COURSE SYLLABUS

BICYCLING, WALKING AND TRAILS:
Innovations in Transportation Planning
State University of New York at Albany, USA

COURSE #PLN 449 /549, 3 Credits
Fall, 2011

Schedule: Monday, 2:45-5:35pm, Room AS123
Faculty: Jeff Olson, R.A. (phone: 584-6634 or e-mail: trails2k@aol.com)
Office Hours: by appointment

1. COURSE OBJECTIVE:
To enable students to plan, design, implement and manage systems of non-motorized transportation, particularly the "human powered" modes of bicycling and walking. This course provides students with the professional skills necessary for meeting the changing needs of urban mobility, environment, health and economics. Bicycling and walking are already significant transportation modes in New York State, where more than 7% of commuter trips are made by pedestrians or bicyclists. Throughout the nation roads and trails of many types connect America’s culture, heritage and communities. The course provides an overview of relevant federal legislation as well as global and local trends which indicate the need for creating a more balanced system for all modes of transportation, including walking, bicycling, automobiles, transit and other alternatives. Opportunities for active participation in developing solutions at the community, regional and statewide level will be a part of the learning experience.

Jeff Olson, R.A.
Saratoga Springs, NY

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2. COURSE OUTLINE and SCHEDULE:

SESSION 1: August 29
Introduction
An overview of the semester's activities will be provided and logistics regarding course requirements and performance standards will be distributed. Students will view an introductory video which will establish the context of bicycling and walking as part of the 'state of the art' in planning.

Activity: measure time/distance relationships on campus via various modes of travel, including walking, bicycling, automobiles and transit.

SEPTEMBER 5 – No Classes / Labor Day

SESSION 2: September 12
A Global Perspective for Local Action.
This lecture will discuss the global and local trends in transportation and land use planning for which bicycling and walking provide cost-effective solutions. Students will view a video presentation of the Dutch National Transportation Plan, which prominently features non-motorized transportation. This vision will then be translated by a group activity which connects the global theme to local needs.

Reading:
Alliance for Walking and Bicycling
Bicycling and Walking in the U.S.: 2010 Benchmarking Report
www.peoplepoweredmovement.org/

Activity: Walking and Bicycling Audit of Campus
http://www.walkableamerica.org/checklist-walkability.pdf

SESSION 3: September 19
The American Experience
The class will be presented with an overview of how transportation plans are developed in the U.S., and the role that non-motorized travel plays in shaping the built environment, including discussions of MPO's, DOT’s and federal funding programs. This session will include new trends including the national Bicycle Friendly Communities program, Safe Routes to Schools, and Complete Streets.

Reading: The Oregon State Bicycle and Pedestrian Plan
(http://www.oregon.gov/ODOT/HWY/BIKEPED/planproc.shtml)

SESSION 4: September 26th
The Four Layers: Greenways, On-Street Improvements, Pedestrian Facilities and Intermodal Connections. This session identifies and discusses in detail the critical elements of a complete bicycle and pedestrian transportation infrastructure, along with the planning techniques for developing plans and programs for implementation.

Reading: Getting Started: A Guide to Planning to Planning Trails in New York State
http://www.ptny.org/pdfs/gscvrcchap1.pdf
Video: Eternal Life of The Bicycle (Houten, NL), Art on the Tracks (Sustrans, UK)
SESSION 5: October 3rd
Integrated Safety and Mobility: Traffic Calming, Safe Routes to Schools and Complete Streets

Traffic Calming is the development of streets which balance the safety needs of all forms of travel, with priority given to pedestrian mobility. Safer Routes to Schools is a growing movement to encourage children to walk or bicycle to school. Complete Streets is an innovative policy approach to integrating walking and bicycling into infrastructure projects. This lecture will discuss all three of these important topics, with presentations of historic and contemporary examples of traffic calming, the fundamentals of crash types, avoidance and causation, and will offer students the opportunity to redevelop a 'typical' intersection, school zone or street.


Resources:
www.saferoutestoschools.org
www.completethestreets.org

SESSION 6: October 10th - Multiple Sections

Redeveloping Suburbia
Perhaps the most significant challenge facing contemporary planning is the redevelopment of existing suburbs. This section will deal with emerging trends such as the New Urbanism and Walkable Communities which are attempting to facilitate a town-centered approach to growth and development.

Main Streets and Pedestrians
In New York State, there are more than 180 Central Business Districts with 'main streets' on the State numbered Highway System, and the relationship between pedestrian traffic and the economic success of these communities is a critical one.

Tools of the Trade
Students will be presented with the current tools used by transportation planners, and will be provided the opportunity to understand the principles of creating change which are essential to human-powered technology and sustainable communities. Case studies will be used to illustrate the discussion, including the Empire State Bike Route System, Grand Canyon Greenway and the Millennium Trails program.

