

**CSUS 476
Natural Resource Recreation Management (August 16, 2017)**

Instructor

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Office Hours

10:00AM – Noon Thursday
Other times by Appointment

Class Time and Location

Fall 2017 (8/31-10/12)
5:10–8:00 PM Tues. & Thur. + 2 hours arranged per week
221 Natural Resources

CATALOG DESCRIPTION

Natural resource recreation management principles, tools and models. Applications to trail, camping, watercraft and dispersed recreation settings. Security of visitors, resources and facilities. Case studies and integrated problem solving. Offered first half of semester.

INTRODUCTION

Natural resource based recreation is an integral part of our society and culture. It is a potent economic, ecological, political and social force in directing the management of public and private lands and influencing the environment. It involves the public, non-profit and commercial sectors of our society. It requires knowledge in both natural and social science and the ability to use that knowledge to plan for the future and manage people, facilities and resources. Sustaining the productive capability of the environment, while meeting the recreational and other needs of current and future generations, is the on-going challenge of natural resource recreation managers.

OBJECTIVES

This course is designed to provide you with critical information and insight in natural resource based recreation management. It will use actual situations to demonstrate approaches to management problems. It will also integrate with knowledge gained by students in related coursework and outdoor experiences including work and recreation. Finally, you will apply the knowledge you have gained to public natural resource based recreation settings.

Specific Objectives

1. Student will understand foundations and practice of sustainable natural resource recreation management.
2. Student will create, deploy and evaluate plans for management of trails, camping areas, water based recreation and dispersed recreation based on best management practices.
3. Student will understand and use visitor, facility and resource management models, techniques, tools and approaches that focus on accountability, security and sustainability.
4. Student will implement sustainable management practices in an on-site project benefiting public natural resource recreation in the Mid-Michigan area.
5. Student will integrate critical thinking, systems thinking, ecological literacy and leadership through their use of initiative and practical skills in multiple public sector field projects.
6. Student will evaluate public provision of natural resource recreation opportunity based on best management practices and suggest feasible improvements for evaluated situations.
7. Student will apply knowledge gained from objectives 1 – 6 in class participation, presentations, examinations, an on-site field project and an evaluation project.

TEXT

All readings are web based and links are provided on the CSUS 476 FS17 Class Calendar which is emailed to all so you just click on the link. This provides students considerable financial savings and the most current content, but it also requires responsibility on the part of the student. **Students need to be prepared for class by reading all assigned documents/articles before class. The readings include agency manuals, video clips and research reports. They complement lecture/discussion and are not repeated in lecture. Attendance in class is crucial. The instructor's notes/power points are NOT available outside of class, including not available on D2L.**

EXAMS

There will be 2 examinations. They may contain essay, multiple choice, true/false and matching questions. They are listed in the class calendar. Each will cover lecture, readings, videos, field assignments and visits, class discussion and presentations. They will be the only activity for their assigned class period.

FOOD

Since class occurs during a meal time for some, feel free to bring in food/drink to tide you over. The same goes for work days and your team's field evaluation. When the class presents (September 21 and October 10) pizza will be provided and you can help complement this "staple" as you choose.

FIELD WORK DAYS ASSIGNMENT/POWERPOINT

There are two scheduled field work days at two different venues and an alternative venue for those who are busy on September 9 or 10 and cannot participate in a regularly scheduled field work day. **Students will need to log a total of 4 or more hours on-site on one or more projects.** The first venue is Sleepy Hollow State Park where we will be improving the non-motorized trail system by correcting a number of problems and doing routine trail maintenance.

The second venue is the 41 miles Fred Meijer CIS (FMCIS) Trail that runs from Owosso to Ionia. There will be project locations still being determined in cooperation with trail manager Barry Culham. Tentatively it looks like an evaluation bike ride of trail issues between Muir and Owosso (36 miles) and then follow up with repair of animal damage (holes), trimming/removal from trail surface of vegetation (overhanging vegetation, fallen vegetation and clear vision areas at roads) and a potential erosion control project in the Village of Ovid involving riprap and filter cloth placement. We will likely try to have the ride to ID problems on 9/9 or 10 and then plan to fix problems after that with those who don't make the initial workdays.

The third project site will be at Clinton Lakes/Motz County Parks just NW of St. Johns. Projects there will be in cooperation with Park and Green Space Coordinator Tom Olson and will occur for those who cannot make the 9/9-10 work days. They will likely include trail projects, facility maintenance, invasive species control and other activities and will be done M-F between 9AM – 5PM. Work there will need to be done BEFORE September 21 so the student will be prepared to present their work day experiences in class on September 21.

Project timing at Sleepy Hollow for trail work is 9AM-4PM Saturday September 9 and 1-5PM Sunday afternoon September 10. The Sleepy Hollow State Park trail work will involve significant physical labor and the use of hand tools to physically improve the trail system in cooperation with park staff that will have some larger mechanical devices to assist the projects. For the FMCIS trail, timing is still being determined on 9/10-11.

