

Programme curriculum
Programme MATHEMATICS (BA DEGREE STUDIES)
Cycle from academic year 2020/2021

Predicted number of students starting the cycle

30

Year I Semester I

COMPULSORY COURSES								
No.	Course name	Type of class	Number of teaching hours	Form of assessment	Number of groups	Total hours	ECTS Points	Reference to programme learning outcomes
1	Introduction to mathematics	lecture	60	Exam	1	60	10	K_W01,K_W02,K_W03,K_W04,K_W05, K_W06,K_U01,K_U02, K_U03,K_U04,K_U05, K_U06,K_U07, K_U08,K_U09,K_U11,K_U36,K_K01,K_K05
		class	60	Graded Pass	1	60		
2	Linear algebra with geometry I	lecture	60	Exam	1	60	11	K_W01,K_W02,K_W03,K_W04,K_W05, K_W07,K_U01,K_U02, K_U03,K_U04,K_U05, K_U06,K_U07,K_U08,K_U16,K_U17,K_U18, K_U19,K_U20,K_U36,K_K01,K_K05
		class	60	Graded Pass	1	60		
3	Logic	lecture	15	Exam	1	15	2	<i>According to the resolution of the Senate of the Catholic University of Lublin from April 12, 2012 (714/II/13)</i>
		class	15	Graded Pass	1	15		
4	Introduction to computer science**	lecture	30	Exam	1	30	5	K_W01,K_W04,K_U25,K_U26,K_U27,K_K01
		laboratory	30	Graded Pass	1	30		
ELECTIVE COURSES*								
No.	Course name	Type of class	Number of teaching hours	Form of assessment	Number of groups	Total hours	ECTS Points	Reference to programme learning outcomes
1	Foreign language	foreign language class	30	Graded Pass	1	30	2	<i>According to the resolution of the Senate of the Catholic University of Lublin from March 28, 2019 (803/II/8)</i>
2	Physical education	class	30	Pass	1	30	0	<i>According to the resolution of the Senate of the Catholic University of Lublin from December 18, 2014 (747/II/5)</i>

* student choose foreign language and physical education

** Joint course with Informatics

*** The student undergoes training: Health and safety procedures training, Student rights and obligations, Student culture and ethos

NUMBER OF TEACHING HOURS PER SEMESTER PER STUDENT:	390
ECTS POINTS PER SEMESTER PER STUDENT:	30

Programme curriculum
 Programme MATHEMATICS (BA DEGREE STUDIES)
 Cycle from academic year 2020/2021

Predicted number of students starting the cycle
 Year I Semester II

30

COMPULSORY COURSES								
No.	Course name	Type of class	Number of teaching hours	Form of assessment	Number of groups	Total hours	ECTS Points	Reference to programme learning outcomes
1	Calculus I	lecture	60	Exam	1	60	11	K_W01,K_W02,K_W03,K_W04,K_W05, K_W07,K_U01,K_U02,K_U03,K_U04,K_U05, K_U06, K_U07,K_U08, K_U09,K_U10, K_U11,K_U12, K_U13,K_U14, K_U15, K_U36, K_K01, K_K05
		class	60	Graded Pass	1	60		
2	Linear algebra with geometry II	lecture	60	Exam	1	60	10	K_W01,K_W02,K_W03,K_W04,K_W05, K_W07,K_U01,K_U02, K_U03,K_U04,K_U05, K_U06,K_U07,K_U08,K_U16,K_U17,K_U20, K_U23,K_K01,K_K05
		class	60	Graded Pass	1	60		
3	Entrepreneurship	workshop	30	Graded Pass	1	30	2	<i>According to the resolution of the Senate of the Catholic University of Lublin from February 22, 2018 (789/II/5)</i>
ELECTIVE COURSES*								
No.	Course name	Type of class	Number of teaching hours	Form of assessment	Number of groups	Total hours	ECTS Points	Reference to programme learning outcomes
1	Foreign language	foreign language class	30	Graded Pass	1	30	2	<i>According to the resolution of the Senate of the Catholic University of Lublin from March 28, 2019 (803/II/8)</i>
2	Physical education	class	30	Pass	1	30	0	<i>According to the resolution of the Senate of the Catholic University of Lublin from December 18, 2014 (747/II/5)</i>
3	Elective course I	lecture	30	Exam	1	30	5	K_W01,K_W04,K_U38,K_K02,K_K05
		class (laboratory**)	30	Graded Pass	1	30		

