Food and Resource Economics Department
University of Florida

AEB 7333 - Applied Valuation Methods
Fall 2025

Instructor: Zhifeng Gao
1161 McCarty Hall A,
Tel: 352-294-7672
Email: zfgao@ufl.edu

Location and Class Hours:

Tuesday: MAEB0238; 11:45 AM - 1:40 PM

Thursday: MAEB0238; 12:50 PM - 1:40 PM

Course Description:
This is a class focusing on the application of valuation methods that are frequently used for the valuation of market and non-market goods and services. We will focus on the methods that estimate consumer willingness to pay (WTP) for products and services. We begin with the basic economic theory to derive the WTP measures, followed by the empirical methods used to elicit consumer WTP. Three key methods will be covered. Choice experiments will cover choice experiment designs, underlying economic theory, and major econometric methods. Contingent valuation methods (CVM) will cover key methods, including open-ended CVM, close-ended, single-bounded referendum, and close-ended double-bounded referendum as well as corresponding econometric methods. Experimental auction discussions will cover major auction methods, BDM, 2nd price auction, random nth price auction, and the corresponding econometric method. The pros and cons of each method will also be discussed in class.

Objective:
By taking this course, students should be able to

1. Understand the theoretical foundation of valuation methods.
2. Understand the key difference between the valuation methods.
3. Choose the proper methods and data collection process for consumer WTP estimation.
4. Employ appropriate statistical and econometric methods to analyze data.
5. Interpret the results from various valuation methods and economic models.
6. Obtain basic knowledge of the software that can be used for analyzing the data obtained from different valuation methods.

Prerequisites:
Knowledge of graduate microeconomics theory I (ECO 7115) and Ph.D. level econometrics is required. Knowledge of the maximum likelihood method and econometric models for limited dependent variables such as Tobit, Logit, and Multinomial Logit models is recommended.

Composition of Final Score:

Homework based on class lectures and reading will be assigned across the semester. All assignments are due at the beginning of class on the due date. Each student is expected to give three in-class presentations and one final project.

The weights for different components are:

Homework	20%
Presentation 1	15%
Presentation 2	20%
Presentation 3	20%
Peer Evaluation	5%
Final Project	20%

Final grade is based on the weighted average of homework and exams.

Course Grade	Letter Grade	Grade Point
90 - 100	A	4.00
87 - 89	A-	3.67
84 - 86	B+	3.33
81 - 83	B	3.00
78 - 80	B-	2.67
75 - 77	C+	2.33
72 - 74	C	2.00
< 72	D	1.00

Presentation 1: Article Presentation

Each student would choose a paper from a list provided by the instructor and summarize the key findings of the paper. She/he also needs to discuss the pitfalls and potential improvements of the paper as well as some future research topics related to the paper.

Presentation 2: Project Proposal Presentation

Present the research background of their project, including the motivations, the literature reviews, and the methods.

Presentation 3: Final Project Presentation

Present the results, conclusions, implications, limitations, and future research directions of the project.

Applied Valuation Methods Project:

The project can be a group project with two or three members per group. The project can be 1) a complete study (or perhaps a pilot) applying the methods discussed in this class; 2) a comprehensive literature review of studies related to methods or estimation of consumer preference of market and non-market goods using some statistical method such as Meta-analysis

(https://en.wikipedia.org/wiki/Meta-analysis).
Suggested Project Structure (adapted from the Authors' guide of *Food Quality and Preference*, you can use other structures if you know the journals that you want to publish your paper in)

1. *Title Page*

Report title
Project group members and department

2. *Abstract*

A brief statement of the motivations, the methods, the main results, and key conclusions of the research project.

3. *Report body*

a. Introduction: motivation of the research project, background, identification, and the significance of the research problem. Related literature should be discussed, but avoid a detailed literature survey or a summary of the results.

b. Literature review (optional): a structured discussion of related literature to present the relevant studies' key topics, methods, and conclusions. The literature should be able to demonstrate the gaps in the literature and how your research could contribute to the current literature.

c. Material and methods (i.e., Data collection method; statistical and econometric models: Provide sufficient detail to allow the work to be reproduced. Methods already published should be indicated by a reference: only relevant modifications should be described.

d. Theory/calculation: A Theory section should extend, not repeat, the background to the article already dealt with in the Introduction and lay the foundation for further work. In contrast, a Calculation section represents a practical development from a theoretical basis.

e. Results: key tests, key tables, figures, and interpretation of the results.

f. Discussion: This should explore the significance of the results of the work, not repeat them. A combined Results and Discussion section is usually only appropriate for short communications. Avoid extensive citations and discussion of published literature.

g. Conclusions: The main conclusions of the study may be presented in a *short* Conclusions section, which may stand alone or form a subsection of a Discussion or Results and Discussion section. It should provide the take-home message of the project, the limitations of the project, and the future direction of the research.

Notes:

1. One semester may not be enough to complete a full project that requires primary data collection. If you choose option 1) you can do a pilot data collection with a small sample

size (i.e., collecting data from your classmate or friends). However, you still need to analyze your data using the models discussed in this class. Hopefully, this process can help you identify the potential problems in your data collection and analysis so that you can make an improvement if you want to collect a larger sample size in the future to write a full research paper.

2. It is strongly recommended that you bring your laptop to the class. A laptop is needed to create questionnaires online and do data analysis in class.

3. Your laptop should have the following software installed: R, and R Studio. We may discuss the use of other software such as SAS, Nlogit and Biogeme. But they are not required.

4. SAS student license can be purchased from UF. If you don't want to buy the license, you can use both online at https://login.apps.ufl.edu/ . Please check more information at https://info.apps.ufl.edu/ .

5. R and R Studio can be obtained https://cran.r-project.org/mirrors.html and https://www.rstudio.com/ , respectively.

6. Software for reference management: You are recommended to install Zotero.

   Zotero is a free reference management software and browser add-on for reference management. Zotero also integrates with Microsoft Word. You should use it to share the references used in your project report so that we can double-check the references. Zotero can be downloaded at https://www.zotero.org/

   Another free reference management software is Mendeley. It provides similar functions to Zotero. You can download it from https://www.mendeley.com/download-reference-manager/

7. The IRB, If you are going to collect data for your project, you need to get IRB approval. Before you apply for IRB, you need to finish the IRB training session at http://irb.ufl.edu/irb02/required-training-for-irb-02.html

8. You can create IRB at http://my.irb.ufl.edu/ . **Warning**, to log into your account, you must first log in UF VPN (https://it.ufl.edu/ict/documentation/network-infrastructure/vpn/). **This is required no matter whether you are on campus or not**.

9. Qualtrics: Qualtrics is an online platform where you can creates questionnaires for online data collection. UF has purchased the license, so you can use Qualtrics for free as long as you have a valid UF ID. You can log into Qualtrics at https://ufl.qualtrics.com/ . If this is the first time that you use Qualtrics, you may need to activate your account.

Suggested Textbooks (not required):

Choice Experiments

1. Hensher, D.A., Rose, J.M., Greene, W.H., 2015. Applied Choice Analysis: A Primer. Cambridge University Press. https://www.amazon.com/Applied-Choice-Analysis-David-Hensher-dp-1107092647/dp/1107092647/ref=dp_ob_title_bk
2. Kuhfeld, W.F., 2005. Marketing research methods in SAS. Experimental Design, Choice, Conjoint, and Graphical Techniques. Cary, NC, SAS-Institute TS-722. https://support.sas.com/techsup/technote/mr2010.pdf
3. Louviere, J.J., Hensher, D.A., Swait, J.D., 2000. Stated Choice Methods: Analysis and Applications. Cambridge University Press. https://www.amazon.com/gp/product/B0014JUZGK/ref=dbs_a_def_rwt_hsch_vapi_tkin_p1_i0
4. Train, K.E., 2009. Discrete choice methods with simulation. Cambridge university press. http://eml.berkeley.edu/books/choice2.html

Contingent Valuation

1. Arrow, K., Solow, R., others, 1993. Report of the NOAA panel on contingent valuation. National Oceanic and Atmospheric Administration Washington, DC. https://edisciplinas.usp.br/pluginfile.php/4473366/mod_folder/intro/Arow_WTP.pdf
2. Hausman, J.A., 2012. Contingent valuation: A critical assessment. Elsevier.
3. Mitchell, R.C., Carson, R.T., 2013. Using surveys to value public goods: the contingent valuation method. Routledge.

