MINISTRY OF EDUCATION AND TRAINI NAM CAN THO UNIVERSITY

UNDERGRADUATE PROGRAM

(Issued together with Decision No. /QĐ-ĐHNCT dated / /2025 of The Rector of Nam Can Tho University)

Name of program	: Environment and Natural Resources Management
Level	: Undergraduate
Major	: Environment and Natural Resources Management
Code	: 7850101
Type of education	: Full-time

1. Program description

1.1 Introduction to the program

The Environment and Natural Resources Management is a bachelor's program in Natural Resources and Environment Management with good moral qualities and health, professional capacity in sustainable management of natural resources and the ability to control environmental quality in the nature, production and life.

Program Name (Vietnamese)	ese) Quản lý Tài nguyên và Môi trường					
Program Name (English)	Environment and Natural Resources					
	Management					
Code	7850101					
Degree granting school	Nam Can Tho University					
Degree	Bachelor of Land Management					
Level	Undergraduate					
Number of credits required	143					
Type of education	Full-time					
Program duration	4 years					
Eligible candidates for admission	High school graduates					
Rating scale	4					
Graduation conditions	- Accumulate enough credits and volume					
	of the 143-credit training program					
	- Cumulative GPA of the entire course is					
	5.0 or higher					
	- Meet the output standards for English					
	and IT proficiency according to the					
	general regulations of the school					
	- Meet the output standards for soft skills					

1.2 Information about the training program

	and professional skills
	- Have a National Defense Education
	certificate and complete the conditional
	courses
Job position	- Experts at institutes, central economic
	and scientific management agencies to
	specialized management agencies on
	resources: Provincial Department of
	Natural Resources and Environment and
	District Department of Natural Resources
	and Environment nationwide;
	- Staff at environmental monitoring centers at all levels; Department of
	Agriculture and Rural Development;
	Center for scientific and technological
	research;
	- Project and program staff on
	conservation, sustainable development,
	anvironmental protection:
	Environmental impact assessment
	consultants
Advanced study	Can continue to study for a master's
	degree at home and abroad
Reference program	Can The University Dong Than
P0	University
Update time	8/2024

1.3 Training goals

1.3.1 General goal

The objective of the undergraduate program in Environmental and Natural Resources Management is to train:

- Human resources meet the high professional requirements in quantity and quality for the labor market in the integration period.

- Bachelor of Natural Resources and Environment Management is in charge of surveying, investigating natural resources and monitoring environmental quality, assessing environmental impacts, auditing the environment, inspecting the environment to serve the exploitation and use of natural resources and the environment in a sustainable manner, comprehensive management of natural resources and the environment; consulting or organizing the implementation of environmental management records at enterprises and production facilities.

- Scientific and technological research staff in research units, non-governmental organizations, and projects on natural resources and environment.

- Teaching staff in universities, colleges, and intermediate schools in the field of natural resources and environment management.

Graduates have good political and moral qualities, professional knowledge and skills, the ability to self-study, self-research, create and solve theoretical and practical requirements and problems in natural resources and environment management, the ability to adapt to the working environment, and self-adapt to lifelong learning.

1.3.2 Specific goals

M1: Understand and apply basic and specialized knowledge of the field of Natural Resources and Environment management to professional work.

M2: Forming professional ideas in Natural Resources and Environment management and developing the capacity to manage and operate work at individual and collective scales.

M3: Meet the requirements of professional skills, soft skills from society, working environment and research.

M4: Organize and perform professional operations in Natural Resources and Environment management, thereby developing creativity at work.

M5: Forming the ability to self-study, self-research in expertise, developing capacity in life and guiding people around, thereby changing and improving social life.

1.4. Student learning outcomes

a. Knowledge

- **SO1:** Complete basic knowledge of science, politics, law, and national defense education.

- **SO2:** Apply specialized software in establishing current status maps and analyzing data on current environmental status.

- **SO3:** Apply new technologies, especially artificial intelligence and digital transformation to improve work efficiency.

- SO4: Effective application of tools to environmental management at local/regional levels

- SO5: Prepare and monitor environmental reports at the facility

b. Skills

- SO6: Achieve English and IT proficiency according to school regulations

- **SO7:** Evaluate environmental records.

