



Identified Competency Focus Areas and Selected Courses for National Exit Exam

Program: Bachelor of Science Degree in Horticulture

Prepared by: Tadele Yeshiwas

Bahir Dar University

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Table of Contents

1. Introduction.....	1
2. Objectives of the Exit Examination	2
3. Significance of the Document.....	2
4. Graduate Profile	3
5. Competencies and Learning outcomes	3
6. Courses to be included in the Exit-Exam.....	5
7. Courses with respective categories/thematic areas	5
8. Conclusion	6
Appendix: List of reviewers /participants on validation workshop.....	7

1. Introduction

The Ethiopian Ministry of Education has unveiled a plan to introduce exit exams in all undergraduate university programs including Horticulture starting from 2022. The horticultural sector in Ethiopia is a leading contributor to the country's GDP, and is earmarked as a key economic growth sector in the medium to long term development strategies. Realization of goals to attain the full potential of the sector will hinge on availability of adequate and suitably skilled manpower in this sector. This Bachelor of Science (BSc) degree in Horticulture program will contribute in meeting this challenge through provision of up-to-date knowledge, skills and appropriate technology in horticulture. The program offers training in fundamental horticultural knowledge and practice focus on basic and state-of-the-art principles and practices in production of a variety of vegetables, fruits, Coffee, tea, spices and medicinal plants, flowers, other ornamental plants and landscape design, postharvest, nursery and greenhouse management etc.

The Exit- Exam is a test that the graduate passes in the last or penultimate year of graduation, the main objective of which is to evaluate the learning outcomes of the program (knowledge - skills – values/attitudes). Its major objective is to check whether the graduate profile and learning outcomes of the BSc. Degree Horticulture curriculum have been achieved to bring quality and supportive education.

This is not a professional license test but a system to ensure whether the graduates' performances in the curriculum are met. The proposed scheme appears to resemble a high-stake exam. Students who do not pass can be given additional opportunities to sit for another round of the exit exam but will not be entitled to any form of employment unless they pass. The ministry believes that the scheme will bring about attitudinal changes by discouraging students from rampant exam cheating and helping them do their own work.

2. Objectives of the Exit Examination

The national Horticulture 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 Horticulture graduates.
- Ensuring whether the graduation profile of Horticulture curriculum have achieved at least common standards of knowledge and practical skills
- Improving public trust and confidence in public administration activities of professionals
- Facilitating the efforts of students to revise the core learning outcomes of the courses covered by the exit examination
- Ensuring all graduates from Higher Education Institutes satisfy the requirements of the labor market and employability through the national wide implementation of competency-based exit exam
- Creating competitive spirit among Horticulture departments in Ethiopia with the vies to encouraging them to give due attention to the national standards

3. Significance of the Document

It is important to set competency areas of the subject matter (Horticulture program) in order to measure how much graduates are acquired with skills, knowledge and attitudes. The following shows us the significance or 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 systematically identify the core courses which will be included the exit exam;

4. Graduate Profile

After successful completion of the program, horticulture graduates will be able to:

- Promote and disseminate updated technologies to farmers and extension workers through training;
- Identify and analyze problems related to horticulture discipline and devise appropriate solutions;
- Plan, implement, monitor and evaluate projects related to production, postharvest handling Protection and utilization of horticultural crops in sustainable way;
- Involve in research undertakings in the areas of production, protection, postharvest handling, and utilization of horticultural crops;
- Plan, design and conduct demand driven trainings for the beneficiaries in areas of Horticulture;
- Assist policy makers and development practitioners in the field of horticulture;
- Establish and manage private enterprises related to their profession and related fields;
- Involve in consultancy, leadership and advisory services in the field of horticulture;
- Initiate and run private horticultural farms as self-employment ;

5. Competencies and Learning outcomes

The graduates of this program will be qualified horticultural professionals who are well equipped with the following necessary knowledge, skills and attitudes.

