

DESCRIPTION OF THE COLLEGE

GENERAL INFORMATION		
Course Holder	prof.dr.sc. Robert Kopal	
Name of the College	Analysis of Social Networks	
Study program	Professional Graduate Study of Business Management - MBA	
Status of the College	Mandatory	
Code	MBA-ASM-18	
Year	Year 2	
Point value and method of teaching	ECTS Student Workload Coefficient	5
	Number of hours (P+H+S)	14+28+14

DESCRIPTION OF THE COLLEGE
1.1. <i>Objectives of the course</i> Students are expected to develop: a) general competencies: • Adapting to different environmental requirements • collaborate effectively in project teams. • apply the acquired knowledge and contribute to solving complex business problems and business decision-making by applying social network analysis. (A) Specific competencies. • take advantage of various possibilities of applying social network analysis within a business entity in different areas of business • analyze network structures and the position and importance of entities and links within the network • Identify the possibilities of different software in the analysis of social networks. • apply knowledge and skills in the field of social network analysis within the business entity, including the areas of telecommunications, marketing, finance, research and development, etc.

1.2. Requirements for enrolment in the course

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1.3. Expected learning outcomes for the course

1. Critically assess the basic goals of network analysis and the principles of network formation.
2. Rank according to the complexity of the distribution of connections of several types of networks that occur in nature.
3. To argue an opinion when choosing centrality measures in network analysis.
4. Recommend measures of prestige and grouping in the network.
5. Rethink the difference between traditional CRM and social CRM.
6. Select the specific functionalities of the software used during the lecture.

1.4. The content of the course

Introduction to the course

INTRODUCTION TO NETWORK ANALYSIS

What are networks and how are they formed

Types of networks we encounter

Basic techniques for creating and analyzing a connectivity map

ANALYSIS OF SOCIAL NETWORKS

What is Social Media Analysis (SNA) and Goals

Overview of the basic measures describing the network

Metrics diameter and density. Metrike centraliteta – degree, closenes

Metrike centraliteta – betweenness. Centralization of the network.

INTRODUCTION TO CRM, TRADITIONAL CRM

What is CRM and basic CRM ideas

Marketing concept as the foundation of CRM

CRM Components

Why Business Organizations Need to Implement CRM

Elaboration of CRM components by segments

View typical phases of deployment with a focus on breaking down expected tasks that can make deployment easier or impossible

SOCIAL CRM

- Defining What Social CRM Is and Basic Principles
- Understanding the Differences between Traditional CRM and Social CRM
- How to Prioritize and Prioritize Social CRM
- Elaboration of goals in the implementation of social CRM

ANALYSIS OF GROUPING IN THE NETWORK

- Subgraph. The dyad, the triad. Transitivity.
- A clique. The coefficient of grouping.
- Homophily and assortativity coefficient.
- Analysis of grouping in a network with a large number of entities

SOCIAL MEDIA ANALYSIS SOFTWARE FUNCTIONALITIES - Gephi

- Introduction to several types of software used for analysis and visualization of social networks
- Focus on the specific functionalities of the software shown
- Introduction to the prerequisites, installation, launch and capabilities of Gephi software.
- Loading and displaying the network within the Gephi software.
- Using basic functionalities for graphical data processing - Gephi.
- Calculating metrics within the software - Gephi.
- Visual data processing based on calculated metrics - Gephi.
- Filtering of selected data and calculation of metrics. - Gephi

SOCIAL MEDIA ANALYTICS SOFTWARE - NodeXL

- Introduction to the prerequisites, installation, launch and capabilities of the NodeXL software.
- Loading and displaying the network within the NodeXL software.
- Calculation and display of metrics - NodeXL.
- Using the functionality for graphical data processing - NodeXL.
- Visualization and processing of data on a graph - NodeXL.
- Use of data from social networks (Facebook, Twitter and LinkedIn) in SNA - NodeXL.
- Ways of collecting and preparing data from social networks

USING SOCIAL MEDIA FOR SLEEP ANALYSIS

- Collection and preparation of data for software analysis from social media profiles (Twitter) - NodeXL..

