

# EC 497-001-Transportation Economics

Fall 2025

Credit Hours: 3

Lecture



## Contact Information

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Jonathan Hall

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## Teaching Assistant Contact Information

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[REDACTED] [REDACTED]



## Course Description

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Students can apply a maximum of 9 credits of of EC 497 toward their degree.

Prerequisite(s): (EN 102; or EN 103; or EN 104; or EN 121) and (MATH 121 or MATH 125 or MATH 145) and (EC 110 or EC 112) and (EC 111 or EC 113) and (AC 210 or AC 211) and (LGS 200 or LGS 201) and ST 260 and MIS 200 and (GBA 146 and GBA 246; or GBA 247)

## Required Texts

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**Small, Kenneth A. / The Economics of Urban Transportation**

**Subtitle:** Small, Kenneth A. / The Economics of Urban Transportation

**ISBN:** 978-1-138-06905-3

**Publisher:** 'Routledge,'

**Required or Recommended:** Required

## Student Learning Outcomes

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The objective of this course is to provide the student with an understanding of the transportation industries in the United States and the major policy issues confronting

government and the public. All modes of transportation are considered: highways, trucking, mass transit, airlines, maritime, railroads, and pipelines. The course acquaints the student with the underlying economics of transportation provision, including demand, costs, the economics of regulation and regulatory reform, the pricing and quality of service, managing congestion, subsidies, competition between the various modes, and the social appraisal of projects.

After completing this course, you will:

- know the underlying economics of the demand for and supply of transportation services;
- understand market equilibria, and how failures in market processes lead to public policy interventions; and
- know how the tools learned in intermediate microeconomics courses can be used to analyze real-world markets and public policy decisions in transportation.

## Outline of Topics

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Below is a list of topics we will address in this course. This is subject to change. The detailed schedule is available [here](#).

1. Foundations of Transportation Markets: Economic characteristics of transportation, historical evolution of US transportation systems, modal competition and network development, derived demand for freight and passenger services
2. Supply, Costs & Industry Structure: Cost functions and economies of scale/density/scope, elasticities and demand modeling, natural monopoly vs. competitive markets, empirical cost estimation across modes
3. Regulation & Deregulation: Economic rationale for regulation, natural monopoly and contestability theory, 40+ years post-deregulation outcomes, platform regulation and new mobility
4. Pricing Transportation Services: Marginal cost pricing challenges, Ramsey and peak-load pricing, price discrimination and yield management, joint fare-frequency optimization and the Mohring effect

5. Externalities: Safety & Congestion: Optimal safety provision and market failures, Value of Statistical Life (VSL), congestion as an externality, static and dynamic congestion models, congestion pricing theory and practice (London, Singapore, HOT lanes)
6. Infrastructure Investment & Evaluation: Cost-benefit analysis methodology, valuing time savings and non-market goods, network effects and induced demand, distributional impacts and equity
7. Urban Transportation & Land Use: Highway impacts on cities, parking economics, housing-transportation tradeoffs, new technologies (AVs, ride-hailing) and urban form
8. Airline Economics & Network Industries: Hub-and-spoke vs. point-to-point networks, airport slot allocation and congestion, airline alliances and antitrust, product unbundling and ancillary revenue

## Policies

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### First rule of holes

Stop digging and get help! If you are struggling academically, don't wait; reach out for support. Come see me, [Culverhouse Undergraduate Student Services](#), an [academic coach](#), a [counselor](#), or any of the other resources the university has available.

### Class participation & discussion

I use an interactive approach where I call on students to answer questions, whether or not they've raised their hand (i.e., "cold calling"). This serves two important purposes: it helps me assess how well the class is understanding the material, and keeps everyone engaged and thinking actively about our discussions. If you have concerns about being called on due to anxiety or other reasons, please speak with me—I'm happy to discuss accommodations.

