Instructor: Dr. Michael Maurer  
E-mail: use D2L e-mail  
Phone: 936-468-1729  
Office: Agriculture Bldg. Rm. 119  
Office Hours: MW 9:00 to 10:00 & 11:00 to 12:00, TR 9:30 to 10:30 am  
Department: Agriculture  
Class meeting time and place: TR 8:00 to 9:15 am, Agriculture Bldg. Rm. 118

Course Description:  
Designed to quantify the parameters necessary for the design, installation and operation of various types of irrigation systems. Emphasis on the fundamental principles of irrigation, water application systems and water distribution systems.

Course Purpose:  
Students successfully completing this course will learn the basic aspects of irrigation. Topics of discovery include determining irrigation requirements, water hydraulics, irrigation design, irrigation scheduling and irrigation audits.

Text:  


Student Learning Outcomes:  
Upon completion of this course, the students will:

A. Be able to determine irrigation system requirements.  
B. Have a basic understanding of irrigation design.  
C. Know how to schedule irrigation.  
D. Be able to conduct an irrigation audit of existing system.  
E. Perform calculations related to irrigation system design and performance.

Methods for Assessing the Expected Learning Outcomes:  
The expected learning outcomes for the course will be assessed through several of the following methods: exams, content application exercises, quizzes, class discussion, and projects.
COVID-19 MASK POLICY
Masks (cloth face coverings) must be worn over the nose and mouth at all times in this class and appropriate physical distancing must be observed. Students not wearing a mask and/or not observing appropriate physical distancing will be asked to leave the class. All incidents of not wearing a mask and/or not observing appropriate physical distancing will be reported to the Office of Student Rights and Responsibilities. Students who are reported for multiple infractions of not wearing a mask and/or not observing appropriate physical distancing may be subject to disciplinary actions.

Course Assignments and Grading Procedures:
Lecture
<table>
<thead>
<tr>
<th>Assignment</th>
<th>Date/Time</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exam I</td>
<td>September 22, 2020</td>
<td>22%</td>
</tr>
<tr>
<td>Exam II</td>
<td>October 22, 2020</td>
<td>22%</td>
</tr>
<tr>
<td>Final</td>
<td>December 10, 2020, 8:00 to 10:30 am</td>
<td>22%</td>
</tr>
<tr>
<td>Assignments and calculations</td>
<td></td>
<td>12%</td>
</tr>
<tr>
<td>Irrigation design and scheduling project(^2)</td>
<td></td>
<td>22%</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>100%</td>
</tr>
</tbody>
</table>

\(^2\)Assignments are due at the beginning of class on the due date. Late assignments will not be accepted unless previous arrangements have been made due to extenuating circumstances.

Point Distribution:
Grades will be assigned according to the following scale:
A = 90 - 100%
B = 80 - 89.9%
C = 70 - 79.9%
D = 60 - 69.9%
F < 59.9%

Course Grades Policy (5.5)
Ordinarily, at the discretion of the instructor of record and with the approval of the academic chair/director, a grade of WH will be assigned only if the student cannot complete the course work because of unavoidable circumstances. Students must complete the work within one calendar year from the end of the semester in which they receive a WH, or the grade automatically becomes an F. If students register for the same course in future terms the WH will automatically become an F and will be counted as a repeated course for the purpose of computing the grade point average. Please read the complete policy at http://www.sfasu.edu/policies/5.5_course-grades.pdf

Student Code of Conduct: Policy 10.4
Classroom behavior should not interfere with the instructor’s ability to conduct the
class or the ability of other students to learn from the instructional program. Unacceptable or disruptive behavior will not be tolerated. Students who disrupt the learning environment may be asked to leave class and may be subject to judicial, academic or other penalties. This policy applies to all instructional forums, including electronic, classroom, labs, discussion groups, field trips, etc. The instructor shall have full discretion over what behavior is appropriate/inappropriate in the classroom. Students who do not attend class regularly or who perform poorly on class projects/exams may be referred to the iCare: Early Alert Program at SFA. Information regarding the iCare program is found at [https://www.sfasu.edu/judicial/earlyalert.asp](https://www.sfasu.edu/judicial/earlyalert.asp) or call the office at 936-468-2703.

**Responsible Use of Technology**

It is expected that all students will only use cell phones, PDAs, laptop computers, MP3 players and other technology outside of class time or when appropriate in class. Answering a cell phone, texting, listening to music or using a laptop computer for matters unrelated to the course may be grounds for dismissal from class or other penalties.

Students are expected to assist in maintaining a classroom environment which is conductive to learning. In order to assure that all students have an opportunity to gain from time spent in class, unless otherwise approved by the instructor, students are prohibited from using cellular phones or beepers, eating in class, making offensive remarks, reading newspapers, sleeping or engaging in any other form of distraction. Inappropriate behavior in the classroom shall result in, minimally, a request to leave the classroom.

