Меѓународен Универзитет Визион - International Vision University
Universiteti Ndërkombëtar Vizion - Uluslararası Vizyon Üniversitesi

Adres: Ul. Major C. Filiposki No.1, Gostivar – Kuzey Makedonya
tel: +389 42 222 325, www.vizyon.edu.mk, info@vizyon.edu.mk

SYLLABUS

COURSE NAME	COURSE CODE	SEMESTER	COURSE LOAD	ECTS
DATA MINING	CEN-2010	4	150	5

Prerequisite(s)	None

Course Language	Macedonian, Turkish, English
Course Type	Required
Course Level	First Cycle
Course Lecturer	
Course Assistants	
Classroom	
Extra-Curricular Office Hours and Location	

Course Objectives	Serves as an introduction to stochastic processes and their applications in industrial engineering, management science, and operations research. The primary focus will be on Markov chains (in both discrete and continuous time), but additional topics such as queueing theory will also be treated. Throughout the semester, we will try to strike a balance between mathematical theory and real-world applications.
Course Learning Outcomes	Learning and applying the basic concepts of stochastic processes gain knowledge and skills.
Course Contents	Random processes: definition, characteristics, classification, transformations. Stationary random processes. Markov chains. Branching processes. Poisson process. Markov process. Mass systems service (queuing systems). Brownian motion (Wiener process).

WEEKLY SUBJECTS AND RELATED PREPARATION STUDIES

Week	Subjects	Related Preparation
1	Conditional Probability and Conditional Expectation	Related Chapters of Course Sources
2	Markov Chains: Introduction	Related Chapters of Course Sources
3	Functionals of Random Walks and Success Runs	Related Chapters of Course Sources
4	The Long Run Behavior of Markov Chains	Related Chapters of Course Sources
5	The Classification of States	Related Chapters of Course Sources
6	Poisson Processes	Related Chapters of Course Sources
7	Midterm	Related Chapters of Course Sources
8	Continuous Time Markov Chains	Related Chapters of Course Sources
9	Renewal Phenomena	Related Chapters of Course Sources
10	Brownian Motion and Related Processes	Related Chapters of Course Sources
11	Brownian Motion	Related Chapters of Course Sources
12	Queueing Systems	Related Chapters of Course Sources
13	Random Evolutions	Related Chapters of Course Sources
14	Project Presentations	Related Chapters of Course Sources
15	Final Exam	Related Chapters of Course Sources

ECTS / WORKLOAD TABLE

Presentation / Seminar			
Hours for off-the-classroom study (Pre-study, practice)	14	3	42
Midterm Exam	1	12	12
Final examination	1	14	14
Total Work Load			
ECTS	**5**		

GENERAL PRINCIPLE RELATED WITH COURSE

Dear Students,

In order to be included in the lesson, learn the lesson fully and achieve the success you deserve, you must come to each lesson prepared by reading the sections related to the subjects to be covered from the basic and supplementary textbooks. We expect you to meticulously comply with the lesson hours, not to interrupt the lessons unless it is absolutely necessary, to participate actively in the lesson, to communicate fully with your teacher and classmates, and to be active by participating in the discussions in the class. Unethical behaviors that may occur both in classes and in exams will be acted upon within the framework of the relevant regulation. Attendance will be taken at the time your teacher requests, at the beginning, middle or end of each lesson. Students who attend all classes during the semester will be given a 15-point attendance grade in addition to the exam grade.

SOURCES

COMPULSORY LITERATURE		
No	Name of the book	Author's Name, Publishing house, Publication Year
1	Veri madenciliği algoritmaları	Sanya Veleva (2011), Özey yayını
2	Veri madenciliği kavram ve algoritmaları	Gökan Silahtaroğlu (2016), Papatya bilim
3	Data mining: concepts and technicques	Jıaweı Han, Micheline kamber(2006), Elsevier İnc

ADDITIONAL LITERATURE		
No	Name of the book	Author's Name, Publishing house, Publication Year
1	Veri madenciliği uygulamaları ve felsefesi	İlker Köse (2018), Papatya
2	İntroduction todata mining	Pang-Nıng Tanö etc. (2015), Pearson Educatıon Limited

EVALUATION SYSTEM

Underlying the Assessment Studies	NUMBER	PERCENTAGE OF GRADE
Attendance/Participation	15	%10
Project / Event	1	%20
Mid-Term Exam	1	%35
Final Exam	1	%35
TOTAL	**17**	**%100**

ETHICAL CODE OF THE UNIVERSITY

In case students are cheating on exams or preparation the same, it is not making reference to the source to be used in studies, as for example in assignments, projects and presentation (plagiarism), in accordance with legislations by Ministry of Education and Science of the Republic of North Macedonia and İnternational Vision University, apply relevant disciplinary rules. İnternational Vision University students are expected never attempts in this kind of behavior.