



Course Information

AEEC 575 – Economics of Water Resource Management and Policy
FALL 2017

Meeting Schedule

MWF: 8:30-9:20
Gerald Thomas, Rm. 184

Withdrawal Date: Mon Oct 16, 2017
Final Exam: Wed Dec 6, 2017: 8:00 am-10:00 am

Instructor and TA Information

Instructor

Brian H. Hurd	Professor
Office:	Gerald Thomas 350
Office Hours	MW 9:30-11:00 AM
Office Phone:	575-646-2674
Instructor Web:	https://wordpress.nmsu.edu/bhurd/
Email:	preferred method is Canvas Inbox (24 hr expected response time)



Course Description

Water is a critical natural resource that is under intense pressure and rising competition throughout the Western United States, as well as in many regions of the world. This course examines some of the key problems confronting water resource managers and policy makers, and builds a framework to assess and analyze impacts, management needs and options, and consequences of policy alternatives. Though emphasizing the understanding and application of economic concepts and principles such as allocative efficiency, welfare optimization, and analysis of tradeoffs (e.g., cost-benefit analysis), the course also entails the central issues of water law, institutions, and regulation. Extensive use of current examples and case studies underscores and highlights the usefulness and application of careful, systematic, and well-reasoned methods of analysis. Topics include: economic, cultural and ecological value of water, water markets, water resource planning, modeling of water resources, transboundary issues, and ethical concerns.

Methods:

Readings, discussions, assignments, and presentations emphasize the role and use of economics to understand and assess water policy and management alternatives. A small class, seminar setting provides a unique opportunity for students to engage each other and their instructor as they develop analytical and critical reasoning skills applied to water resource management and policy issues.

Course Delivery Method

This course is module-based. There are 9 modules that must be completed in sequence -- including each module quiz and either discussion or assignment, which these will alternate by module. All assignments are expected and due according to the scheduled dates unless prior notice and consent is obtained. The course includes a semester project. Students work with an instructor to develop a research topic, expressed in the form of a problem statement. Students then research and write a technical memorandum that addresses the problem statement.

Course Objectives

Students improve their appreciation of interrelationships and complexities inherent in water resource problems as well as the explicit and implicit tradeoffs that accompany management and policy decisions. Course objectives (CO) include ability to:

- (CO1) Describe the major categories of water use and explain their role, function, and economic value of water within natural and human systems.
- (CO2) Apply basic economic concepts to the assessment of water quantity and quality issues.
- (CO3) Analyze impacts of water management and policy decisions on competing water resource users, public interests, and address their potential for conflict.
- (CO4) Demonstrate conceptual and systems thinking applied to water resource problems.
- (CO5) Apply quantitative and qualitative reasoning, modeling, and decision-support methods to water resource problems, including Integrated Water Resources Management (IWRM), Cost-Benefit Analysis (CBA), and Economic and Environmental Impact Assessment.
- (CO6) Compare analytic methods for watershed assessment, including statistical, optimization, and simulation methods applied to watershed assessment.
- (CO7) Conduct and perform collaborative research.

Textbooks and Materials

(A) Required Text:

Griffin, R. C. (2016). *Water resource economics: the analysis of scarcity, policies, and projects, 2nd edition*. MIT Press.

(B) Additional Required Resources:

- a. Selected readings will be provided as links within specific modules.
- b. Web-available Resources and Video Links:

Prerequisites

There are no course pre-requisites. This is an an entry-level course in the Water Management and Science program normally taken by students with graduate- or senior-level standing.

Online Preparation

Students should be prepared to actively take and engage in online learning. This includes access and availability to apply 4-6 hours per week to participating and completing online activities for this course, and familiarity with NMSU's online learning management system, CANVAS.

Required Technical Skills

Taking an online course requires a number of technical skills as well as other soft skills. However, at a minimum you will need to meet certain technology responsibilities to complete work for this course. If you have questions about technical requirements for the course, please contact me immediately.

To begin in this course, you must:

- Read this syllabus and schedule carefully and contact me immediately if you have any questions. You are responsible for the content and assignments in these documents.
- Be able to obtain access to an internet connection, preferably broadband, and a working computer for the duration of this course.
- Be proficient with Microsoft® Office applications, in particular MS Word, Excel, and Powerpoint.
- Be able to conduct research searches on the Internet; for example, internet search engines (GOOGLE). For more resources go to [NMSU Library](#) and [Research Help for Students](#).
- Find resources on the Internet; see [Internet Tutorials](#)
- Be able to send and receive emails and email attachments in an out of class.
- Know how to change your CANVAS Notification settings.
- Know how to read and send email in CANVAS, including attachments.
- Maintain backups of all work you create for this course.

