



**Ministry of Education**

**Identified Competency Focus Areas and Core  
Courses for Ethiopian Higher Education  
Institutions' Exit Examination**

**Program: Bachelor of Arts (BA) Degree in  
Geography and Environmental Studies**

**Prepared By  
Gebremaryam Araya, Hawassa University**

**August 2022  
Addis Ababa  
Ethiopia**

## Contents

1. Introduction .....	<b>Error! Bookmark not defined.</b>
2. Expected Profiles of Graduates .....	<b>Error! Bookmark not defined.</b>
3. Competences and Learning Outcomes .....	1
3.1. Competences .....	4
3.2. Learning Outcomes .....	5
4. Categorizing Courses of the Program in to Themes .....	6
5. Courses to be Included in the Exit Examination .....	7
6. Conclusion .....	8

Courses and Competencies Identified for Exit Exam 2015 (First Draft)

## 1. Introduction

Geography has been broadly accepted as a bridge discipline between human and physical sciences. In the beginning, Geography focused on the physical aspects of the earth, however, modern Geography is an all-encompassing discipline that seeks to understand the earth and all of its human and natural processes as integrating elements. Geography has emerged through time as a trans-disciplinary subject integrating the regional diversity with the concepts of the timing of space and the spacing of time.

Attributed to advancement of technology and newly emerging issues in the field of geography, the program is becoming wider in scope. Geography as a field of study is composed of two main branches: Human Geography and Physical Geography. Apart from the two main branches, it is also composed of technical/ skill based courses, which include Geo-information sciences, Cartography, Map Reading, and Surveying.

Global environmental change issues such as; climate change, desertification and global warming, and environmental degradation and management strategies used to address these problems are important issues of these days. Studying Geography therefore enable to nurture sensitivity for our neighbors, society and the world with respect to understand the spatial and temporal patterns, to adopt and manipulate physical environment with wise decisions and to solve contemporary geographical and environmental problems.

Geographic knowledge and skills help in developing our economy, to use resources more efficiently and keep the wellbeing of the environment by supporting the implementation of various environmental management measures. Geography not only mediated between natural or physical sciences and biosciences on one hand and the social sciences on the other, but also bridging and synthesizing their mutual common broad spectrum underpinning through its core thrust on man - environment relationships, which naturally integrate them all.

In Ethiopia, the teaching of Geography at the tertiary level started in 1950 at the then University College of Addis Ababa (UCAA). By then, Geography was offered as an important field of study to students from social sciences stream. Since 1958, the department of Geography, now renamed Department of Geography and Environmental Studies as of

2002, has been offering the program in different public universities leading to the Bachelor of Arts Degree in Geography and Environmental Studies. Nowadays, the program is given in almost all of the public Universities in Ethiopia and it is one of popular program, which is most preferred by most undergraduate students from both social as well as natural science streams. Hence, hundreds to thousands of graduates has been joined to the market. Currently, thousands of Geography and Environmental Studies graduates have been working in various governmental and non-governmental organization offices in the country.

However, as many stakeholders agree, the quality of education and graduates' competency level is below the requirement (Eyob *et al.*, 2022). According to the same source, one potential way to enhance educational achievement and quality of education is offering exit exams. As Hilal El-Hassan *et al.* (2021), curriculum-based national exit exams play a crucial role in program assessment and measuring student achievement of program learning outcomes. According to the same source, these examinations are thought to have significant effects on how teachers teach and how students study. Hence, considering its role in assuring educational quality, the Ministry of Education is in a position to introduce national exit exam on selected programs. Geography and Environmental Studies is one of the selected programs to have an exit exam in the coming year (2015 E.C).

The main objective of this document is to identify competency focus areas and core courses for Ethiopian Higher Education Institutions' Exit Examination that will apply for Geography and Environmental Studies graduates. MoE proposed 10-15 courses to be included for exit examination. To select those courses to be included for exit exam, two consecutive workshops were held. The first draft of the document was prepared in the first workshop, and fifteen courses were selected in three thematic areas (Physical Geography, Human Geography and Technical Geography). In the second workshop, these focus areas have been validated with some modification on the selected courses. In this validation workshop thirteen courses were selected from the three thematic areas. The selection of courses was based on relative representativeness of the thematic areas and major professional career. The exit exam will be administered by Ministry of Education.

## ❖ Objectives of the Exit Examination

The national Geography & Environmental Studies (GeES) exit exam shall have the following objectives:

- To produce skilled and competent manpower to national and international market,
- Assessing students' educational achievement in major areas of GeES,
- Ensuring whether the graduate profile of GeES curriculum have achieved at least common standards of knowledge and practical skills,
- Improving public trust and confidence in GeES professional work environment,
- Facilitating the efforts of students to revise the core learning outcomes of the courses to be covered in the exit examination,
- Ensuring all graduates from higher educational institutions (HEIs) satisfy the requirements of the labor market and employability through nationwide competency-based exit exam, and
- Creating competitive spirit among GeES departments in Ethiopia with the view of encouraging them to give due attention to the national standards.