At ALL locations you will evaluate the before condition, the management changes your team was involved in implementing or recommending and why (including any monitoring activities) and suggested feasible future monitoring at the project site(s). For the trail projects use the following criteria from the rules of thumb for sustainable trails from the US Forest Service Trail Manual. Working either individually or in a group of 2-5, in a power point of 8-12 slides, including photographs:

Assess how well our **Trail Triage** efforts addressed:

1. Correcting truly unsafe situations to visitors or others (e.g. neighbors, motorists, etc.).

2. Correcting problems that were causing trail/environmental damage, such as erosion.
3. Improved visitor experience, comfort or convenience.
4. Consider the original design standard of the trail and what types of use/users for which the trail was designed. Has this changed or should it be changed? Why and if to be changed, to what?

In your powerpoint assessment, some points to consider in trail design of a **Sustainable Trail include:**

- Outsloped tread
- Sustainable grades
- Frequent grade reversals
- Erosion resistance
- Path that traverses along the sideslope (sidehill design)
- Provision for sheet flow of runoff
- Positive user experiences
- Low maintenance needed to sustain the trail

The power point presentation from each group or individual should be from 10 minutes long + 5 minutes for Q and A. It will be on Thursday September 21, 2017 in class. We will have pizza and will stay until all presentations are finished.

EVALUATION PROJECT/POWERPOINT

The project will be done in a team of 2-5 people, unless one wishes to work by him/herself. Students choose their team members and their project location.

Mid-Michigan is blessed with a wide array of public and private natural resource based recreation options. The public options include state and local parks, state game, wildlife, research and recreation areas, public water access sites and non-motorized trail corridors. There are also commercial/non-profit natural resource venues such as commercial campgrounds, youth camps, shooting preserves, watercraft liveries, etc. After selecting such a venue (for private sector must get permission from management) and receiving approval in writing from the instructor, in a power point presentation of 12-15 slides taking 12-15 minutes with 5 minutes for Q & A, **the student team will examine one of the five sets of facilities/opportunities listed below:**

- Day use waterfront/beach/boat launch
- Family and organization campgrounds
- Dispersed recreation opportunities (shore/pier fishing, nature observation, hunting)
- Day use/non-waterfront facilities (shelters, picnic areas, sports fields, playgrounds)
- Visitor comfort/need facilities (restrooms, parking, drinking fountains, signage, road network)

Be sure to review the rules regarding each facility/opportunity area in your examination (e.g. is hunting legal or not allowed, etc. at the site). The site cannot be one where any group member did their Field Work Day project.

In this examination, accomplish the following:

- a. Describe the site, its managing organization and mission statement and approximate level of annual site visitation.
- b. Describe the set of facilities/opportunities chosen including photographically
- c. Document your description photographically
- d. Identify and document two key management situations that need to be improved for the site to better achieve the mission statement for the facility/opportunity set chosen. Base your selection on readings from the literature (including materials from this course and other sources), lecture and other knowledge such as that gained from work experience, recreational experience, other courses, etc.
- e. Provide one or more specific management recommendations based on best management practices for each of the two challenges identified.
- f. Prioritize your proposed management actions. Explain rationale for your priority ranking.

- g. Provide cost estimates for each management recommendation based on the best information available. Be realistic and look to get things done efficiently. Think of the size/budget of the managing entity in your proposals and don't propose million dollar projects for small organizations.

For this assignment, there are likely to be right and wrong approaches to improving these sites. Recommend the former and know why it is a right approach.

EVALUATION

All grading will be on a straight scale. There will be no opportunities for extra credit other than those the instructor provides to all students on the 2 scheduled exams.

Assignments	Points	Percentage = Grade	Points
Evaluation Project Powerpoint	100	≥90.0% = 4.0	360 – 400
Exams	200	85% - 89.95%=3.5	340 – 359
Field Day Work/Powerpoint	100	80% - 84.95%=3.0	320 - 339
Total	400	75% - 79.95%=2.5	300 – 319
		70% - 74.95%=2.0	280 – 299
		65% - 69.95%=1.5	260 – 279
		60% - 64.95%=1.0	240 – 259
		< 60% = 0.0	< 240

ACADEMIC INTEGRITY

[Article 2.III.B.2](#) of the Academic Freedom Report states: “The student shares with the faculty the responsibility for maintaining the integrity of scholarship, grades, and professional standards.” In addition, the Department of Community Sustainability adheres to the policies on academic honesty specified in General Student Regulation 1.0, [Protection of Scholarship and Grades](#); the all-University Policy on [Integrity of Scholarship and Grades](#); and [Ordinance 17.00](#), Examinations.

CSUS 476 CLASS CALENDAR FS15

This is a 4 credit half semester class with 6 class hours per week plus an additional 2 hours per week arranged. Those arranged hours are covered by the field day and evaluation project.

