# Department of …Soil & Water

# College of …Agriculture

# University of …Salahaddin

# Subject: …Agrometeorology

# Course Book – ( *2nd* Year )

# Lecturer's name M.S.c. Muna Muhanned Abdulhameed

# Academic Year: 2023-2024

# Course Book

| | |
|---|---|
| **1. Course name** | **Fall semester** |
| **2. Lecturer in charge** | **Mrs Muna Muhannad Abdulhameed** |
| **3. Department/ College** | **Soil & Water / Agriculture** |
| **4. Contact** | **e-mail: muna.abdulhameed@su.edu.krd** |
| **5. Time (in hours) per week** | **Thursday 10:30- 1:30** |
| **6. Office hours** | **Availability of the lecturer to the student during the week** |
| **7. Course code** | |
| **8. Teacher's academic profile** | **2013 - BSc – Salahaddin Univ. Agriculture Engineering Science College – Soil and Water Dept.**<br><br>**2017- MSc – Salahaddin Univ. Agriculture Engineering Science College – Soil and Water Dept. MSc in Soil Pollution.**<br><br>**2023- PhD student- Salahaddin Univ. Agriculture Engineering Science College – Soil and Water Dept. PhD in Soil Chemistry** |
| **9. Keywords** | |

**10. Course overview:**

In this course, students will learns about Agro metrology and Ecology Concept and tasks related to climate change, weather effects on crops, biosphere level of organization. Furthermore, study of ecosystem and the change of ecosystem. Students will also learn how to measure and estimate the component of weather station and climate by using Stevenson screen box. In addition, the population growth will be discussed followed by the major components of the population system and characteristics will also be evaluated.

**11. Course objective:**

Collecting the huge information about the very important things of life and one of the important things of ecology which represent in soil and its relation with the other components in the world.

**12. Student's obligation**

1- The student must be already in the lecture.

2- The student must success in the average of the two examination were must be done.
3- Prepare the report and presentation about one of the titles were taken the lectures Or syllabus.
4- Quizzes must be done weekly**.**

## 13. Forms of teaching

1- Data show and power point.
2- White board.
3- Papers (Which collected some headline )

## 14. Assessment scheme

final grade will be derived as follows:

- **Quizzes and homework's**: About 8 quizzes will be given throughout the semester. They will be given at the beginning of the class period and last 10 minutes.5-10 % of your grade. Student's must prepare a report about their practical work in the laboratory.
- **Monthly Exams**: There will be two closed book exams given throughout the semester.

Mean of two examinations (Theoretical Part) 15%, Practical part 35%

Final examination: 60% for theory part only.

## 15. Student learning outcome:

1 Taking knowledge about the main characteristics of the Ecologyand soil.
2-The impotency of the agro meteorology in agricultural method.
3-Personal ability and its responsibility against the soil.
4-All processes and formations were happened of the solar radiation.
5- Studying the weather, climate and agricultural productivity.
6- And at the end must the student feel what's the duty of one of them, like each academic person and take the information of development countries.

## 16. Course Reading List and References

**Required book:**

1- Pedgley, D. 1982. Windborne Pests and Diseases: Meterology of Airbourne Organisms. John
2- Fedoseev A. P. 1985. Agrometeorological conditions for the effectiveness of fertilization. Leningrad, Hydrometeoizdat, 144 pp..
3- Rijks, D. and Baradas, M.W. 2000. The clients for agrometeorological information. Agric. For.
4- Friesland H. 2002. Review of the Scientific literature on the effect of climate and weather, especially during the ripening period, on the quality and storage capacity of grapes, spring barley, and potatoes. In Report of RA VI Working Group on Agricultural meteorology.WMO/TD 1113

- **Useful references**:

1- Folkedal, A. and C. Brevig. 2005. VIPS – A web-based decision support system for crop protection in Norway. In Irrigation and pest and disease models: Evaluation in different environments and web-based applications. Eds. G. Maracchi, L. Kajfez-Bogataj, S. Orlandini, F. Rossi, and M Barazutti. European Commission. Cost Action 718: Meteorological Applications for Agriculture.
2- Leedman, A. 2007. The Australian National Agricultural Monitoring System – a national climate risk management application. Proceedings of the Expert Team Meeting on Management of Natural and Environmental Resources for Sustainable Agricultural Development, February 13- 17, 2006, Portland, Oregon, USA. Washington, D.C., USA: United States Department of Agriculture; Geneva, Switzerland, World Meteorological Organization. To be Published.

- **Magazines and review (internet):**

The core materials of the course consists of the above book, articles from media and internet, and lecture's notes, make sure you read all the materials and prepare well before going for the examinations. Students are encouraged to search for any other materials that may help improve their English language ability in reading, writing, listening and speaking plant communities' texts.

| **17. The Topics:** | **Lecturer's name** |
|---|---|
| **1-** Understanding introduction about Agrometeorological, concept, tasks and definition.<br>**2-** Application of Agro meteorological in agriculture.<br>**3-** Study effects and relation of climate, weather, wind and precipitation on agricultural agro metrology<br>**4-** Ecology, definition, biome, Ecosystem and climate change.<br>**5-** Studying Atmospheric layer, troposphere, stratosphere, Mesosphere and exosphere. **First Exam**<br>**6-** Understanding Biotic and Abiotic and studying the difference between them.<br>**7-** Stevenson box and its element. Applications of rain gauge for estimating precipitation<br>**8-** Measures humidity and temperature by using of hygrometer and thermometer. Studying and determine of pressure by using barometer instrument.<br>**Second Exam** | Mrs Muna Muhanned abdulhameed<br>Weekly (3)hrs |
| **18. Practical Topics (If there is any)** | |

**19. Examinations:**

***Example of Semester Examination:-***

**Q1:- Define Agro meteorology? And write the major object of it?.**

**(25 marks)**

**Q2) What is the difference between positive feedback and negative feedback of the atmosphere.**

**(25 marks)**

**20. Extra notes:**

**21. Peer review**: