



Lead for the Greater Good

O'Neill School of Public and Environmental Affairs  
*V 437/ V550 Public Transportation Management*  
*Fall Semester 2024*

**Instructor:** Perry J. Maull, Adjunct Professor

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Phone # 812-325-6554

**Class Meeting:** 4:45 PM to 6:00 PM Monday and Wednesday

**Classroom:** SPEA PV 278

**Office Hours:** By appointment in person or by Zoom

**Course Description:** SPEA-V 437 / V 550 Public Transportation Management (3 credit hours)

The class will explore all public transportation modes operated in the United States: intercity passenger rail, high speed rail, heavy rail, light rail, fixed route bus, flexible route bus, paratransit service, as well as jitneys, taxis, transportation network companies, volunteer programs, ridesharing, car sharing, and human services transportation.

The class will review the relationship between public transportation services and urban development.

The class will review public transit agency functions including, human resources and labor management, financing capital projects and operating costs from local, state, and federal funding opportunities, organizational structures for operations and maintenance, planning and scheduling of services. The class will also review federal and state policies, planning and grants.

**Learning Outcomes:** By the end of the semester students will be expected to have an overview of public transportation agency services and management.

## **O'Neill School expectations of civility and professional conduct<sup>1</sup>**

The O'Neill School takes matters of honesty and integrity seriously because O'Neill is the training ground for future leaders in government, civic organizations, health organizations, and other institutions charged with providing resources for the public, and for members of society who are vulnerable and who are lacking in power and status. Precisely because O'Neill graduates tend to rise to positions of power and responsibility, it is critical that the lessons of honesty and integrity are learned early.

O'Neill requires that all members of its community – students, faculty, and staff – treat others with an attitude of mutual respect both in the classroom and during all academic and nonacademic activities outside the classroom. A student is expected to show respect through behavior that promotes conditions in which all students can learn without interruption or distraction. These behaviors foster an appropriate atmosphere inside and outside the classroom:

- Students are expected to attend class regularly and to be prepared for class.
- Students must be punctual in their arrival to class and be present and attentive for the duration of the class. Eating, sleeping, reading the newspaper, doing work for another class, wandering in and out of the classroom, and packing up or leaving class early are not civil or professional behaviors.
- Students must abide by the course policy regarding use of electronic devices in the classroom.
- Students must responsibly participate in class activities and during team meetings.
- Students must address faculty members, other students, and others appropriately and with respect, whether in person, in writing, or in electronic communications.
- Students must show tolerance and respect for diverse nationalities, religions, races, sexual orientations, and physical abilities.
- Students must not destroy or deface classroom property nor leave litter in the classroom.

**Texts:** No textbook is required for this course. All readings will be posted on Canvas. Readings are drawn from the most up to date public transportation research primarily from the Transportation Research Board of the National Academies of Science and Engineering.

### **Course Policies:**

1. **Attendance:** Students are expected to attend class sessions. Twenty percent of the final grade will be awarded for class participation.
2. **Make-up Exams and Quizzes:** Students are expected to take quizzes and exams at the assigned times. Any exceptions must be approved in advance and with a reasonable explanation.

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<sup>1</sup> These expectations are excerpted from the O'Neill School Honor Code which can be found at: [https://oneill.indiana.edu/doc/undergraduate/ugrd\\_student\\_honorcode.pdf](https://oneill.indiana.edu/doc/undergraduate/ugrd_student_honorcode.pdf)

**3. Late Assignments:** Students are expected to turn in all assignments on time. Any exceptions must be approved in advance and with a reasonable explanation.

**4. Use of AI (such as ChatGPT) in this class:** Using AI (such as ChatGPT) to assist in completing assignments will be allowed, but in all cases, you must cite ChatGPT as your source for the information. If you use AI in an unauthorized manner, you will be committing plagiarism\* and will be subject to penalties in this class and sanctions by Indiana University.

**\*Plagiarism:** Plagiarism is defined as presenting someone else's work, including the work of other students, as one's own. *Any ideas or materials taken from another source* for either written or oral use *must be fully acknowledged*, unless the information is common knowledge. What is considered "common knowledge" may differ from course to course. <https://studentcode.iu.edu/responsibilities/academic-misconduct.html>

**5. Note Selling:** Several commercial services have approached students regarding selling class notes/study guides to their classmates. Selling the instructor's notes/study guides in this course is not permitted. Violations of this policy will be reported to the Dean of Students as academic misconduct (violation of course rules). Sanctions for academic misconduct may include a failing grade on the assignment for which the notes/study guides are being sold, a reduction in your final course grade, or a failing grade in the course, among other possibilities. Additionally, you should know that selling a faculty member's notes/study guides individually or on behalf of one of these services using IU email, or via Canvas may also constitute a violation of IU information technology and IU intellectual property policies; additional consequences may result.

