laboratory TeachingMethods**

**Theoretical Practise**

Order	PreparationInfo	Laboratory TeachingMethods	Theoretical	Practise
1	Introduction to Science and Research (12-18) Bilimsel Araştırma Teknikleri (2024), İstanbul Üniversitesi Açık ve Uzaktan Eğitim Fakültesi, İstanbul.	This course is structured to include theoretical lectures, practical applications, and interactive teaching methods. Classes will begin with lectures by the instructor, followed by activities such as question-and-answer sessions, group discussions, and case analyses to ensure active student participation. Problem-solving-oriented exercises, individual and group work, project development, and presentation techniques will also be incorporated to help students better understand scientific research processes.	Introduction to Science and Research	Within the scope of this course, students will have the opportunity to learn scientific research methods through practical applications. Hands-on activities will include case analyses, data collection processes, statistical analysis methods, and scientific reporting techniques. During the course, students will work on real research problems, allowing them to directly experience scientific methods. Additionally, practical exercises will be conducted using various software tools for data analysis and reporting.
2	Nature of Scientific Knowledge and Scientific Method (19-29) Bilimsel Araştırma Teknikleri (2024), İstanbul Üniversitesi Açık ve Uzaktan Eğitim Fakültesi, İstanbul.	This course is structured to include theoretical lectures, practical applications, and interactive teaching methods. Classes will begin with lectures by the instructor, followed by activities such as question-and-answer sessions, group discussions, and case analyses to ensure active student participation. Problem-solving-oriented exercises, individual and group work, project development, and presentation techniques will also be incorporated to help students better understand scientific research processes.	Nature of Scientific Knowledge and Scientific Method	Within the scope of this course, students will have the opportunity to learn scientific research methods through practical applications. Hands-on activities will include case analyses, data collection processes, statistical analysis methods, and scientific reporting techniques. During the course, students will work on real research problems, allowing them to directly experience scientific methods. Additionally, practical exercises will be conducted using various software tools for data analysis and reporting.
3	Research Problem and Hypothesis (29-37) Bilimsel Araştırma Teknikleri (2024), İstanbul Üniversitesi Açık ve Uzaktan Eğitim Fakültesi, İstanbul.	This course is structured to include theoretical lectures, practical applications, and interactive teaching methods. Classes will begin with lectures by the instructor, followed by activities such as question-and-answer sessions, group discussions, and case analyses to ensure active student participation. Problem-solving-oriented exercises, individual and group work, project development, and presentation techniques will also be incorporated to help students better understand scientific research processes.	Research Problem and Hypothesis	Within the scope of this course, students will have the opportunity to learn scientific research methods through practical applications. Hands-on activities will include case analyses, data collection processes, statistical analysis methods, and scientific reporting techniques. During the course, students will work on real research problems, allowing them to directly experience scientific methods. Additionally, practical exercises will be conducted using various software tools for data analysis and reporting.
4	Types and Methods of Research (37-45) Bilimsel Araştırma Teknikleri (2024), İstanbul Üniversitesi Açık ve Uzaktan Eğitim Fakültesi, İstanbul.	This course is structured to include theoretical lectures, practical applications, and interactive teaching methods. Classes will begin with lectures by the instructor, followed by activities such as question-and-answer sessions, group discussions, and case analyses to ensure active student participation. Problem-solving-oriented exercises, individual and group work, project development, and presentation techniques will also be incorporated to help students better understand scientific research processes.	Types and Methods of Research	Within the scope of this course, students will have the opportunity to learn scientific research methods through practical applications. Hands-on activities will include case analyses, data collection processes, statistical analysis methods, and scientific reporting techniques. During the course, students will work on real research problems, allowing them to directly experience scientific methods. Additionally, practical exercises will be conducted using various software tools for data analysis and reporting.