* student choose foreign language, physical education and one elective course (60 h, 5 ECTS)

** Joint course with Informatics

NUMBER OF TEACHING HOURS PER SEMESTER PER STUDENT:	390
ECTS POINTS PER SEMESTER PER STUDENT:	30

Elective course I, IV,VI
Differential geometry
Discrete mathematics**
Foundations of numerical methods
Operations research
Financial mathematics
Descriptive statistics
Statistical analysis of data**
Abstract data structures
Artificial intelligence**
Elective course II, III, V
Elements of number theory
Introduction to mathematical modelling
Algorithmic methods
Graph and network theory**
Mathematical basics for computer graphics**
Mathematics of life insurance
Multidimensional data analysis
Databases I**
Object-oriented programming**

** Joint course with Informatics

Programme curriculum
Programme MATHEMATICS (BA DEGREE STUDIES)
Cycle from academic year 2020/2021

Predicted number of students starting the cycle

30

Year II Semester III

COMPULSORY COURSES								
No.	Course name	Type of class	Number of teaching hours	Form of assessment	Number of groups	Total hours	ECTS Points	Reference to programme learning outcomes
1	Calculus II	lecture	60	Exam	1	60	10	K_W01,K_W02,K_W03,K_W04,K_W05, K_W07,K_U01,K_U02,K_U03,K_U04,K_U05, K_U06,K_U10,K_U12, K_U13,K_U14, K_U15, K_K01, K_K05
		class	60	Graded Pass	1	60		
2	Topology	lecture	30	Exam	1	30	5	K_W01,K_W02,K_W03,K_W04,K_W05, K_W07,K_U01,K_U02,K_U03,K_U04,K_U05, K_U06,K_U09,K_U23, K_U24,K_K01, K_K05
		class	30	Graded Pass	1	30		
3	History of philosophy	lecture	45	Exam	1	45	3	<i>According to the resolution of the Senate of the Catholic University of Lublin from April 12, 2012 (714/II/10)</i>
ELECTIVE COURSES*								
No.	Course name	Type of class	Number of teaching hours	Form of assessment	Number of groups	Total hours	ECTS Points	Reference to programme learning outcomes
1	Foreign language	foreign language class	30	Graded Pass	1	30	2	<i>According to the resolution of the Senate of the Catholic University of Lublin from March 28, 2019 (803/II/8)</i>
2	Elective course II	lecture	30	Exam	1	30	5	K_W01,K_W04,K_U38,K_K02,K_K05
		class (laboratory**)	30	Graded Pass	1	30		
3	Elective course III	lecture	30	Exam	1	30	5	K_W01,K_W04,K_U38,K_K02,K_K05
		class (laboratory**)	30	Graded Pass	1	30		

* student choose foreign language and two elective courses (60+60 h, 5+5 ECTS)

** Joint course with Informatics

NUMBER OF TEACHING HOURS PER SEMESTER PER STUDENT:	375
ECTS POINTS PER SEMESTER PER STUDENT:	30

Elective course I, IV,VI
Differential geometry
Discrete mathematics**
Foundations of numerical methods
Operations research
Financial mathematics
Descriptive statistics
Statistical analysis of data**
Abstract data structures
Artificial intelligence**
Elective course II, III, V
Elements of number theory
Introduction to mathematical modelling
Algorithmic methods
Graph and network theory**
Mathematical basics for computer graphics**
Mathematics of life insurance
Multidimensional data analysis
Databases I**
Object-oriented programming**

** Joint course with Informatics

Programme curriculum
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Predicted number of students starting the cycle
 Year II Semester IV

