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Course Purpose and Objectives
Metropolitan transportation systems are currently under great stress as reflected in several transportation indicators such as the increasing levels of congestion, air pollution, growing suburban sprawl, etc. Since transportation investments should be a “catalyst for elevating the quality of the urban environment,” (Irving Hand), metropolitan planners are exploring a wide variety of new and innovative strategies. This course will explore transportation policies, planning techniques, and development principles that aim to produce sustainable cities and regions.

Learning outcomes of the course will include:
- An appreciation of the need for a multi-modal transportation system
- An understanding of the linkage between transportation systems and land use
- An understanding of past and present public policies in the transportation field
- Knowledge of transportation planning principles and techniques
- Knowledge of transit planning and management principles
- Knowledge of application of environmental and sustainability principles to transportation
- Experience in communication in written and oral formats.

Course Requirements and Structure

The required course assignments will include:

Two Analytical Memos – All students will write two critiques of case studies of implementation of transportation planning and be prepared to make an oral presentation of these cases on the due date. Students will use the professional memo format and papers be 3-5 single-spaced pages (see specific assignments handout for further details).

Transportation Field Project/Research Paper – Graduate students will form two-person teams and examine either a field project topic (involving implementation of transportation project) or examine a research paper topic involving a current significant issue facing transportation. The field project/research report should be approximately 15 double-spaced pages, include table of contents, references, cover page, etc. and include a formal 10 minute oral presentation of findings on the due date.

Two Examinations - The course will have one mid-term and one final examination. The exams will be in-class essay format and study questions will be provided in advance.

The grade breakdown will be based on the following allocation:
GRADUATE STUDENTS: Field/Research Project (35%), Exams (25%), Case Study Analysis (30%), Presentation and participation (10%);
UNDERGRAD. STUDENTS: Exams (40%), Case Study Analyses (50%), Presentation & participation (10%)
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<td>Sustainable Transportation and Land Use</td>
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*Required Readings include: (1) Susan Hanson and Genevieve Giuliano. THE GEOGRAPHY OF URBAN TRANSPORTATION (3rd ed.)- Available at MSUM Bookstore (2) Robert Cervero. THE TRANSIT METROPOLIS – available on Reserve at MSUM Library (3) Dittmar. THE NEW TRANSIT TOWN-on Reserve at MSUM Library

Supplemental Readings (on Reserve) include: (1) Vukan Vuchic. TRANSPORTATION FOR LIVABLE CITIES. (4) Newman and Kenworthy. SUSTAINABILITY AND CITIES (2) Bernick & Cervero. TRANSIT VILLAGES IN THE 21st CENTURY. (3) Alan Black. URBAN MASS TRANSPORTATION PLANNING (4) B. Pushkarev. PUBLIC TRANSPORTATION AND LAND USE POLICY
PURPOSE
Cities around the world are seeking new remedies for overcoming automobile dependency and creating a “transit metropolis.” In TRANSIT METROPOLIS by Robert Cervero (on Reserve at MSUM Library), Chapters 4-15 provide case studies of how cities in Europe, South and Central America, Asia, and Australia have implemented their vision of enhancing urban livability by promoting quality transportation services. In this memo, you will compare the strategies, technologies, and policies that these cities have employed and analyze their effectiveness.

ASSIGNMENT
Select two chapters from among Chapters 4-15 in the Cervero’s TRANSIT METROPOLIS text (on Reserve in MSUM Library). Select the cities based on your personal interest (e.g. past visits) or type of transit service implemented. In your paper, address the following issues:

1. Common Strategies: What techniques, policies, etc. were common among the four cities?
2. Divergent Strategies: In what ways were the cities different?
3. Effectiveness: What data or statements are used to justify the effectiveness of the transit approaches described in the four cities?
4. Lessons Learned: Do you think there are lessons from the 2 cities that can be applied to American cities? Explain.

FORMAT
Submit a 3-5 page, single-spaced analytical memo using the professional memo format provided by the instructor. In your paper, include a summary table as “Appendix A” identifying the 2 cities and their common and divergent strategies.

PRESENTATION and DUE DATE
Each student will be asked to briefly summarize their report and analysis in class. The written paper will be due on the date identified in the course schedule.
PURPOSE

In THE NEW TRANSIT TOWN, Dittmar and Ohland describe transit-oriented development as follows:

Transit-oriented developments have the potential to provide residents with improved quality of life and reduced household transportation expense, while providing the region with stable mixed-income neighborhoods that reduce environmental impacts and provide real alternatives to traffic congestion.

In this assignment, you will analyze the extent to which cities are achieving this potential and identify the reasons for their success or failure by examining case studies of transit-oriented development practice.

ASSIGNMENT

Select two chapters from among Chapters 7-11 in the Hank Dittmar/Gloria Ohland NEW TRANSIT TOWNS (on Reserve at MSUM Library). In your paper, address the following issues:

1. Project and location: Describe the location of the 2 case studies. What type of transit serves the site, what type of land uses exist, and what form of development was proposed?
2. Implementation: Describe the development that was implemented in the 2 cases, the type of developer involved, the role of adjacent residents, etc.
3. Effectiveness: What do the case studies tell us about TOD implementation related to issue such as planning, financing, community involvement, design, land use, etc?
4. Recommendations: What would you recommend that the planners and developers do differently in implementing TOD in the future?