Experimental Auctions

1. Klemperer, P., 2004. Auctions: Theory and Practice. Princeton University Press, Princeton.
2. Krishna, V., 2009. Auction Theory. Academic Press.
3. Lusk, J.L., Shogren, J.F., 2007. Experimental auctions: Methods and applications in economic and marketing research. Cambridge University Press.

Readings

A reading list will be given throughout the semester. You are expected to read those chapters/papers with asterisks. You are also responsible for the material in handouts that will be distributed in class—some supplemental papers and provided for each topic. Students may read unassigned chapters/papers at their discretion.

Schedule:

Week 1:	Introduction to the Course (e.g., Examples, Tools and Software) and Theoretical Foundation of Valuation Method.
Week 2:	Choice Experiment Design
Week 3:	Practice of Choice Experiment Design and Manipulation of Choice Experiment Data
Week 4:	Conditional Logit Model and Interpretation of Model Results
Week 5:	Practics of Manipulation of Choice Experiment Data and Model Estimation
Week 6:	Heteroscedastic Extreme Value Model and Mixed Logit Model (MLM) and Project Proposal Presentation
Week 7:	Latent Class Model (LCM) and Practice of MLM and LCM
Week 8:	Scale Parameters, Scaled Multinomial Logit, Generalized Mixed Logit

Week 9: Willingness to Pay Estimation (WTP), and Model in WTP Space
Week 10: Contingent Valuation Method and Experimental Auctions
Week 11: Journal Article Presentation 1
Week 12: Journal Article Presentation 2
Week 13: Journal Article Presentation 3
Week 14: Final Project Presentation 1
Week 15: Final Project Presentation 2
Week 16: Final Project Presentation 3

Important Dates

Classes Begin	August 20
Classes End	December 3
Drop/Add (11:59 pm of last day)	August 21 - 22, 25 - 27
Withdrawal with no Fee Liability (11:59 pm of last day)	August 27
Reading Day	December 4 - 5
Final Grades available	December 17
Holidays - no classes	September 1: Labor Day October 17 - 18: Homecoming November 11: Veterans Day November 24 - 29: Thanksgiving

Tentative dates	
Class Presentation (in class)	TBD
Final Project Due	December 12

AI Use Rules:
Guidance for Students | AI | University of Florida

Resnik, D. B., & Hosseini, M. (2025). The ethics of using artificial intelligence in scientific research: New guidance needed for a new tool. *AI and Ethics*, *5*(2), 1499–1521. https://doi.org/10.1007/s43681-024-00493-8

Attendance Policy: Class attendance is expected. Students should inform the instructor of expected absences. Excessive unexcused absences will result in negative consequences.

Requirements for class attendance and make-up exams, assignments and other work are consistent with university policies that can be found at: https://catalog.ufl.edu/UGRD/academic-regulations/attendance-policies/

Policy on In-Class Cell Phone Use and Text Messaging: Cell phones should be turned off or put on vibrate mode and should not be answered during class periods. Non-emergency, in-class text messaging is not acceptable.

Academic Policies & Resources

Students Requiring Accommodations

Students with disabilities who experience learning barriers and would like to request academic accommodations should connect with the Disability Resource Center. It is important for students to share their accommodation letter with their instructor and discuss their access needs, as early as possible in the semester.

Course Evaluation

Student assessment of instruction is an important part of efforts to improve teaching and learning. At the end of the semester, students are expected to provide feedback on the quality of instruction in this course using a standard set of university and college criteria. Students are expected to provide professional and respectful feedback on the quality of instruction in this course by completing course evaluations online via GatorEvals. Guidance on how to give feedback in a professional and respectful manner is available at: https://gatorevals.aa.ufl.edu/students/. Students will be notified when the evaluation period opens and can complete evaluations through the email they receive from GatorEvals, in their Canvas course menu under GatorEvals, or via https://ufl.bluera.com/ufl/. Summaries of course evaluation results are available to students at: https://gatorevals.aa.ufl.edu/public-results/.