## ❖ Significance of the Document

It is important to set competency areas of the discipline (GeES) in order to measure the learning outcomes (skills, knowledge and attitudes) of graduates towards satisfying labor market. The following shows us the significance of setting competencies and identifying core courses of the program;

- To set competencies that helps to assess the basic skills, knowledge and attitude of graduating students
- To set standards for facilitating the administration of the national Exit examination

## 2. Expected profile of graduates

The curriculum is designed with the view that graduates shall be able to:

- ✓ Demonstrate knowledge and understanding of spatial-temporal distributions in both physical and human phenomena, and use geographic and environment perspectives to evaluate, make decisions about, and report on issues, processes, and events,

- ✓ Identify, collect and compile information through archives, field survey; aerial photographs and remotely sensed data to alleviate spatio-temporal problems of physical and human environment and develop potentialities,
- ✓ Use different theories and models to understand and explain Spatio-temporal processes, trends and patterns related to human and physical environment,
- ✓ Apply modern geospatial tools and techniques like GIS, surveying and remote sensing to generate, organize, and analyses Geo-data for Spatial Decision Support system and sustainable development,
- ✓ Conduct researches, which are beneficial to society and present the result of their findings in clear and coherent manner ,
- ✓ Appreciate the natural environment, work on resources, and environmental degradation, pollution and population explosion, which are global issues of today's,
- ✓ Involve as an expert in terrain analysis, land use planning and administration, and
- ✓ Have basic understanding on fundamental national development issues.

### **3. Competences and Learning Outcomes**

#### **3.1. Competences**

Competency of graduate students in Geography and Environmental Studies will be measured by exist exam at the end of their training programme (completion of Geography and Environmental Studies courses) with emphasis to students' knowledge, skill, and attitude. The details of the competency are presented here below by a categorizing knowledge, skills, and attitudes.

##### **A. Knowledge**

- Understanding the facts and patterns of Spatio-temporal processes and possibilities of human and physical phenomena and their interactions
- Comprehend different theories and models to understand and explain spatio-temporal processes, trends and patterns related to human and physical phenomena
- Identifying and solving Spatio-temporal problems of the physical and human environments
- Comprehending the risks, potentials, and prospects of the country's environment in isolation as well as in global perspective

- Understanding the national development priority areas(issues) and issue related to sustainable development

## **B. Skills**

- Generating, analyzing, and presenting Spatio-temporal data of physical and human environment using different scientific procedures, models, tools, and techniques
- Providing various kinds of professional trainings to the community
- Providing professional consultancy services with a view to accelerate environmental, social and economic developments
- Conduct research in different areas (environment, development, social, economy, etc.,) that would help in solving societies' problems and disseminate results thereof
- Apply modern tools and techniques like GIS and remote sensing in managing resources and protecting environment for sustainable development

## **C. Attitudes**

- Demonstrating confidence and conviction that enable them to become positive role models to society, committed to change and development
- Awakenning the general public of environmental problems, their causes, consequences and mobilize the public for positive actions
- Enhance customer satisfaction with departmental services by devising sound system for this purpose
- Care for ethical values, and provide leadership role models in national, regional and local development with a clear understanding of values and needs
- Capable of working cooperatively for the common good of society
- Initiate and participate actively in community services and developmental activities

## **3.2. Learning Outcomes**

After completing their BA training those courses presented on the mentioned themes, graduating students will be able to:

- Demonstrate knowledge and understanding of spatio-temporal distributions in both physical and human phenomena, and use geographic and environment perspectives to evaluate, make decisions about, and report on issues, processes, and events,

- Identify, collect and compile information through archives, field survey; aerial photographs and remotely sensed data to alleviate spatio-temporal problems of physical & human environment and develop potentialities,
- Capable of working cooperatively for the common good of society
- Use different theories and models to understand and explain spatio-temporal processes, trends and patterns related to human and physical environment,
- Initiate and participate actively in community services and developmental activities
- Generate, organize, and analyses Geo-data for Spatial Decision Support system
- Apply modern tools and techniques like GIS and remote sensing in managing resources and protecting environment for sustainable development
- Conduct researches, which are beneficial to society and present the result of their findings in clear and coherent manner;
- Appreciate the natural environment, work on resources and environmental issues
- Involve as an expert in land administration and registration issues;
- Actively participate in food security and livelihood related research undertakings.
- Have basic understanding on fundamental national issues and sustainable development.