FORMAT

Submit a 3-5 page, single-spaced analytical memo using the professional memo format provided by the instructor. In your paper, include a summary table as “Appendix A” providing descriptive data/information on the two cities and their characteristics.

PRESENTATION and DUE DATE

Each student will be asked briefly summarize their report and analysis in class. The written paper will be due on the date identified in the course schedule.
The Assignment: Breaking into teams of two students, graduate students will conduct an investigation of a transportation issue. This study can examine a current highway or transit project (field paper) or examine a current issue facing transportation in metropolitan areas. Each team will produce a 15 page, double-spaced report (including a cover page, table of contents, and references) and make a 10 minute oral PowerPoint presentation. Generally, the team report will consist of the following sections:

1. Background: Provide history and context for issue. Why is it important in transportation planning? How has the issue evolved and changed over time?
2. Current Issue: What are your findings as to the current dimensions of the issue? What planning, research and analysis has been done and what were the findings? What are the perspectives of key actors involved in this issue?
3. Project Research: Identify what aspects of the project you investigated and how (e.g. data gathering, survey, mapping, interviews, etc.)
4. Recommendations: Based on your research, what are your conclusions and recommendations?

Therefore, implement the project by forming a team, pick one topic below and, as soon as possible, schedule a 10 minute meeting with the instructor to discuss your topic and approach to the investigation.

Possible Field Project Topics:

1. Highway 14 from Mankato to Owatonna. What is status of this project and what have been issues involved in planning and implementation?
2. Transit Implementation in Mankato: Critique existing system (e.g. routes, schedules, equipment, fares) and identify alternatives for improving the system and attracting new riders.
4. Central Corridor LRT connecting downtown Mpls. and St. Paul. What are alternative proposals for transit in this corridor? What are issues raised by residents, merchants, etc.? What are project cost/ridership estimates
5. Northstar Commuter Rail Service: What are funding, political, technical issues involved in implementing new Northstar Commuter Rail from Downtown Minneapolis towards St. Cloud? What are ridership projections and how is commuter rail preferable over BRT or LRT?
6. Hiawatha Light Rail Transit and TOD: How has the Hiawatha line influenced land use development? Has Transit-Oriented Development been achieved around the transit stations?
7. Mid-Town Greenway: To what extent are alternative modes of transit (e.g. streetcar) compatible with the Midtown Greenway Bicycle route?
8. Intermodal Transit Station as part of new Twins Baseball Stadium. What are alternative proposals for integrating Hiawatha LRT, Central LRT, Northstar Commuter Rail behind new Twins Baseball Stadium? What are positions of key stakeholders?

Possible Research Topics:

1. Car Sharing: Around the U.S., private companies (e.g. Zipcar, HOURCAR) have developed cooperative agreements with transit systems to operate short-term rental of cars in metropolitan areas. What is the status and the potential for Carsharing?
2. Big Dig/Central Artery: This massive tunnel project through the heart of downtown Boston has greatly exceeded the budget and is now estimated to cost over $14 billion! Describe this transportation mega-project and explain its rationale. Does this project integrate transit or is it totally a highway project? What are the projected costs and benefits?
3. Bike and Ride: Transit systems around the country (including MetroTransit have provided bike parking at transit stops/stations and have added bike racks to buses. To what extent have these facilities been used and have we seen an increase in bike and ride as a result? How can we encourage more bike and ride use?
4. Crime, Homeland Security and Transit. What are crime prevention and security strategies that transit systems have implemented around the country? What are recommendations for improving the safety and security of transit systems?
Twin Cities/Minnesota Transportation Organizations/Agencies

- Metro Council: [www.metrocouncil.org](http://www.metrocouncil.org) (go to “transportation” section)
- Center for Transportation Studies at Uof M: [www.cts.umn.edu](http://www.cts.umn.edu)
- Minnesota Department of Transportation: [www.dot.state.mn.us](http://www.dot.state.mn.us)
- MnDOT-Office of Transit: [www.dot.state.mn.us/transit](http://www.dot.state.mn.us/transit)
- Minnesota Transportation Alliance – [www.transportationalliance.com](http://www.transportationalliance.com)
- St. Cloud Area Planning Organization (example of « Transportation Improvement Program) – [www.stcloudapo.org](http://www.stcloudapo.org)
- Central Corridor LRT: [www.centralcorridor.org](http://www.centralcorridor.org)
- Northstar Commuter Rail: [www.northstartrain.org](http://www.northstartrain.org)
- Duluth transit system: [www.duluthtransit.org](http://www.duluthtransit.org)
- Metro Transit: [www.metrotransit.org](http://www.metrotransit.org)
- Southwest Transit: [www.swtransit.org](http://www.swtransit.org)
- Transit for Livable Communities: [www.tlcminnesota.org](http://www.tlcminnesota.org)

National Transportation Organizations/Agencies

- American Assoc. of State Highway Transportation Officials: [www.transportation.org](http://www.transportation.org)
- American Public Transportation Association: [www.apta.com](http://www.apta.com)
- Surface Transportation Policy Project: [www.transact.org/stpp](http://www.transact.org/stpp)
- Railvolution: [www.railvolution.com](http://www.railvolution.com)
- Portland, Oregon Transit [wwwтри-met.org](http://wwwтри-met.org)
- Congress for New Urbanism: [www.cnu.edu](http://www.cnu.edu)