



Co-funded by the
Erasmus+ Programme
of the European Union



AN GIANG UNIVERSITY
FACULTY OF ENGINEERING-TECHNOLOGY-ENVIRONMENT

POSTGRADUATE CURRICULUM
IN MANAGEMENT OF ENVIRONMENT AND NATURAL
RESOURCES

DEGREE TRAINING: MASTER LEVEL

TRAINING CODE: 60850101

AN GIANG prov., Sept. 2017



CURRICULUM

Name of curriculum: **MANAGEMENT OF ENVIRONMENT AND NATURAL RESOURCES**

Degree training : **Master degree**

Training code : **60850101**

1. Training objective

1.1. Overall objectives

The overall objective of Msc. Curriculum is to train the graduated students with high quality in management of environment and natural resources. The purpose is to prepare the scientists able to study, understand and take care of the protection of natural environment and management of natural resources. The final goal is the rational and sustainable management and use of natural resources, the confrontation of environmental problems and the consideration of Nature Conservation and the Management in Natural, Urban and Rural areas.

1.2. Detail objectives

1.2.1. Knowledge

- Management and exploitation of renewable and non-renewable natural resources;
- Management of river basin, ecosystems; and biodiversity conservation;
- Management of soil, water and air quality; and waste management.

1.2.2. Skill

- Development of projects on the establishment of conservation zones and national parks; evaluation and assessment of environmental impacts from project of biodiversity conservation to socio-economic development;
- Management and inventory of waste sources;
- Creativity, teamwork, presentation and communication;
- To research and improve the expertise by themselves;
- Assistant for officers implement the government policies of management of environment, natural resources and ecosystems; and apply safeguards for social and environmental safeguards.

1.3. Learning outcomes

Having expertise in management and exploitation of renewable and non-renewable natural resources; Management of River basin, ecosystems and biodiversity conservation; and quality management for soil, water and air environments; and waste management.

Having an independently study ability to create a premise to continue to study at higher levels or be able to participate in research at institutes, research centers, international organizations in the field of conservation and conservation. environmental protection.

Requirements of English skill: TOEIC 550; TOEFL ITP 450, iBT 45; IELTS 5.0.

1.4. Job placement after the graduation

- Working at research institutes, universities, colleges, professional secondary schools, state management agencies in charge of environmental matters, agencies for analysis and observation of natural resources and environment, national parks and conservation zones...

- Working in companies, factories, industrial parks ...

- Working in non-governmental organizations for environmental protection, biodiversity conservation ...

2. Requirements for candidates

The candidates have a bachelor degree in Management of Environment and natural resources and join an entrance examination.

The entrance examination is included the 03 tests in (1) probability statistics mathematics, (2) foreign language (English, French, Chinese,...) and (3) environmental management. The candidate will not attend the foreign language if they satisfy the currently Training Regulations of Ministry of Training and education for master training.

For the candidates' bachelor degree, which is not Management of Environment and natural resources (e.g. environmental science, crop science etc.), they must take the 03 courses in Environmental ecology, environmental science and method of analysis of environmental parameters. However, AGU has concerned to detailed candidate's transcript to decide the number of courses.

3. Candidate resource

Candidates come from Mekong delta, Laos, Cambodia, etc.

4. Curriculum

4.1. Overview of curriculum

Training time: 2 years (including 1,5 years for courses in class and 0,5 year for thesis)

Total credit of curriculum: 60 credits.

Including

- General knowledge: 5 credits
- Fundamental and Professional knowledge: 14 credits
- Major knowledge: 26 credits
- Master. thesis: 15 credits

Compulsory and elective courses

- Compulsory courses: 44 credits (73,3%)
- Elective courses: 16 credits (26,7%)



4.2. List of course name in the curriculum

| No. | Code | Course name | Credit | Course type | | Hour | | Previous course | Parallel course | Prerequisite course | Semester |
|-----------|--|---|---|-------------|----------|--------|----------|-----------------|-----------------|---------------------|----------|
| | | | | Compulsory | Elective | Theory | Practise | | | | |
| I | General knowledge (5 credits) (Compulsory course: 5 credits; Elective course: 0 credit) | | | | | | | | | | |
| 1 | | Philosophy | 3 | 3 | | 45 | | | | | I |
| 2 | | English Proficiency | To be certified according to the standards from the MOET of Vietnam | | | | | | | | |
| 3 | | Research Methodology | 2 | 2 | | 15 | 30 | | | | I |
| II | Fundamental and Professional Knowledge: 16 Credits (Compulsory: 10 credits, Selective: 4 credits) | | | | | | | | | | |
| 4 | | Principles of natural resources and environmental management | 2 | 2 | | 30 | | | | | I |
| 5 | | Application of GIS and Remote sensing into natural resources and environmental management | 2 | 2 | | 15 | 30 | | | | II |
| 6 | | Application of statistics into natural resources and environmental management. | 2 | 2 | | 15 | 30 | | | | III |
| 7 | | Basis of | 2 | 2 | | 30 | | | | | I |