- 8/31 Introductions, Responsibilities, Field Work Days, Student Career Goals & NR Recreation Experiences
Limiting Negative Environmental Impacts of Recreation with Best Management Practices to Protect Soil and Water
http://www.michigan.gov/dnr/0,1607,7-153-30301_31154_31261---,00.html. (only chap 5-7 + Appendices A and E)
- 9/5 Non-Motorized Trails: Hiking, Mountain Biking, Horseback Riding and X-C Skiing
(*Building Mountain Bike Trails: Sustainable Singletrack DVD*; *Introduction to Mechanized Trail Equipment DVD*)
http://www.fhwa.dot.gov/environment/recreational_trails/publications/fs_publications/07232806/
- 9/7 Managing Rail-Trails
(*Making the Connection - Rail Trails in MI Today DVD*)
- 9/9-10 Field Work Projects/Experience at **Sleepy Hollow State Park**, 7835 E. Price Road, Laingsburg, MI 48848 (if you need to Mapquest). Projects will include trail

re-routes to reduce water erosion and improve user safety, the removal of a hazardous bridge and replacement with culverts and a turnpike and other activities to make the park more sustainable. Wear long pants, work shoes/boots and bring insect repellent, water, etc. so you will be comfortable and hydrated. No flip flops, shorts, etc. either day. We will be working on the non-motorized trail system with park personnel with a 9AM start at Park HQ on Saturday, lunch provided at noon (cooked by the Nelson/DeRosa family) and done by 4PM. On Sunday we will be finishing projects not done on Saturday and are starting late (1-5PM) at Park HQ to allow sleep and other things to occur. We will be using shovels, loppers, hand saws, rakes, etc. with some serious physical work.

The second venue for work projects is the 41 mile **Fred Meijer Clinton-Ionia-Shiawassee (FMCIS) Trail** that runs from Owosso to Ionia. There will be projects that are still being determined in cooperation with Trail Manager Barry Culham. Barry's contact information is cistrail@gmail.com. It is likely to be a monitoring ride on 9/9 or 10 from Muir to Owosso (36 miles likely done in sections with multiple students). This will ID needs to be met later in the semester for repairing trail surface and sub-surface damage done by animals, water, vegetation and vandalism; removal of encroaching vegetation and accurately locating additional current and future maintenance issues for preventative action or repair including a culvert in Ovid with erosion issues. Initial work times are TBD on the weekend of 9/9-10 and also after that. Like at Sleepy Hollow SP wear suitable clothing (long pants, work shoes/boots and bring insect repellent, water, etc. so you will be comfortable and hydrated) to match the weather. For those of you who ride bicycles, this will be a good opportunity to ride as part of the job. Note the trail surface is not the best for very narrow tires on road bikes as it is fairly loose crushed limestone in some rural areas while in towns it is paved asphalt.

A third work site, if you are unable to make either field day (9/9-10), is Clinton Lakes you will make arrangements to do alternate field work with Clinton County Park and Green Space Coordinator Tom Olson at Motz and Clinton Lakes County Parks just NW of St. Johns. Tom's contact info is (989) 224-5128 and email is olsont@clinton-county.org. He is looking forward to your contact. Work will be done during the work week (M-F) between 9AM and 5PM at a mutually agreeable time for you and Tom. Projects can be done with as few as two or as many as a dozen students at a given time. These projects will include resealing picnic tables, landscaping/seeding to re-route a trail to a more sustainable location, maintaining bluebird nesting boxes by cleaning and recording nesting data, painting, etc.

For any work or evaluation project, students should plan to share transportation which will provide you additional flexibility and take less of your time.

9/12 Managing Fire in NR Recreation Settings (*Fire Wars DVD*)
<https://www.nwcg.gov/sites/default/files/publications/pms210.pdf> (Chaps 1 & 2 pgs. 1-39)

- 9/14 Assessing NR Recreation Use and Users in Dispersed and Developed Recreation Handout
- 9/19 Exam 1**
- 9/21 Student Fieldwork Experience Presentations with dinner (pizza) provided in class
- 9/26 Understanding Maintenance and Managing Camping
- 9/28 Managing Waterway Based Recreation
(Construction Techniques for Recreational Boating Access Facilities DVD)
<http://www.sobaus.org/documents/NASBLAWaterWayManagement.pdf> (pgs 9-47)
<http://www.nps.gov/ncrc/programs/rtca/helpfultools/launchguide.pdf> (pgs 4-15)
- 10/3 Managing Motorized Trails: Off-Road Vehicles
(Trail Planning, Monitoring, Maintenance and Signing DVD)
http://www.michigan.gov/documents/dnr/ORV2010ReportFinal_327707_7.pdf.
 (pages 1-5)
 Managing Motorized Trails: Snowmobiling
http://www.michigan.gov/documents/dnr/SNOWMOBILE-RPT_322022_7.pdf.
 (pages 1-5)
http://www.snowmobilers.org/groomer_guide/GroomerGuidePart1.pdf.
- 10/5 Philosophy and Practice of Security and Law Enforcement in NR Recreation
Evaluation Project Paper due at the beginning of class
- 10/10 Student Evaluation presentations with dinner (pizza) provided in class

10/12 Exam 2

Enjoy the rest of the semester and the great outdoors. Your field work has provided a lasting legacy for natural resource recreation. You have made Mid-Michigan a better, more sustainable place! I look forward to working with you on your internship in the near future if you are an SPRT or an ESS major and have yet to do your internship.