PRACTICAL EXAMPLES OF SOCIAL MEDIA ANALYSIS

An overview of the application of calculations, metrics and software in a business environment.

Going through the functionalities of the SNA analysis software.

1.5. Types of teaching (put X)

☒ Lectures

☒ Seminars and workshops

☒ Exercises

☐ Distance education

☐ Field Teaching

☒ Independent tasks

☐ Multimedia & Network

☐ Laboratory

☐ mentoring work

☐ other _____

1.6. Obligations of students

Student obligations are prescribed in detail by the Statute, the Study Regulations and the Instructions on Student Obligations. The key obligations of students are:

ATTENDANCE AT CLASSES: *students are obliged to attend classes, actively follow lectures and exercises and participate constructively in classes, and in order to acquire the right to take the exam, it is necessary to attend classes in the percentages prescribed by the Study Regulations. For each student, their presence in class is recorded through the Infoeduka digital office system. The minimum commitments are;*

- *Full-time students must attend at least 70% of the total number of classes to be eligible to sign.*
- *Part-time students need to attend at least 50% of the total number of teaching hours to be eligible to sign.*

EXAM: *in order to achieve a positive grade in a subject, it is necessary to achieve at least 54 points in the subject, but also at least 50% of points for each learning outcome. The method of taking the exam is described in more detail in the item Assessment and evaluation of students' work during classes and at the final exam.*

***FINAL EXAM** – *a student who has not met the conditions for passing the exam during the continuous examination (has achieved a total of at least 54 points in the course and met the lower point threshold for the acquisition of each learning outcome, i.e. at least 50% of the points of each learning outcome), may take the learning outcomes of the course at the final exam.*

***CONTINUOUS ASSESSMENT OF KNOWLEDGE:** *In order to improve the efficiency of students' progress in teaching, continuous examinations (3 intermediate exams) are carried out. In this way, students acquire smaller teaching units and master the subject material more easily.*

1.7. Monitoring of student work (add X with the appropriate form of monitoring)

Attendance	x	Teaching activity		Term paper		Experimental work	
Written exam	x	Oral exam		Essay		Research	
Design	x	Continuous assessment*		Paper		Practical work	x
Portfolio							

1.8. Assessment and evaluation of students' work during classes and at the final exam

Assessment and evaluation of students' work during classes and at the final exam is carried out on the basis of the Study Regulations of the EFFECTUS University of Applied Sciences.

Allocation of points according to the forms of student work monitoring:

	Attendance	Written exam	Design	Practical work	Total
I1		16			16
I2		16			16
I3				16	16
I4				16	16
I5			16		16

16			16		16
OUT OF THE BOX	4				4
TOTAL	4	32	32	32	100

Linking learning outcomes, teaching methods and methods of assessment of knowledge:

FORMS OF TRACKING	NAME OF LEARNING OUTCOMES	TEACHING METHOD	METHOD OF ASSESSMENT KNOWLEDGE	Maximum number of rating points
Written exam	OUTCOME 1 <i>Critically assess the basic goals of network analysis and the principles of network formation</i>	Lecture	Essay-problem questions to which an answer is sought that demonstrates the identification and definition of the key terms of SNA, their connection and the corresponding argumentation of a higher degree of complexity	32
		Asking questions		
		Discussion		
	OUTCOME 2 <i>Rank according to the complexity of the distribution of connections of several types of networks that occur in nature</i>	Lecture		
		Open questions		
		Guided training		
Practical work	OUTCOME 3 <i>Argue an opinion when choosing centrality measures in network analysis</i>	Guided training	Computational tasks with appropriate argumentation and interpretation	32
		Training and feedback		
	OUTCOME 4 <i>Recommend measures of prestige and grouping in the network</i>	Guided training		
		Training and feedback		
Design	OUTCOME 5 <i>Rethink the difference</i>	Guided training		32

