แผนการศึกษา

หลักสูตรวิศวกรรมศาสตรบัณฑิต สาขาวิศวกรรมปัญญาประดิษฐ์และระบบอัจฉริยะ

B.Eng. in Artificial Intelligence and System Engineering (AISE)

ปีที่ 1 ภาคเรียนที่ 1

Code	Competency	Credit
MAT-101	Differential Equations and Approximation	12
MAT-102	Differential and Integral Calculus	12
SCI-103	Physics I	12
AIC-101	Algorithmic Thinking	2
AIC-102	Intro to Programming	4
SYS-102	Basic Computer Architecture	6
HCD-101	Visualization	4
ENI-101	Intellectual Property	3
ENI-102	Communication and Marketing	3
HAS-102	Social Psychology	9
SOF-101	Creative flexibility	
SOF-102	Working flexibility	
รวม		67

ปีที่ 1 ภาคเรียนที่ 2

Code	Competency	Credit
MAT-103	Calculus in Three Dimensions	12
SCI-104	Physics II	12
AIC-103	Advanced Imperative Programming	4
AIC-107	Algorithms and Data Structures	8
HCD-102	User Experience and Interface Design	4
SYS-101	Operating Systems Basics	8
MCS-101	Modern Computing	3
ENI-103	Business Models and Funding	3
HAS-108	Economics	9
SOF-201	Human-centered focus	
SOF-202	Respect for diversity	
รวม		63

ปีที่ 2 ภาคเรียนที่ 3

Code	Competency	Credit
AIC-201	Probability and Statistics	12
AIC-202	Discrete Mathematics	12
MCS-201	Hardware acceleration	6
SYS-201	Software Engineering Processes	6
HCD-201	Accessibility and Universal Design	4
COM-101	Research and Technical Writing	8
HAS-105	Global Histories	9
HAS-106	History of Visual Arts	9
SOF-301	Social consciousness	
SOF-302	Honesty	
SOF-303	Fairness	
SOF-304	Respect for privacy and confidentiality	
SOF-401	Service orientation	
SOF-402	Continuous improvement focus	
รวม		66

ปีที่ 2 ภาคเรียนที่ 4

Code	Competency	Credit
AIC-203	Matrices and Linear Transformations	12
MCS-301	Data gathering	9
SYS-301	Cyber-Physical Systems	4
SYS-302	Cloud Computing	4
ENI-204	Smart cities	12
HAS-107	History of Music	9
HAS-104	Human Geography	9
SOF-501	Responsibility	
SOF-502	Compliance with organizational norms	
SOF-503	Time management	
SOF-504	Quality focus	
SOF-505	Professional awareness	
SOF-506	Interpersonal relations	
รวม		59

ปีที่ 3 ภาคเรียนที่ 5

Code	Competency	Credit
AIC-301	Logic-based Models	6
AIC-303	Planning and Search Strategies	4
AIC-304	Neural Networks and Deep Learning and CNN	4
AIC-501	Supervised and Unsupervised Learning	6
AIC-502	Reinforcement Learning	4
AIC-503	Transformer Network	4
AIC-602	Natural Language Processing (NLP)**	4
HCD-301	Ethics in Computer Engineering	2
HCD-302	Creating Explainable AI	4
SYS-401	Parallel Computing	4
COM-103	Improvisational Acting	4
COM-104	Graphics and Visual Storytelling	8
SOF-601	Motivation to learn	
SOF-602	Active learning	
รวม		54

ปีที่ 3 ภาคเรียนที่ 6

Code	Competency	Credit
URD-101	Undergraduate research and development1	18
URD -102	Undergraduate research and development2	18
URD -103	Undergraduate research and development3	18
SOF-701	Attention	
SOF-702	Respect and courtesy	
SOF-703	Openness	
SOF-704	Team spirit	
รวม		54
รวม 6 ภาคเรียน		363