Creating a Balanced Program: Engineering, Education and Enforcement.
This session will present the importance of including law enforcement and public education in a comprehensive pedestrian and bicycle transportation program. Students will learn about partnerships for improved health, safety, mobility and quality of life.

SESSION 7: October 17 - Mid Term
Mid Term Exam: this 1.5 hour exam will test students' ability to assimilate the information provided in the first half of the course. A question and answer session and discussion of the remaining course activities will precede the exam. Student semester project topics are due this week.
October 20th: Special Evening Session at Skidmore College in Saratoga Springs

"The Long Emergency vs NYC's Resurgence" A Debate about the Future of Cities
Location: Palamountain Hall: Gannett Auditorium
Date: 10/20/2011
Time: 6:00 PM - 7:30 PM
Speakers: Paul Steely White, Executive Director - Transportation Alternatives and James Howard Kunstler, Author

SESSION 8: October 24th
Part 1: Workshop: Imagine Your Community
Students will lead teams or work in groups on the development of a prototype bike/ped projects for their neighborhood, street, campus or community, based on the course readings and other available documents.

SESSION 9: October 31st - Working Session

SESSION 10: November 7th
Part 2 - Continuation of Workshop: Presentation of Solution(s) by students

SESSION 11: November 14th
Student Presentations
Success Stories (presentation of student papers on successful bike/ped/trail projects, personalities and communities from the U.S. and the world. Possible examples: Copenhagen, Delft, Davis, Congressman Oberstar, ...)

SESSION 12: November 21st - Student Presentations (continued)

SESSION 12: November 28th - Student Presentations (continued)

December 5th:
FINAL EXAM
This three hour written and graphic exam will test student comprehension of the course as a whole, and will include material from throughout the semester.
3. COURSE EVALUATION CRITERIA:

UNDERGRADUATES:

10% Class Participation and Attendance: Students must be actively engaged in the section activities, participate in the workshop sessions, and attend all classes to receive full credit for this portion of their evaluation.

25% Mid-Term Exam: this 90 minute written exam will test the student's retention and understanding of the material presented in the first half of the course. Questions will be in the form of multiple choice and/or short essay/graphic problems.

25% Individual Paper/Project: Each student will be required to submit a 10-20 page document and presentation about a bicycle/pedestrian topic (a community, individual, project or other area of interest). Students will be able to select a on their own or from a list provided by the faculty.

20% Planning Workshop: Students will be responsible for working in teams on the development of a prototype bike/ped plan during an in-class workshop and for providing documentation and presentations of the results on behalf of the class or team.

20% Final Exam: this 120 minute written exam will test the student's mastery of the second half of the course, as well as understanding of the course material as a whole.
4. COURSE MATERIALS:

Recommended Resources:

UNITED STATES DEPARTMENT OF TRANSPORTATION (USDOT)
National Bicycling and Walking Study Ten Year Status Report October 2004
http://www.fhwa.dot.gov/environment/bikeped/study/index.htm

Alliance for Walking and Bicycling
Bicycling and Walking in the U.S.: 2010 Benchmarking Report
Washington, DC1612 K. Street, Suite 802, Washington, DC 20006
www.peoplepoweredmovement.org/

OREGON STATE DEPARTMENT OF TRANSPORTATION
The Oregon State Bicycle and Pedestrian Plan: An Element of the Oregon Transportation Plan,
ODOT, (1995) Bicycle and Pedestrian Program, 355 Capitol Street NE, 5th Floor, Salem, OR 97301-3871
http://www.odot.state.or.us/techserv/bikewalk/obpplan.htm

FLINK, Charles A., Searns, R., and OLKA, Kristine, et al,

Institute of Transportation Engineers

CALTHORPE, Peter
The Next American Metropolis: Ecology, Community and the American Dream

AMERICAN ASSOCIATION OF STATE HIGHWAY TRANSPORTATION OFFICIALS (AASHTO)

LOWE, Marcia,
The Bicycle: Vehicle for a Small Planet,

BIRK, Mia,
Joyride: Pedaling Toward a Healthier Planet

MINISTRY OF TRANSPORT, PUBLIC WORKS and WATER MANAGEMENT,
The Dutch Bicycle Master Plan: Description and Evaluation in an Historical Context
Video: http://www.youtube.com/watch?v=QExnRr9VAJw

FEDERAL HIGHWAY ADMINISTRATION and INSTITUTE OF TRANSPORTATION ENGINEERS
Traffic Calming: State of the Practice

GENERAL REFERENCE:
National Bicycle and Pedestrian Information Center: www.bicycling.org or www.walking.org