

Bachelor of Science in Computer Engineering – Artificial Intelligence Concentration

Total Credits: 138

Study Plan (Fall Start)

First Year (Freshman)

Semester 1

Code	Title	Cr.	Prerequisite
ARL101(A)	Comm. Skills in Arabic Lang.	3	NII
ECS100	Intro. to Engr. & Computing	3	NII
MIT102	Calculus I	3	Math Placement Test or MIT101 (C grade)
STT100	General Statistics	3	NII
ISL100(A)	Islamic Culture	3	NII
Total Credit Hours			15

Semester 2

Code	Title	Cr.	Prerequisite
FWS205	UAE and GCC Society	3	ENG102 (P) & FWS100 (E) / US5001 is prerequisite FWS100(E) / US5001 is co-requisite if students enter to ENG200 directly
ENG200	English II	3	IELTS average score of 6 or EMSAT average score of 3400 or passing grade in ENG 102
COE101	Introductory Artificial Intelligence	3	FEWS100(E) / US5001 is co-requisite if students enter to ENG200 directly
PHY102	Physics & Engr. Applications I	3	MIT102
PHY102L	Physics & Engr. Applications I Lab	1	MIT102, PHY102(co)
MIT200	Calculus II	3	MIT102
Total Credit Hours			16

Second Year (Sophomore)

Semester 3

Code	Title	Cr.	Prerequisite
CSC201	Computer Programming I	3	MIT101 or higher
PHY201	Physics & Engr. Applications II	3	PHY102
PHY201L	Physics & Engr. Applications II Lab	1	PHY102, PHY201(co)
EEN210L	Digital Circuits Lab	1	EEN210(co)
EEN210	Digital Circuits	3	ECS100
COE202	Engineering Ethics, Economy, and Law	3	ENG200, MIT102
MIT202	Discrete Structures and Applications	3	STT100
Total Credit Hours			17

Semester 4

Code	Title	Cr.	Prerequisite
CSC202	Computer Programming II	3	CSC201
CEN333	Cross-platform Mobile App. Develop.	3	CSC201
CEN201	Electric Circuits I	3	ECS100 or PHY201, EEN210L
AIRE310	Machine Learning	3	CSC201, COE101, MIT200
MIT205	Differential Equations	3	MIT200, MIT204(co)
MIT204	Introduction to Linear Algebra	3	MIT200
Total Credit Hours			18

Third Year (Junior)

Semester 3

Code	Title	Cr.	Prerequisite
CEN320	Signals and Systems	3	MIT 205, CEN201
CSC301	Data Structures and Algorithms	3	CSC202, MIT202
CSC305	Data Communications and Networks	3	Junior Level
CEN304	Electronic Devices and Circuits	3	CEN201
CEN325	IoT: Foundation & Design	3	CSC201, EEN210
CEN368	Computer Architecture and Organization	3	EEN210, CEN325
Total Credit Hours			18

Summer Semester

Code	Title	Cr.	Prerequisite
CEN399i	Internship In Computer Engineering I	2	90 Credit Hours
Total Credit Hours			2

Fourth Year (Senior)

Winter Semester

Code	Title	Cr.	Prerequisite
CEN399ii	Internship in Computer Engineering II	1	CEN399i
Total Credit Hours			1

Semester 8

Code	Title	Cr.	Prerequisite
EEN365	Control Systems	3	CEN320, MIT204
AIRE325	Edge AI	3	CEN325, AIRE310
CEN466	Advanced Digital System Design	3	EEN210
CEN452	Computer Engineering Design Project II	2	CEN451
CEN454	Computer Vision and Image Processing	3	CEN464, CEN464L
AIRE430	Generative AI	3	AIRE310
Total Credit Hours			17

Semester 7

Code	Title	Cr.	Prerequisite
GEN300	Numerical Methods	3	MIT205, CSC201
FWS310	Fund. of Innovation & Entrepreneurship	3	ENG200 +min 60 credits
AIRE475	Self-Driving Cars	3	AIRE310, CEN325
CEN455	Fund. of Sec. for Computer & Embedded Systems	3	CSC308, CSC305, CEN325
CEN464L	Signal Processing Lab	1	CEN464(co)
CEN464	Digital Signal Processing	3	CEN320
CEN451	Computer Engineering Design Project I	1	Senior Level
Total Credit Hours			17