

American University of Central Asia
Liberal Arts and Sciences Department
Mathematical Modeling in Natural and Social Sciences Concentration
2026 AY Checklist

Student's Name _____ **ID #** _____

General Education – 97 credits (102 credits limit of 100 level courses)	Credits	Completed	Grade	Notes
Academic Orientation program	2	☐		
FYS I: English language for Liberal Arts - 4 credits, English Composition for Liberal Arts I – 6 credits Introduction to Philosophy I (part of FYS I) – 2 credits	12	☐		
FYS II: English language for Liberal Arts - 4 credits, English Composition for Liberal Arts II – 6 credits Introduction to Philosophy II (part of FYS II) – 2 credits	12	☐		
Kyrgyz Language and Literature I - 4 credits Kyrgyz Language and Literature II - 4 credits (to be completed during sophomore year)	8	☐ ☐		State exam in 2 year
Russian Language I – 2 credits Russian Language II – 2 credits	4	☐ ☐		
Linear Algebra and Analytic Geometry	6	☐		
Artificial intelligence/digital literacy and math/natural science*	3	☐		
History of Kyrgyzstan – 4 credits Geography of Kyrgyzstan – 2 credits (to be completed during sophomore year)	6	☐ ☐		State exam in 2 year
Manas Studies	2	☐		
Arts/Second Year Seminar**	6	☐ ☐ ☐		
Humanities/Second Year Seminar**	6	☐ ☐ ☐		
Social Sciences/Second Year Seminar**	6	☐ ☐ ☐		
Sports (any 4 courses during 4 years of study)	0	☐ ☐ ☐ ☐		400 hours/0 credits
Total General Education:	73			
* These include: Digital Literacy/Introduction to Computing/Computer Science/AI or any math/natural science related courses.				
**All students in their 2 nd year must take one Second Year Seminar. This seminar substitutes for one required 6-credit course in either Humanities, Social Sciences, Arts or Natural Science.				
LAS Core Courses – 24 credits				
Concepts of Modern Art/Arts	6	☐		
World Literature/Humanities	6	☐		
Concepts of Modern Sciences/Natural Sciences	6	☐		
Globalization and Social Sciences/Social Sciences	6	☐		
Total LAS Core Courses	24			
Concentration Required Courses – 63 credits				
Linear Algebra and Analytic Geometry for AMI	6	☐		1 semester. Counts towards Gen Ed Mathematics and Quantitative Reasoning
Discrete mathematics and mathematical logic I	6	☐		2 semester
Mathematical Analysis I for AMI/SFW	6	☐		3 semester
Introduction to programming	6	☐		4 semester
The theory of probabilities and mathematical statistics	6	☐		5 semester

Computer architecture	6	☐		6 semester
Senior Project Preparation I	3	☐		7 semester
Senior Project Preparation II	3	☐		8 semester
Research Methods in Applied Mathematics	6	☐		6 semester
Internship I and II	15	☐		
Total Concentration Courses	63			
Major elective courses – 30 credits				
Database	6	☐		
Ordinary differential equations	6	☐		
Operating Systems	6	☐		
Numerical Methods	6	☐		
Math Modeling in Economics	6	☐		
Mathematical Modeling in Geophysics	6	☐		
Game Theory	6	☐		
One 300 or 400 level elective course	6	☐		
		☐		
		☐		
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Total major elective courses	30			
Note: the list of concentration electives is subject to constant update				
Other elective courses	67	At least, 18 credits must be taken outside of LAS, 49 credits can taken within or outside of LAS.		
General Education and LAS Core Courses	97	☐		
Concentration Required Courses	63	☐		
Major elective courses	30	☐		
Other electives	67	☐		
Total credits	257	☐	240 credits must be earned to graduate	

Recommended Order of Study

1st semester (30 credits)		2nd semester (30 credits)	
First Year Seminar I English Composition for Liberal Arts I Introduction to Philosophy I (part of FYS I) – 2 cr	12	First Year Seminar II English Composition for Liberal Arts II Introduction to Philosophy II (part of FYS II) – 2	12
Linear Algebra and Analytic Geometry for AMI/SFW	6	Mathematical Analysis I for AMI/SFW	6
Concepts of Modern Sciences	6	World Literature	6
Elective Course	6	Elective Course	6
Sport	0	Sport	0
3rd semester (33 credits)		4th semester (33 credits)	
Concepts of Modern Art	6	Globalization and Social Sciences	6
Elective Course	6	The Theory of Probabilities and Math. Statistics	6
Introduction to Programming	6	History and Geography of Kyrgyzstan	6
Discrete Mathematics and Mathematical Logic I	6	Computer Architecture	6
Kyrgyz language and literature – 4 cr. Russian Language – 2 cr.	6	Kyrgyz language and literature – 4 cr. Russian Language – 2 cr.	6
Sport	0	Sport	0
5th semester (33 credits)		6th semester (33 credits)	
Ordinary Differential Equations		Numerical Methods	6
Operating Systems	6	Research Methods in Applied Mathematics	6
General Education Course	6	General Education Course	6
General Education Course	6	General Education Course	6
Elective Course: Database	6	Elective Course	6
7th semester (36 credits)		8th semester (39 credits)	
Senior thesis seminar I	6	Senior thesis seminar II	6
Gen Edu course	6	Gen Edu course	6
Elective Course: Math Modeling in Economics	6	Elective Course: Mathematical Modeling in Geophysics	6
Internship	6	Internship	9
Elective Course	12	Elective Course	12

Graduation requirements:

1. Earn at least 257 credits
 - a. Complete all General Education requirements;
 - b. Complete all requirements for at least one major;
 - c. Earn no more than 102 credits of introductory (100-level) courses;
 - d. Complete at least 18 elective credits outside of a student's major and General Education program;
 - e. Complete the required number of internship credits (the number of credits is determined by each department);
 - f. Pass all state graduation examinations;
 - g. Successfully complete and defend a senior thesis/project;
 - h. Receive no "F" or "N/P" grades in the final semester;
 - i. To earn an overall GPA of at least 2.0.

Important Contacts:

LAS Department

Phone: +996 (312) 915000 *487

Room: 333

Email: las@auca.kg

Academic Advising Office

Phone: +996 (312) 915000 *416, 417

Room: 209

Email: advising@auca.kg

Registrar Office

Phone: +996 (312) 915000 *401,402

Room: 110

Email: registrar@auca.kg

Writing and Academic Resources Center

Phone: +996 (312) 915000 *490

Room: 224

Email: warc@auca.kg

Shared Service Center

Phone: +996 (312) 915019

Room: 244

Email: service@auca.kg

Counseling Services

Write an email to set up a meeting with counselors:

cs@auca.kg

Student's signature: _____

(I am informed and confirm that I have completed all required courses and necessary components for my department)

Advisor's name and signature: _____

(I have reviewed and confirmed that the student has completed all required courses and necessary components for their department)

Department chair's name and signature: _____

I have double-checked and confirmed that the student has completed all required courses and necessary components for their department and eligible to graduate)