MS AGRICULTURE, SPECIALIZATION IN WATER ENGINEERING

Program Learning Objectives

Graduates are prepared to:

1. Demonstrate expertise and the use of technology in their respective discipline.
2. Demonstrate effective oral and written communication skills.
3. Make choices based on an understanding of personal and professional ethics and respect for diversity of people and ideas.
4. Recognize leadership principles and skills.
5. Evaluate and solve problems using critical thinking.
6. Demonstrate an appreciation for sustainability and global perspectives.

Required Courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>ESCI 501</td>
<td>Research Planning</td>
<td>4</td>
</tr>
<tr>
<td>STAT 511</td>
<td>Statistical Methods</td>
<td>4</td>
</tr>
<tr>
<td>STAT 513</td>
<td>Applied Experimental Design and Regression Models</td>
<td>4</td>
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</tbody>
</table>

Select from the Following: 2-3

- AG 581 Graduate Seminar
- CE 591 Graduate Seminar I
- CE 592 Graduate Seminar II
- BRAE 414 Irrigation Engineering
- BRAE 532 Water Wells and Pumps
- BRAE 533 Irrigation Project Design
- CE 533 Advanced Water Resources Engineering
- BRAE 599 Thesis in BioResource and Agricultural Engineering (2, 2, 5) 9

Approved Electives

Select from the following:

- BRAE 435 Drainage
- BRAE 440 Agricultural Irrigation Systems
- CE 434 Groundwater Hydraulics and Hydrology
- CE 435 Engineering Hydrology
- CE 440 Hydraulic Systems Engineering
- CE 536 Computer Applications in Water Resources with Geographic Info Systems (GIS)
- ENVE 436 Introduction to Hazardous Waste Management
- ENVE 438 Water and Wastewater Treatment Design
- ENVE 535 Physico-Chemical Water and Wastewater Treatment
- ENVE 542 Sustainable Environmental Engineering

Total units 45-46

1 At least 60% of all units required by the committee as reflected on the formaly study plan must be at the 500 level.