

# THE UNIVERSITY OF TEXAS AT DALLAS School of Economic, Political and Policy Sciences

## Course syllabus

PPPE 6367: Environmental Economics and Policy

January 2024 (subject to updates)

#### Course overview

Course number: PPPE 6367

Course title: Environmental Economics and Policy

Professor: Elías Cisneros Term: Spring 2024

**Meetings:** 07:00 pm - 09:45 pm @ FN 2.202

## Contact information

**Instructor**: Dr. Elías Cisneros

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**Office**: GR 3.230

Office hours: Monday, 1–3 pm (appointments

via email)

#### General course information

Course description: This course provides a comprehensive exploration of environmental economics and policy, integrating economic theory with empirical insights to analyze and formulate effective responses to environmental challenges. The curriculum delves into the economic dimensions of environmental issues such resource depletion and pollution, emphasizing the role of policy instruments and market mechanisms in addressing these challenges. The course will employ a mix of theoretical instruction, empirical case studies, and policy analysis exercises. Students will engage in critical discussions, research projects, and policy design projects to develop a comprehensive understanding of the economic principles underlying environmental policy-making.

**Pre-requisites:** No prerequisites. But (1) at least one undergraduate-level economics course and (2) a general understanding of regression analysis are desirable. Students may need some mathematical and graphical skills to analyze economic problems, but the level of the analytical components of the course will be determined by the background of the enrolled students.

#### Learning outcomes and objectives

- 1. Students will be able to use economic tools to evaluate environmental issues.
- 2. Students will be able to evaluate environmental policy solutions.

<sup>&</sup>lt;sup>1</sup>For example, any of the following courses would more than cover the basic needs: (a) EPPS 7313 Descriptive and Inferential Statistics, (b) EPPS 7316 Regression and Multivariate Analysis, (c) PPPE 6342 Research Design II.

- 3. Students will develop analytical and research skills to critically evaluate empirical research on environmental policies.
- 4. Students will be able to design environmental policy evaluations.
- 5. Students will learn to effectively communicate and present a research plan, strategy, and results in public.
- 6. Students will be able to demonstrate critical thinking by developing a research question and writing a research design paper.

#### Texts & materials

- The first part of the course focuses on theories and concepts of environmental economics. Lectures are largely based on:
  - Perman, R., Y. Ma, J. McGilvray, and M. Common (2011): *Natural resource and environmental economics*, volume Pearson Education Limited. Addison Wesley Longman, 4th edition
- The second part of the course introduces empirical evaluation methods in the context of environmental policies. The lecture material is largely based on:
  - Khandker, S. R., G. B. Koolwal, and H. A. Samad (2010): Handbook on impact evaluation: quantitative methods and practices. World Bank Publications
- The third part of the course focuses on reading and understanding research papers that analyze environmental policy interventions. Find the list of required literature below under "course outline". This reading list will be continuously *updated*.

## Course assignments

**Overview** This course will use several types of assignments to assess your learning. The maximum achievable points are 100.

Ph.D. Students		Master/ Fast-track students	
Item	Points	Item	Points
Participation	20	Participation	20
Research paper presentation	15	Research paper presentation	15
1-on-1 office meeting	5	1-on-1 office meeting	5
Research design exposé	10	Bibliography essay exposé	10
Research design presentation	20	Bibliography essay presentation	20
Research design paper	30	Bibliography essay paper	30
Maximum achievable points:	100	Maximum achievable points:	100

**Participation** I expect that each of you will come to class prepared and having carefully read the assignments. Further, I expect that you will attend every session of the class and that you will participate actively in the discussions we have during class. Missing an excessive number of classes will result in a reduction in your grade. Class participation includes, but is not limited to:

- (a) Attendance
- (b) Active participation in discussions during class
- (c) Participation in group work and exercises
- (d) Discussing presentations as participants and especially as an assigned discussant
- (e) Subscribing to presentation slots and meetings on time
- (f) Submitting proposals, presentations slides, etc. on time before class

Research paper presentation Give a brief research paper presentation. The presentation will consist of a 10-minute session. During the presentation, you should introduce the research question of the paper and highlight its relevance and significance. While it is not necessary to delve into theoretical models, a statement of the main theoretical argument is necessary. You should briefly present the main data sources and their operationalization. You should explain the main empirical approach, showing the estimation equation and highlighting the identification strategy. The presentation should display the main result, such as a relevant table (or figure), and point out the main effect and conclusion. Also, display two additional findings that you find essential. The presentation should consist of approximately eight slides, strictly avoiding excessive content on each slide. You are required to upload the presentations to the eLearning platform the day before the presentation at 23:59 pm. Subscribe to a presentation slot (and your selected paper here!