Order	PreparationInfo	Laboratory	TeachingMethods	Theoretical	Practise
5	Data Collection Techniques (53-62) Bilimsel Araştırma Teknikleri (2024), İstanbul Üniversitesi Açık ve Uzaktan Eğitim Fakültesi, İstanbul.		This course is structured to include theoretical lectures, practical applications, and interactive teaching methods. Classes will begin with lectures by the instructor, followed by activities such as question-and-answer sessions, group discussions, and case analyses to ensure active student participation. Problem-solving-oriented exercises, individual and group work, project development, and presentation techniques will also be incorporated to help students better understand scientific research processes.	Data Collection Techniques	Within the scope of this course, students will have the opportunity to learn scientific research methods through practical applications. Hands-on activities will include case analyses, data collection processes, statistical analysis methods, and scientific reporting techniques. During the course, students will work on real research problems, allowing them to directly experience scientific methods. Additionally, practical exercises will be conducted using various software tools for data analysis and reporting.
6	Measurement and Evaluation (62-69) Bilimsel Araştırma Teknikleri (2024), İstanbul Üniversitesi Açık ve Uzaktan Eğitim Fakültesi, İstanbul.		This course is structured to include theoretical lectures, practical applications, and interactive teaching methods. Classes will begin with lectures by the instructor, followed by activities such as question-and-answer sessions, group discussions, and case analyses to ensure active student participation. Problem-solving-oriented exercises, individual and group work, project development, and presentation techniques will also be incorporated to help students better understand scientific research processes.	Measurement and Evaluation	Within the scope of this course, students will have the opportunity to learn scientific research methods through practical applications. Hands-on activities will include case analyses, data collection processes, statistical analysis methods, and scientific reporting techniques. During the course, students will work on real research problems, allowing them to directly experience scientific methods. Additionally, practical exercises will be conducted using various software tools for data analysis and reporting.
7	Positivism and Post-Positivism (69-75) Bilimsel Araştırma Teknikleri (2024), İstanbul Üniversitesi Açık ve Uzaktan Eğitim Fakültesi, İstanbul.		This course is structured to include theoretical lectures, practical applications, and interactive teaching methods. Classes will begin with lectures by the instructor, followed by activities such as question-and-answer sessions, group discussions, and case analyses to ensure active student participation. Problem-solving-oriented exercises, individual and group work, project development, and presentation techniques will also be incorporated to help students better understand scientific research processes.	Positivism and Post-Positivism	Within the scope of this course, students will have the opportunity to learn scientific research methods through practical applications. Hands-on activities will include case analyses, data collection processes, statistical analysis methods, and scientific reporting techniques. During the course, students will work on real research problems, allowing them to directly experience scientific methods. Additionally, practical exercises will be conducted using various software tools for data analysis and reporting.
8				Vize Haftası	
9	Sampling Methods (90-98) Bilimsel Araştırma Teknikleri (2024), İstanbul Üniversitesi Açık ve Uzaktan Eğitim Fakültesi, İstanbul.		This course is structured to include theoretical lectures, practical applications, and interactive teaching methods. Classes will begin with lectures by the instructor, followed by activities such as question-and-answer sessions, group discussions, and case analyses to ensure active student participation. Problem-solving-oriented exercises, individual and group work, project development, and presentation techniques will also be incorporated to help students better understand scientific research processes.	Sampling Methods	Within the scope of this course, students will have the opportunity to learn scientific research methods through practical applications. Hands-on activities will include case analyses, data collection processes, statistical analysis methods, and scientific reporting techniques. During the course, students will work on real research problems, allowing them to directly experience scientific methods. Additionally, practical exercises will be conducted using various software tools for data analysis and reporting.