| No. | Code | Course name | Credit | Course type | | Hour | | Previous course | Parallel course | Prerequisite course | Semester |
|--------------|--|--|--------|-------------|----------|--------|----------|-----------------|-----------------|---------------------|----------|
| | | | | Compulsory | Elective | Theory | Practise | | | | |
| | | biological conservation | | | | | | | | | |
| 8 | | Structure and function of typical ecosystems in the Mekong Delta | 2 | 2 | | 15 | 30 | | | | I |
| 9 | | Environmental biology indicators | 2 | | 2 | 15 | 30 | | | | II |
| 10 | | Quantifying ecology | 2 | | | 15 | 30 | | | | II |
| 11 | | Monitoring techniques on natural resources | 2 | | | 15 | 30 | | | | II |
| 12 | | Environmental sociology | 2 | | 2 | 30 | | | | | I |
| 13 | | Policies and strategies on environmental resources | 2 | | | 30 | | | | | I |
| 14 | | Environment and resources economics | 2 | | | 30 | | | | | I |
| III | Major courses | | | | | | | | | | |
| III.1 | Biodiversity conservation: 08 credits (Compulsory: 04 credits, Selective: 04 credits) | | | | | | | | | | |
| 15 | | Investigate and | 1 | 1 | | | 30 | | | | III |



| No. | Code | Course name | Credit | Course type | | Hour | | Previous course | Parallel course | Prerequisite course | Semester |
|--------------|--|--|--------|-------------|----------|--------|----------|-----------------|-----------------|---------------------|----------|
| | | | | Compulsory | Elective | Theory | Practise | | | | |
| | | set up a biodiversity monitoring system | | | | | | | | | |
| 16 | | Management of conservation areas and national parks | 2 | 2 | | 15 | 30 | | | | III |
| 17 | | Field visits and writing report resources conservation | 1 | 1 | | | 30 | | | | II |
| 18 | | Biodiversity of aquatic resources | 2 | | 2 | 15 | 30 | | | | I |
| 19 | | Biodiversity of land resources | 2 | | | 15 | 30 | | | | I |
| 20 | | Wildlife conservation and rescue technology | 2 | | 2 | 15 | 30 | | | | II |
| 21 | | Project development and management for resource conservation | 2 | | | 15 | 30 | | | | II |
| 22 | | Applied biotechnology in conservation | 2 | | | 15 | 30 | | | | II |
| III.2 | Natural resources and ecological management: 12 Credits (Compulsory: 06 credits, Selective: 06 credits) | | | | | | | | | | |
| 23 | | Integrated water resources management | 2 | 2 | | 30 | | | | | II |
| 24 | | Land resources using and | 2 | 2 | | 30 | | | | | III |



| No. | Code | Course name | Credit | Course type | | Hour | | Previous course | Parallel course | Prerequisite course | Semester |
|-----|------|---|--------|-------------|----------|--------|----------|-----------------|-----------------|---------------------|----------|
| | | | | Compulsory | Elective | Theory | Practise | | | | |
| | | assessment | | | | | | | | | |
| 25 | | Integrated river and coastal zone management (marine resources) | 2 | 2 | | 15 | 30 | | | | III |
| 26 | | Forest resources management | 2 | | 2 | 30 | | | | | III |
| 27 | | Planning and management of fisheries resource | 2 | | | 30 | 2 | | | | III |
| 28 | | Mineral resources management | 2 | | | 30 | | | | | III |
| 29 | | Management of specificity ecosystem services management in the Mekong Delta | 2 | | 2 | 15 | 30 | | | | II |
| 30 | | Risk assessment of Ecology | 2 | | | 15 | 30 | | | | II |
| 31 | | Health assessment of Ecosystems | 2 | | | 30 | | | | | II |
| 32 | | Ecotourism and sustainable development | 2 | | 2 | 15 | 30 | | | | III |
| 33 | | Applied ecological techniques for resilience of resource and environment | 2 | | | 15 | 30 | | | | III |



