DONG NAI TECHNOLOGY UNIVERSITY

DNTU

CURRICULUM

Major:	**Artificial Intelligence**
Education level:	**Undergraduate**
Mode of study:	**Full-time**
Program duration:	**4 years**
Degree awarded:	**Engineer**
Cohort:	**Cohort 21 (2025–2029)**
Total program credits:	**152**

Courses marked (*) are excluded from the cumulative GPA.

SEMESTER 1: 7 credits (required: 7, elective: 0)					
Course code	**Course title**	**Credits**	**Total hours**	**Lecture hours**	**Practical hours**
Required courses		**7**			
CB70107	Introduction to DNTU (*)	1	15	15	0
TA70301	Key English 1 (*)	3	45	45	0
TA70302	Key English 2 (*)	3	45	45	0
TA70303	Key English 3 (*)	3	45	45	0
TA70304	English Speaking Community (*)	2	30	30	0
CB70303	Public Speaking Skills	1	15	15	0
TH70105	Programming Fundamentals	3	60	30	30
TH70103	Introduction to Computing	2	60	0	60
TN70001	Introduction to the Artificial Intelligence Major	1	15	15	0
SEMESTER 2: 21 credits (required: 19, elective: 2)					
Course code	**Course title**	**Credits**	**Total hours**	**Lecture hours**	**Practical hours**
Required courses		**19**			

CB70401	National Defense and Security Education 1 (*)	3	45	45	0
CB70402	National Defense and Security Education 2 (*)	2	30	30	0
CB70403	National Defense and Security Education 3 (*)	1	30	0	30
CB70404	National Defense and Security Education 4 (*)	2	60	0	60
CB70304	Emotional Management Skills	1	15	15	0
CB70101	Marxist–Leninist Philosophy	3	45	45	0
CB70202	Advanced Mathematics	3	45	45	0
TA70305	Intensive English 1	4	60	60	0
PM70208	Introduction to Artificial Intelligence	2	45	15	30
PM70202	Programming Techniques	3	60	30	30
TN70002	Computer Architecture	3	60	30	30
Elective courses (Choose 1 of 3 courses)		**2**			
TH71101	Operating Systems	2	45	15	30
TN71002	Introduction to Electronics	2	45	15	30
TN71019	Ethics in AI	2	30	30	0
SEMESTER 3: 21 credits (required: 19, elective: 2)					
Course code	**Course title**	**Credits**	**Total hours**	**Lecture hours**	**Practical hours**
Required courses		**19**			
CB70411	Swimming (*)	1	30	0	30
CB70305	Communication and Relationship-Building Skills	2	30	30	0
CB70106	Introduction to Law	2	30	30	0
CB70102	Marxist–Leninist Political Economy	2	30	30	0
TA70306	Intensive English 2	4	60	60	0
TH70106	Computer Networks	3	60	30	30
TN70003	Python Programming	3	60	30	30

TN70023	Discrete Structures	3	45	45	0
Elective courses (Choose 1 of 3 courses)		**2**			
CB71101	Environment and Sustainable Development	2	30	30	0
CB71102	Behavioral Psychology	2	30	30	0
CB71103	Psychology and Medical Ethics	2	30	30	0
SEMESTER 4: 22 credits (required: 17, elective: 5)					
Course code	**Course title**	**Credits**	**Total hours**	**Lecture hours**	**Practical hours**
Required courses		**17**			
CB70307	Industrial Accident Prevention Skills	2	30	30	0
CB70206	Research Methodology	2	30	30	0
CB70103	Scientific Socialism	2	30	30	0
TA70307	Intensive English 3	4	60	60	0
PM70203	Databases	3	60	30	30
TN70006	Project-Based Advanced Programming	2	45	15	30
TN70004	Mathematics for AI	2	30	30	0
Elective courses (Choose 1 of 3 courses)		**2**			
CB71412	Football (*)	2	30	0	30
CB71403	Physical Education 2 – Volleyball (*)	2	30	0	30
CB71404	Physical Education 2 – Badminton (*)	2	30	0	30
Elective courses (Choose 1 of 3 courses)		**2**			
CB71104	Green Economy and Sustainable Development	2	30	30	0
CB71105	Vietnamese Traditional Culture and Music	2	30	30	0
CB71106	History of World Civilizations	2	30	30	0
Elective courses (Choose 1 of 3 courses)		**3**			
TN71003	Introduction to Digital Circuits	3	60	30	30

