

The University of Manitoba
Faculty of Agricultural and Food Sciences



COURSE TITLE

Department Biosystems Engineering

Course Number BIOE 0690

Academic Session 2012/2013

Credit Hours 4

Prerequisites and how they apply to this course

Classroom Location A205 Agricultural Engineering Bldg.

Meeting Days and Class Hours 1:30 – 2:30 Wednesdays and Fridays

Lab/Seminar Location A205 Agricultural Engineering Bldg. **Lab/Seminar/Hours** 1:30 – 4:00 Mondays

Department Office location E2-376 EITC Bldg **Phone Number** 474-6033

Course Web Page (if applicable)

Instructor Information

Name & Title Dr. (Ranjan) R. Sri Ranjan, P.Eng., Professor

Office Location E1-348 EITC Bldg.

Office Phone Number 474-9344

Office Hours I am mostly available to meet. Please call 9344 to arrange the time.

Email Address Ranjan@cc.umanitoba.ca

Teaching Assistant(s) (if applicable)

TA Office Hours and Location

Course Philosophy

Students' Learning Responsibilities

Students are expected to study the material covered during the lecture and make additional notes. They are expected to have reviewed the material already covered before they come to the next class. The assignments are due on the designated dates. This course relies heavily on your knowledge of basic Mathematics and soils. You are encouraged to review your high school Mathematics.

Why this course is useful?

Students interested in on-farm water management will benefit from this course. Topics covered include basic land surveying, irrigation systems, and drainage systems. If you are planning to work in production agriculture, overseas development projects, knowledge about on-farm water management will be an asset.

Who should take this course?

Students interested in irrigated agriculture and drainage will benefit from this course.

How this course fits into the curriculum

Water is a scarce resource is used heavily in irrigated agriculture. Knowing how to manage water on the farm covers and important component of production agriculture.

Course Description/Objectives

Undergraduate Calendar Description

(Formerly 034.069) Surveying including use of the level instrument and steel tape, agricultural drainage, dugouts and wells for farm water supply, irrigation, pump selection, the Water Rights Act. 4.000 Credit Hours

Instructional Methods

The lecture will consists of discussion of concepts using Powerpoint slides with additional descriptive notes in class. The slides will be available as course handouts for students to take additional notes during the lecture.

Course Objectives

To introduce Diploma Agriculture students in this course to the basic theoretical principles and practical skills in the preparation, construction and usage of farm-scale irrigation, drainage, and water storage projects. Students successfully completing this course should be able to design small projects themselves and, in larger projects they should be able to deal as well informed and knowledgeable partners with consultants, contractors, institutions and government agencies.

Learning outcomes

Learning outcomes assist: i) students to identify the knowledge, skills, attitudes and personal attributes expected of them to successfully complete their program of studies; ii) faculty to develop learning goals and objectives in their courses and programs, in prioritizing and focusing the learning experiences, and in the selection of appropriate assessment tools and; iii) potential students and outside agencies to assess the quality of our academic programs.

These learning outcomes areas include:

Scholar, Content and technical expertise, Social accountability, Communicator, and Professional

This course provides you a lot of **content and technical expertise** pertaining to on-farm water management. You are expected to grasp the material and extend knowledge to new scenarios. This will help your development as a **Scholar**. The environmental impact of using poor quality irrigation water on long-term sustainability will be discussed. This topic will cover **social accountability**. Your **communication skills** will be assessed through your ability to convey your thoughts concisely in your assignments and tests. Alternative strategies to solve water management problems will be discussed. This aspect will help develop your skills as a **professional**.

Additional Comments:

Description of Examinations

All tests/examinations will consist of two parts. Part A will be closed book/notes testing your ability to recall concepts. Part B will be open book/notes/assignments testing your ability to solve a field problem, or quantify inputs and outputs.

Description of Assignments

The surveying part of the lab will provide hands-on training with survey instruments working in pairs. Assignments are usually problem-solving type questions to provide practice for what was discussed in class. You are expected to complete the assignment and submit at the next class.

Assignment Due Dates

Assignments are due in the next class.

Grade Evaluation

50% on written final examination

30% on two written mid-term test (**October 10, 2012; November 14, 2012**)

20% on weekly assignments.

The survey field notebooks are generally due at the end of each lab. The tutorial assignments are due on Fridays. Late submission is penalized at 10% per day. Some evaluative feedback will be given before the VW deadline date.

Important Dates (e.g., voluntary withdrawal date)

Voluntary withdrawal date: **November 14, 2012**

Texts, Readings, Materials

Textbook(s) – Authors, Titles, Edition

No textbooks are required. However, the student is expected to acquire the following:

A field book, e.g. Sockkisha Field Book S360, available in the Drafting Supplies Section of the University Bookstore or at or Lewis Instruments, 1438 Erin Street, Winnipeg.

Supplementary Reading

Additional Materials

Course handouts will be available.

Course Policies

Late Assignments

10% per day will be deducted for late assignments. Assignments will not be accepted after the marked assignments of others have been returned to the class.

Missed Assignments

Zero marks for missed assignments.

Missed Exams

There is NO make-up examination for a missed mid-term! If missed and student has a valid medical certificate or compassionate reason (e.g., death of an immediate family member), marks from mid-term will be added to marks for the final examination. Students who miss the examination without a valid reason will receive a grade of zero (0) for the mid-term examination.

In the case of a missed final examination, a student will be assigned an F no paper grade for the course unless an acceptable medical certificate or a confirmable compassionate reason is provided in which case a supplementary examination will be allowed.

Academic Integrity

Plagiarism or any other form of cheating in examinations, term tests or academic work is subject to serious academic penalty. Cheating in examinations or tests may take the form of copying from another student or bringing unauthorized materials into the exam room. Exam cheating can also include exam impersonation. A student found guilty of contributing to cheating in examinations or term assignments is also subject to serious academic penalty. Students should acquaint themselves with the University's policy on plagiarism; cheating, exam impersonation and duplicate submission in the University of Manitoba Undergraduate Calendar.

Additional Comments:

Use of Third Party Detection and Submission Tools

Electronic detection tools may be used to screen assignments in cases of suspected plagiarism.

Group Work Policies:

Students are allowed to discuss laboratory results with lab partner or others but the final report must be independently written. Copying or joint production of reports will result in both reports receiving a zero mark.