



UNIVERSITETI “KADRI ZEKA” UNIVERSITY

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 www.uni-gjilan.net tel: 0280-390-112

SYLLABUS

Course: Mathematic Analysis 2

Basic information of the course	
Academic unit:	FAS
Course Title:	Mathematic Analysis 2
Level:	Bachelor
Program:	Mathematic Education
Course status:	Obligatory
Academic year:	2019/2020
Year of study:	Year II, Semester III
Number of hours per week:	3+2
Credits – ECTS:	7 ECTS
Timer / Location:	
Professor of subject:	Prof. Ass. Dr.
Contact details:	
Description, Objectives and expected results	
Course description:	Contents of the course include: the meaning of Integral; Integration methods; Integral application; functions with more variables; the limit and continuity of the functions with more variables; Derivative and differential of the functions with more variables. Understanding the double integral and their properties;
Objectives of the course:	<i>Mathematical analysis 2</i> aims to integrate training of professionals in the field of mathematics education bachelor studies. The course objective is to acquaint students with the basics of knowledge in <i>Mathematic analysis</i> . Another goal is to develop the skills and abilities of students so that they successfully solve concrete problems in field of mathematics whenever required implementation <i>Mathematic analysis</i> .
Expected learning outcomes:	After successful completion of the course <i>Mathematic analysis 2</i> , students will be able to: <ul style="list-style-type: none"> • Be familiar with the meaning of the integral and implement this knowledge by solving various problems. • Recognize and understand the function with more variable, limit and continuity of function. • Recognize and understand the derivative, the differentials and their properties for the functions with more variables. • Recognize and understand the double integral.

Student contribution													
Activity	Hours	Day / Week	Total										
Lectures	3	15	45										
Theoretical exercises / laboratory	2	15	30										
Contacts with teacher / consultations	1	15	15										
Colloquiums, seminars	3	2	6										
Homework	1	15	15										
Self-learning time student (at the library or at home)	1	15	15										
Final preparation for the exam	2	15	30										
Projects, seminars, presentations, etc.	3	1	9										
Total			165										
165:25≈7 ECTS.													
Teaching methodology and assessment methods													
Teaching methodology:	Regular lessons, lectures, consultations, discussions, individual independent work, term papers (homework), presentations.												
Methods of assessment:	<p>The exam consists of a written part and the oral part. The assessment is based on the following activities: Participation and engagement in hours (10%) (Koll.) Test 1-40% (written examination) (Koll.) Test 2-40% (written examination) Seminar papers (individual independent work) - 10% Final exam: 80% (for those who do not pass kollokfiumet). Points Score</p> <table> <tr> <td>91-100</td> <td>10</td> </tr> <tr> <td>81-90</td> <td>9</td> </tr> <tr> <td>71-80</td> <td>8</td> </tr> <tr> <td>61-70</td> <td>7</td> </tr> <tr> <td>51-60</td> <td>6</td> </tr> </table>			91-100	10	81-90	9	71-80	8	61-70	7	51-60	6
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81-90	9												
71-80	8												
61-70	7												
51-60	6												
Literature													
Base literature:	<ul style="list-style-type: none"> • Ligjerata të autorizuar nga profesori, Gjilan. 2019. • Tanush Shaska, Kalkulus 1, second edition, ISBN-13: 978-1-60985-000-5, ISBN-10: 1-60985-000-9, 2011. • S. Lang, <i>A first Course in Calculus</i>, 5th edition, Springer Verlag, 1986. • Paul Dawkins, <i>Calculus 1</i>, 2018 												
Designed teaching plan:													
Week	The lecture to be held												
<i>I - week :</i>	Definition of undefined integral and their properties.												
<i>II - week :</i>	Undefined integral. Integrations Methods												
<i>III - week :</i>	Meaning, definition and properties of the defined integral.												
<i>IV - week :</i>	Some theorems in relation to defined integral.												
<i>V - week :</i>	Application of defined integral.												
<i>VI - week</i>	Application of defined integral.												
<i>VII-week</i>	The first colloquium												
<i>VIII-week</i>	Function with more variables. Limit and continuity.												
<i>IX-week</i>	Differentiability, differentials and local linearity												

<i>X-week</i>	Directional Derivatives and Gradients
<i>XI-week</i>	Maxima and minima of functions of two variables
<i>XII-week</i>	The double integral. Fubini's theorem
<i>XIII-week</i>	The double integral. Polar coordinate.
<i>XIV-week</i>	Line integral. Green's theorem
<i>XV-week</i>	The second colloquium
Academic policies and rules of etiquette:	
<p>Regular attendance of students assessed with 10 points,</p> <ul style="list-style-type: none"> - Students are free to ask questions and active participation in all teaching activity. - They are not allowed cell phones, late arrival or departure from the class without reason. - Plagiarism and copying in exams are penalized under the statute and other regulations of the university. - The Code of conduct applies to both students and teachers. 	