Bachelor of Science in Computer Engineering – Artificial Intelligence Concentration
Study Plan (Fall Start)
First Year (Freshman)

Total Credit Hours: 137

Semester 1

Code	Title	Cr.	Prerequisite
ARL101(A)	Comm. Skills in Arabic Lang.	3	Nil
ECS200	Intro. to Engr. & Computing	3	Nil
MTT102	Calculus I	3	Math Placement Test or MTT101 (C grade)
STT100	General Statistics	3	Nil
ISL100(A)	Islamic Culture	3	Nil
	Total Credit Hours	**15**	

Semester 2

Code	Title	Cr.	Prerequisite
FWS205	UAE and GCC Society	3	ENG102 (P) & FWS100 (E)/ USS001 as pre-requisite FWS100(E)/ USS001 as co-requisite if students enter to ENG200 directly
ENG200	English II	3	IELTS average score of 6 or EMSAT average score of 1400 or passing grade in ENG 102 (FWS100(E)/ USS001 as co-req if placed in ENG200)
COE101	Introductory Artificial Intelligence	3	STT100
PHY102	Physics & Engr. Applications I	3	MTT102
PHY102L	Physics & Engr. Applications I Lab	1	MTT102, PHY102(co)
MTT200	Calculus II	3	MTT102
	Total Credit Hours	**16**	

Second Year (Sophomore)

Semester 3

Code	Title	Cr.	Prerequisite
CSC201	Computer Programming I	3	MTT101 or higher
PHY201	Physics & Engr. Applications II	3	PHY102
PHY201L	Physics & Engr. Applications II Lab	1	PHY102, PHY201(co)
CSC303	Digital Logic Design	3	ECS200
COE202	Engineering Ethics, Economy, and Law	3	ENG200, MTT102
MTT202	Discrete Structures and Applications	3	STT100
	Total Credit Hours	**16**	

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	ECS200 or PHY201
AIRE305	Artificial Intelligence for Engineers	3	CSC201, COE101
MTT205	Differential Equations	3	MTT200, MTT204(co)
MTT204	Introduction to Linear Algebra	3	MTT200
	Total Credit Hours	**18**	

Third Year (Junior)

Semester 5

Code	Title	Cr.	Prerequisite
CEN320	Signals and Systems	3	MTT 205, CEN201
CSC301	Data Structures and Algorithms	3	CSC202, MTT202
CSC305	Data Communications and Networks	3	Junior Level
CEN304	Electronic Devices and Circuits	3	CEN201
CEN325	IoT: Foundation & Design	3	CSC201, CSC303
FWS310	Fund. of Innovation & Entrepreneurship	3	ENG200+ min 60 credits
	Total Credit Hours	**18**	

Semester 6

Code	Title	Cr.	Prerequisite
CEN330	Probability and Stochastic Processes	3	MTT200, STT100
CSC308	Operating Systems	3	CSC301
CSC408	Distributed Information Systems	3	CSC202, CSC305
CEN324	Digital and Analog Electronics	3	CEN304
CEN425	IoT: Applications & Networking	3	CEN325
AIRE310	Machine Learning and Pattern Recognition	3	CSC201, COE101, MTT200
	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)

Semester 7

Code	Title	Cr.	Prerequisite
GEN300	Numerical Methods	3	MTT205, CSC201
CEN468	Computer Architecture and Organization	3	CSC303, CEN325
AIRE410	Deep Learning	3	AIRE310
CEN455	Fund. of Sec. for Computer & Embedded Systems	3	CSC308, CSC305, CEN325
CEN464	Digital Signal Processing	3	CEN320
CEN451	Computer Engineering Design Project I	1	Senior level, CEN425
	Total Credit Hours	**16**	

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, MTT204
CE1	Concentration Elective I	3	
CEN466	Advanced Digital System Design	3	CSC303
CEN452	Computer Engineering Design Project II	2	CEN451
CEN454	Computer Vision and Machine Learning	3	CEN320
CE2	Concentration Elective II	3	
	Total Credit Hours	**17**	