- **SO8:** Find raw materials with potential for future development, create job opportunities and start-ups for the community

c. Capacity for autonomy and responsibility

- SO9: Perform work independently, work in a team, be confident in work, enthusiastic and creative.

1.5 Teaching and learning methods/strategies and assessment methods

1.5.1. Teaching and learning methods/strategies

The teaching methods are presented in the table below

Methods and form of teaching	Purpose			
Presentation	Systematically convey knowledge, helping learners grasp basic and core content.			
Discussion	Develop critical thinking, communication skills, and teamwork abilities.			
Assignment	Reinforce and apply learned knowledge, honing practical problem-solving skills.			
Self-study, reading of reference materials	Develop self-learning abilities, deepen knowledge, and expand understanding beyond lectures.			

1.5.2. Grading scale, form, assessment criteria, and weight of scores						
No.	Form	%	Assessment criteria	Maximum score		
			- Proactivity, level of active preparation, and participation in class			

No	Form	0/0	Assessment criteria	Maximum
110	TOTM	70	Assessment er tter ta	score
1	Attendance	10	 Proactivity, level of active preparation, and participation in class activities. Attendance time in mandatory classes. 	10
2	Personal exercises	15	Quality of submitted work.	10
3	Progress assessment	15	Based on the instructor's answer key and grading scale.	10
4	Final exam	60	Based on the instructor's answer key and grading scale.	10

2. Training time: 4 years

3. Total course knowledge:

Course knowledge: 143 credits (excluding Physical Education and National Defense Education), distributed as follows:

KNOWLEDGE BLOCK	Required knowledge	Elective knowledge	Total
General education knowledge	46	0	46
Professional educational knowledge	79	18	97
- Basic industry knowledge	35	06	42

- Industry and specialized knowledge	40	06	46
- Graduation internship	4	0	4
- Graduation/alternative thesis	0	6	6
Total	125	18	143

4. Enrollment subjects

Admission is based on the results of the national high school graduation exam or the transcript of high school studies according to the combination of subjects by major and nationwide.

5. Training process, graduation requirements

5.1. Training process

Implement the regulations for regular university and college training according to the credit system and current training regulations of Nam Can Tho University.

5.2. Graduation conditions:

NO	Course code	Course name	Number of credits	Theory	Practice	Category
А	Political theo	ry	12			
1	0101000869	History of the Communist Party of Vietnam	3	3		CS
2	0101000900	Ho Chi Minh's Thought	2	2		CS
3	0101000890	Scientific socialism	2	2		CS
4	0101000641	Marxist-Leninist Political	2	2		CS
5	0101000889	Marxist-Leninist	3	3		
В	Social science	es and humanities	2			
6	0101000891	general law	2	2		CS
С		Foreign language	15			CS
7	0101000861	Basic English 1	3	3		CS
7	0101000862	Basic English 2	3	3		CS
8	0101000863	Basic English 3	3	3		CS
9	0101002348	Basic English 4	3	3		CS
10	0101002363	Basic English 5	3	3		CS
D	Natural science		17			
11	0101000898	Advanced math	3	3		CS
12	0101000896	Basic informatics	3	2	1	CS
13	0101000883	Probability theory and mathematical statistics	3	3		CS

NO	Course code	Course name	Number of credits	Theory	Practice	Category
14	0101000269	General analytical	2	2		CS
15	0101000270	General analytical	1	1		CS
16	0101000892	General biology	2	2		CS
17	0101000957	General biology Practice	1		1	CS
18	0101000881	General logic	2	2		CS
Е	E Physical education		3			
19	0101000872	Physical education 1 (*)	1	1	1	С
20	0101000873	Physical education 2 (*)	1	1	1	С
21	0101000874	Physical education 3 (*)	1	1	1	С
F	National defense education		8		8	
22	0101000871	National defense education	8		8	С

- Students who complete the training program are considered to graduate and recognized as graduating according to Article 27 of the training regulations according to the credit system. - Achieve English and IT proficiency according to the general regulations of the School (for IT, achieve module 01 to 06 of the information technology skills standard according to Circular 03/2014/TT-BTTTT)

- Obtaining certificates of National Defense-Security Education; Physical Education; Soft Skills and Vocational Skills.