Academic Honesty

As a student at the University of Florida, you have committed yourself to uphold the Honor Code, which includes the following pledge: "*We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honesty and integrity.*" You are expected to exhibit behavior consistent with this commitment to the UF academic community, and on all work submitted for credit at the University of Florida, the following pledge is either required or implied: "*On my honor, I have neither given nor received unauthorized aid in doing this assignment*."

It is assumed that you will complete all work independently in each course unless the instructor provides explicit permission for you to collaborate on course tasks (e.g. assignments, papers, quizzes, exams). Furthermore, as part of your obligation to uphold the Honor Code, you should report any condition that facilitates academic misconduct to appropriate personnel. It is your individual responsibility to know and comply with all university policies and procedures regarding academic integrity and the Student Honor Code. Violations of the Honor Code at the University of Florida will not be tolerated. Violations will be reported to the Dean of Students Office for consideration of disciplinary action. For more information regarding the Student Honor Code, please see: http://www.dso.ufl.edu/sccr/process/student-conduct-honor-code

Software Use

All faculty, staff and students of the university are required and expected to obey the laws and legal agreements governing software use. Failure to do so can lead to monetary damages and/or criminal penalties for the individual violator. Because such violations are also against university policies and rules, disciplinary action will be taken as appropriate.

Services for Students with Disabilities

The Disability Resource Center coordinates the needed accommodations of students with disabilities. This includes registering disabilities, recommending academic accommodations

within the classroom, accessing special adaptive computer equipment, providing interpretation services and mediating faculty-student disability related issues. Students requesting classroom accommodation must first register with the Dean of Students Office. The Dean of Students Office will provide documentation to the student who must then provide this documentation to the Instructor when requesting accommodation.

0001 Reid Hall, 352-392-8565, https://disability.ufl.edu/

Student Privacy
There are federal laws protecting your privacy with regards to grades earned in courses and on individual assignments. For more information, please see the Notification to Students of FERPA Rights.

Campus Helping Resources
Students experiencing crises or personal problems that interfere with their general wellbeing are encouraged to utilize the university's counseling resources. The Counseling & Wellness Center provides confidential counseling services at no cost for currently enrolled students. Resources are available on campus for students having personal problems or lacking clear career or academic goals, which interfere with their academic performance.

Health and Wellness
U Matter, We Care: If you or someone you know is in distress, please contact umatter@ufl.edu, 352-392-1575, or visit U Matter, We Care website to refer or report a concern and a team member will reach out to the student in distress.

Counseling and Wellness Center: Visit the Counseling and Wellness Center website or call 352-392-1575 for information on crisis services as well as non-crisis services. Address: 3190 Radio Road. Services provided:

- Counseling services
- Groups and workshops
- Outreach and consultation
- Self-help library
- Wellness coaching

Student Success Initiative: https://studentsuccess.ufl.edu/ Services provided:

- Advising
- Peer mentoring
- Coaching
- Peer tutoring

Student Health Care Center: Call 352-392-1161 for 24/7 information to help you find the care you need, or visit the Student Health Care Center website.

Academic Resources

E-learning technical support: Contact the UF Computing Help Desk at 352-392-4357 or via e-

mail at helpdesk@ufl.edu.

Career Connections Center: Reitz Union Suite 1300, 352-392-1601. Career assistance and counseling services.

Library Support: Various ways to receive assistance with respect to using the libraries or finding resources.

Teaching Center: Broward Hall, 352-392-2010 or to make an appointment 352- 392-6420. General study skills and tutoring.

Writing Studio: 2215 Turlington Hall, 352-846-1138. Help brainstorming, formatting, and writing papers.

Student Complaints On-Campus: https://sccr.dso.ufl.edu/policies/student-honor-code-student-conduct-code/

Online Students Complaints: https://pfs.tnt.aa.ufl.edu/state-authorization-status/#student-complaint