Order	PreparationInfo	Laboratory TeachingMethods	Theoretical	Practise
10	Data Analysis and Statistical Methods (104-124) Bilimsel Araştırma Teknikleri (2024), İstanbul Üniversitesi Açık ve Uzaktan Eğitim Fakültesi, İstanbul.	This course is structured to include theoretical lectures, practical applications, and interactive teaching methods. Classes will begin with lectures by the instructor, followed by activities such as question-and-answer sessions, group discussions, and case analyses to ensure active student participation. Problem-solving-oriented exercises, individual and group work, project development, and presentation techniques will also be incorporated to help students better understand scientific research processes.	Data Analysis and Statistical Methods	Within the scope of this course, students will have the opportunity to learn scientific research methods through practical applications. Hands-on activities will include case analyses, data collection processes, statistical analysis methods, and scientific reporting techniques. During the course, students will work on real research problems, allowing them to directly experience scientific methods. Additionally, practical exercises will be conducted using various software tools for data analysis and reporting.
11	Validity and Reliability in Scientific Research (135-145) Bilimsel Araştırma Teknikleri (2024), İstanbul Üniversitesi Açık ve Uzaktan Eğitim Fakültesi, İstanbul.	This course is structured to include theoretical lectures, practical applications, and interactive teaching methods. Classes will begin with lectures by the instructor, followed by activities such as question-and-answer sessions, group discussions, and case analyses to ensure active student participation. Problem-solving-oriented exercises, individual and group work, project development, and presentation techniques will also be incorporated to help students better understand scientific research processes.	Validity and Reliability in Scientific Research	Within the scope of this course, students will have the opportunity to learn scientific research methods through practical applications. Hands-on activities will include case analyses, data collection processes, statistical analysis methods, and scientific reporting techniques. During the course, students will work on real research problems, allowing them to directly experience scientific methods. Additionally, practical exercises will be conducted using various software tools for data analysis and reporting.
12	Writing and Presenting a Research Report (153-160) Bilimsel Araştırma Teknikleri (2024), İstanbul Üniversitesi Açık ve Uzaktan Eğitim Fakültesi, İstanbul.	This course is structured to include theoretical lectures, practical applications, and interactive teaching methods. Classes will begin with lectures by the instructor, followed by activities such as question-and-answer sessions, group discussions, and case analyses to ensure active student participation. Problem-solving-oriented exercises, individual and group work, project development, and presentation techniques will also be incorporated to help students better understand scientific research processes.	Writing and Presenting a Research Report	Within the scope of this course, students will have the opportunity to learn scientific research methods through practical applications. Hands-on activities will include case analyses, data collection processes, statistical analysis methods, and scientific reporting techniques. During the course, students will work on real research problems, allowing them to directly experience scientific methods. Additionally, practical exercises will be conducted using various software tools for data analysis and reporting.
13	Scientific Ethics and Academic Integrity (160-173) Bilimsel Araştırma Teknikleri (2024), İstanbul Üniversitesi Açık ve Uzaktan Eğitim Fakültesi, İstanbul.	This course is structured to include theoretical lectures, practical applications, and interactive teaching methods. Classes will begin with lectures by the instructor, followed by activities such as question-and-answer sessions, group discussions, and case analyses to ensure active student participation. Problem-solving-oriented exercises, individual and group work, project development, and presentation techniques will also be incorporated to help students better understand scientific research processes.	Scientific Ethics and Academic Integrity	Within the scope of this course, students will have the opportunity to learn scientific research methods through practical applications. Hands-on activities will include case analyses, data collection processes, statistical analysis methods, and scientific reporting techniques. During the course, students will work on real research problems, allowing them to directly experience scientific methods. Additionally, practical exercises will be conducted using various software tools for data analysis and reporting.

Order	PreparationInfo	Laboratory TeachingMethods	Theoretical	Practise
14	Applied Research Studies (179-191) Bilimsel Araştırma Teknikleri (2024), İstanbul Üniversitesi Açık ve Uzaktan Eğitim Fakültesi, İstanbul.	This course is structured to include theoretical lectures, practical applications, and interactive teaching methods. Classes will begin with lectures by the instructor, followed by activities such as question-and-answer sessions, group discussions, and case analyses to ensure active student participation. Problem-solving-oriented exercises, individual and group work, project development, and presentation techniques will also be incorporated to help students better understand scientific research processes.	Applied Research Studies	Within the scope of this course, students will have the opportunity to learn scientific research methods through practical applications. Hands-on activities will include case analyses, data collection processes, statistical analysis methods, and scientific reporting techniques. During the course, students will work on real research problems, allowing them to directly experience scientific methods. Additionally, practical exercises will be conducted using various software tools for data analysis and reporting.
15	General Evaluation and Discussion (191-199) Bilimsel Araştırma Teknikleri (2024), İstanbul Üniversitesi Açık ve Uzaktan Eğitim Fakültesi, İstanbul.	This course is structured to include theoretical lectures, practical applications, and interactive teaching methods. Classes will begin with lectures by the instructor, followed by activities such as question-and-answer sessions, group discussions, and case analyses to ensure active student participation. Problem-solving-oriented exercises, individual and group work, project development, and presentation techniques will also be incorporated to help students better understand scientific research processes.	General Evaluation and Discussion	Within the scope of this course, students will have the opportunity to learn scientific research methods through practical applications. Hands-on activities will include case analyses, data collection processes, statistical analysis methods, and scientific reporting techniques. During the course, students will work on real research problems, allowing them to directly experience scientific methods. Additionally, practical exercises will be conducted using various software tools for data analysis and reporting.