**1-on-1 office meeting** Discuss in a 1-on-1 office meeting your research design proposal or bibliography essay proposal (master's students). This meeting aims to mutually learn from each other and brainstorm on your topic. **Subscribe** to a meeting slot here!

**Exposé** A three-page document outlining motivation, research question, scientific contribution, potential data, potential empirical strategy, the outline of the paper, and a first list of relevant literature. This is the foundation for writing the full research design or bibliography essay paper.

**Presentation** Presentations will consist of a 15 to 20-minute session. Depending on your final paper, you will present a bibliographic essay or a research design paper. Further details will be discussed at a later point.

Bibliography essay paper (Fast track / Master's students) Write a bibliographic essay on a one environmental policy instrument either in a specific region (or context) or one specific aspect. The objective of such an essay is to compare and contrast various perspectives to a policy and to critically assess the readings. The goal is to address the state of current knowlege, provide a new perspective, and highlight a knowlege gap. The best approach is to integrate your reading of the literature into a cohesive narrative that reflects knowledge of previous research but is simultaneously aware of its strengths and weaknesses. All bibliographic essays should contain a clearly stated thesis, which summarizes your assessment of the themes, issues and problems of the research. The research paper should be 12–15 pages in length, plus an appendix, and be submitted as a PDF. Generative AI tools may only used in this assignment with the written permission of the instructor (see course policies below).

Research design paper (Ph.D. Students) For the research design paper, students will select a topic and specific research question (RQ) of their choice, subject to instructor approval. Each paper should select and motivate a research question related to the course topic. For this course you should focus on an (environmental) policy or intervention that has a direct or indirect effect on environmental outcomes. Alternatively you may focus on an environmental externality or shock that has an effect on a socio-economic outcome, policy, or politics. Each RQ should be genuinely new, i.e., not already be addressed in the literature. The research design paper should begin with a motivational introduction and provide a critical overview of the topic and relevant literature. The research design will identify potential data sources, outline in detail the empirical identification strategy, and the potential analysis of mechanisms. The research paper should be 12–15 pages in length, plus an appendix, and be submitted as a PDF. Generative AI tools may only used in this assignment with the written permission of the instructor (see course policies below).

## Tentative schedule

$\mathbf{W}$	Wed.	Topics	Assessment/activity	Due date
1	01/17	Introduction; "Scientific writing"	Presentation and meetings subscription	Jan. 17, 23:59
2	01/24	Welfare criteria, externalities, public goods; "How to present"		
3	01/31	Target setting	Census day	
4	02/07	Pigou & Coase		
5	02/14	Policy evaluation criteria;		
		Command and control instruments		
6	02/21	Economic instruments;	Submit (tentative) paper topic	Feb. 23, 23:59
		Uncertainty & Asym. Information		
7	02/28	Env. policy impact evaluation (1)	1-on-1 office meetings	
8	03/06	Env. policy impact evaluation (2)		
	03/13	Spring break	Submit exposé	Mar. 15, 23:59
9	03/20	M&E for forest conservation		
10	03/27	Payments for environmental services		
11	04/03	US Clean Water Act		
12	04/10	US Clean Air Act		
13	04/17	Presentations	Slides to Professor	Apr. 16, 23:59
14	04/24	Presentations	Slides to Professor	Apr. 23, 23:59
15	05/01	Presentations	Slides to Professor	Apr. 30, 23:59
	05/08		Submit paper	May $8, 23:59$

## Course outline

The course will generally consist of three parts: Weeks 1-6 will introduce environmental economic theory. Weeks 7-8 will introduce impact evaluation methods (including spatial data processing and estimations in R). Weeks 9-13 will increasingly focus on reading empirical papers that evaluate environmental policies and interventions. Successful course participation requires reading all listed material marked with a "\*" Additional suggested reading is marked with a "†"

#### Week 1: Introduction & Syllabus

- \*Guideline on writing term papers

### Week 2: Welfare criteria, Externalities, Public goods

- \*Perman et al. (2011), Chapter 4
- Varian (2014) / Varian (2010) Chapters: Exchange, Externalities, Public goods
- Endres (2010) Part 1