### Technology policy: phones and laptops

Mobile phones are not permitted during class, and laptops and tablets are strongly discouraged. [Research consistently shows](#) that even when electronic devices are used appropriately for note-taking, they still lead to worse learning outcomes compared to traditional pen-and-paper methods. Please bring paper and pen for taking notes.

## Communication: Email, Blackboard, and Piazza

I prefer that you ask class questions and discuss academic topics in person during class or office hours, as face-to-face discussions work better than email for substantive conversations. If you must ask a course-related question using an electronic format, please use our class Piazza page at [REDACTED]. Piazza emphasizes student-to-student Q&A, and while the TA and I monitor the platform periodically, we cannot answer every question due to resource constraints. Using Piazza is optional.

For administrative matters, send emails to [REDACTED] from your official UA email address—this helps me prioritize your message. I will respond to emails within two business days, but please remember that email works best for administrative questions only.

I use Blackboard to post course information, announcements, and assignments. You should either check Blackboard daily or set up email notifications and check your email daily to stay current with course updates.

## Accommodations

I provide reasonable accommodations for a variety of reasons, including disability, health problems, religious observance, participation in an extracurricular activity, death in the family, illness, or injury. To request an accommodation, you must submit a written request. If you need an accommodation for a disability, you should register

with the [Office of Disability Services](#). *I'm especially willing to accommodate concerns about cold-calling.*

## Grade appeals and re-evaluation

If you believe a specific assignment, quiz, or exam has been graded incorrectly, you may submit a re-evaluation request at [REDACTED]. This request must be submitted within two weeks of the work being returned. Please note that the

entire assignment will be reviewed and your grade may increase or decrease, as grading involves some inherent variability despite our best efforts.

Final grades in this course reflect your completed work throughout the semester, and I cannot offer additional extra credit or accept late work after the course has concluded. This policy ensures fairness for all students who complete their work within the established deadlines. If you have concerns about your final grade, first review the grading criteria in the syllabus and verify that all assignments are correctly recorded. If you still have concerns after this review, you may schedule an appointment to discuss your performance in the course.

### **No audio or video recordings**

Audio or video recordings of class are not permitted, except for students with approved disability accommodations who have discussed this with me in advance.

## **Exams and Assignments**

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Grades will be based on

- Two midterm exams (40%)
- Comprehensive final exam (40%)
- Homework (20%)

### **Midterm exams**

40% of your final grade comes from your average on the midterm exams. The exams are cumulative, though they focus heavily on the material not yet covered on an exam. Midterm exams do not cover the material taught in the class immediately before an exam. Exams primarily test material taught in class and via homework, but also include material in the assigned readings that was not covered in class.

### **Final exam**

40% of your final grade comes from the final exam. The final exam is comprehensive, however, it heavily emphasizes recent content: approximately two-thirds of the exam focuses on the final third of the course, while the remaining third is split equally between earlier course material.

## Homework

20% of your final grade comes from your homework. Homework is assigned most weeks to help you review course material. I encourage you to work on the homework in groups. I automatically drop the worst 15% of your homework assignments (rounded up) as an automatic accommodation for illness, computer problems, and other issues that may prevent you from completing assignments.

## Extra credit

You can earn up to 5% extra credit through unannounced in-class assignments, with your worst score automatically dropped to accommodate absences. No other extra credit opportunities are available.

## Important Dates

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- September 11th, Midterm exam 1
- October 21st, Midterm exam 2
- Friday, November 7th, Make-up exam (1:00-2:15pm)
- December 8, 10:30am-12:30pm, Final exam. Please confirm this information via the [Academic Calendar](#).

## Grading Policy

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The final letter grade you earn will be based on the following scale. I may curve grades up, but never down.

Letter grade	Percentage	Letter grade	Percentage
A+	97-100	C+	77-79
A	93-96	C	73-76

A-	90-92	C-	70-72
B+	87-89	D+	67-69
B	83-86	D	63-66
B-	80-82	D-	60-62
F 59 and below			

## Policy on Missed Exams and Coursework

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### Missed exams

If you need to miss an exam, you must email me a request from your official University of Alabama email account. In most cases, your request must be made two weeks before the exam. This deadline does not apply for illness or official university events where it was not reasonable to know about the event before the deadline.