#### Workload

Activities	Number	PLEASE SELECT TWO DISTINCT LANGUAGES
Vize	1	1,00
Final	1	1,00
Derse Katılım	14	2,00
Ders Öncesi Bireysel Çalışma	1	14,00
Ders Sonrası Bireysel Çalışma	1	14,00
Ara Sınav Hazırlık	2	7,00
Final Sınavı Hazırlık	2	7,00

#### Assesments

Activities	Weight (%)
Ara Sınav	40,00
Final	60,00

	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	P.O. 11	P.O. 12	P.O. 13
L.O. 1	2		3		2		3		3		3		3
L.O. 2	3	3		4	3	4		4		3		4	
L.O. 3	4		4		5		3		2	3	3	3	4
L.O. 4	3	3		3	4		4		4	4	5	5	2
L.O. 5	3	3		4		3		3		3		3	
L.O. 6	4	5	4		4	4		4	4		3		3

Table :

- P.O. 1 :** Muhasebe ve finans alanı ile ilgili yazılım ve uygulamaları kullanır.
- P.O. 2 :** Muhasebe mesleğinin temel ilkelerinin ve mesleki etik değerlerinin bilincinde, meslekte nitelikli eleman olma sorumluluğuna sahiptir.
- P.O. 3 :** Ticari hayatta kullanılan defterleri ve belgeleri mevzuata uygun usul ve esaslara göre işler.
- P.O. 4 :** Sayısal ve istatistiksel araştırma becerisi ve düşünme yeteneğine sahiptir, stratejik yaklaşım geliştirebilme becerisi ve kamu kaynaklarının etkin ve verimli kullanımını sağlar.
- P.O. 5 :** Mesleği ile ilgili mevzuatı takip eder ve temel hukuk bilgilerine sahiptir.
- P.O. 6 :** Analitik düşünme, bilişim teknolojileri başta olmak üzere işletmeciliğin çağdaş yöntem ve teknolojilerini kullanır.
- P.O. 7 :** Muhasebe ve vergi işlemlerinin işletmeler açısından önemi, kapsamı, işletmelerin finansal rasyo ve tabloları hakkında teorik bilgilere sahip olur ve bu bilgileri yorumlayabilir.
- P.O. 8 :** Muhasebe ve verginin fonksiyonlarını ve temel ilkelerini kavrayabilme yeteneğine sahip olur.
- P.O. 9 :** Alanıyla ilgili uygulamaları, gereksinimleri, yenilikleri kavrayabilme ve iş yaşamı süresince ortaya çıkabilecek problemler karşısında analitik düşünme ve çözüm üretebilme yeteneğine sahip olur.
- P.O. 10 :** Türk dilinin temel özellikleri hakkında bilgiye sahip olur.
- P.O. 11 :** Alanının gerektirdiği yazılım ve uygulamalar ile birlikte bilişim ve iletişim teknolojilerini kullanır.
- P.O. 12 :** Alanında yeterli olacak düzeyde yabancı dil bilgisine sahip olur.
- P.O. 13 :** Atatürk ilkeleri ve inkılapları konusunda bilgiye sahip olur ve Cumhuriyetin temel değerlerini benimser.
- L.O. 1 :** Güncel konuları hakkında araştırma yapabilir.
- L.O. 2 :** güncel konuları ve sorunları ile ilgili sunum hazırlayıp, sunabilir.
- L.O. 3 :** Alanıyla ilgili konulara eleştirel yaklaşabilir,
- L.O. 4 :** Bilimsel etik ilkelerine uygun şekilde araştırma yürütür ve akademik yazım kurallarını kullanır.
- L.O. 5 :** Bağımsız ve grup halinde araştırmalar yaparak bilimsel düşünme ve problem çözme becerilerini geliştirir.
- L.O. 6 :** Veri toplama tekniklerini öğrenir ve uygun araştırma yöntemlerini seçer.