

Prerequisite status: -	Unit Type: Theoretical	The number of units: 2	Name of the lesson: Models and Decision-making Techniques in Urban Spatial Organization
Type of additional practical training: Has it <input type="checkbox"/> does not have <input checked="" type="checkbox"/> Science travel <input type="checkbox"/> Laboratory <input type="checkbox"/> Workshop <input type="checkbox"/> , Seminar <input type="checkbox"/>		The number of hours: 32	
General goal: The course of decision-making methods and techniques aims to achieve the following goals: - Knowing the types of decision-making methods and techniques and acquiring the necessary skills to apply them in urban and regional planning. - Determining the most optimal and most suitable places for optimal exploitation of the economic and social advantages of urban Regions. - Regional explanation regarding the spatial organization and prioritization of urban regions and settlements Behavioral goal: This course can provide the basis for the scientific and practical preparation of students in order to enter the field of decision-making in scientific research as well as administrative and executive hierarchy so that with a correct understanding of the types of decision-making models and techniques, they can make correct and appropriate decisions in various fields with the participation of the stakeholders in the field of urban planning and especially with the participation of the people.			
Headlines 1- Geographical explanation of the concept of decision-making and its Application in the urban spatial organization 2- Classification and description of decision-making methods and models 3- Methods of standardization of indicators in the decision-making process 4- Index weighting methods (ranking, rating, entropy, and AHP) 5- Multi-indicator decision-making methods and techniques in the urban spatial organization 6- Realistic elimination and selection method Electre 7- Simple weighted sum method (SAW) 8- Optimum point method (IPM) 9- Methods and techniques of multi-indicator decision-making based on fuzzy logic in the urban spatial organization 10- A ranking technique based on similarity to the ideal solution (Topics) 11- Fuzzy weighted summation method			
Reference			

- 1- Azar, Adel, 2020, applied decision-making, Negah Danesh Publications, Tehran.
- 2- Asgharizadeh, Ezzatullah, Mohammadi Balani, Abdul Karim, 2020, multi-criteria decision-making techniques, Tehran University Press.
- 3- Poortaheri, Mehdi, 2015, Application of multi-criteria decision-making methods in geography, Samt publications, first edition.
- 4- Hajinejad, Ali, Fatahi, Ahadollah, Paydar, Abuzar, 2016, Application of decision-making models and techniques in geography, Jahad Academic Publishing Organization
- 5- Ziyari, Keramatullah (2017) principles, and regional planning methods, 8th edition, Tehran University Press.
- 6- Malchevski, Yachek, 2016, geographic information system and multi-criteria decision analysis, translated by Dr. Akbar Parhizgar and Ata Ghafari Gilande, Samt Publications.
- 7- Malcheski, Yasek; Rainer, Klaus, 2020, multi-criteria decision analysis in geographic information science, translated by Mohammad Reza Jelukhani Niarki and Esmat Mirzaei, Tehran University Press.
- 8- Malczewski, Jacek. Rinner, Claus (2015) Multicriteria Decision Analysis in Geographic Information Science (Advances in Geographic Information Science).
- 9- Mullen John. Douglas, Roth Byron Mitchell, 2002, Decision making: it's logic and practice, Rowman and Littlefield Publishers, INC.