MSc in Agricultural Meteorology

http://meteorology.uonbi.ac.ke/degree_courses/692

Duration (in semesters): Four Semesters

Credits per semester: 7 (semester 1), 6 (semester 2) and 4 (semesters 3 & 4)

Objectives:
Equip students with advanced knowledge and skills in practical application of Agro-meteorology.
Provide students, having a scientific background, with advanced theoretical and applied knowledge in agrometeorology.
Train students in skills and knowledge in applied aspects of agrometeorology.
Equip the students with tools necessary for them to work in operational, research and training institutions.
Expose the students to areas of current research in agrometeorology.

Structure:

- The course consists of course work, continuous assessment, written examination and a research project. The continuous assessment shall comprise tests, assignments, practicals and term papers.
- The candidate shall be required to take 13 course units; 11 of which shall be core and 2 electives.
- The candidate in addition shall undertake mandatory research project equivalent to four course units. The course shall be covered in a period of two years consisting of four semesters of 15 weeks each.
- The candidate shall be required to take 7 taught course units in the first semester of the first year and 6 course units in the second semester.
- Some of the course units are designed to include fields to operational centres.
- The second year of study shall be devoted to a research project equivalent to at least 4 taught course units.
- The research project will be synthesized into a report that will be internally examined to enable the students to complete the program in two years.
- Each unit shall be covered in 45 contact hours

Content:

Core courses:

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<th>Code</th>
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<tbody>
<tr>
<td>SMR 700</td>
<td>Synoptic Meteorology for Agriculture</td>
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<tr>
<td>SMR 701</td>
<td>Climatology and General Circulation</td>
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<td>SMR 702</td>
<td>Boundary Layer Meteorology</td>
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<td>SMR 703</td>
<td>Methods of Measurement and Observations in Agrometeorology</td>
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<td>SMR 704</td>
<td>Atmospheric Radiation</td>
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<td>SMR 705</td>
<td>Soil Science and Agricultural Land Evaluation</td>
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SMR 706  Crop Ecology and Physiology (CS1)
SMR 707  Animal Bioclimatology, Behavior and Welfare
SMR 708  Fundamental Economics in Agrometeorology
SMR 709  Statistical and Research Methods in Agrometeorology
SMR 710  Computer Applications and Modeling in Agrometeorology
SMR 711  Research Project

Elective Courses: Select at least two courses from any the options A, B, C & D.

**A. Environmental Option**

SMR 712  Environmental Pollution and Climate Change
SMR 713  Food Security and Disaster Management
SMR 714  Climate and Crop Protection
SMR 715  Modification of Microclimate

**B. Agricultural Production Systems Option**

SMR 716  Climate and Rangeland Resource Management
SMR 717  Animal Production Systems and Management
SMR 718  Crop Production Systems
SMR 719  Environmental Management and Post Harvest Technology

**C. Hydrology Option**

SMR 720  Applied Hydrology and Drainage
SMR 721  Agricultural Water Shed Management Systems
SMR 656  Measures for Flood and Drought Relief

**D. Application (Research) Tools Option**

SMR 722  Remote Sensing and GIS for Agrometeorology
SMR 723  Economics of Agrometeorology: Marketing and Management
SMR 667  Surface and Ground Water Resources

**Learning outcomes:** Acquisition of knowledge, skills and attitude to enable one to competently work in operational, research and academic setting.