Course Expectations

I will expect your weekly participation in discussions and accessing course modules and materials on timely basis. Meeting course timelines and scheduled events is MANDATORY. You can expect me to be available and prompt in my communications with you, including providing timely evaluations and actionable feedback on your submissions and queries.

Netiquette

Netiquette, or network etiquette, is concerned with the "proper" way to communicate in an online environment. Consider the summary of "rules" shown here, [Netiquette Summary](#), that are adapted from Virginia Shea's [The Core Rules of Netiquette](#), whenever you communicate in the virtual world.

Course Organization

The course is organized and sequenced by modules. Each module contains the following four elements: (1) Overview and Expectations; (2) Lectures and Content; (3) Assignment; and (4) Additional Resources. Students are expected to view and complete each module by the scheduled DUE date.

Performance Assessment and Grading Policy

The course consists of ten module quizzes, five assignments, five graded discussions, a research project presentation, and a final exam. The purpose and goals of each are explained in the associated module. Weights and assessment value are given as:

Assignments	Units	Points	Weight
Module Quizzes	12	1200	20%
Assignments	6	600	20%
Discussions	6	600	20%
Research Project	1	100	20%
Final EXAM	1	100	20%
Total			100%
Percentage	Grade		
90-100	A		
80-89.5	B		

70-79.5	C
60-69.5	D
<60	F

Quizzes

Each module contains a quiz that is assessed from 100 points. Quizzes are intended to assess comprehension of concepts and content from readings, lectures, and additional resources associated with each module. Each quiz will contain a description of the material that is covered and any performance parameters that will guide its execution (e.g., is quiz repeatable).

Assignments

Assignments will generally consist of tasks and activities that (1) develop skills and knowledge relevant to the module topic; AND (2) a research component that will develop

The course consists of twelve module quizzes, six assignments, and six graded discussions. The purpose and goals will be explained in the associated module. Assignments will generally consist of tasks and activities that (1) develop skills and knowledge relevant to the module topic; AND (2) a research component that will develop key steps in the research process.

Discussions

Discussions Tool is an integral part of this course and participation BOTH in providing a discussion response and replies to other's responses is expected.

Research Project

The research project and presentation is a fundamental component of this course and completion is expected. Significant time and effort will be devoted to understanding the research process, including identification of a research topic and focus, fact gathering and analysis, and reporting structure and organization.

Final Exam

The final exam is required and **MUST** be completed by the time given for this course (unless prior arrangements have been made with the instructor).

Late Work

Late assignments will be penalized 25%. Assignments more than one week late are scored 0, and may result in degrading the student's ability to perform on subsequent assignments (i.e., some assignments, in particular those associated with the research project, are sequential and cumulative in nature. A missing assignment is a **missing step**).

Incomplete Grades

The grade of "I" may only be assigned if the student is unable to complete the course due to circumstances beyond the student's control that develop after the last day to withdraw from the course.

Class Withdrawals

It is your responsibility to know important dates such as the final day to withdraw from classes. The last day to drop with a 'W' is shown in the *Course Information*, above. You must officially withdraw from any class that you intend to drop.

Academic Integrity

Plagiarism is using another person's work without acknowledgment, making it appear to be one's own. Intentional and unintentional instances of plagiarism are considered instances of academic misconduct and are subject to disciplinary action such as failure on the assignment, failure of the course or dismissal from the university. The [NMSU Library](#) has more information and help on how to avoid plagiarism.

Communication

I will send urgent and regular communication to all students using the Announcements tool in Canvas. It is a requirement in this class that you set your New Announcements in Notifications to "Right Away" to ensure that you receive any announcements. (Go to Profile>Notifications, find for new announcements and set to Right Away). The CANVAS Discussion Tool and Collaboration Tool will also be used for interactions among instructors and students.

Virtual Office Hours (MST)

I will be available for immediate text and email messaging according to the OFFICE HOURS listed above (times are MST).

Email

Preferred email is CANVAS INBOX for all instructors. Students should normally expect a response within 24 hours. Your NMSU email account is the official means of communicating with the university. Information critical to your success at NMSU is delivered to you via this account, and you are expected to follow rules and policies provided to you via this communication method. Any email from you to the instructor should be sent either through the CANVAS course management system or through your official NMSU email account. Please be advised that due to privacy and security concerns, we are unable to respond to emails from or about students that do not originate from an official NMSU email address.

