CURRICULUM FOR APPLIED STATISTICS K2023

ACADEMIC ENGLISH (TOEFL iBT>=61; IELTS >=5.5)

Freshman Year					
Semester 1			**Semester 2**		
EN007IU	Writing AE1	2	EN011IU	Writing AE2	2
EN008IU	Listening AE1	2	EN012IU	Speaking AE2	2
MAFE101IU	Analysis 1	4	MAFE103IU	Analysis 2	4
PE021IU	General Law	3	MAFE104IU	Linear Algebra	4
MAFE109IU	Introduction to Python	4	IT069IU	Object-Oriented programming	4
PT001IU	Physical Training 1	3	MAFE212IU	Financial Accounting	4
PE015IU	Philosophy of Marxism and Leninism	3	PE016IU	Political economics of Marxism and Leninism	2
	Total Credits	**21**		*Total Credits*	**22**

Sophomore Year					
Semester 3			**Semester 4**		
MAFE201IU	Real Analysis	4	MAFE316IU	Statistics	4
MAFE203IU	Analysis 3	3	MAAS221IU	Introduction to Machine Learning	3
MAFE206IU	Probability	3	MAFE202IU	Differential Equations	4
MAFE204IU	Database Management system	3	PE018IU	History of Vietnamese Communist Party	2
MAAS220IU	Introduction to Statistics	2	BA115IU	Introduction to Business Administration	3
PE017IU	Scientific Socialism	2	PT002IU	Physical Training 2	3
	Total Credits	**17**		*Total Credits*	**19**
Summer Semester 2: Military Education					

Junior Year					
Semester 5			**Semester 6**		
MAAS318IU	Stochastic Modeling	3	MAFE303IU	Optimization 1	4
MAFE208IU	Numerical Analysis	4	MAFE207IU	Decision making	3
MAAS320IU	Regression Models	3	MAAS322IU	Statistical Computing	3
PE019IU	Ho Chi Minh's Thoughts	2	MAAS324IU	Applied Time Series Analysis	3
IT013IU	Algorithms and Data Structure	4		MAAS Elective #2	3
	MAAS Elective #1	3			
	Total Credits	**19**		*Total Credits*	**16**
Summer Semester 3					
	MAAS328IU-Summer Internship	3			
	Total Credits	**3**			

Senior Year					
Semester 7			**Semester 8**		
IT157IU	Deep Learning	4	MAAS420IU	GRADUATION THESIS	12
MAAS410IU	Bayesian Statistics	3			
MAAS413IU	Multivariate Statistical Analysis	3			
	MAAS Elective #3	3			
	MAAS Elective #4	3			
	Total credit	**16**		*Total Credits*	**12**

Total credits: 139 (not included Physical Training 1, 2 which are not accumulated in GPA)

INTENSIVE ENGLISH 2 (TOEFL iBT 46-60, IELTS <=5.0)

Freshman Year					
Semester 1			**Semester 2**		
ENTP02	IE2	13	EN007IU	Writing AE1	2
			EN008IU	Listening AE1	2
PT001IU	Physical Training 1	3	MAFE101IU	Analysis 1	4
PE015IU	Philosophy of Marxism and Leninism	3	MAFE104IU	Linear Algebra	4
PE016IU	Political economics of Marxism and Leninism	2	MAFE109IU	Introduction to Python	4
			PE021IU	General Law	3
			PT002IU	Physical Training 2	3
	Total Credits	**21**		*Total Credits*	**22**
Summer Semester 1					
EN011IU-Writing AE2		2			
EN012IU-Speaking AE2		2			
PE017IU-Scientific Socialism		2			
	Total Credits	**6**			

Sophomore Year					
Semester 3			**Semester 4**		
MAFE103IU	Analysis 2	4	MAAS221IU	Introduction to Machine Learning	3
IT069IU	Object-Oriented programming	4	MAFE202IU	Differential Equations	4
MAFE212IU	Financial Accounting	4	PE018IU	History of Vietnamese Communist Party	2
MAFE204IU	Database Management system	3	MAFE201IU	Real Analysis	4
MAAS220IU	Introduction to Statistics	2	MAFE203IU	Analysis 3	3
BA115IU	Introduction to Business Administration	3	MAFE206IU	Probability	3
	Total Credits	**20**		*Total Credits*	**19**
Summer Semester 2: Military Education					