- Evaluation of component scores and course scores is carried out according to Articles 22 and 23 of the credit-based training regulations.

- Ranking of academic years and graduation rankings is carried out according to Articles 14 and 28 of the credit-based training regulations.

6. PROGRAM CONTENT

6.1 General education knowledge

(*) Conditional credits, not cumulative average

6.2 Professional education knowledge block

NO	Course code	Course name	Number of credits	Theory	Practice	Category
Basic industry knowledge			(35+6)			
1	0101000303	Hydrometeorology	3	3		CS
2	0101000229	Environmental science foundation	3	3		CS
3	0101001238	Environmental testing statistics	3	2	1	CS
4	0101000154	Geodesy	2	2		CS

NO	Course code	Course name	Number of credits	Theory	Practice	Category
5	0101000155	Geodesy Practice	1		1	CS
6	0101000253	System information address and perspective	2	2		CS
7	0101000254	System information address and perspective Practice	1		1	CS
8	0101000147	Hydraulics (fluid mechanics)	2	2		CS
9	0101000282	Economics of Resources and Environment	2	2		CS
10	0101000745	Law on resources and environment	3	3		CS
11	0101000374	Environmental planning	2	2		CS
12	0101000233	Water quality	2	2		CS
13	0101000351	Scientific research methods	2	2		CS
14	0101000169	Environmental English 1	3	3		CS
15	0101000170	Environmental English 2	2	2		CS
16	0101000135	Applied Engineering 1 (AutoCAD 2D)	2		2	CS
17	0101000240	Population - health - environment	2	2		ES
18	0101000385	Climate change				ES
19	0101000014	Water supply and drainage		2		ES
20	0101000391	Calculating and forecasting water demand	2			ES
21	0101000851	Resource and environment communication	2	2		ES
22	0101001063	Natural disasters and risk management				ES
Ind	Industry and specialized knowledge		(40+6)			
23	0101000371	Environmental monitoring and analysis	2	2		CS
24	0101000373	Environmental monitoring and analysis Practice	1		1	CS
25	0101000380	Water resources planning and management	2	2		CS

NO	Course code	code Course name		Theory	Practice	Category
26	0101000362	Resource and environmental management	3	3		CS
27	0101000038	Environmental Impact Assessment	2	2		CS
28	0101001061	Environmental Impact Assessment Practice	1		1	CS
29	0101000106	Wastewater treatment engineering	2	2		CS
30	0101000107	Project. Wastewater treatment engineering	1		1	CS
31	0101000316	Environmental modeling	2	2		CS
32	0101000361	Urban and industrial environmental management	2	2		CS
33	0101001061	Urban and industrial environmental management Practice	1		1	CS
34	0101001236	Agricultural and Rural Environmental Management	2	2		CS
35	0101001237	Agricultural and Rural Environmental Management Practice	1		1	CS
36	0101001062	Marine resources and environment management	2	2		CS
37	0101001542	Marine resources and environment management Practice	1		1	CS
38	0101000363	Land resource management	2	2		CS
39	0101000364	Forest resource management	2	2		CS
40	0101000365	Forest resource management Practice	1		1	CS
41	010100035	Solid and hazardous waste management	2	2		CS
42	0101000356	Solid and hazardous waste management Practice	1		1	CS

NO	Course code	Course name	Number of credits	Theory	Practice	Category
43	0101000279	Air and noise pollution control	2	2		CS
44	0101000210	Environmental technology	2	2		CS
45	0101000639	Environmental and resource audit	3	3		CS
46	0101000466	Environmental toxicology		2		ES
47	0101000163	Occupational safety and environmental hygiene	2			ES
48	0101000386	Environmental biological indicators	2	2		ES
49	0101000420	Land degradation and pollution treatment	2			ES
50	0101000357	Wetland Management		2		ES
51	0101000779	Investment project management	2			ES
Gra	aduation inter	nship	4			
52	0101000406	Graduation internship	4		4	CS
Gra	aduation/alter	native thesis	6			
53	0101000306	Graduation thesis	6		6	ES
54	0101000366	Community-Based Natural Resource Management	3	3		ES
55	0101000242	Assessment of soil, water and air quality	3	3		ES