**6. Materials:** The faculty member teaching this course holds the exclusive right to distribute, modify, post, and reproduce course materials, including all written materials, study guides, lectures, assignments, exercises, and exams. While you are permitted to take notes on the online materials and lectures posted for this course for your personal use, you are not permitted to re-post in another forum, distribute, or reproduce content from this course without the express written permission of the faculty member. Any violation of this course rule will be reported to the appropriate university offices and officials, including to the Dean of Students as academic misconduct.

**7. Late Withdrawal:** The auto-W deadline is NO LONGER THE LAST DAY OF CLASS (as it was during and post-Covid). After the auto-W deadline, withdrawal will be significantly limited, and you will need permission to withdraw and must meet requirements established by the O'Neill School.

### **Additional information for students:**

1. **Counseling and Psychological Services:** For information about services offered to students by CAPS: <http://healthcenter.indiana.edu/counseling/index.shtml>.
2. **TimelyCare:** Students have free, 24/7 access to virtual mental health care services with TimelyCare. Students do not need insurance to access TimelyCare services. <https://www.iu.edu/mental-health/find-resources/timely-care.html#0>
3. **Religious Observation:** In accordance with the Office of the Dean of Faculties, any student who wishes to receive an excused absence from class must submit a request form available from the Dean of Faculties for each day to be absent. This form must be presented to the course instructor by the end of the second week of this semester. A separate form must be submitted for each day. The instructor will fill in the bottom section of the form and then return the original to the student. Information about the policy on religious observation can be found at the following website: <https://policies.iu.edu/policies/aca-59-accommodation-religious-observances/index.html>
4. **Disability Services for Students:** *Securing accommodations for* a student with disabilities is a responsibility shared by the student, the instructor and the DSS Office. For information about support services or accommodations available to students with disabilities, and for the procedures to be followed by students and instructors: <https://studentaffairs.indiana.edu/student-support/disability-services/index.html>
5. **Sexual Harassment.** As your instructor, one of my responsibilities is to help create a safe learning environment on our campus. Title IX and our own Sexual Misconduct policy prohibit sexual misconduct. If you have experienced sexual misconduct, or know someone who has, the University can help. If you are seeking help and would like to talk to someone confidentially, you can make an appointment with:
  - i. The Sexual Assault Crisis Service (SACS) at 812-855-8900
  - ii. Counseling and Psychological Services (CAPS) at 812-855-5711
  - iii. Confidential Victim Advocates (CVA) at 812-856-2469
  - iv. IU Health Center at 812-855-4011

For more information about available resources:

<http://stopsexualviolence.iu.edu/help/index.html>. It is also important to know that federal regulations and University policy require me to promptly convey any information about potential sexual misconduct known to me to our campus' Deputy Title IX Coordinator or IU's Title IX Coordinator. In that event, they will work with a small number of others on

campus to ensure that appropriate measures are taken and resources are made available to the student who may have been harmed. Protecting a student's privacy is of utmost concern, and all involved will only share information with those that need to know to ensure the University can respond and assist. I encourage you to visit <http://stopsexualviolence.iu.edu/help/index.html> to learn more.

V 437/550 Public Transportation  
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4:45 PM to 6:00 PM  
Classroom TBD

Instructor: Perry J. Maull  
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Telephone: 812-325-6554

