

## Curricular Structure of the Study Programme "Software Engineering" (in Ukrainian, in English)

Course code	Educational Units and Courses	Semester	Form of Examination/ Assessment	Workload (hours)		ECTS credits
				Contact Time	Self-Study Time	
	Unit 1.1 General training			780	660	48
GT1	History and culture of Ukraine	1	Exam	32	58	
GT2	Ukrainian language (for professional purposes)	1	Exam	32	58	
GT6	Higher mathematics	1	Exam	80	100	
GT7	Physics	1	Exam	48	72	
GT3	Foreign language	1-2	Credit	120	60	
GT5	Fundamentals of humanitarian and philosophical knowledge in professional activity	2	Exam	28	62	
GT6	Higher mathematics	2	Exam	84	66	
GT4	Foreign language for professional communication	6-7, 8	Credit, Exam	168	12	
GT8	Physical education	1-6	Credit	188	172	
	Unit 1.2 Professional training			1518	2442	132
PT1	Fundamentals of programming	1	Exam	96	54	
PT2	Fundamentals of software engineering	1	Credit	64	56	
PT1	Fundamentals of programming	2	Exam	84	96	
PT3	Computer architecture and operating systems	2	Credit	56	64	
PT4	Theory of algorithms	2	Credit	56	64	
PT24	Introductory practice at the "Innovation Campus"	2	Credit	0	90	
PT5	Probability theory and mathematical statistics	3	Exam	64	86	
PT9	Mathematical models and system analysis	3	Credit	64	86	
PT6	Data models and structures	3	Exam	48	72	
PT7	Object-oriented programming	3	Exam	64	56	
PT8	Computer networks	3	Credit	48	42	
PT10	Computer mathematics	4	Credit	64	56	
PT12	Database design and development	4	Exam	64	56	
PT11	Fundamentals of web development	4	Exam	64	56	
PT13	Software requirements engineering	4	Credit	48	72	
PT10	Computer mathematics	5	Exam	64	86	
PT14	CI/CD	5	Credit	48	42	
PT15	Software architecture and design	5	Exam	48	72	
PT16	Software quality, testing and support	5	Exam	48	72	
PT15	Software architecture and design	6	Exam	64	56	
PT17	Fundamentals of cybersecurity	6	Exam	48	42	
PT25	Project (practice)	6	Credit	0	180	
PT10	Computer mathematics	6	Exam	48	72	
PT18	Decision making theory	7	Exam	64	56	
PT20	Software modeling and analysis	8	Exam	40	80	
PT19	Scientific and practical seminar Software engineering	7	Credit	32	88	
PT19	Scientific and practical seminar Software engineering	8	Credit	20	70	
PT21	Practical seminar on mathematical methods in software engineering	8	Credit	30	60	
PT22	Artificial intelligence systems	8	Credit	40	50	
PT23	Fundamentals of software project management	8	Exam	40	50	
PT26	Pre-diploma practice	8	Credit	0	180	
	Certification	8	Credit	0	180	
	Unit 2.1 Profile training					33
	2.1.1 Profiled discipline package 01 "Research and			464	526	
OP1.1	Foreign language for scientific research	3-4, 5	Credit, Exam	192	78	
OP1.2	Data collection and preparation	3	Credit	64	56	
OP1.3	Probabilistic and statistical models	4	Credit	48	72	
OP1.4	Planning of the experiment	5	Credit	48	72	
OP1.5	Complex systems modeling methods	6	Credit	48	72	
OP1.6	Fuzzy logic and fuzzy systems	7	Credit	32	88	
OP1.7	Fundamentals of Machine Learning	7	Credit	32	88	
	2.1.2 Profiled discipline package 02 "Software			464	526	
OP2.1	Foreign language for business communications	3-4, 5	Credit, Exam	192	78	
OP2.2	Fundamentals of entrepreneurship	3	Credit	64	56	
OP2.3	Business modeling	4	Credit	48	72	
OP2.4	Fundamentals of prototyping	5	Credit	48	72	
OP2.5	Startup business planning	6	Credit	48	72	
OP2.6	Internet marketing	7	Credit	32	88	
OP2.7	Startup business analytics	7	Credit	32	88	
	2.1.3 Profiled discipline package 03 "Innovation Campus"			464	526	
OP3.1	Foreign language for the development of corporate information systems	3-4, 5	Credit, Exam	192	78	
OP3.2	Development of corporate information systems (part 1)	3	Credit	64	56	
OP3.3	Development of corporate information systems (part 2)	4	Credit	48	72	
OP3.4	Databases for corporate information systems	5	Credit	48	72	
OP3.5	Architecture of corporate information systems	6	Credit	48	72	
OP3.6	Project workshop	7	Credit	32	88	
OP3.7	IT project teams formation and development	7	Credit	32	88	
ODP	Unit 2.2 Optional student disciplines of the profile preparation according to the list	4-6	Credit	192	258	15
	Unit 2.3 Optional student disciplines from the general university catalog of disciplines			144	216	12
OD1	Discipline 1	7	Credit	48	72	
OD2	Discipline 2	7	Credit	48	72	
OD3	Discipline 3	7	Credit	48	72	
	<b>Total</b>			<b>3098</b>	<b>4102</b>	<b>240</b>