	<i>between traditional CRM and social CRM</i>	<i>Training and feedback</i>	<i>Problem tasks with explanations and argumentation that require problem identification, analysis, synthesis, connection and critical judgment</i>	
	<i>OUTCOME 6 Select the specific functionalities of the software used during the lecture</i>	<i>Guided training</i>		
		<i>Training and feedback</i>		
<i>Attendance</i>	<i>All outcomes</i>	<i>Lectures and exercises</i>	<i>Attendance records</i>	<i>4</i>
<i>TOTAL POINTS</i>				<i>100</i>

<i>Type of student workload</i>	<i>Hours of student workload</i>	<i>ECTS credits</i>
Attending face-to-face classes	56	1,86
Field trips/visits outside the college	0	0
Independent study/research	30	1,0
Out-of-classroom preparation and preparation of seminars/presentations	10	0,33
Work on an out-of-classroom project assignment	10	0,33
Independent preparation for exams and exam time	30	1
Consultation activities	15	0,5
Other	0	0
TOTAL ECTS credits	150	5

JUDGING:

In order to achieve a positive grade in the course, the student must cumulatively meet two conditions: achieve a total of at least 54 (fifty-four) points in the course and meet the lower point threshold for the adoption of each individual learning outcome, which is 50% of the total points of the learning outcomes.

Grades are calculated based on the following distribution of points:

<i>NUMBER OF POINTS</i>	<i>RATING</i>
<i>0,00 – 53,90</i>	<i>Insufficient (1)</i>

54,00 – 64,90	Sufficient (2)
65,00 – 79,90	Good (3)
80,00 – 89,90	Very Good (4)
90.00 and more	Excellent (5)

The evaluation is carried out in a transparent manner by collecting points. The course is valued with 100.00 points (with the possibility of achieving an additional 8 points on the Challenge learning outcome).

CHALLENGE LEARNING OUTCOME - the student has the opportunity to earn an additional maximum of 8 points through the Challenge learning outcome; The student independently chooses one of the activities proposed in the first lesson, and has the opportunity to independently propose an activity by which he wants to increase the number of points and, with the consent of the course holder, achieves them according to the criteria of the subject. Points for the Challenge learning outcome are not distributed according to the learning outcomes, but the number achieved is an additional number of points to the total number of points achieved according to the learning outcomes.

Before taking the final written exam, each student must meet the prescribed conditions, which primarily means that they have attended the % of classes determined by the Study Regulations and that they have received an electronically encrypted permission to take the exam.

1.9. Required literature and number of copies in relation to the number of students currently attending classes in the course

Title	Number of copies	Number of students
Kopal, R., Korkut, D. and Krnjašić, S. (2020). <i>Social Media Analysis: Practical Application, Third Updated Edition. Effectus University of Applied Sciences</i>	5* *students receive compulsory literature in permanent ownership	60

<i>1.10. Supplementary literature</i>		
<i>R. A. Hanneman, M. Riddle (2005): Introduction to Social Network Methods (online manual)</i>		
<i>Carlos Andre Reis Pinheiro (2011): Social Network Analysis in Telecommunications, Wiley</i>		
<i>1.11. Quality monitoring methods that ensure the acquisition of output knowledge, skills and competences</i>		
• <i>analysis of exam results, achieved results, level of understanding and knowledge during exercises, practical tasks and group work,</i> • <i>conducting a survey among students,</i> • <i>The teacher's evaluation,</i> • <i>the achieved results and the level of knowledge presented during the preparation and defense of the final thesis (of students who choose the graduate thesis in this subject),</i> • <i>analysis of the reports of the Quality Center and</i> • <i>Feedback from students who have already graduated and their employers on the usefulness of the content of this course in the performance of the work they do.</i>		