COURSE DESCRIPTION

This is a "project" oriented course designed to allow the student to analyze the economic and environmental consequences of regional development project. The role of the regional planner (i.e. the student) is to identify and analyze the consequences that such plans have on the status of the region.

The course is intended to give students from planning, environmental science, and other disciplines experience in addressing the range of problems faced when trying to address a broad set of interdisciplinary problems.

COURSE OBJECTIVES

At the end of this course the student should be able to:

1. Review and analyze the nature of planning, management, and environmental problems in a regional setting

2. Outline a research strategy aimed at providing an analysis of the problem and a proposed set of solutions.

3. Gather data and information necessary to evaluate the area, before and after alternative plans, policies, or management techniques are implemented, delineating the social, economic, and environmental impacts on the area;

4. Employ basic GIS and related data analysis technologies to the analysis of regional planning and environmental problems.

5. Present the results of the study both orally and in writing as a professional report would be presented.

COURSE METHOD

Information pertinent to the completion of the course objectives will be available to the student from lectures and readings. Most of the information and data, however, will be gathered by students from published sources, local and regional agencies, public officials, and on-site studies.

EVALUATION

In order to evaluate the student's progress as it relates to the course objectives, the student will be required to complete the following assignments:

1. Prepare a project outline

2. Prepare a short paper analyzing the issues related to the project

3. Gather data and information necessary for the analysis of one aspect of the project or plan
4. Utilize the data in an analysis to draw conclusions on policy recommendations for the area and present the finding both in writing and orally.

5. Help integrate the individual findings into a comprehensive class report on the planning effort.

GRADING

Students will be graded on the following:

- Project Outline: 5%
- Issue Paper: 10%
- Two oral presentations on portion of the study results: 30%
- Completion of data collection tasks: 15%
- Analysis of data and written final report: 30%
- Integration of results in class report: 10%

Since some of the work will be undertaken as group projects, half of your analysis credits will be based on the rating of your contributions by your peers in your group. Each member of the group will be asked to rank everyone else in the group.

TENTATIVE CLASS SCHEDULE

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<td>Discussion of Issues</td>
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PROJECT DESCRIPTION

The proposed project will utilize available information to derive an environmentally-based land use, management, and sustainability plan for a portion of the watershed that can be used as an example for watershed-wide implementation.

The project will focus on the Big Darby Creek watershed and efforts to preserve its unique qualities as a diverse aquatic habitat, a state and national scenic river, and a recreational and scientific resource. Students will undertake a variety of applied projects focusing on environmental, planning, and management issues in the watershed. Projects will analyze a variety of data and propose alternative approaches to balancing human activities with the maintenance of a high quality natural environment.

The project will be divided into four major parts:

1. Compilation and analysis of a regional GIS database based on work by the several projects that have studied the Big Darby Creek. Analyses will focus on the environmental or ecological risks associated with developing various portions of the watershed. The risks are those conditions that would cause a decline in water quality or habitat and include such things as erosion and sedimentation, changes in
flood levels and flood frequency, or declines in water quality from point and non-point water pollution. Additional background analysis on demographics, land use change, local economic base (particularly farm economy numbers if available) will also be completed. These will be used to help define the social and sustainability consequences of any proposed management options.

2. Analysis of the more localized impacts of one major development area on the watershed. We expect to divide the class into several groups to do these “case studies”:

3. Analysis of growth control and management options compatible with avoiding the range of potential impacts found at both the watershed and larger scale. There are a number of such options that have been tried in other areas. These include traditional zoning and subdivision controls, purchase of development rights, transfer of development rights, controls on the location and growth rate of utility lines, and other options. These options will be examined and summarized in terms of the pros and cons of each potential approach.

4. Completion of a final report detailing the findings of each of the other parts of the study and presenting the findings at a meeting of interested parties. A presentation will be given to invited members of a watershed preservation group and selected staff from other agencies. The nature, location, and timing of the meeting will be determined in conjunction with the other organizations undertaking research on the Big Darby.

GIS DATASET USE

All students will be expected to learn the basics of ArcView GIS package so that they can undertake part of their analysis using the GIS tools. Those without previous GIS experience will be expected to go through the ArcView GIS tutorial and to achieve a beginning level of understanding of the system. More advanced students will assist in the more complex portions of the database analysis.

Students will be issued special accounts on the server for the project. The database is a shared resource that will be available via the network in the computer labs. Although the datasets will be backed up, students are expected to take precautions to avoid the deletion of the shared data files. This will require care in following instructions on database use. Students are also expected to keep their special accounts private and not share passwords with anyone else.

BOOKS

Students are required to purchase a course manual of readings from Grade A Notes (22 E. 17th Ave).