

FEL 306 - MODERN LOGIC - Fen Edebiyat Fakültesi - Sosyoloji Bölümü

General Info

Objectives of the Course

The aim of this course is to introduce the student to the concepts and problems of first-level and extensional quantified logic and to teach the methods of analyzing the semantic structures of quantified propositions.

Course Contents

Explanation of different methods applied in the field of modern logic through examples.

Recommended or Required Reading

1)Yüksel, Yücel, Gelenekselden Moderne: Mantıkta Önergeler ve Doğruluk Değerleri, Akademi Titiz Yayınları, 2017. 2) Modern Mantık, Auzef Yayınları

Planned Learning Activities and Teaching Methods

Solving examples related to the topic

Recommended Optional Programme Components

It is recommended to do the work again.

Instructor's Assistants

There is no teaching assistant teaching the course.

Presentation Of Course

Face to face

Dersi Veren Öğretim Elemanları

Inst. Müjdet Güngör

Program Outcomes

1. Acquisition of basic information about the distinction between traditional (classical) and modern (symbolic) logic, propositions, truth values, propositional joints, and truth value tables.
2. Being able to check the validity, consistency and identity of propositions using the truth table method.
3. To be able to check the validity, consistency and identity of propositions using the Quine method
4. Ability to perform validity and identity checks by reducing to absurdity method
5. Ability to perform validity, consistency and identity checks by reducing to full normal form
6. Learning how to determine the truth value of a statement written in this notation and how to interpret this value in terms of validity and consistency

Order	PreparationInfo	Laboratory TeachingMethods	Theoretical	P
1	https://sistem.nevsehir.edu.tr/bizdosyalar/c73e52eea876c9f76cd5ed1cc8c62ef5/Modern Mantik 1HAFTA.pptx		PROPOSITIONS, TRUTH VALUES, PROPOSITION JOINTS AND TRUTH TABLES	
2	https://sistem.nevsehir.edu.tr/bizdosyalar/c73e52eea876c9f76cd5ed1cc8c62ef5/MODERN MANTIK 2 HAFTA.pptx		CHECK OF VALIDITY, CONSISTENCY AND IDENTITY OF PROPOSITIONS WITH THE TRUTH TABLE METHOD	
3	https://sistem.nevsehir.edu.tr/bizdosyalar/c73e52eea876c9f76cd5ed1cc8c62ef5/MODERN MANTIK 3 HAFTA.pptx		CHECK OF VALIDITY, CONSISTENCY AND IDENTITY OF PROPOSITIONS WITH THE TRUTH TABLE METHOD QUINE METHOD	
4	https://sistem.nevsehir.edu.tr/bizdosyalar/c73e52eea876c9f76cd5ed1cc8c62ef5/MODERN MANTIK 4 HAFTA.pptx		METHOD OF REDUCTION TO ABSURDITY	
5	https://sistem.nevsehir.edu.tr/bizdosyalar/c73e52eea876c9f76cd5ed1cc8c62ef5/MODERN MANTIK 4 HAFTA.pptx		METHOD OF REDUCTION TO ABSURDITY	
6	https://sistem.nevsehir.edu.tr/bizdosyalar/c73e52eea876c9f76cd5ed1cc8c62ef5/MODERN MANTIK 6 HAFTA.pptx		REDUCTION TO FULL NORMAL FORM METHOD	
7	https://sistem.nevsehir.edu.tr/bizdosyalar/c73e52eea876c9f76cd5ed1cc8c62ef5/MODERN MANTIK 6 HAFTA.pptx		REDUCTION TO FULL NORMAL FORM METHOD	
8			MIDTERM EXAM	
9	https://sistem.nevsehir.edu.tr/bizdosyalar/c73e52eea876c9f76cd5ed1cc8c62ef5/MODERN MANTIK 5 HAFTA.pptx		LUKASIEWICZ - TARSKI NOTATION	
10	https://sistem.nevsehir.edu.tr/bizdosyalar/c73e52eea876c9f76cd5ed1cc8c62ef5/MODERN MANTIK 5 HAFTA.pptx https://sistem.nevsehir.edu.tr/bizdosyalar/c73e52eea876c9f76cd5ed1cc8c62ef5/Modern Mantik 9 hafta.pptx		LUKASIEWICZ - TARSKI NOTATION VERY VALUABLE LOGIC	
11	https://sistem.nevsehir.edu.tr/bizdosyalar/c73e52eea876c9f76cd5ed1cc8c62ef5/Modern Mantik 9 hafta.pptx https://sistem.nevsehir.edu.tr/bizdosyalar/c73e52eea876c9f76cd5ed1cc8c62ef5/Modern Mantik 11 hafta.pptx		VERY VALUABLE LOGIC MODAL LOGIC	
12	https://sistem.nevsehir.edu.tr/bizdosyalar/c73e52eea876c9f76cd5ed1cc8c62ef5/Modern Mantik 11 hafta.pptx https://sistem.nevsehir.edu.tr/bizdosyalar/c73e52eea876c9f76cd5ed1cc8c62ef5/Modern Mantik 12 hafta.pptx		MODAL LOGIC LOGIC OF RELATIONS	
13	https://sistem.nevsehir.edu.tr/bizdosyalar/c73e52eea876c9f76cd5ed1cc8c62ef5/Modern Mantik 12 hafta.pptx https://sistem.nevsehir.edu.tr/bizdosyalar/c73e52eea876c9f76cd5ed1cc8c62ef5/Modern Mantik 13 hafta.pptx		QUANTIFICATION LOGIC: BASIC REPRESENTATIONS AND APPLICATIONS	
14	https://sistem.nevsehir.edu.tr/bizdosyalar/c73e52eea876c9f76cd5ed1cc8c62ef5/Modern Mantik 14 hafta.pptx		OPENING: INTRODUCTION AND BASIC APPLICATIONS	
15	https://sistem.nevsehir.edu.tr/bizdosyalar/c73e52eea876c9f76cd5ed1cc8c62ef5/Modern Mantik 15 hafta.pptx		ANALYTICAL SPREADING METHOD	