7. Teaching plan

Semester 1:

No	Course nome	Number of Total		Total	Catagony	
110.	Course name	credits	periods	Theory	Practice	Category
1	Basic English 1	3	45	45		
2	Physical education 1	1	30		30	CON
3	Marxist-Leninist Philosophy	3	45	45		
4	National defense education	8	120	75	90	CON
To	otal accumulated credits	14	95	95	0	

Semester 2:

No.	Course name	Number of	Total periods	Total	Category	
		credits		Theory	Practice	
1	General biology	2	30	30		
2	General biology Practice	1	30		30	
3	Ho Chi Minh's Thought	2	30	30		
4	Advanced math	3	45	45		
5	Basic English 2	3	45	45		
6	Physical education 2	1	30		30	CON
To	otal accumulated credits	12	180	150	30	

Semester 3:

No.	Course name	Number of credits	Total periods -	Total periods		Category
				Theory	Practice	
1	General law	2	30	30		
2	General analytical chemistry	2	30		30	
3	General analytical chemistry Practice	1	30	30		
4	Scientific Socialism	2	45	45		
5	Basic information	3	45	45		
6	Basic English 3	3	30		30	
7	General logic	2				
To	otal accumulated credits	15	180	150	30	

Semester 4:

No.	Course name	Number	Total	Total periods		Category
1.00		credits	periods	Theory	Practice	Curregory
1	Environmental science foundation	3	45	45		
2	Physical education 3	1	30		30	CON
3	Probability theory and mathematical statistics	3	45	45		
4	Water quality	2	30	30		
5	Marxist-Leninist Political Economy	2	30	30		
6	Basic English 4	3	45	45		
Το	otal accumulated credits	14	225	195	30	

Semester 5:

N	Course name	Number	Total	Total periods		Catalog
INO.		or credits	periods	Theory	Practice	Category
1	Hydrometeorology	3	45	45		
2	Hydraulics (fluid mechanics)	2	30	30		
3	Geodesy	2	30	30		
4	Geodesy Practice	1	30		30	
5	Applied Engineering 1 (AutoCAD 2D)	2	45	15	30	
6	Basic English 5	3	45	45		
7	History of the Communist Party of Vietnam	3	45	45		
r	۲ổng số tín chỉ tích lũy	16	270	210	60	

Semester 6:

No.	Course name	Number of credits	Total	Total periods		Category
			periods	Theory	Practice	
1	System information address and perspective	2	30	30		
2	System information address and perspective Practice	1	30		30	
3	Environmental testing statistics	3	45	30	30	
4	Scientific research methods	2	30	30		
5	Resource and environmental economics	2	30	30		
6	Environmental English 1	3	45	45		
7	Water supply and drainage Calculating and forecasting water demand	2	30	30		
Τα	otal accumulated credits	15	255	195	60	

Semester 7:

No.	Course name	Number of	Total	Total periods		Category
		credits	periods	Theory	Practice	
1	Law on resources and environment	3	45	45		
2	Environmental English 2	2	30	30		
3	Resource and environmental management	3	45	45		
4	Population - health - environment Climate change	2	30	30		
5	Environmental communication Natural disasters and risk management	2	30	30		
To	otal accumulated credits	12	180	180	0	

Semester 8:

No.	Course name	Number of credits	Total	Total	Category	
			periods	Theory	Practice	
1	Environmental technology	2	30	30		
2	Environmental planning	2	30	30		
3	Marine resources and environment management	2	30	30		
4	Marine resources and environment management Practice	1	30		30	
5	Forest resource management	2	30	30		
6	Forest resource management Practice	1	30		30	
	Environmental Toxicology					
7	Occupational Safety and Environmental Hygiene	2	30	30		
To	otal accumulated credits	12	210	150	60	

Semester 9:

No.	Course name	Number of credits	Total	Total periods		Category
			periods	Theory	Practice	
1	Wastewater treatment engineering	2	30	30		
2	Project. Wastewater treatment engineering	1	30		30	
3	Solid and hazardous waste management	2	30	30		
4	Solid and hazardous waste management Practice	1	30		30	
5	Environmental modeling	2	30	30		
6	Environmental monitoring and analysis	2	30	30		
7	Environmental monitoring and analysis Practice	1	30		30	
To	otal accumulated credits	11	210	120	90	