TH71103	Introduction to Data Science	3	60	30	30
TN71004	Knowledge Representation and Reasoning	3	45	45	0
SEMESTER 5: 21 credits (required: 19, elective: 2)					
Course code	**Course title**	**Credits**	**Total hours**	**Lecture hours**	**Practical hours**
Required courses		**19**			
CB70309	Effective and Creative Thinking Skills	2	30	30	0
CB70104	Ho Chi Minh Thought	2	30	30	0
CB70105	History of the Communist Party of Vietnam	2	30	30	0
TA70308	Intensive English 4	4	60	60	0
TH70107	Data Structures and Algorithms	3	60	30	30
TN70005	Fundamental Data Analysis Methods	3	60	30	30
TN70007	Artificial Intelligence	3	60	30	30
Elective courses (Choose 1 of 2 courses)		**2**			
TN71005	Graph Theory	2	30	30	0
TN71006	Probability and Statistics for AI	2	30	30	0
Elective courses (Choose 1 of 2 courses)		**1**			
CB71413	Fitness (*)	1	30	0	30
CB71406	Dancesport (*)	1	30	0	30
CB71407	Basketball (*)	1	30	0	30
CB71414	Martial Arts (*)	1	30	0	30
SEMESTER 6: 21 credits (required: 15, elective: 6)					
Course code	**Course title**	**Credits**	**Total hours**	**Lecture hours**	**Practical hours**
Required courses		**15**			
PM70205	Object-Oriented Programming	3	60	30	30

TH70109	Information Systems Analysis and Design	3	60	30	30
TN70009	Visual Analytics	3	60	30	30
TN70010	Big Data	3	60	30	30
TH71111	Computer Vision	3	60	30	30
Học phần tự chọn (Chọn 2 trong 4 học phần)		**3**			
TN71007	Machine Learning – Supervised Learning Techniques	3	60	30	30
TN71008	Machine Learning – Unsupervised Learning Techniques	3	60	30	30
TN71009	Robotics	3	60	30	30
TN71010	Machine Learning and Pattern Recognition	3	60	30	30
SEMESTER 7: 21 credits (required: 9, elective: 12)					
Course code	**Course title**	**Credits**	**Total hours**	**Lecture hours**	**Practical hours**
Required courses		**9**			
TH71113	IT Project Management	3	45	45	0
TH71110	Deep Learning	3	60	30	30
TN70012	Selected Topics in AI Applications	3	60	30	30
Elective courses (Choose 4 of 8 courses)		**12**			
PM70210	Information Security	3	60	30	30
TN71011	Deep Neural Networks	3	60	30	30
TN71012	Natural Language Processing	3	60	30	30
TN71013	Reinforcement Learning	3	60	30	30
TN71014	Digital Signal Processing	3	60	30	30
TN71015	Expert Systems	3	60	30	30
TN71016	Symbolic Programming for AI	3	60	30	30
TN71017	Fuzzy Logic and Its Applications in AI	3	60	30	30
SEMESTER 8: 18 credits (required: 8, elective: 10)					

Course code	Course title	Credits	Total hours	Lecture hours	Practical hours
Professional and Graduation Internships		***8***			
TN70013	Graduation Internship	8	120	120	0
Graduation Thesis		***10***			
TN71020	Graduation Thesis	10	150	150	0
Courses in Lieu of the Graduation Thesis		***10***			
TN71021	Machine Learning with Big Data	4	75	45	30
TN71022	Computational Data Analytics	3	60	30	30
TN71018	Generative AI	3	60	30	30