30

COMPULSORY COURSES								
No.	Course name	Type of class	Number of teaching hours	Form of assessment	Number of groups	Total hours	ECTS Points	Reference to programme learning outcomes
1	Abstract algebra	lecture	60	Exam	1	60	8	K_W01,K_W02,K_W03,K_W04,K_W05,K_U01,K_U02, K_U03,K_U04,K_U05, K_U06,K_U17,K_K01, K_K05
		class	30	Graded Pass	1	30		
2	Measure and integral	lecture	30	Exam	1	30	5	K_W01,K_W02,K_W03,K_W04,K_W05, K_W07,K_U01,K_U02, K_U03,K_U04,K_U05, K_U06,K_U07,K_U09,K_U13,K_U14,K_K01, K_K05
		class	30	Graded Pass	1	30		
3	Differential equations	lecture	30	Exam	1	30	5	K_W01,K_W02,K_W03,K_W04,K_W05, K_W07,K_U01,K_U02, K_U03,K_U04,K_U05, K_U06,K_U21,K_U22,K_K01, K_K05
		class	30	Graded Pass	1	30		
4	Computing laboratory	laboratory	30	Graded Pass	2	60	4	K_W08,K_W09,K_U15,K_U28,K_U39,K_U41,K_K02, K_K05
ELECTIVE COURSES*								
No.	Course name	Type of class	Number of teaching hours	Form of assessment	Number of groups	Total hours	ECTS Points	Reference to programme learning outcomes
1	Foreign language	foreign language class	30	Graded Pass	1	30	2	<i>According to the resolution of the Senate of the Catholic University of Lublin from March 28, 2019 (803/II/8)</i>
		exam		Exam			1	
2	Elective course IV	lecture	30	Exam	1	30	5	K_W01,K_W04,K_U38,K_K02,K_K05
		class (laboratory**)	30	Graded Pass	1	30		

* student choose foreign language and one elective course (60 h, 5 ECTS) and practical placement – 3 weeks (120 h) during summer holiday (course credit in 5th semester)

** Joint course with Informatics

NUMBER OF TEACHING HOURS PER SEMESTER PER STUDENT:	330
ECTS POINTS PER SEMESTER PER STUDENT:	30

Elective course I, IV,VI
Differential geometry
Discrete mathematics**
Foundations of numerical methods
Operations research
Financial mathematics
Descriptive statistics
Statistical analysis of data**
Abstract data structures
Artificial intelligence**
Elective course II, III, V
Elements of number theory
Introduction to mathematical modelling
Algorithmic methods
Graph and network theory**
Mathematical basics for computer graphics**
Mathematics of life insurance
Multidimensional data analysis
Databases I**
Object-oriented programming**

** Joint course with Informatics

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 Year III Semester V

30

COMPULSORY COURSES								
No.	Course name	Type of class	Number of teaching hours	Form of assessment	Number of groups	Total hours	ECTS Points	Reference to programme learning outcomes
1	Probability theory	lecture	60	Exam	1	60	8	K_W01,K_W02,K_W03,K_W04,K_W05, K_U01,K_U02, K_U03,K_U04,K_U05,K_U06, K_U29,K_U30,K_U31,K_U32,K_U33,K_U35, K_K01, K_K05
		class	30	Graded Pass	1	30		
2	Complex analysis	lecture	30	Exam	1	30	5	K_W01,K_W02,K_W03,K_W04,K_W05, K_U01,K_U02, K_U03,K_U04,K_U05,K_U06, K_K01, K_K05
		class	30	Graded Pass	1	30		
3	Ethics	lecture	30	Exam	1	30	2	<i>According to the resolution of the Senate of the Catholic University of Lublin from April 12, 2012 (714/II/11)</i>
4	Protection of intellectual property	lecture	15	Graded Pass	1	15	1	K_W10
ELECTIVE COURSES*								
No.	Course name	Type of class	Number of teaching hours	Form of assessment	Number of groups	Total hours	ECTS Points	Reference to programme learning outcomes
1	Seminar	seminar	30	Pass	1	30	5	K_W01,K_W02,K_W03,K_W04,K_W05, K_W06,K_W07,K_U01,K_U02,K_U03,K_U04, K_U05,K_U11,K_U13,K_U14,K_U15,K_U16, K_U18,K_U22,K_U37,K_U38,K_U39,K_U40, K_U41,K_U42,K_K01,K_K02,K_K03,K_K04, K_K05
2	Practical placement (3 weeks)	practical placement	120	Pass			4	K_W10,K_U25,K_U28,K_U36,K_U38,K_U39, K_U40,K_U41,K_U42,K_K01,K_K02,K_K03, K_K04
3	Elective course V	lecture	30	Exam	1	30	5	K_W01,K_W04,K_U38,K_K02,K_K05
		class (laboratory**)	30	Graded Pass	1	30		