Perry J. Maull retired at the end of 2018 as the Director of the IU Campus Bus Service, a position he had held since 2006. He holds a Master of Business Administration degree in urban transit management and a Bachelor of Science in Business with a major in marketing both from the IU Kelley School of Business. He started his public transit career in 1973 as a part-time bus driver for Bloomington Transit while attending IU as a full-time student. He has held the following public transit management positions: Executive Director of Palm Tran, the public transit agency serving Palm Beach County, Florida. Transit Director for the Regional Transit Service which serves the City of Gainesville, Florida and the University of Florida, Deputy Executive Director of the Tri-County Commuter Rail Authority (Tri-Rail) which serves Miami-Dade, Broward and Palm Beach counties, Florida. Transit Director for Space Coast Area Transit the public transit department for Brevard County, Florida. Marketing, Planning, and Development Director for the Miami Valley Regional Transit Authority which serves the City of Dayton and Montgomery County, Ohio. His prior position at Indiana University (1975-1980) was Administrative Director for the Institute for Urban Transportation. He has also held consulting positions in Miami, Florida with the Corradino Group as well as Parsons, Brinkerhoff. He was assigned to consulting projects with the Florida Department of Transportation, Broward County Transit, and the Ministry of Transport of the Government of Trinidad and Tobago. He was inducted into the Florida Public Transportation Association's Hall of Fame as its tenth member in 2013.

Prospectus:

The class will explore the basis of public transportation, including the modes of bus, rail, paratransit, and taxi. The curriculum will include lectures and discussions on:

- Public Transportation Management Elements: Human resources, Finance, Operations, Scheduling, Maintenance, and Planning
- Modes of public transportation
- Federal Public Transportation Policy, Program funding options, Policy development, Interagency programs, and the Federal Authorization process
- Mobility options: Volunteer programs, Car sharing, Ridesharing, Transportation Network Companies, and Coordinated human services transportation programs.

**Readings:** There is no textbook for this course. Readings will be drawn from the most up to date research reports, primarily published by the Transportation Research Board of the National Academies of Science and Engineering through the Transit Cooperative Research Program (TCRP) and the National Cooperative Highway Research Program (NCHRP). Other sources of the readings will come from the American Public Transportation Association and the US Department of Transportation Federal Transit Administration. The readings have been selected, because these will be the kinds of technical reports that you would be using, if you were working for a public transit agency.

**Home-Town Public Transportation Paper:** Discuss the public transportation services in your hometown. If you have used any of the public transportation services in your hometown you should give a brief description of your experiences. Based on your research and what you are learning in this class, evaluate how well the public transportation system serves the community. If you live in a very large metropolitan area with many large public transportation services, please select one of the services to focus your research. The paper should be 10 to 12 pages.

More information on the content and formatting of the paper will be provided in the assignment.

**Group Project: Public Transportation Challenges and Opportunities-Group Project:** Public transportation is facing many challenges and has many opportunities.

Challenges:

- Over the past few years there have been some major technological changes that have impacted current public transit services across the nation. Transportation Network Companies, such as Uber and Lyft, have expanded rapidly throughout the nation.
- Most public transportation bus services saw declining ridership even before COVID. COVID saw overall public transportation ridership decline rapidly at the start of the pandemic. Overall ridership has not yet returned to pre-COVID levels for many public transit agencies.
- Public transportation agencies around the nation are experiencing a shortage of workers. Many agencies have raised wages and benefits, but still many agencies are understaffed, resulting in lower levels of service being provided.
- Cities, large and small, are experiencing a dramatic rise in the number of people experiencing homelessness.
- Drug use continues to be a challenge for urban and rural communities.
- Many people perceive the rise of crime in cities and public transit services.
- City center employment has not rebounded completely from pre-pandemic levels.

Opportunities:

- The Boring Company may provide cost effective tunneling that could dramatically reduce the cost of subway projects.
- Autonomous vehicle technology may revolutionize how bus services are provided. Rail systems are already operated without drivers.

- The new federal Bipartisan Infrastructure law was passed by Congress and signed into law by the President in 2021 it will provide much more federal funding for public transportation than in the past.
- Public transportation is becoming viewed as one of the tools that can be used to reduce the impacts that the overall transportation system has on our environment through reducing auto trips, reducing the need for more and more pavement to support single occupant automobility, even if most autos are converted to electric mode in the near future.

Each group will prepare a PowerPoint Presentation on how their assigned metropolitan area public transit agencies are addressing these issues. The transit agency assignments will be made based on the number of students registered for the class.

The purpose of the group project is to simulate presentations that you will be expected to perform if you were working for a public transit agency.

Each group will give an approximately 20-minute PowerPoint Presentation with another 10 minutes for questions.

More information about the group project will be provided in the assignment. Feedback will be provided to the each group as part of the grading process.