Junior Year					
Semester 5			**Semester 6**		
MAAS318IU	Stochastic Modeling	3	MAFE303IU	Optimization 1	4
MAFE208IU	Numerical Analysis	4	MAFE207IU	Decision making	3
MAAS320IU	Regression Models	3	MAAS322IU	Statistical Computing	3
IT013IU	Algorithms and Data Structure	4	MAAS324IU	Applied Time Series Analysis	3
MAFE316IU	Statistics	4	PE019IU	Ho Chi Minh's Thoughts	2
	MAAS Elective #1	3		MAAS Elective #2	3
	Total Credits	**21**		*Total Credits*	**18**
Summer Semester 3					
MAAS328IU-Summer Internship		3			
	Total Credits	**3**			

Senior Year					
Semester 7			**Semester 8**		
IT157IU	Deep Learning	4	MAAS420IU	GRADUATION THESIS	12
MAAS410IU	Bayesian Statistics	3			
MAAS413IU	Multivariate Statistical Analysis	3			
	MAAS Elective #3	3			
	MAAS Elective #4	3			
	Total credit	**16**		*Total Credits*	**12**

Total credits: 139 + 13 (IE2) = 152 (**not** included Physical Training 1, 2 which are not accumulated in GPA)

Remark: If a student does not pass IE2 multiple times, he/she has to take the single course IE2 in the next semesters until pass the level IE2. Trong trường hợp SV chưa đạt IE2 nhiều lần, sinh viên phải học riêng môn IE2 ở các học kì tiếp theo cho đến khi đạt trình độ IE2.

INTENSIVE ENGLISH 1 (TOEFL iBT 35-45, IELTS <=4.5)

Freshman Year					
Semester 1			**Semester 2**		
ENTP01	IE1 (week: 1-7)	17	EN007IU	Writing AE1	2
			EN008IU	Listening AE1	2
ENTP02	IE2 (week: 8-14)	13	MAFE101IU	Analysis 1	4
			MAFE104IU	Linear Algebra	4
			MAFE109IU	Introduction to Python	4
			PE021IU	General Law	3
			PT001IU	Physical Training 1	3
Total Credits		**30**		*Total Credits*	**22**
Summer Semester 1					
EN011IU-Writing AE2		2			
EN012IU-Speaking AE2		2			
PE015IU- Philosophy of Marxism and Leninism		3			
PE016IU- Political economics of Marxism and Leninism		2			
Total Credits		**9**			

Sophomore Year					
Semester 3			**Semester 4**		
MAFE103IU	Analysis 2	4	MAAS221IU	Introduction to Machine Learning	3
IT069IU	Object-Oriented programming	4	MAFE202IU	Differential Equations	4
MAFE212IU	Financial Accounting	4	MAFE201IU	Real Analysis	4
MAFE204IU	Database Management system	3	MAFE203IU	Analysis 3	3
MAAS220IU	Introduction to Statistics	2	MAFE206IU	Probability	3
BA115IU	Introduction to Business Administration	3	PT002IU	Physical Training 2	3
PE017IU	Scientific socialism	2	PE018IU	History of Vietnamese Communist Party	2
Total Credits		**22**		*Total Credits*	**22**
Summer Semester 2: Military Education					

Junior Year					
Semester 5			**Semester 6**		
MAAS318IU	Stochastic Modeling	3	MAFE303IU	Optimization 1	4
MAFE208IU	Numerical Analysis	4	MAFE207IU	Decision making	3
MAAS320IU	Regression Models	3	MAAS322IU	Statistical Computing	3
IT013IU	Algorithms and Data Structure	4	MAAS324IU	Applied Time Series Analysis	3
MAFE316IU	Statistics	4	PE019IU	Ho Chi Minh's Thoughts	2
	MAAS Elective #1	3		MAAS Elective #2	3
Total Credits		**21**		*Total Credits*	**18**
Summer Semester 3					
MAAS328IU-Summer Internship		3			
Total Credits		**3**			

Senior Year					
Semester 7			**Semester 8**		
IT157IU	Deep Learning	4	MAAS420IU	GRADUATION THESIS	12
MAAS410IU	Bayesian Statistics	3			
MAAS413IU	Multivariate Statistical Analysis	3			
	MAAS Elective #3	3			
	MAAS Elective #4	3			
Total credit		**16**		*Total Credits*	**12**

Total credits: 139 + 30 = 169 (**not** included Physical Training 1, 2 which are not accumulated in GPA)

Remark: If a student does not pass IE2 multiple times, he/she has to take the single course IE2 in the next semesters until pass the level IE2. Trong trường hợp SV rớt IE2 nhiều lần, sinh viên phải học riêng môn IE2 ở các học kì tiếp theo cho đến khi đạt trình độ IE2.