Workload

Activities	Number	PLEASE SELECT TWO DISTINCT LANGUAGES
Vize	1	1,00
Final	1	1,00
Derse Katılım	14	1,00
Ders Öncesi Bireysel Çalışma	10	1,00
Ders Sonrası Bireysel Çalışma	10	1,00
Ara Sınav Hazırlık	1	4,00
Final Sınavı Hazırlık	1	4,00
Diğer	14	1,00
Teorik Ders Anlatım	14	4,00
Anlatım	12	2,00

Assesments

Activities	Weight (%)
Final	60,00
Vize	40,00

	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	P.O. 14	P.O. 15
L.O. 1															
L.O. 2															
L.O. 3															
L.O. 4															
L.O. 5															
L.O. 6															

Table :

- P.O. 1 :** Define the basic concepts related to sociology programs.
- P.O. 2 :** Can adapt and transfer knowledge in the field of sociology to other disciplines
- P.O. 3 :** May have the ability to define, model and solve sociological problems in sociology and related fields.
- P.O. 4 :** Their social aspects, communication skills, creativity and entrepreneurship, sociological analysis characteristics, and predisposition to teamwork may develop.
- P.O. 5 :** Can improve herself by following developments in science, technology and contemporary issues
- P.O. 6 :** Using the advanced knowledge and skills acquired in the field, the student can interpret and evaluate data, identify and analyze problems parallel to current technological developments, and develop solution proposals based on research and evidence.
- P.O. 7 :** Gain the ability to use contemporary techniques and equipment necessary for current applications in the field of sociology.
- P.O. 8 :** Conducts intra-disciplinary and inter-disciplinary teamwork, can plan and manage activities for the development of employees under his/her responsibility within the framework of a project.
- P.O. 9 :** He/she may have the ability to work individually, use initiative and make independent decisions, and be able to communicate by expressing his/her ideas clearly and concisely, both verbally and in writing.
- P.O. 10 :** Gain awareness of professional and ethical responsibility in the stages of collecting, interpreting, applying and announcing the results of data related to the field.
- P.O. 11 :** Can follow national and international contemporary issues.
- P.O. 12 :** He/she can use his/her knowledge on human health and environmental awareness in his/her field for the benefit of society.
- P.O. 13 :** Can track information in her field and communicate with colleagues using a foreign language
- P.O. 14 :** Can use the information and communication technologies required by the field of sociology at a minimum level.
- P.O. 15 :** May have sufficient awareness of the universality of social rights, social justice, acting in accordance with and participating in quality management and processes, and the protection of cultural values, as well as environmental protection, occupational health and safety.
- L.O. 1 :** Acquisition of basic information about the distinction between traditional (classical) and modern (symbolic) logic, propositions, truth values, propositional joints, and truth value tables.
- L.O. 2 :** Being able to check the validity, consistency and identity of propositions using the truth table method.
- L.O. 3 :** To be able to check the validity, consistency and identity of propositions using the Quine method
- L.O. 4 :** Ability to perform validity and identity checks by reducing to absurdity method
- L.O. 5 :** Ability to perform validity, consistency and identity checks by reducing to full normal form
- L.O. 6 :** Learning how to determine the truth value of a statement written in this notation and how to interpret this value in terms of validity and consistency