
Mekdela Amba University

College of Social science and Humanity

Department of Geography and Environmental Studies

Course module- *Sustainable Resource Management & Livelihood*

Course Title- Agro ecology and Farming system

Course Code- **GeES 3103**

Instructor: **Belachew A.**

Academic year -2019/20, 3rd year GeES

Course descriptions

The course will cover the meaning and theories as well as concepts of agriculture and agro ecology. Course is also intended to acquaint students with the basic interrelationship of agriculture, ecology and farming system; the advantage of applying ecological principles and concepts application in agriculture

Course objective- At the end of the course students will be able to:

- Analyze the various factors affecting the farming system;
- Observe the interrelationship of agriculture, ecology and farming system;
- Identify advantage and disadvantages of agricultural development

Course Policy

Students are expected to attend class regularly. Attendance will be taken randomly and any absenteeism without tangible problems highly affect your grade. **If you miss 20% of the class attendance you will be totally cancelled from the course.** Try to come to the class on time. You are not permitted to enter the class if you are late more than 10 minutes.

Chapter –one –Introduction

1.1. Basic concepts in agro-ecology and farming System

1.2. Ecosystem and Agro ecosystem

1.3. Fundamental Principles of Agro-ecology

1.4. Major Agro-ecological zones of the world and associated Farming system

Chapter Two - Agro-ecology and its Approach

2.1 The science of agro ecology as a solution for the environmental problem

Chapter Three - Agro-ecological zones of Ethiopia

Chapter Four –Classification of Farming System

4.1 Classification of farming System based on the *supply of land*

4.2 Classification of farming System based on the *supply of water*

4.3 Classification based on *cropping*

4.3.1 Monoculture and single cropping

4.3.2 Double and multiple cropping

4.4 classifications on the bases of *production and marketing*

4.4.1 Migratory and primitive agriculture

4.4.2 Commercial farming

4.4.3 Plantation

4.4.4 Mixed farming

Chapter Five -Factors affection farming system

5.1 Physical factors affecting the farming system

5.2 Human factors affecting the farming system

Chapter Six - Agricultural policy

6.1 Meanings and basic tools of agricultural policy

6.2 objectives of market intervention-National Food security

6.3 Agricultural policies of Ethiopia

Evaluations Methods

Quiz.....10%

Quiz-1 =5%

Quiz-2=5%

Test 1.....10%

Test 2.....10%

Project report.....10%

Group assignment & presentation....10%

Final exam.....50%

Total.....100%

Reference

1. Boeken 2005-10 Agro-ecology as a science, a movement and a practice. A review Wezel1*, S. Bellon2, T. Dor'e3, C. Francis4, D.Vallod1, C.David1 http://cmsprod.bgu.ac.il/Eng/Units/bidr/Faculty__Members/Boeken.htm
2. Gerdien meijerink & pim roza (2007) -The role of agriculture in economic development
3. Menale Kassie, Precious Zikhali, John Pender, and Gunnar Köhlin (2009) Sustainable Agricultural Practices and Agricultural Productivity in Ethiopia
4. Agricultural Geography
5. Wand a W. Collins and Calvin O .Qualset 1986 Biodiversity in Agro ecosystem