

Training program of Applied Mathematics

No.	Module code	Module title in English	ECTS
I	Core modules		
1.1	General training modules		
1	MAT1.001	Calculus 1	4
2	MAT1.002	Linear Algebra	4
3	MAT1.003	Calculus 2	3
4	MAT2.028	Probability 1	4
5	MAT1.006	Discrete Mathematics	4
6	ICT1.001	Introduction to Informatics	3
7	ICT1.002	Basic programming	4
8	ICT1.004	Introduction to Algorithm	3
9	MAT1.007	Optimization 1	3
10	MAT2.030	Statistics 1	4
1.2	Core specialized modules		
11	MAT2.025	Linear Algebra 2	4
12	MAT2.029	Differential Equation	4
13	MAT1.005	Numerical methods	4
14	ICT2.014	Data Structures and Algorithms	4
15	ICT2.013	Advanced Programming with Python	4
16	MAT2.019	Probability 2	4
17	MAT2.027	Stochastic Processes	4
18	MAT2.017	Statistics 2	4
19	MAT2.013	Mathematical Modeling	4
20	MAT2.022	Mathematical foundation for machine learning	4
21	DS3.013	Time series data analysis	4
22	MAT2.023	Multivariate Statistics	4
23	MAT2.021	Multivariable Calculus	4
24	MAT2.024	Modern Algebra	4
1.3	Group project and graduation internship		
25	MAT3.021	Group Project	4
26	MAT3.022	Graduation Internship	12
1.4	Foreign languages		
27	FR2.001	French 2.1	4
28	FR2.002	French 2.2	4
29	ENG1.012	English Academic Writing	3
30	ENG1.013	English Presentation	3
31	ENG1.014	English Listening & Note-taking	2

No.	Module code	Module title in English	ECTS
32	MS2.007	Ethics and integrity in science	2
II	Optional module group 1		
1	PHI1.001	Philosophy	3
2.1	Direction 1		
1	MAT2.026	Dynamical Systems	4
2	ICT2.019	Image Processing	4
3	MAT3.001	Data Assimilation	4
4	MAT3.004	Machine Learning: Optimization Approach	4
5	MAT3.005	Machine Learning: Statistical Approach	4
6	MAT3.011	Cryptography and coding	4
7	MAT3.013	Statistical methods for finance	4
8	MAT3.003	Mathematical Finance	4
9	ICT3.025	Natural Language Processing	4
10	ICT3.026	Computer Vision	4
2.2	Direction 2		
11	MAT2.020	Optimization 2	4
12	MAT3.015	Partial Differential Equation	4
13	MAT3.016	Mathematical Analysis	4
14	MAT3.017	Differential Geometry	4
15	MAT3.018	Modern Probability theory	4
16	MAT3.019	Numerical Analysis	4
17	MAT3.020	Advanced Statistics	4
III	Optional module group 2		
IV	Conditional modules (for Vietnamese students only)		
1	QP1.001	National defense and security education	0