**Attendance Policy:**

**Class Attendance**

Attendance is the best way to succeed in this course. Regular and punctual attendance is expected for all classes, and other activities for which a student is registered. If a student has excessive absences, the instructor reserves the right not to give individual tutoring, special consideration regarding make-up work, or other help the student needs because of missing class. Attendance will also play a crucial role in decisions concerning borderline final grades.

**No makeup examinations** will be given. A student who misses an examination because of a medical reason must provide documented evidence of medical incapacitation. Other reasons for missing an examination must be discussed as soon as possible before the day of the examination. Each case will be considered on an individual basis. The overall course grade for a student who misses an examination with a valid reason will be based on that student’s remaining course work. A student who misses an examination without a valid excuse will receive a grade of zero on that examination.

**Excused Absences**

Students may be excused from attendance for certain reasons, among these are
absences related to health, family emergencies, and student participation in certain university-sponsored events. However, students are responsible for notifying their instructors in **advance** whenever possible for excusable absences.

Students are responsible for providing timely documentation satisfactory to the instructor for each absence. Students with acceptable excuses may be permitted to make up work for absences to a maximum of three weeks of a semester when the nature of the work missed permits. Whether excused or unexcused, a student is still responsible for all course content and assignments.

**Student Academic Dishonesty Policy (4.1)**

Academic integrity is a responsibility of all university faculty and students. Faculty members promote academic integrity in multiple ways including instruction on the components of academic honesty, as well as abiding by university policy on penalties for cheating and plagiarism. Definition of Academic Dishonesty:

Academic dishonesty includes both cheating and plagiarism. Cheating includes but is not limited to (1) using or attempting to use unauthorized materials to aid in achieving a better grade on a component of a class; (2) the falsification or invention of any information, including citations, on an assigned exercise; and/or (3) helping or attempting to help another in an act of cheating or plagiarism. Plagiarism is presenting the words or ideas of another person as if they were your own. Examples of plagiarism are (1) submitting an assignment as if it were one's own work when, in fact, it is at least partly the work of another; (2) submitting a work that has been purchased or otherwise obtained from an Internet source or another source; and (3) incorporating the words or ideas of an author into one's paper without giving the author due credit. Please read the complete policy at [http://www.sfasu.edu/policies/student_academic_dishonesty.pdf](http://www.sfasu.edu/policies/student_academic_dishonesty.pdf)

Integrity and professionalism are expected at this level of education. Unauthorized collaboration on assignments or projects, as well as dishonesty on exams and quizzes will not be tolerated. Suspected cases of cheating or plagiarism in class and labs as well as grade disputes and appeals will be handled according to the academic regulations of the University. **If it is determined cheating occurred, the student will be dismissed and fail the course**

**Academic Accommodation for Students with Disabilities Policy (6.1)**

To obtain disability related accommodations, alternate formats and/or auxiliary aids, students with disabilities must contact the Office of Disability Services (ODS), Human Services Building, and Room 325, 468-3004 / 468-1004 (TDD) as early as possible in the semester. Once verified, ODS will notify the course instructor and outline the accommodation and/or auxiliary aids to be provided. Failure to request services in a timely manner may delay your accommodations. For additional information, go to [http://www.sfasu.edu/disabilityservices/](http://www.sfasu.edu/disabilityservices/)
Tentative Lecture Schedule:

PRINCIPLES OF IRRIGATION
AGM 421, Section 001
Topic outline and Exam dates

(Exam dates or topics may change with prior notification)

Topic

Irrigation systems (1 wk)

Soil, plant and water relations (2 wks)

Precipitation rates (1 wk)

Irrigation efficiency and uniformity (2 wks)

Pipe layout, types of pipe & size criteria (1 wk)

Automatic controllers (1 wk)

Scheduling irrigation (3 wks)

Irrigation audit (3 wks)
Program Learning Outcomes:
1. The student will demonstrate entry level skills needed for success in horticulture, agronomy and other related fields in the area of a) plant physiology and anatomy, b) practical experience in plant management systems, c) basic knowledge of plant genetics and reproduction, d) identification and knowledge of crops and e) management of soils and soilless media.
2. The student will demonstrate quantitative competence related to horticulture and agronomy.
3. The student will exhibit problem solving skills based on quantitative and analytical reasoning.
4. The student will demonstrate effective communication skills.
5. The student will exhibit leadership and other interpersonal skills needed for career placement and advancement.

Program learning outcome #1 is addressed in this class.

<table>
<thead>
<tr>
<th>Course</th>
<th>PLO 1 Plant Science</th>
<th>PLO 2 Quantitative</th>
<th>PLO 3 Problem Solving</th>
<th>PLO 4 Communications</th>
<th>PLO 5 Leadership</th>
</tr>
</thead>
<tbody>
<tr>
<td>AGR 280</td>
<td>I</td>
<td>A</td>
<td>A</td>
<td>B</td>
<td>I</td>
</tr>
</tbody>
</table>

B-Basic  I-Intermediate A-Advanced M-Mastery