5.1. Knowledge

- Establish, organize and manage horticultural farms at various levels and lead their own enterprise
- Demonstrate and adopt technologies related to horticultural crops Propagation , production, post-harvest management and protection;
- Able to apply technologies of horticultural crops that solve limitations and problems associated with the sector;

- Consult governmental and non-governmental organizations as well as private investors on issues related to horticultural crop propagation, production, protection and postharvest management
- Teach and train horticultural courses in higher learning institutes at various levels
- Identify researchable problems, plan and execute basic and applied researches in Horticultural sciences

5.2. Skills

- Identify problems related to horticultural crops production and implement problem solving solutions;
- Establish and manage horticultural farms
- Handle horticultural crops properly and able to reduce postharvest losses
- Able to train students and farming communities
- Organize and lead the production of horticultural enterprises of different size and character
- Propagate horticultural planting materials,
- Establish horticultural crop nursery and orchard manage horticultural crop farms,
- Management of horticultural crop production under protected cultivation,
- Manage research projects of horticultural crops production and related disciplines,
- Plan, design, execute and manage residential, public and commercial landscape

5.3. Attitudes

- Appreciate the status, potentials and constraints of horticultural crops production at country as well as international levels;
- Dedicate to live and work with the farming community.
- Appreciate and believe the importance of horticultural crops towards food security and economic growth and development of the country;
- Develop interests in teaching, research and extension services in the field of horticultural crops;
- Develop interests in the development of horticulture at country level and worldwide; and
- Enhance her/his interest for further study in horticultural fields.

6. Courses to be included in the Exit-Exam

No.	Course Title	Cr. Hrs.
1.	Principles and Practices of Protected Horticulture	2(1+3)
2.	Principles and Practices of Plant Propagation	2(1+3)
3.	Vegetable Crops Production and Management	3(2+3)
4.	Root and Tuber Crops Production and Management	2(1+3)
5.	Tropical Fruit Crops Production and Management	2(1+3)
6.	Sub-Tropical and Temperate Fruit Crops Production and Management	2(1+3)
7.	Coffee Production, Processing and Quality Control-	3(2+3)
8.	Tea Production and Processing	2(1+3)
9.	Spice, Herbs and Medicinal Plants Production & Processing	2(1+3)
10.	Floriculture Plant Production and Management	2(1+3)
11.	Principles and Practices of Landscape Designing	2(1+3)
12.	Postharvest Physiology and Handling of Horticultural Products	3(2+3)
13.	Research methods in Horticulture	2(2+0)
14.	Horticultural crop Entomology	3(2+3)
15.	Horticultural crop Pathology	3(2+3)

7. Courses with respective categories/thematic areas

Thematic area 01: Plant Propagation, Fruit and Vegetable Crops Production

No	Course Title	Cr. Hrs.
1	Principles and Practices of Plant Propagation	2(1+3)
2	Tropical Fruit Crops Production and Management	2(1+3)
3	Sub-Tropical and Temperate Fruit Crops Production and Management	2(1+3)
4	Vegetable Crop Production and Management	2(1+3)
5	Root and Tuber Crop Production and Management	2(1+3)

Thematic area 02: Stimulants, Spices and Medicinal Plants Production and Management

No	Course Title	Cr. Hrs.
1	Coffee Production, Processing and Quality Control-	3(2+3)
2	Tea Production and Processing	2(1+3)
3	Spice, Herbs and Medicinal Plants Production & Processing	2(1+3)

Thematic area 03: Green house, Floriculture and Landscaping

No	Course Title	Cr. Hrs.
1	Principles and Practices of Protected Horticulture	2(1+3)
2	Floriculture Plant Production and Management	2(1+3)
3	Principles and Practices of Landscape Designing	2(1+3)

Thematic area 04: Postharvest Technology and Food Safety

	Course Title	Cr. Hrs.
1.	Postharvest Physiology and Handling of Horticultural Products	3(2+3)

Thematic area 05: Research methods and skills

	Course Title	Cr. Hrs.
1	Research methods in Horticulture	2(2+0)

Thematic area 06: Horticultural Crops Protection

	Course Title	Cr. Hrs.
1	Horticultural crop Entomology	3(2+3)
2	Horticultural crop Pathology	3(2+3)

8. Conclusion

The exit exam results could be used as a monitoring tool whose outcomes could be used for feedback, evaluation, and review processes. This exam evaluates the student on knowledge, skills, and attitudes acquired during the study of the courses of a specific program. Therefore, horticulture graduates will take exit exam for the above mentioned courses (6 thematic areas and 15 courses) as one way of enhancing the quality and relevance of education. On one hand, this planned exit exams could be expected to positively influence student achievement through several interrelated pathways including, pressuring teachers to align curriculum to national content standards. Moreover, the threat of diploma denial may also motivate students to work harder to reach the standards set by the state.

Appendix: List of reviewers /participants on validation workshop.

s.no	Name of participants	University	Department
1	Mr. Ermias Misganaw	University of Gondar	Horticulture
2	Mr. Tsegaye Chalachew	Debank University	Horticulture
3	Dr.Yenenesh Ayalew	Dilla University	Horticulture
4	Mr.Abayneh Wubetu	Debre Markos	Horticulture