INTENSIVE ENGLISH 0 (TOEFL iBT <=34, IELTS <=4.0)

Freshman Year					
Semester 1			**Semester 2**		
ENTP00	IE0 (week 1-7)	17	ENTP02	IE2	13
ENTP01	IE1 (week 8-14)	17	PT001IU	Physical Training 1	3
			PE015IU	Philosophy of Marxism and Leninism	3
	Total Credits	**34**		*Total Credits*	**16**
Summer Semester 1					
EN007IU Writing AE1		2			
EN008IU Listening AE1		2			
MAFE101IU Analysis 1		4			
	Total Credits	**8**			

Sophomore Year					
Semester 3			**Semester 4**		
EN011IU	Writing AE2	2	MAFE109IU	Introduction to Python	4
EN012IU	Speaking AE2	2			
MAFE103IU	Analysis 2	4	MAFE201IU	Real Analysis	4
MAFE104IU	Linear Algebra	4	MAFE203IU	Analysis 3	3
IT069IU	Object-Oriented programming	4	MAFE206IU	Probability	3
MAFE212IU	Financial Accounting	4	PT002IU	Physical Training 2	3
MAAS220IU	Introduction to Statistics	2	PE021IU	General Law	3
	Total Credits	**22**		*Total Credits*	**20**
Summer Semester 2: Military Education					

Junior Year					
Semester 5			**Semester 6**		
MAFE204IU	Database Management system	3	MAAS221IU	Introduction to Machine Learning	3
MAFE202IU	Differential Equations	4	MAAS318IU	Stochastic Modeling	3
IT013IU	Algorithms and Data Structure	4	MAFE208IU	Numerical Analysis	4
MAFE316IU	Statistics	4	MAAS320IU	Regression Models	3
BA115IU	Introduction to Business Administration	3	PE018IU	History of Vietnamese Communist Party	2
PE017IU	Scientific socialism	2		MAAS Elective #1	3
	Total Credits	**20**		*Total Credits*	**18**
Summer Semester 3					
MAAS328IU-Summer Internship		3			
	Total Credits	**3**			

Senior Year					
Semester 7			**Semester 8**		
MAFE303IU	Optimization 1	4	IT157IU	Deep Learning	4
MAAS322IU	Statistical Computing	3	MAAS410IU	Bayesian Statistics	3
MAAS324IU	Applied Time Series Analysis	3	MAAS413IU	Multivariate Statistical Analysis	3
PE019IU	Ho Chi Minh's Thoughts	2	MAFE207IU	Decision making	3
	MAAS Elective #2	3		MAAS Elective #4	3
	MAAS Elective #3	3			
	Total credit	**18**		*Total Credits*	**16**

Semester 9 (5ᵗʰ-year)		
MAAS420IU GRADUATION THESIS	12	
Total Credits	**12**	

Total credits: 139 + 47 = 196 (not included Physical Training 1, 2 which are not accumulated in GPA)

Remark: If a student does not pass IE2 multiple times, he/she has to take the single course IE2 in the next semesters until pass the level IE2. Trong trường hợp SV rớt IE2 nhiều lần, sinh viên phải học riêng môn IE2 ở các học kì tiếp theo cho đến khi đạt trình độ IE2.

Elective courses

	Codes	Subjects	Credits			
			Total	Theory	Practice	% practice /total
MAAS Elective #1						
	IS055IU	Principles of Logistics and Supply Chain Management	3			
	MAFE306IU	Financial Mathematics 1	3			
	MAFE209IU	Financial Markets	3			
	PE008IU	Critical Thinking	3			
MAAS Elective #2						
	MAAS325IU	Predictive Analytics	3			
	IS065IU	Supply Chain Security and Risk Management	3			
	MAFE308IU	Financial Risk Management 1	3			
	MAAS326IU	Actuarial Mathematics for Life Contingent	3			
MAAS Elective #3						
	MAAS411IU	Statistical Models for Actuarial Science	3			
	MAAS412IU	Statistical Methods for Finance	3			
	IS066IU	Data Mining in Supply Chain	3			
MAAS Elective #4						
	MAFE307IU	Optimization 2	3			
	MAAS414IU	Survey Sampling	3			
	MAAS415IU	Applied Probability Models in Actuarial Science	3			

Approved by Chair of Mathematics Department

Date: 05/9/2023

Signature:

Prof. Dr. Pham Huu Anh Ngoc