### **Course Goals:**

1. Develop an understanding of the different modes of public transportation and where they work the best.
2. Develop an understanding of the different functions within a transit agency and the training and experience necessary to manage a transit agency.
3. Become familiar with the skills and knowledge required to manage a transit agency and with the public transit resources and how to access and use them.



### Course Requirements:

Course Elements	Percentage of Grade	Explanation
Participation	20%	Based on in-class discussions and participation in the group project and other class assignments, such as the required readings through pop quizzes. Please be advised that students will not be able to earn participation points if they do not regularly attend class. The instructor wants every student to get all the participation points. Participation points can only be earned by regularly attending class.
3 Quizzes	5% each quiz for a total of 15%	Questions will come 50% from lectures and 50% from readings. Quizzes will be available on Canvas.
Term Paper	20%	Hometown Public Transportation submit it on Canvas as a PDF.
Group Project	15%	Groups will prepare a PowerPoint Presentation for the assigned metropolitan area public transit agency and submit it on Canvas.
Final Exam	30%	Questions will come 50% from readings and 50% from lectures for the entire semester. The final will be available on Canvas the week of finals up to the end of the final exam's scheduled day and time.
Total	100%	

The following describes more fully the instructor's expectations for participation.

1. Each student will update their Canvas profile with an appropriate current photo. The photos help me learn students' names. Also include a short biography covering your hometown, class standing, major, and career objectives. One point.
2. Record in Canvas Name Coach your first and last name. One point.

3. Participate in a One-on-One Zoom session with the instructor to discuss and receive approval on the public transit agency that will be the subject of the Hometown Transit paper. One point.
4. Participate in the 2 Group Project Zoom Meetings The first meeting will be to go over the assignment, including discussion of the public transit agency to be reviewed in the group project. The second meeting will be to review the outline of the group presentation, including who is assigned to each part of the presentation. Two points as part of the overall group project points.
5. There will be 6 pop quizzes on the readings for the day of the quiz. Each quiz will be worth a total of 1 point.
6. There will be assigned seating in the classroom based on groups. Assigned seating will give the instructor another tool to learn the names of the students. Groups will be assigned randomly by Canvas. Discussions will be by groups with each group reporting to the class the discussion question. The groups will also be assigned a group project for the semester. The group project is worth 15 points. Each group member will provide an evaluation of fellow group members at the end of the semester which will be used by the instructor for assigning participation points.

**Schedule of Assignments: This schedule is subject to limited change in the event of extenuating circumstances.**

<b>Dates</b>	<b>Topic</b>	<b>Notes</b>	<b>Readings</b>
Monday August 26	Introduction to Public Transportation.		
Wednesday August 28	History of Public Transportation	Evolution of Public Transit Services in the USA	Brief History of Public Transit in the USA and The Commuting Principle that Shaped Urban History
Friday August 30	Complete the Update of the Canvas Picture, Name Coach and Biography		
<b>Monday September 2</b>	<b>Labor Day Holiday</b>		<b>Enjoy Your Day Off!</b>
Wednesday September 4	Intercity Passenger Rail and High-Speed Rail		NCRRP Report 6: Guidebook for Intercity Passenger Rail Service and Development: Summary and Chapters 1, 2, and 3; Pages 1 through 32.
Monday September 9	Overview of Urban Public Transportation Modes		TCRP 165: Transit Capacity and Quality of Service Manual- Third Edition 2013

			Chapter 2: Mode and Service Concepts
Monday September 9	Complete One on One Zoom Meetings with each student	Approve Hometown Transit Topic	These Zoom meetings will also be an opportunity for students to ask questions about the class.
Wednesday September 11	Heavy Rail (Rapid Transit) and Automated Guideway Transit (AGT)	Capacity and applications	TCRP 165: Chapter 8: Rail Transit Capacity
Monday September 16	Commuter Rail and Light Rail (Streetcars)	Capacity and applications	TCRP 165 Chapter 8
Wednesday September 18	Bus Rapid Transit	Capacity and applications	TCRP 90: Bus Rapid Transit: Volume 2 Implementation Guidelines: Summary and Chapter 1 Introduction
Monday September 23	Fixed Route Bus	Capacity and applications	TCRP 165: Chapter 6 Bus Transit Capacity
Wednesday September 25	Flexible Public Transportation Services and Demand Response	Capacity and applications	TCRP 140 A Guide for Planning and Operating Flexible Public Transportation Services: Chapter 1: Basic Concepts of Flexible Public Transportation Services.  TCRP 165 Chapter 7 Demand Responsive Transit
<b>Wednesday September 25</b>	<b>First Quiz</b>	<b>Last 20 minutes of class</b>	Quiz to cover content from the first day of class through Monday September 23 with 50% of the questions from the lectures and 50% of the questions from readings.
Monday September 30	Rural, Small Urban and Human Services Transportation	Description of various services provided	TCRP 70 Guidebook for Change and Innovation at Rural and Small Urban Transit Systems: Part 1 Change and Innovation  TCRP 144 Sharing the Costs of Human Services Transportation: Chapter 2 Benefits of Better Transportation Cost and Service Data
Wednesday October 2	Private for Hire Vehicles	Taxis and Transportation Network Companies (Uber, Lyft, etc.	NCHRP Research Results Digest 366: Local and State Partnerships with Taxicab Companies: Chapter 1-Introduction and Summary