Semester 10:

NI	Course name	Number	Total	Total	Catal	
INO.		of credits	periods	Theory	Practice	Category
1	Water resources planning and management	2	30	30		
2	Environmental Impact Assessment	2	30	30		
3	Environmental Impact Assessment Practice	1	30		30	
4	Air and noise pollution control	2	30	30		
5	Wetland Management		30	20		
5	Investment project management	2		50		
6	Environmental biological indicators	2	30	20		
0	Land degradation and pollution treatment	Δ		50		
Te	otal accumulated credits	11	180	150	30	

Semester 11:

No.	Course name	Number	Total	Total	Catagony	
		credits	periods	Theory	Practice	Category
1	Urban & Industrial Environment Management	2	30	30		
2	Urban & Industrial Environment Management Practice	1	30		30	
3	Agricultural and Rural Environmental Management	2	30	30		
4	Agricultural and Rural Environmental Management Practice	1	30		30	
5	Land resource management	2	30	30		
6	Environmental and resource audit	3	45	45		
Total accumulated credits		11	195	135	60	

Semester 12:

No.	Course name		Number	Total periods	Total periods		Cotogowy
			credits		Theory	Practice	Category
1	Graduation internship		4	120		120	
2	Graduation thesis		6	180		180	
3	Community-Based Natural Resource Management	Choose thesis or 2 alternative courses (*)	3	45	45	30	
4	Assessment of soil, water and air quality		3	45	45		
Total accumulated credits			10	180	150	30	

(*) If students do not meet the requirements to complete their thesis, they will take an alternative course.

8. PROGRAM IMPLEMENTATION GUIDE

8.1. For Faculty and Department:

- The Faculty of Professional Management is responsible for reviewing and presiding over the compilation of detailed outlines of the subjects in the basic knowledge block of the industry, industry and specialization according to the correct credit volume of this program. Providing a list of textbooks, lectures and reference materials of all subjects to the School Library and storing them in the Faculty Office. At the beginning of each semester, coordinate with the units of the School to implement the training plan on schedule.

- Assign lecturers with a master's degree or higher (in the same field or related major) to teach theoretical courses, provide detailed course outlines to lecturers to ensure compliance with the school's general teaching plan.

- The academic advisor team must thoroughly understand the entire credit-based training program to guide students in registering for courses.

8.2. For instructors:

- When a lecturer is assigned to teach one or more courses, he/she must carefully study the detailed course outline to prepare the lecture and appropriate teaching aids and tools.

- The lecturer must fully prepare the lecture, textbook, and learning materials and provide them to students to prepare before class.

- Create seminars, focusing on organizing group study and guiding students to do topics and projects, lecturers determine teaching methods; present in class, guide discussions, solve problems in class, practice in room, in the laboratory and guide students in writing reports.

- Pay attention to developing students' self-study and research ability throughout the teaching process and guide internships and practices.

- Pay attention to the logic of conveying and acquiring knowledge blocks, specify prerequisite courses of compulsory courses and prepare lecturers to meet the requirements of teaching elective courses.

8.3. For student:

- Must consult the academic advisor to choose the appropriate course for the progress. Must self-study the lesson before class to easily absorb the lecture. Must ensure enough class time to listen to the lecturer's lecture instructions. Be proactive in self-study and self-research, and actively participate in group study, attend all seminars.

- Proactively and actively exploit resources on the Internet and in the school library to serve self-study, self-research and graduation thesis writing. Strictly implement the regulations on examinations, tests and assessments.

- Regularly participate in group activities, literature, sports and arts to practice communication skills, understanding of society and people.

8.4. Facilities and equipment for teaching, practice and internship:

- Theory classroom system with traditional equipment, equipped with additional teaching aids (projectors).

- Computer practice room installed with software for basic computer training.

- Environmental practice room equipped with appropriate equipment and tools

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DEPARTMENT OF ACADEMIC AFFAIRS FACULTY

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