| No. | Code | Course name | Credit | Course type | | Hour | | Previous course | Parallel course | Prerequisite course | Semester |
|--------------|--|--|--------|-------------|----------|--------|----------|-----------------|-----------------|---------------------|----------|
| | | | | Compulsory | Elective | Theory | Practise | | | | |
| 34 | | Community-based on natural resource management | 2 | | | 15 | 30 | | | | III |
| III.3 | Environmental management 06 credits (Compulsory: 04 credits, Selective: 02 credits) | | | | | | | | | | |
| 35 | | Waste reuse and management | 2 | 2 | | 15 | 30 | | | | II |
| 36 | | Environmental water management for aquaculture | 2 | | 2 | 15 | 30 | | | | III |
| 37 | | Climate change and resilience | 2 | | | 15 | 30 | | | | III |
| 38 | | Energy and environment | 2 | | | 15 | 30 | | | | II |
| 39 | | English in environment | 2 | 2 | | 30 | 0 | | | | II |
| IV | Master thesis: 15 credits (Compulsory: 15 credits, Selective: 00 credits) | | | | | | | | | | |
| 40 | | Master thesis | 15 | | | | | | | | IV |
| | | Total | 60 | 44 | 16 | | | | | | |

4.3. List of lecturers

| No. | Lecturer | Birth year | University | Lecture |
|-----|-------------------------------|------------|------------|------------------------|
| 1 | Assoc. Prof. Dr. Vo Van Thang | 1964 | AGU | - Philosophy |
| 2 | Dr. Nguyen Trung Thanh | 1980 | AGU | - Research Methodology |



| No. | Lecturer | Birth year | University | Lecture |
|-----|-----------------------------|------------|------------|---|
| | | | | <ul style="list-style-type: none"> - Wildlife conservation and rescue technology - Energy and environment |
| 3 | Dr. Nguyen Tran Nhan Tanh | 1979 | AGU | <ul style="list-style-type: none"> - The application of statistics into natural resources and environmental management. - Integrated river and coastal zone management (marine resources) - Applied ecological techniques for resilience of resource and environment - English in environment |
| 4 | Dr. Nguyen Tran Thien Khanh | 1978 | AGU | <ul style="list-style-type: none"> - Monitoring techniques on natural resources - Waste reuse and management - Mineral resources management |
| 5 | Dr. Nguyen Van Kien | 1972 | AGU | <ul style="list-style-type: none"> - Principles of natural resources and environmental management - Policies and strategies on environmental resources |
| 6 | Dr. Nguyen Huu Tri | 1979 | AGU | <ul style="list-style-type: none"> - Environment and resources economics - Project development and management for resource conservation - Ecotourism and sustainable development |
| 7 | Assoc. Prof. Dr. Vo Lam | 1971 | AGU | <ul style="list-style-type: none"> - Biodiversity of land resources - Principles of natural resources and environmental management |
| 8 | Dr. Chau Thi Đa | 1975 | AGU | <ul style="list-style-type: none"> - Quantifying ecology - Planning and management of fisheries resource |



| No. | Lecturer | Birth year | University | Lecture |
|-----|---------------------------|------------|--------------|---|
| | | | | - Management of specificity ecosystem services management in the Mekong Delta |
| 9 | Dr. Doan Thi Minh Nguyet | 1980 | Khoa NN-TNTN | Applied biotechnology in conservation |
| 10 | Dr. Nguyen Van Chuong | 1973 | AGU | - Land resources using and assessment - Field visits and writing report resources conservation - Environmental biology indicators |
| 11 | Dr. Pham Van Quang | 1968 | AGU | - Integrated water resources management - Investigate and set up a biodiversity monitoring system |
| 12 | Dr. Nguyen Van Minh | 1952 | AGU | Forest resources management |
| 13 | Dr. Thai Huynh Phuong Lan | 1980 | AGU | - Environmental sociology - Community-based on natural resource management |

4.4. Visiting lecturer list

| No. | Lecturer | Birth year | University/Institute | Lecture |
|-----|----------------------------------|------------|----------------------|--|
| 1 | Assoc. Prof. Dr. Nguyen Van Cong | 1960 | Can Tho University | - Risk assessment of Ecology - Basis of biological conservation |



| No . | Lecturer | Birth year | Universit y/Insitute | Lecture |
|---------|-----------------------------------|---------------|--|--|
| 2 | Assoc. Prof. Dr. Nguyen Huu Chiem | 1962 | Can Tho University | <ul style="list-style-type: none"> - Structure and function of typical ecosystems in the Mekong Delta - Health assessment of Ecosystems |
| 3 | Dr. Tran Hau Vuong | 1980 | University of natural resources and environment | <ul style="list-style-type: none"> - The application of GIS and Remote sensing into natural resources and environmental management - Climate change and resilience |
| 4 | Assoc. Prof. Dr. Vu Ngoc Ut | 1961 | Can Tho University | <ul style="list-style-type: none"> - Environmental water management for aquaculture - Biodiversity of aquatic resources |
| 5 | Dr. Bui Truong Tho | 1985 | Center of agriculture and high technology application, Ben Tre Prov. | Management of conservation areas and national parks |