**Ministry of Education**

Zero Draft Document On Competencies And

Courses Identification For Exit Examination

Program: Natural Resources Management

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Identified Competency Focus Areas and Core Courses for National Exit Examination:

Program: Bachelor of Science in **Horticulture**

Competencies & Courses Suggested For Exit Examination For Bsc In

Animal Sciences Graduates To Be Held In 2015 E.C

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Animal Sciences Graduates To Be Held In 2015 E.C

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1. Introduction

The Ethiopian Ministry of Education has unveiled a plan to introduce exit exams in all undergraduate university programs including Horticulture from the next academic year, starting October 2022. The horticultural sub-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, flowers, other ornamental plants, 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.

1. Graduates profiles

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

**4.1.** Knowledge of graduates:

* Establish, organize and manage horticultural farms at various levels and lead their own enterprise
* Demonstrate and adopt technologies related to horticultural crops production, improvement, 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 crops production and postharvest management
* Teach and train horticultural courses in higher learning institutes at various levels
* Conduct basic and applied research in the area of Horticulture.

**4.2.** Skills of graduates:

* 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 and marketing of horticultural enterprises of different size and character
* Propagate, produce and manage horticultural planting materials
* Manage research projects/program of horticultural crops production and related disciplines
* Plan, design, execute and mange residential, public and commercial landscape
* Handle the farming communities properly so as to able to communicate and distributes improved technologies
* Prepare and present reports in written as well as oral communication

**4.3.** Attitudes of graduates:

* Appreciate the status, potentials and constrains of horticultural crops production at country as well as international levels;
* 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 will be developed;
* Develop interests in the development of horticulture at country level; and
* Enhance her/his interest in further study in horticultural fields.

1. Competencies and Learning outcomes

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 horticultural sciences and devise appropriate solutions;
* Plan, implement, monitor and evaluate projects related to production, postharvest handling 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;
* Design and conduct demand driven trainings in areas of Horticulture;
* Assist policy makers and development practitioners in the field of horticulture;
* Establish and mange private enterprises related to their profession and related fields;
* Involve in consultancy and advisory services in the field of horticulture;
* Establish and manage horticultural enterprises ;
* Provide professional consultancy services and leadership in horticultural enterprises ;
* Design, execute, monitor & evaluate horticulture projects;
* Initiate and run private horticultural farms as self-employment ;

1. Courses to be included in the Exit-Exam

|  |  |  |
| --- | --- | --- |
| **No.** | **Course Title** | **Cr. Hrs.** |
|  | Principles and Practices of Protected Horticulture | 2(1+3) |
|  | Principles and Practices of Plant Propagation | 2(1+3) |
|  | Vegetable Crops Production and Management | 3(2+3) |
|  | Root and Tuber Crops Production and Management | 2(1+3) |
|  | Tropical Fruit Crops Production and Management | 2(1+3) |
|  | Sub-Tropical and Temperate Fruit Crops Production and Management | 2(1+3) |
|  | Coffee Production, Processing and Quality Control- | 3(2+3) |
|  | Tea Production and Processing | 2(1+3) |
|  | Spice, Herbs and Medicinal Plants Production & Processing | 2(1+3) |
|  | Ornamental Plants Production and Management | 2(1+3) |
|  | Principles and Practices of Landscape Designing | 2(1+3) |
|  | Postharvest Physiology and Handling of Horticultural Products | 3(2+3) |

1. Courses with respective categories/thematic areas

**Thematic area 01: Greenhouse and Propagation**

|  |  |  |
| --- | --- | --- |
| **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) |

**Thematic area 02: Vegetable Crops Production**

|  |  |  |
| --- | --- | --- |
| **No** | **Course Title** | **Cr. Hrs.** |
| 1 | Vegetable Crops Production and Management | 2(1+3) |
| 2 | Root and Tuber Crops Production and Management | 2(1+3) |

**Thematic area 03: Fruit Crops Production**

|  |  |  |
| --- | --- | --- |
| **No** | **Course Title** | **Cr. Hrs.** |
| 1 | Tropical Fruit Crops Production and Management | 2(1+3) |
| 2 | Sub-Tropical and Temperate Fruit Crops Production and Management | 2(1+3) |

**Thematic area 04: 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 05: Floriculture and Landscaping**

|  |  |  |
| --- | --- | --- |
| **No** | **Course Title** | **Cr. Hrs.** |
| 1 | Ornamental Plants Production and Management | 2(1+3) |
| 2 | Principles and Practices of Landscape Designing | 2(1+3) |

**Thematic area 06: Postharvest Technology and Food Safety**

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

1. Conclusion

Exit exam results could be used as a monitoring tool whose outcomes could be used for feedback, evaluation, and review processes. This exam tests the student on knowledge, skills, and attitudes gained throughout the study of the courses of a specific program. Therefore, horticulture graduates will take exit exam for the above mentioned 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.