

Department:		Artificial Intelligence Thrust			Pathway 1									
Program:		BEng in Artificial Intelligence			Background:									
(Major/Minor/Other*)					Profile:									
*delete as appropriate														
Subject Area (course code prefix)	Course Number	Course Title / Courses List			Credits	Year 1 Fall	Year 1 Spring	Year 2 Fall	Year 2 Spring	Year 3 Fall	Year 3 Spring	Year 4 Fall	Year 4 Spring	Sub-total
Common Core	Experiencing	Undergraduate experiential Opportunities Programs (UxOP) (can be substituted by any Broadening courses) Undergraduate Research Opportunities Programs (UROP) Undergraduate Teaching Opportunities Programs (UTOP) Undergraduate Practice Opportunities Programs (UPOP) Undergraduate Global Challenges and Opportunities Programs (UCOP)			0-3									0
	Broadening	12 credits under stipulated program-specific areas; 0 to 6 credits under any areas as substitution to CTDL/UxOP Arts (A) Humanities (H) Science (S) Technology (T) Social Analysis (SA)			12-18		3		3					15
	Foundations	Cognitive Foundations of University Education. Critical Thinking and Data Literacy (CTDL) Behavioral Foundations of University Education: Habits, Mindsets, and Wellness (HMW) English Communication Chinese Communication			12-15	3								15
						0-3	2	1						
						3	3	3						
						3			3	3				
						3								
						3								
						3								
						3								
Fundamental Course(s)	UFUG		Note: UFUG 1102 OR UFUG 1105		3									3
	UFUG	1102	Calculus I		3	3								3
	UFUG	1105	Honors Calculus I		3									
	UFUG		Note: UFUG1103 OR UFUG 1106		3									
	UFUG	1103	Calculus II		3		3							3
	UFUG	1106	Honors Calculus II		3									
	UFUG	1601	Introduction to Computer Science		3			3						3
	UFUG		Note: UFUG 2601 OR UFUG 2602		3-4									
	UFUG	2601	C++ Programming		4				3					3
	UFUG	2602	Data Structure and Algorithm Design		3									
	UFUG		Note: UFUG 1301 OR UFUG1302 OR UFUG 1401 OR UFUG 1501 OR UFUG 1503		3									
	UFUG	1301	General Chemistry		3									
	UFUG	1302	Honors Chemistry I		3									
	UFUG	1401	General Biology I		3		3							3
	UFUG	1501	General Physics I		3									
UFUG	1503	Honors General Physics I		3										
UFUG		Note: UFUG 2102 OR UFUG 2103		3										
UFUG	2102	Matrix Algebra and Applications		3			3						3	
UFUG	2103	Linear Algebra		3										
UFUG	2104	Applied Statistics		3				3					3	
<b>Required Credits for Fundamental Course(s)</b>					<b>21-22</b>								<b>21</b>	
Program Major Required Course(s)	AIAA	1010	Academic Orientation for AI Students		1			1						1
	AIAA	2205	Introduction to Artificial Intelligence		3			3						3
	AIAA	2290	Ethics, Privacy and Security in Artificial Intelligence		3					3				3
	AIAA	2711	Mathematics for AI		3						3			3
	DLED	3020	English Communication I for Information Hub Programs		3					3				3
	AIAA	3102	Python Programming for and with Artificial Intelligence		3					3				3
	AIAA	3111	Introduction to Data Mining		3					3				3
	AIAA	3201	Introduction to Computer Vision		3						3			3
	DSAA	2011	Machine Learning		3						3			3
	DSAA	2043	Design and Analysis of Algorithms		3						3			3
	DLED	4020	English Communication II for Information Hub Programs		3							1	2	3
	AIAA	4051	Introduction to Natural Language Processing		3							3		3
	AIAA	4490	Final Year Capstone Project		6							3	3	6
<b>Required Credits for Program Major Required Course(s)</b>					<b>40</b>								<b>40</b>	
Elective Course(s) (Option A)	DSAA	1001	Introduction to Data Science and Analytics		3									
	DSAA	2012	Deep Learning		3									
	AIAA	2211	Exploring Artificial Intelligence		3									
	AIAA	3053	Reinforcement Learning: Principles and Methods		3									
	AIAA	3072	Foundations of Quantum Computing and Quantum AI		3									
	AIAA	3075	Information-Theoretic Foundations of Compression and Learning		3									
	AIAA	3225	Learning and Optimization for Artificial Intelligence		3									
	AIAA	4213	Introduction to Bayesian Networks		3									
	AIAA	4220	Introduction to Embodied AI		3					3	6	9	6	24
	AIAA	4250	Robotic Manipulation and Mobility		3									
	AIAA	4255	Machine Learning with Structured Data		3									
	AIAA	4330	Introduction to Artificial Intelligence and Big Data in Finance		3									
	AIAA	4332	Big Data Mining and Management		3									
	AIAA	4432	Statistical Machine Learning		3									
	AIAA	4641	Social Information Network Analysis and Engineering		3									
	AIAA	4711	Introduction to Advanced Algorithmic Techniques		3									
AIAA	4911	IT Entrepreneurship		3										
<b>Sub-total for Option A</b>					<b>24</b>								<b>24</b>	
<b>Required Credits for Program Major Elective Course(s)</b>					<b>24</b>								<b>24</b>	
<b>Total Credits for the Program</b>					<b>115-116</b>	<b>Semester load (excl. free credits)</b>								
						14	13	13	15	15	18	16	11	
						<b>115</b>								

<< Declaration of major