* student choose one elective course (60 h, 5 ECTS), one seminar (30 h 4 ECTS) and complete practical placement – 3 weeks (120 h 4 ECTS)

** Joint course with Informatics

NUMBER OF TEACHING HOURS PER SEMESTER PER STUDENT:	285
ECTS POINTS PER SEMESTER PER STUDENT:	30

120

Seminar
Algebra
Application of mathematics
Programming and computer graphics**

Elective course I, IV,VI
Differential geometry
Discrete mathematics**
Foundations of numerical methods
Operations research
Financial mathematics
Descriptive statistics
Statistical analysis of data**
Abstract data structures
Artificial intelligence**
Elective course II, III, V
Elements of number theory
Introduction to mathematical modelling
Algorithmic methods
Graph and network theory**
Mathematical basics for computer graphics**
Mathematics of life insurance
Multidimensional data analysis
Databases I**
Object-oriented programming**

** Joint course with Informatics

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Predicted number of students starting the cycle
 Year III Semester VI

30

COMPULSORY COURSES								
No.	Course name	Type of class	Number of teaching hours	Form of assessment	Number of groups	Total hours	ECTS Points	Reference to programme learning outcomes
1	Statistics	lecture	30	Exam	1	30	5	K_W01,K_W02,K_W03,K_W04,K_W05, K_U01,K_U02, K_U03,K_U04,K_U05,K_U06, K_U34,K_U35,K_K01, K_K05
		class	30	Graded Pass	1	30		
2	Functional analysis	lecture	30	Exam	1	30	5	K_W01,K_W02,K_W03,K_W04,K_W05, K_U01,K_U02, K_U03,K_U04,K_U05,K_U06, K_U09,K_U10,K_K01, K_K05
		class	30	Graded Pass	1	30		
ELECTIVE COURSES*								
No.	Course name	Type of class	Number of teaching hours	Form of assessment	Number of groups	Total hours	ECTS Points	Reference to programme learning outcomes
1	Seminar	seminar	30	Pass	1	30	5	K_W01,K_W02,K_W03,K_W04,K_W05, K_W06,K_W07,K_U01,K_U02,K_U03,K_U04, K_U05,K_U11,K_U13,K_U14,K_U15,K_U16, K_U18,K_U22,K_U37,K_U38,K_U39,K_U40, K_U41,K_U42,K_K01,K_K02,K_K03,K_K04, K_K05
2	BA project and preparation for a diploma examination	assignment		Pass			10	
3	Elective course VI	lecture	30	Exam	1	30	5	K_W01,K_W04,K_U38,K_K02,K_K05
		class (laboratory**)	30	Graded Pass	1	30		

* student choose one elective course (60 h, 5 ECTS) and one seminar (30 h, 5 ECTS), student is required to prepare BA project (10 ECTS)

** Joint course with Informatics

NUMBER OF TEACHING HOURS PER SEMESTER PER STUDENT:	210
ECTS POINTS PER SEMESTER PER STUDENT:	30

NUMBER OF TEACHING HOURS PER CYCLE PER STUDENT:	1980
ECTS POINTS PER CYCLE PER STUDENT:	180

Seminar
Algebra
Application of mathematics
Programming and computer graphics**

Elective course I, IV,VI
Differential geometry
Discrete mathematics**
Foundations of numerical methods
Operations research
Financial mathematics
Descriptive statistics
Statistical analysis of data**
Abstract data structures
Artificial intelligence**
Elective course II, III, V
Elements of number theory
Introduction to mathematical modelling
Algorithmic methods
Graph and network theory**
Mathematical basics for computer graphics**
Mathematics of life insurance
Multidimensional data analysis
Databases I**
Object-oriented programming**

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