American University of Central Asia

Program: Software Engineering

CHECKLIST

Student's Name:				**ID #:**	
Major:				**Year of Admission:**	**2018**
Minor:				**Year of Declaration:**	

Course Name	Course #	Course ID	Credits	Prereq	Comments
General Education Courses				**Total - 80-96 Credits**	
First Year Seminar I			6		
Introduction to Philosophy I (part of FYS)			2		
Kyrgyz Language (part of FYS)			2		
Russian Language (part of FYS)			2		
First Year Seminar II			8		
Manas Studies (part of FYS)			2		
Introduction to Philosophy I (part of FYS)			2		
Kyrgyz Language (Literature)			6		
Russian Language			6		
History of Kyrgyzstan			4		
Geography of Kyrgyzstan			2		
Social Sciences (12 credits):					
Psychology, Sociology, Political Studies, Economics, Law, Anthropology and/or European Studies from outside the student's major			12		OR Second year seminar: Social science (6 cr)
Humanities (12 credits):					
Modern Foreign Languages, Religious Study, History, Literature, and/or Culture from outside the student's major			12		OR Second year seminar: Humanities (6 cr)
Art/Sport					
Arts			12		
Sports			0	4 semesters-1 sport class (400 Hours)	
Natural science					
Ecology **Physics** (prereq. LINEAR ALGEBRA)			3+3		
Mathematics (12 credits)					
Linear Algebra & Analytic Geometry for AMI/SFW			6	none	
Mathematical Analysis I for AMI/SFW			6	Linear Algebra	
Courses on Specialty				**Total 146 credits**	
Required Courses on Specialty				**126**	
From Software Engineering department					**99 credits**
Algorithm Languages			6		
Algorithms and Data Structures	COM-223.1	3114	6	OOP	
Computer Architecture	COM-410.1	3268	6	Alg.& Data structures	
Computer Graphics			6		
Database	COM-213	4773	6	Alg.& Data structures	
Information Security	COM-424.1	3953	6		

Course	Code	Num	Cr	Prerequisite	Offered
Internship: Educational Tasks Internship: Research Project			6		
Introduction to Software Engineering and Informatics	COM-108	4321	6	-	Fall-2017
Object Oriented Programming	COM-119	4357	6	Structural programming	Spring-2018
Operating Systems	COM-341	3325	6	Alg.& Data Struct+Archit.	
Safety Management and Economics	COM-120	4358	3	-	
Senior Project Preparation I/ II	COM-431.1	3706	12	Comp. Archit+ OperSyst	
Software Design and Architecture			6		
Software Engineering			6		
Structural programming	COM-118	4322	6	None	Fall-2017
System programming			6		
			99		

Required courses from "Applied Mathematics and Informatics" department					**24 credits**
Mathematical Analysis II for AMI/SFW			6	Math. Analysis I	*From AMI*
Discrete mathematics and math. logic I			6	-	*From AMI*
Discrete mathematics and math. logic II			6	Discrete Math I	*From AMI*
6 credits out of next courses:					
Numerical Methods			6	OOP and Math.An II	*From AMI*
Theory of Probabilities and Math. Statistics			6	Linear Math.	*From AMI*

Elective Courses on Specialty

From Software Engineering department				**Minimum 18 credits (23 cr)**	
3D Design and Animation			6	-	
ABAP programming for SAP			6	OOP	
Algorithm Analysis*			6	Alg. and Data Structures	
Applied Autonomous robotics			6	OOP	
Introduction to Artificial Intelligence			6	FYS II	
Computer Design I / II			6		
Computer Networks			6	Operating Systems	
Computer Systems & Assembler			6	OOP	
Computer Vision			6	Parallel and Distr. Prog	
Cryptography			6	Alg. and Data Structures	
Data Science			6	OOP	
Database Design			6	Database	
Digital Integrated Circuit Design			6	OOP	
Game Development			6	OOP	
Information Security II			6	Info.security	
Intro to Web programming			6	OOP and Comp	
Introduction to automated deduction			6	Discrete Math II	
iOS application development			6	OOP	
Machine learning			6	LinAlg and Comp Architect	
Mobile and IoT Development			6	OOP	
Neural Networks and deep learning			6	Comp Architecture	
Programming Languages			6	OOP	
System Administration			6	Comp Networks	
Theory of Computation			6	Lin. Algebra	
Website & Mobile Web App			6	Intro to SE and Informatics	

courses should be taken in case of doing Minor

Courses for Minor*

Total Number of Credits					**240**

Order of study for 2018 admits

I semester (30 credits)			II semester (30 credits)		
Gen. Ed.	First Year Seminar I	6	**Gen. Ed.**	First Year Seminar I	8
	Introduction to Philosophy I (part of FYS)	2		Introduction to Philosophy II (part of FYS)	2
	Kyrgyz Language (part of FYS)	2		Manas Studies	2
	Russian Language (part of FYS)	2		Total FYS: 12 credits	
	Total FYS: 12 credits				
	Sport (Competitive programming)	0		Sport (Competitive programming)	0
Profile	Introduction to Software Engineering and Informatics	6	**Profile**	Object Oriented Programming	6
				Safety Management and Economics	3
	Linear Algebra and Analytic Geometry	6		Physics	3
	Structural programming	6		Mathematical Analysis I	6

III semester (30 credits)			IV semester (33 credits)		
Profile	Mathematical Analysis II	6	**Profile**	Computer Architecture	6
	Algorithm and Data Structures	6		Discrete Mathematics II	6
	Discrete Mathematics I	6			
				Elective course (Algorithm Analysis)	6
	Elective course (Game Dev., Web. Prog. Mobile App Dev etc.)	6		Numerical Methods/Theory of Probabilities	6
Gen. Ed.	Second year seminar	6	**Gen. Ed.**	History and Geography of Kyrgyzstan	6
	Sport (Competitive programming)	0		Sport (Competitive programming)	0
				Ecology	3

V semester (30 credits)			VI semester (30 credits)		
Profile	Operating Systems	6	**Profile**	Computer Graphics	6
	Database	6		Algorithm Languages	6
				Elective course	6
	Elective course (Game Dev., Web. Prog. Mobile App Dev etc.)	12		System programming	6
Gen. Ed.	KYR(Lit)/RUS:ART	6	**Gen. Ed.**	KYR(Lit)/RUS:ART	6

VII semester (30 credits)			VIII semester (30 credits)		
Profile	Senior Paper/Seminar	6	**Profile**	Senior Paper/Seminar	6
	Elective course (Game Dev., Web. Prog. Mobile App Dev etc.)	6		Software Design and Architecture	6
	Software Engineering	6		Elective	6
	Elective	6		Information Security	6
Gen. Ed.	Social Science	6	**Gen. Ed.**	Social Science	6