



**Course Book**

<b>1. Course name</b>	Meteorology
<b>2. Lecturer in charge</b>	Zahraa Ali Mala issa
<b>3. Department/ College</b>	Physics/ Education-Shaqlawa
<b>4. Contact</b>	e-mail: <a href="mailto:Zahraa.malaissa@su.edu.krd">Zahraa.malaissa@su.edu.krd</a> Tel: 07505891478
<b>5. Time (in hours) per week</b>	Theory: 2 hours Munday: ( 8:30 -12:30 )
<b>6. Office hours</b>	
<b>7. Course code</b>	
<b>8. Teacher's academic profile</b>	<p>Welcome to my Academic Profile page. My name is: Zahraa Ali malaissa <b>I am Assistant lecturer r with a MSc in Nuclear physics, teaching in the <a href="#">Department of Physics, College of Shaqlaw Education</a> at <a href="#">Salahaddin University</a> in <a href="#">Kurdistan Region</a>, F.R. Iraq</b></p> <p>e-mail: <a href="mailto:Zahraa.malaissa@su.edu.krd">Zahraa.malaissa@su.edu.krd</a> Mobile: (+964) -7505891478 <b>I teach several topics at the university, i.e.</b></p> <ol style="list-style-type: none"> <li>1. Electricity and magnetism</li> <li>2. Matlab programing</li> <li>3. Statistical Mechanics</li> <li>4. Astronomy</li> </ol> <p><b>My research interests focus on;</b></p> <ol style="list-style-type: none"> <li>1.Nuclear Paring models</li> <li>2. Solar Cells..</li> </ol> <p><a href="#">Examination committee</a> &gt; 5o students <a href="#">Reviser for scientific research paper</a> &gt; 6</p>
<b>9. Keywords</b>	Electric charge, electric field, current, resistance.
<b>10. Course overview:</b>	<p>The course will cover principle information about Meteorology, and understanding of atmosphere requires knowledge not only of the earth atmosphere themselves but also of those external influences which directly or indirectly affect them. A suitable environment is necessary for any organism, since life depends upon the continuance of a proper exchange of essential substances and energies between the organism and its surroundings. And the study of the weather or atmospheric factors such as temperature, pressure, wind, precipitation and sun energy and others. The course will give students a better understanding of the Environment that surrounded us.</p>

**11. Course objective:**

The course will cover principle information about Climate, temperature, pressure, rainfall as so on and how use some sources of energy as cleaner and safer for organisms especially human on the earth. The course will give students a better understanding of the different type of inland water, and teaching the student how protect the Environment from of pollution.

**12. Student's obligation**

When I ask the student for preparing in class, and in the exam, preparing and writing a report and discusses in class, this stimulate the students to become more active and able to learn more things about environment science.

**13. Forms of teaching**

—Different forms of teaching will be used to reach the objectives of the course: power point presentations for the head titles and definitions and summary of conclusions, classification of Environmental health and any other illustrations, besides worksheet will be designed to let the chance for practicing on several aspects of the course in the classroom, furthermore students will be asked to prepare research papers on selective topics and summaries articles contents published in English into either Kurdish language, those articles need to be from printed media or internet articles. There will be classroom discussions and the lecture will give enough background to translate, solve, analyze, and evaluate problems sets, and different issues discussed throughout the course.

To get the best of the course, it is suggested that you attend classes as much as possible, read the required lectures, teacher's notes regularly as all of them are foundations for the course. Lecture's notes are for supporting and not for submitting the reading material including the handouts. try as much as possible to participate in classroom discussions, preparing the assignments given on the course.

**14. Assessment scheme**

The student must provide the following quizzes and exams during the course:

Task	Quizzes	Seminar	Project	Participation and Homework	Report	Midterm Exam Theoretical	Final Exam Theoretical	Total
Marks	4%	4%	4%	4%	4%	20%	60%	100%

**15. Student learning outcome:**

Meteorology and Clean Energy is one of the most important lecture in Environmental Sciences Department because the student in this course learn the student many things about Meteorology and Clean Energy that around us and can the student to water management , how pollution control , guideline of safe and health Environment and increase the number of people who not full-time water can understand and apply its general concepts to a broad range of related disciplines all these things can students apply in our daily life for services the community

## 16. Course Reading List and References:

### Required book:

1- The Atmosphere, F.K. Lutgens and E.J. Tarbuck, Ninth (2003) or Tenth Edition (2007) The Weather Cycler for interpreting and forecasting your weather. Optional activity kit. All other course materials are available on the Internet.

2- Meteorological Measurement Systems, by Fred V. Brock and Scott J. Richardson, Oxford University Press, 2001.

3-Instructor's Handbook on Meteorological Instrumentation, by Fred V. Brock (Editor) and Carol E. Nicholaidas (Assistant Editor), NCAR/TN-237+IA, 1984.

4-Federal Meteorological Handbook No. 1 (FMH-1), by OFCM, 1995.

5- National Aeronautics and Space Administration, "The Importance of Understanding Clouds," NASA Facts, FS-2005-0-073-GSFC, [http://www.nasa.gov/pdf/135641main\\_clouds\\_trifold21.pdf](http://www.nasa.gov/pdf/135641main_clouds_trifold21.pdf).

6-Ather, G.D. ( 2005). Essential Meteorology. 3rd Edition. Doubleday and Co., Garden City, NY.

7. Prof. R N Singh, Professor, School of Energy and Environmental Studies, Devi Ahilya Vishwavidyalaya, Indore

8. Prof. J S Saini, Professor Emeritus, Department of Mechanical and Industrial Engineering, IIT Roorkee

9. Dr. R.L. Sawhney, Former Professor, TERI Unievrsity, Delhi; School of Energy and Environmental Studies, Devi Ahilya Vishwavidyalaya, Indore

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:

**Chapter One:**

**2 Weeks**

**Introduction to Meterology  
. meteorological instruments**

<b>Chapter Two:</b> <b>1 Week</b>	<b>LAYERS OF THE EARTH'S ATMOSPHERE</b>	
<b>Chapter Three:</b> <b>2 Weeks</b>	<b>Weather &amp; Climate</b>	
<b>Chapter Four:</b> <b>2 Weeks</b>	<b>weather station</b> <b>Wind direction and wind speed</b> <b>humidity</b>	
<b>Chapter Five:</b> <b>2 Weeks</b>	<b>Students visit to Shaqlawa weather station</b> <b>. solar radiation</b>	
<b>Chapter Six:</b> <b>2 Weeks</b>	<b>Thermometer</b> <b>atmospheric pressure</b> <b>clouds</b> <b>Precipitation</b> <b>Weather Forecasting</b> <b>Automatic weather station</b> <b>Water vapour</b>	
<b>18. Practical Topics (If there is any)</b>	<b>Not Exist</b>	
<b>20. Extra notes:</b> Due to a number of <b>unforeseen</b> reasons that may lead to the <b>shifting</b> of the academic year <b>program</b> , it may be subjected to <b>modifications</b> . Also extra <b>curriculum</b> hours may be <b>needed</b> to cover all the <b>topics</b> mentioned above. The students shall be <b>notified</b> of the <b>changes</b> if and when they may <b>occur</b> .		
<b>21. Peer review</b>		

