DONG NAI TECHNOLOGY UNIVERSITY

DNTU

CURRICULUM

Major: **Machine building technology**

Educational Level: **Undergraduate**

Mode of Study: **Full-time**

Duration of Study: **4 years**

Degree Awarded: **Engineer degree**

Cohort: **Cohort 22 (2026-2030)**

Total cumulative credits for the whole program: **152**

Courses marked with (*) are not calculated into the cumulative GPA.

SEMESTER 1: 17 cumulative credits (Compulsory: 14, Elective: 3)					
Course Code	**Course Name**	**Credits**	**Total Hours**	**Theory Hours**	**Practice Hours**
Compulsory Courses		**17**			
CT70102	Technical drawing	2	30	30	0
CT70104	Autocad	2	60	0	60
CT70111	Basic electronics	2	30	30	0
CT70157	Electrical engineering	2	60	0	60
CT70109	Measurement technical tolerances	2	30	30	0
CT70101	Introduction to machine manufacturing technology	1	15	15	0
CT70175	Python Programming	3	45	45	0
TH70001	Informatics 1(*)	2	45	15	30
CB70411	Swimming(*)	1	30	0	30
Elective Courses (Choose 1 out of 2 courses)		**5**			
TA71331	English 1	3	45	45	0
TQ71321	Chinese 1	3	45	45	0

SEMESTER 2: 22 cumulative credits (Compulsory: 17, Elective: 5)					
Course Code	**Course Name**	**Credits**	**Total Hours**	**Theory Hours**	**Practice Hours**

Compulsory Courses		**20**			
CB70101	Philosophy of Marxism and Leninism	3	45	45	0
TH70002	Informatics 2(*)	2	60	0	60
CB70202	Advanced Mathematics	3	45	45	0
CT70105	Theoretical mechanics	3	45	45	0
CT70126	Practice in electronic circuit design	1	30	0	30
CT70113	Mechanical materials	2	30	30	0
CT70103	Mechanical engineering drawing	2	30	30	0
CT70112	Material strength	2	30	30	0
CT70171	Digital	3	60	30	30
Elective Courses		**5**			
TA71332	English 2	3	45	45	0
TQ71322	Chinese 2	3	3	45	45
CT71253	Mechanical measurement experiment	2	60	0	60
CT71254	Materials science experiment	2	60	0	60
National Defense Education					
CB70401	National Defense Education - 1st Course(*)	3	45	45	0
CB70402	National Defense Education - 2nd Course(*)	2	30	30	0
CB70403	National Defense Education - 3rd Course(*)	1	30	0	30
CB70404	National Defense Education - 4th Course(*)	2	60	0	60
Physical Education 2 (Choose 1 out of 4 courses)					
CB71412	Football(*)	1	30		30
CB71403	Volleyball(*)	1	30		30
CB71404	Badminton(*)	1	30		30
CB71410	Pickleball(*)	1	30		30
SEMESTER 3: 24 cumulative credits (Compulsory: 17, Elective: 7)					

Course Code	Course Name	Credits	Total Hours	Theory Hours	Practice Hours
Compulsory Courses		**17**			
CB70102	Political Economics of Marxism and Leninism	2	30	30	0
CB70106	Introduction of Laws	2	30	30	0
CB70203	Physics	3	45	45	0
CT70176	Fluid mechanics	3	45	45	0
CT70162	Automatic control engineering	2	30	30	0
CT70110	Principle, machine details	3	45	45	0
Elective Courses (Choose 1 out of 2 courses)		**7**			
TA71333	English 3	3	45	45	0
TQ71323	Chinese 3	3	45	45	0
CB71201	Computational mathematics	2	30	30	0
CB71202	Computational mathematics	2	30	30	0
CB70311	Occupational Safety and Technical Environment	2	30	30	0
CB70305	Communication and Relationship Building Skills	2	30	30	0
Physical Education 2 (Choose 1 out of 4 courses)					
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 4: 24 cumulative credits (Compulsory: 24, Elective: 0)					
Course Code	**Course Name**	**Credits**	**Total Hours**	**Theory Hours**	**Practice Hours**
Compulsory Courses		**20**			
CB70103	Scientific Socialism	2	30	30	0

CT70173	Machine Building Technology	3	45	45	0
CT70123	Mechanical design on computers	2	30	30	0
CT70163	Practice of automatic control engineering	1	30	0	30
CT70160	CAD/CAM-CNC Technology	2	30	30	0
CT70161	CAD/CAM-CNC Technology Practice	2	60	0	60
CT70125	Machine Detail Project	1	30	0	0
CT70167	Basic Mechanical Practice 1	2	60	0	60
CT70168	Basic Mechanical Practice 2	2	60	0	60
CT70158	Electrical and electronic equipment in industrial machines	2	30	30	0
CT70159	Practice electrical and electronic equipment in industrial machines	1	30	0	30
CT70172	Kỹ thuật cảm biến đo lường	3	60	30	30
TA71334	English for International Certification*	9	135	135	0
TQ71324	Chinese for International Certification*	9	135	135	0
SEMESTER 5: 19 cumulative credits (Compulsory: 19, Elective: 0)					
Course Code	**Course Name**	**Credits**	**Total Hours**	**Theory Hours**	**Practice Hours**
Học phần bắt buộc		**19**			
CB70104	Ho Chi Minh Ideology	2	30	30	0
CT70136	CNC machining technology	3	75	15	60
CT70132	Hydraulic Pneumatic System	3	75	15	60
CT70134	Machine building technology project	1	30	0	0
CT70164	PLC programming techniques	3	75	15	60

CT70177	Mechanical mold design	2	30	30	0
CT70178	Mold design technical project	1	30	0	0
CT70179	Application of CAE to mechanical design	2	60	0	60
CB70206	Scientific research method	2	30	30	0
SEMESTER 6: 14 cumulative credits (Compulsory: 5, Elective: 9)					
Course Code	**Course Name**	**Credits**	**Total Hours**	**Theory Hours**	**Practice Hours**
Compulsory Courses		**5**			
CB70105	History of Vietnamese Communist Party	2	30	30	0
CT70181	Industrial Robots	3	75	15	60
Elective Courses (Choose 4 out of 8 courses)		**9**			
CT71265	Artificial Intelligence and Applications	2	30	30	0
CT71266	IoT Technology	3	60	30	30
CT71268	Robot Projects	1	30	0	0
CT71269	IoT Projects	1	30	0	0
CT71271	Industrial Networks	2	30	30	0
CT71272	SCADA System	3	60	30	30
DT70206	Microcontrollers	3	60	30	30
CT70174	Digital photo processing	3	45	45	0
SEMESTER 7: 9 cumulative credits (Compulsory: 0, Elective: 9)					
Course Code	**Course Name**	**Credits**	**Total Hours**	**Theory Hours**	**Practice Hours**
Compulsory Courses		**2**			
CT71130	English for Mechanical Engineering	2	30	30	0
CT70180	Reverse engineering technology and 3D printing	2	45	15	30
Elective Courses (Choose 3 out of 6 courses)		**1**			
CT71263	Robot control techniques	3	45	45	0

CT71264	Robotic Dynamics	3	45	45	0
CT71267	Deep Learning and Applications	3	60	30	30
CT71144	Mechatronics System	3	45	45	0
CT71270	Digital Signal Processing	3	45	45	0
CT71273	Embedded systems for Mechatronics	3	60	30	30
SEMESTER 8: 9 cumulative credits (Compulsory: 8, Elective: 1)					
Course Code	**Course Name**	**Credits**	**Total Hours**	**Theory Hours**	**Practice Hours**
Compulsory Courses		**8**			
CT70170	Engineering internship	8	240	0	240
Elective Courses (Choose 1 out of 2 courses)		**1**			
CT71274	Mechatronics Projects	1	30	0	30
CT71275	Automatic control engineering project	1	30	0	30
SEMESTER 9: 10 cumulative credits (Compulsory: 10, Elective: 0)					
Course Code	**Course Name**	**Credits**	**Total Hours**	**Theory Hours**	**Practice Hours**
Compulsory Courses		**10**			
CT70182	Graduation thesis	10	300	0	300