

American University in Central Asia

CHECKLIST

Student's Name _____

ID # _____

Major: Applied Mathematics and Informatics

Year of Admission _____

Profile: Mathematical Modeling in Natural and Social Sciences Year of Declaration _____

Course Name	Course #	Course ID	Credits	Prerequisite	Comments
GENERAL EDUCATION COURSES			Total - 86 Credits		
First Year Seminar I/ II	FYS		18		
Kyrgyz, Russian Language (part of FYS)	FYS FYS		2+2		
Manas Studies (part of FYS)	FYS		2		
Kyrgyz, Russian Language	KYR, RUS		6+6		
History of Kyrgyzstan	HIST		4		
Introduction to Philosophy	PHL		4		
Social Sciences					
Social Sciences (from outside the student's major)			6		
Arts	ART		12		
Sports			0		400 hours 4 semester
Mathematics and Natural Sciences					
Linear Algebra and Analytic Geometry	MAT-131	2926	6	none	
Mathematical Analysis I	MAT-233		6	MAT-131	
Introduction to Computing	COM-106		3	none	
Physics	COM-234.1		3	MAT-131	
Concepts of Modern Sciences	LAS-100.1		6	none	
REQUIRED COURSES			Total - 81 Credits		
Discrete Mathematics and Mathematical Logic I	COM-227		6	none	
Mathematical Analysis II	MAT-316.2		6	MAT-233	
The Theory of Probabilities and Mathematical Statistics I	MAT-307		6	MAT-131	
Ordinary Differential Equations	MAT-332		6	MAT-316.2	
Physics. Computer modeling	MAT-202		3	MAT-131	
Equations of Mathematical Physics	MAT		6		
Numerical Methods	MAT-407		6	MAT-316.2, COM-116	
Functional Analysis	MAT		3		
Complex Variables	MAT-326		3	MAT-316.2	
Computer Science	COM-150		3	COM-106	
Programming I. Introduction to Object Oriented Programming	COM-116		6	none	
Programming II. Introduction to Object Oriented Programming	COM-117		6	COM-116	
Computer Graphics: Programming Basics	COM-380		3	COM-117	

Computer Architecture	COM-410.1		3	COM-311.1	
Operating Systems	COM-341.1		3	COM-117	
Senior project preparation I	MAT		3		
Senior project preparation II	MAT		3		
Internship I	MAT		3		
Internship II	MAT		3		
<i>ELECTIVE COURSES</i>			<i>Total - 73 Credits</i>		
The Theory of Probabilities and Mathematical Statistics II	MAT-328		6	MAT-307	
Discrete Mathematics and Mathematical Logic II	COM-228		6	COM-227	
Research Methods in Applied Mathematics	MAT		6		
Optimization Methods	MAT		3		
Game Theory	MAT-317		6	MAT-233 / MAT-131	
Database Principles	COM-210.1		6	COM-117	
Courses for the education profile "Mathematical Modeling in Natural and Social Sciences" (1 of the following groups)			12		
1. Numerical Methods of Mathematical Physics.	MAT		6		
Mathematical Modelling in Geophysics.	MAT		6		
2. Econometrics.	MAT		6		
Mathematical Modelling in Economics	MAT		6		
			6		
			6		
			6		
			6		
			4		
Total Number of Credits			240		