#### 4. Categorizing Courses of the Program in to Themes

The exit exam in Geography and Environmental Studies program for undergraduate students' competency can be categorised in to six themes. Accordingly, for exit exams documentation the themes in geography and environmental studies program can be generalized as follows (Table 2):

**Table 2: List of Themes in Geography & Environmental Studies Program**

R.No.	List of Themes in Geography & Environmental Studies Program	ECTS	Cr.Hrs.
1	Climatology and Hydrology	10	6
2	Landform Studies	10	6
3	Economic Development and Spatial Planning	15	9
4	Socio-Cultural Geography	10	6
5	Sustainable Resource Management & Livelihood	10	6

R.No.	List of Themes in Geography & Environmental Studies Program	ECTS	Cr.Hrs.
6	Spatial Data Acquisition, Analysis and Mapping Techniques	21	13
	Total ECTS and Cr.Hrs	76	46

## 5. Courses to be Included in the Exit Examination

As mentioned above, this document is compiled with six themes and fifteen courses for exit examination regardless of assessing the competencies of that graduate are expected to acquire. During the preparation of this document, there was a general consensus that a specific program should consider total of 10-15 lists of courses. However, in Geography and Environmental Studies program there are plenty number of courses related to physical, human and technical Geography.

Accordingly, this document takes in to account the major branches and themes in the program. The themes and course which will be included in the exit exam are summarized in the following table (Table 3).

**Table 3: List of Courses to be included in the Exit Exam**

R.No	List of Themes	List of courses	Course Code	ECTS	Cr.Hr
1	Climatology and Hydrology	Introduction to Climate	GeES2013	5	3
		Environmental Hydrology	GeES2024	5	3
2	Landform Studies	Geomorphology	GeES2014	5	3
		Terrain Analysis and Land Use Planning	GeES3021	5	3
3	Economic Development and Spatial Planning	Economic Geography	GeES2015	5	3
		Urban and Regional Planning	GeES4011	5	3
		Development Geography	GeES3011	5	3
4	Socio-Cultural Geography	Cultural and Social Geography	GeES2026	5	3
		Geography of Population and Settlement	GeES3012	5	3
5	Sustainable Resource Management & Livelihood	Geography of Natural Resources Management	GeES3015	5	3
		Food Security and Livelihood	GeES4023	5	3

R.No	List of Themes	List of courses	Course Code	ECTS	Cr.Hr
6	Spatial Data Acquisition, Analysis and Mapping Techniques	Introduction to GIS	GeES3014	5	3
		Research Methods in Geography and Environmental Studies	GeES3026	5	3
		Fundamentals of Remote Sensing	GeES3023	5	3
		Cartography and Map Reading	GeES2022	6	4
Total		14 Courses		76	46

## 6. Conclusion

Competence base exit exam guide in Geography and Environmental Studies program enables our graduates to have a solid understanding on physical, human and technical areas of the program. Hence, implementing exit exams can be vital to improve the quality of the program.

Generally, the basic aim of the exit exam is to produce high level and qualified professionals in Geography and Environmental Studies that will benefit the country's sustainable natural resource management and socio-economic development.

## Appendices II

### List of Major Courses in Department of Geography & Environmental Studies

Course Name	Course Code
Introduction to Geographic Thought	GeES 2011
Introduction to Computer Applications in GeES	GeES 2012
Introduction to Climate	GeES 2013
Geomorphology	GeES 2014
Economic Geography	GeES 2015
Quantitative Techniques & Spatial Analysis	GeES 2021
Cartography and Map Reading	GeES 2022
Applied Climatology	GeES 2023
Environmental Hydrology	GeES 2024
Agroecology and Farming System	GeES 2025
Cultural and Social Geography	GeES 2026
Development Geography	GeES 3011
Geography of Population and Settlement	GeES 3012
Introduction to Surveying	GeES 3013
Introduction to GIS	GeES 3014
Geography of Natural Resources Analysis & Management	GeES 3015
Soil Geography	GeES 3016
Terrain Analysis and Land Use Planning	GeES 3021
Applied GIS	GeES 3022
Fundamentals of Remote Sensing	GeES 3023
Geography of Transport and Development	GeES 3024
Urban Geography	GeES 3025
Research Methods in Geography and Environmental Studies	GeES 3026
Urban and Regional Planning	GeES 4011
Geography of Tourism and Development	GeES 4012
Land Administration and Registration	GeES 4013
Environmental Policy, Ethics and Governance	GeES 4014
Biogeography	GeES 4015

Project Design and Management in GeES	GeES 4016
Seminar on Contemporary Geographical Issues	GeES 4021
Political Geography	GeES 4022
Livelihood and Food Security	GeES 4023
Environmental Hazard and Risk Management	GeES 4024
Environmental Impact Assessment	GeES 4025
Senior Essay	4026

Source: Undergraduate Syllabus for Geography and Environmental Studies Courses, 2021

## Appendices II

List of writer and evaluator/ validators

No	Name	Role	University
1	Gebremaryam Araya	Writer	Hawassa
2	Dr. Mekonnen Adnew Degefu	Validator	Debre Markos
3	Tesfaye Wasihun	Validator	Dire Dawa
4	Ayele Behaylu	Validator	Debre Berhan
5	Abraham Dessie	Validator	Debark
	Seyoum Demissie	Validator	Jigjiga