Monday October 7	International Public Transportation Services		TBD
Wednesday October 9	Public Transit Funding Sources	Local, State, and Federal	<p>APTA: The Benefits of Reliable Federal Funding for Public Transportation</p> <p>APTA Issue Brief: Public Transportation Funding: Increase Critical Investments</p> <p>TCRP 129: Local and Regional Funding Mechanisms for Public Transportation: Summary and Section 2: Overview of Local and Regional Public Transportation Funding</p>
<b>Wednesday October 9</b>	<b>Home-Town Public Transportation Paper Due</b>	<b>Due by 11:59 PM</b>	<b>Submit as a PDF in Canvas</b>
Monday October 9	Civil Rights and Public Transit		<p>TCRP Synthesis 135: ADA Paratransit Service Models: Chapter 3</p> <p>Transportation Protests: 1841 to 1992</p>
Wednesday October 11	Land Use and Public Transportation: Livable Cities		TCRP 128 Effects of Transit Oriented Development on Housing, Parking, and Travel: Summary and Sections 1 and 2.
Friday October 13	Group Project Zoom Meetings Completed		Discuss the assigned public transit agency and sources of information about the agency
Monday October 16	Public Transportation and Technology		TBD
Wednesday October 18	Future of Public Transportation		TBD
<b>Wednesday October 16</b>	<b>Second Quiz</b>	<b>Last 20 Minutes of Class</b>	Quiz will cover content from Wednesday September 18 through Monday October 14
Monday October 23	Sustainable Public Transportation		TCRP 195 Broadening Understanding of the Interplay Among Public Transit, Shared Mobility, and Personal Automobiles: Summary
Wednesday October 25	Sustainable Public Transportation		TCRP 207: Fast Tracked: A Tactical Transit Study: Summary,

			Introduction, Findings (Page 19 through Page 44)
Monday October 30	Trends Impacting Public Transportation		TCRP 209 Analysis of Recent Public Transit Ridership Trends (2020): Summary and Chapter 4 Transit Agency Strategies
Wednesday November 1	Public Transportation Agency Management		TCRP 181: Shared Mobility and Transformation of Public Transit: Chapter 2: Findings
Monday November 6	Public Transit Networks		TCRP 215: Minutes Matter: A Bus Transit Service Reliability Guidebook: Summary and Introduction
Monday November 13	Labor Relations in Public Transit		TBD
Wednesday November 15	Public Transportation and the Environment		TBD
<b>November 20</b>	<b>Third Quiz</b>	<b>Last 20 minutes of class</b>	Quiz will cover content from October 16 to November 20.
Friday November 22	Second Zoom Meetings Completed		Review the PowerPoint Presentation and who is assigned to each part of the presentation
<b>November 25</b>	<b>Thanksgiving Break</b>	<b>NO CLASS</b>	
<b>November 27</b>	<b>Thanksgiving Break</b>	<b>NO CLASS</b>	
Monday December 2	Group Presentations	Public Transportation Challenges and Opportunities	
Wednesday December 4	Group Presentations	Public Transportation Challenges and Opportunities	
Monday December 9	Group Presentations	Public Transportation Challenges and Opportunities	
Wednesday December 11	Group Presentations	Public Transportation Challenges	

		and Opportunities	
Wednesday December 18 5:20 PM to 7:20 PM	<b>Final Exam:</b> SPEA PV 278		Final Exam will cover material from the entire course. Questions will be drawn: 50% Lectures and 50% Readings