If you need to miss an exam due to illness, you must email me on the day of the exam, before the start of the exam. Your email must concisely explain why you will miss the exam, contain the statement "I understand that it is a punishable academic offense to present false or misleading information with my request for a make-up test" and close with your name and student number. I do not require a medical note.

You will take a cumulative make-up exam on the date scheduled under "Important Dates." There is no make-up exam for the make-up exam. You will be allowed to review your make-up exam during office hours, but you will not be able to keep a copy of the exam.

For medical issues that last longer than a few days, you should consult with an academic advisor.

### Missed homework

Late homework is not accepted. However, I automatically drop your lowest 15% of homework assignments (rounded up) to accommodate technological problems, illness, and other issues that



prevent timely submission.

As an accommodation for late enrollment and start-of-semester issues, any assignment originally due before the add/drop deadline may be submitted without penalty until one week after the add/drop deadline.

## **Attendance Policy**

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Regular attendance is expected and will contribute to your success in the course. When illness or other circumstances prevent you from attending, you are responsible for catching up by working with classmates, reviewing course slides, and completing assigned readings. You do not need to notify me of planned absences.

## **Generative AI Tools**

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All submitted work must be produced by the students themselves, whether individually or collaboratively. Use of a generative AI tools such as ChatGPT to complete an assignment constitutes academic misconduct.

## **Notification of Changes**

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The instructor will make every effort to follow the guidelines of this syllabus as listed; however, the instructor reserves the right to amend this document as the need arises. In such instances, the instructor will notify students in class and/or via email and will endeavor to provide reasonable time for students to adjust to any changes.

## **Statement on Academic Misconduct**

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Students are expected to be familiar with and adhere to the official [Academic Misconduct Policy](#).

## **Statement On Disability Accommodations**

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The University of Alabama is committed to ensuring the full participation of all students in its programs. If you have a documented disability (or think you may have a disability) and need reasonable accommodation(s) to participate in this class, contact the Office of Disability Services (or ODS; 205-348-4285, [ods@ua.edu](mailto:ods@ua.edu), Houser Hall 1000, [www.ods.ua.edu](http://www.ods.ua.edu)) as soon as possible. If you have been approved to receive accommodations through ODS, please meet with your instructor or College designee during office hours or by appointment to review your accommodation letter and discuss how accommodations can be implemented in this course.

## **Severe Weather Protocol**

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Please refer to the Severe Weather Guidelines located on the [Office of Emergency Management website](#).

## **Pregnant Student Accommodations**

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Title IX protects against discrimination related to pregnancy or parental status. If you are pregnant and will need accommodations for this class, please review the University's FAQs on the [UAct website](#).

## **Religious Observances**

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Under the Guidelines for Religious Holiday Observances, students should notify the instructor in writing or via email during the first two weeks of the semester of their intention to be absent from class for religious observance. The instructor will work to provide reasonable opportunity to complete academic responsibilities as long as that does not interfere with the academic integrity of the course. See full guidelines at [Religious Holiday Observances Guidelines](#).

## **UAct Statement**

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The University of Alabama is committed to an ethical, inclusive community defined by respect and civility. The [UAct website](#) provides extensive information on how to report or obtain assistance with a variety of issues, including issues related to dating violence, domestic violence, stalking, sexual assault, sexual violence or other Title IX violations,

illegal discrimination, harassment, hate or bias incidents, child abuse or neglect, hazing, threat assessment, retaliation, and ethical violations or fraud.

## **Student Resources**

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The University of Alabama provides resources and support for the benefit of all students. An up-to-date list of these resources is located on the [Division of Student Life website](#), which includes information regarding counseling, health and wellness, career planning, and accessibility services.