Phone Number

Telephone numbers are provided above. Limit their use to non-normal events or situations. Leave a voicemail message if necessary and I will return your call (or reply with an email as needed) within 24 hours.

Technology Requirements

Basic algebra skills, familiarity with word processing and spreadsheet software.

Computer Hardware & Software

Students will need to have a functional understanding and ability to use the following in order to most fully participate in this course:

- Access to a Windows or Macintosh desktop computer or laptop with internet access, sound, and speakers
- Canvas Learning Management System
 - [Canvas Instructions](#)
 - [Instructure Canvas](#)
- Microsoft Office 2007 or higher
 - MS Word
 - MS Excel
 - MS Powerpoint
- Adobe Reader (for reading PDF files)
- Video camera and microphone and/or headsets with microphone
- Capability to record (capture) video. Necessary for recording and submitting project presentation.
- Skype (Optional)
- Adobe Connect (Optional)

Web Browsers

The following browsers are recommended for use in Canvas. Please remember to update the web browser you are using to access Canvas. Internet Explorer is not recommended for use with Canvas at this time.

- [Firefox](#)
- [Chrome](#)
- [Safari](#)

Canvas does not fully support mobile devices; while there is a free Canvas mobile app available through iTunes store, a lot of functionality is unavailable when using a mobile phone. When you take this course, it is assumed you have access to a computer or laptop for full access to functionality in this course.

Outcome Assessment (course evaluation)

At the conclusion of the term, students are encouraged to provide candid and informative evaluations of the course and the instructor.

Student Support

Accessibility Support

Section 504 of the Rehabilitation Act of 1973 and the Americans with Disabilities Act Amendments Act (ADAAA) covers issues relating to disability and accommodations. If a student has questions or needs an accommodation in the classroom (all medical information is treated confidentially), contact:

Trudy Luken, Director Student Accessibility Services (SAS) - Corbett Center Student Union, Rm. 208
Phone: (575) 646-6840 E-mail: sas@nmsu.edu Website: <http://sas.nmsu.edu/>

NMSU policy prohibits discrimination on the basis of age, ancestry, color, disability, gender identity, genetic information, national origin, race, religion, retaliation, serious medical condition, sex, sexual orientation, spousal affiliation and protected veterans status. Furthermore, Title IX prohibits sex discrimination to include sexual misconduct: sexual violence (sexual assault, rape), sexual harassment and retaliation.

For more information on discrimination issues, Title IX, Campus SaVE Act, NMSU Policy Chapter 3.25, NMSU's complaint process, or to file a complaint contact: Lauri Millot, Director and Title IX Coordinator Agustin Diaz, Associate Director, Title IX Deputy Coordinator Office of Institutional Equity (OIE) - O'Loughlin House, 1130 University Avenue Phone: (575) 646-3635 E-mail: equity@nmsu.edu Website: <http://eeo.nmsu.edu/>

Other NMSU Resources: NMSU Police Department: (575) 646-3311 www.nmsupolice.com NMSU Police Victim Services: (575) 646-3424 NMSU Counseling Center: (575) 646-2731 NMSU Dean of Students: (575) 646-1722 For Any On-campus Emergencies: 911

Academic Learner Services Support

Students may find the [NMSU Student Support](#) website helpful for Academic Resources, Support and Development, and Campus Information.

Technical Support

The ICT Customer Service Center is equipped to deal with all of your information technology (IT) and telecommunications needs at NMSU. The ICT Customer Service Center hours of operation are from 8:00 am until 5:00 pm Monday through Friday Mountain Time. Please feel free to contact them at 646-1840 or via e-mail at helpdesk@nmsu.edu. You can also go to the [Student Technology Help](#) web page and [Student Resources](#) located at the [Canvas](#) web page for additional information on Canvas.

Accessibility of eLearning Tools

Privacy Policies

- [Canvas](#)
- [Google](#)
- [Microsoft](#)
- [Adobe](#)
- [USDA Accessibility Statement \(for SuperTracker used in Assignment #1\)](#)

VPAT Statements

Voluntary Product Accessibility Template (VPAT)

- [Canvas](#)
- [Google](#)
- [Microsoft](#)
- [Adobe](#)
- [USDA Privacy Policy \(for SuperTracker used in Assignment #1\)](#)

Syllabus Modifications Statement

Instructor may modify this syllabus. Students will be notified of any and all changes through the CANVAS ANNOUNCEMENTS TOOL that will include a specific link to the revised document.