

American University of Central Asia
Liberal Arts and Sciences Department
Mathematical Modeling in Natural and Social Sciences Concentration
2024 AY Checklist

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

General Education – 92 credits (102 credits limit of 100 level courses)	Credits	Completed	Grade	Notes
Academic Orientation program	2*	<input type="checkbox"/>		
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	<input type="checkbox"/>		
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	<input type="checkbox"/>		
Kyrgyz Language and Literature I - 4 credits Kyrgyz Language and Literature II - 4 credits (to be completed during sophomore year)	8	<input type="checkbox"/>		State exam in 2 year
Russian Language I – 2 credits Russian Language II – 2 credits	4	<input type="checkbox"/>		
Mathematics and Quantitative Reasoning	6	<input type="checkbox"/>		
History of Kyrgyzstan – 4 credits Geography of Kyrgyzstan – 2 credits (to be completed during sophomore year)	6	<input type="checkbox"/>		State exam in 2 year
Manas Studies	2	<input type="checkbox"/>		
Natural Science (Concepts of Modern Sciences)	6	<input type="checkbox"/>		
Arts/Second Year Seminar**	12	<input type="checkbox"/>		
Humanities/Second Year Seminar**	12	<input type="checkbox"/>		
Social Sciences/Second Year Seminar**	12	<input type="checkbox"/>		
Sports (any 4 courses during 4 years of study)	0	<input type="checkbox"/>		400 hours/0 credits
Total General Education:	92 [2] credits			

* Credits earned for the Academic Orientation program are not included into 240 credits for graduation.

**All students in their 2nd 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	<input type="checkbox"/>		Can be counted towards Arts requirement in the General Education program
World Literature/Humanities	6	<input type="checkbox"/>		Can be counted towards Humanities requirement in the General Education program
Concepts of Modern Sciences/Natural Sciences	6	<input type="checkbox"/>		Can be counted towards Natural Sciences requirement in the General Education program
Globalization and Social Sciences/Social Sciences	6	<input type="checkbox"/>		Can be counted towards Social Sciences

				requirement in the General Education program
Total LAS Core Courses	24			
Concentration Required Courses – 42 credits				
Discrete mathematics and mathematical logic I	6	<input type="checkbox"/>		1 semester
Mathematical Analysis I for AMI/SFW	6	<input type="checkbox"/>		
Introduction to programming	6	<input type="checkbox"/>		
The theory of probabilities and mathematical statistics	6	<input type="checkbox"/>		
Computer architecture	6	<input type="checkbox"/>		
Senior Project/Thesis I	3	<input type="checkbox"/>		
Senior Project/Thesis II	3	<input type="checkbox"/>		
Research Methods in Applied Mathematics	6	<input type="checkbox"/>		
Internship	15	<input type="checkbox"/>		out of 240 credits
Total Concentration Courses	42			
Major elective courses – 36 credits				
Database	6	<input type="checkbox"/>		
Ordinary differential equations	6	<input type="checkbox"/>		
Operating Systems	6	<input type="checkbox"/>		
Numerical Methods	6	<input type="checkbox"/>		
Mathematical models in natural and social sciences:		<input type="checkbox"/>		
Math Modeling in Economics	6	<input type="checkbox"/>		
Mathematical Modeling in Geophysics	6	<input type="checkbox"/>		
Game Theory	6	<input type="checkbox"/>		
		<input type="checkbox"/>		
		<input type="checkbox"/>		
		<input type="checkbox"/>		
		<input type="checkbox"/>		
		<input type="checkbox"/>		
		<input type="checkbox"/>		
		<input type="checkbox"/>		
Total major elective courses	36			
Elective courses (from outside the student's major)	46			In fact 70 credits are available due to overlap of LAS core courses and Gen Ed courses.

Total Number of Credits	240 [257] credits			240 credits must be earned to graduate
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Recommended Order of Study

Academic Orientation Program [2 credits]			
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 cr	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
Physics. Computer Modeling	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 (33 credits)		8th semester (33 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	Elective Course	6
Elective Course	6	Elective Course	6

Graduation requirements:

1. Earn at least 240 credits (+credit hours earned for program internships)
 - 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

Registrar Office

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

Room: 110

Email: registrar@auca.kg

Shared Service Center

Phone: +996 (312) 915019

Room: 244

Email: service@auca.kg

Academic Advising Office

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

Room: 209

Email: advising@auca.kg

Writing and Academic Resources Center

Phone: +996 (312) 915000 *490

Room: 224

Email: warc@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)