#### Week 3: Target setting

- \*Perman et al. (2011) Chapter 5
- \*Deryugina, T., G. Heutel, N. H. Miller, D. Molitor, and J. Reif (2019): The mortality and medical costs of air pollution: Evidence from changes in wind direction. *American Economic Review* 109 (12): 4178–4219
- \*Wen, J., S. Heft-Neal, P. Baylis, J. Boomhower, and M. Burke (2023): Quantifying fire-specific smoke exposure and health impacts. *Proceedings of the National Academy of Sciences* 120 (51): e2309325,120

#### Week 4: Pigouvian tax & Coasean bargaining, and PES

- \*Perman et al. (2011), Chapter 6
- \*Davis, L. W. and L. Kilian (2011): Estimating the effect of a gasoline tax on carbon emissions. Journal
  of Applied Econometrics 26 (7): 1187–1214
- \*Vorlaufer, T., J. de Laat, and S. Engel (2023): Do payments for environmental services affect forest access and social preferences in the long run? experimental evidence from uganda. *Journal of the* Association of Environmental and Resource Economists 10 (2): 389–412
- Wunder, S. (2007): The efficiency of payments for environmental services in tropical conservation.
   Conservation biology 21 (1): 48-58

#### Week 5: Policy evaluation criteria & Command and control instruments

- \*Perman et al. (2011), Chapter 7

#### Week 6: Economic instruments & Uncertainty and Asym. Information

- \*Perman et al. (2011), Chapter 7, 8

#### Week 7: Environmental policy impact evaluation (1) - Randomization, DD, FE, Matching

- †Khandker et al. (2010) Chapters 1-5
- \*Ferraro, P. J. and M. M. Hanauer (2014): Advances in measuring the environmental and social impacts of environmental programs. *Annual Review of Environment and Resources* 39 (1): 495–517
- \*Margoluis, R., C. Stem, N. Salafsky, and M. Brown (2009): Design alternatives for evaluating the impact of conservation projects. New Directions for Evaluation 2009 (122): 85–96
- Baylis, K., J. Honey-Rosés, J. Börner, E. Corbera, D. Ezzine-de Blas, P. J. Ferraro, R. Lapeyre, U. M. Persson, A. Pfaff, and S. Wunder (2016): Mainstreaming impact evaluation in nature conservation.
   *Conservation Letters* 9 (1): 58–64
- Ferraro, P. J. (2009): Counterfactual thinking and impact evaluation in environmental policy. New Directions for Evaluation 2009 (122): 75–84
- Pfaff, A. and J. Robalino (2012): Protecting forests, biodiversity, and the climate: predicting policy impact to improve policy choice. Oxford Review of Economic Policy 28 (1): 164–179

#### Week 8: Environmental policy impact evaluation (2) - Spatial RDD, IV, Shift-Share

- †Khandker et al. (2010) Chapters 6-7
- †Cunningham (2021) Chapter 7 (or more specifically Chapter 7.8), Online version is available here.
- \*Miteva, D. A., S. K. Pattanayak, and P. J. Ferraro (2012): Evaluation of biodiversity policy instruments: what works and what doesn't? Oxford Review of Economic Policy 28 (1): 69–92
- \*Börner, J., D. Schulz, S. Wunder, and A. Pfaff (2020): The effectiveness of forest conservation policies and programs. *Annual Review of Resource Economics* 12 (1): null
- \*Ferraro, P. J., M. M. Hanauer, D. A. Miteva, J. L. Nelson, S. K. Pattanayak, C. Nolte, and K. R. E. Sims (2015): Estimating the impacts of conservation on ecosystem services and poverty by integrating modeling and evaluation. *Proceedings of the National Academy of Sciences* 112 (24): 7420–7425
- Joppa, L. and A. Pfaff (2010): Reassessing the forest impacts of protection. Annals of the New York Academy of Sciences 1185 (1): 135–149

#### Week Spring Break

#### Week 9: Monitoring and enforcement for forest conservation

- \*Börner, J., K. Kis-katos, J. Hargrave, and K. König (2015): Post-crackdown effectiveness of field-based forest law enforcement in the Brazilian Amazon. PLoS ONE 10 (4): 1–19
- \*Assunção, J., C. Gandour, and R. Rocha (2023): DETER-ing deforestation in the amazon: Environmental monitoring and law enforcement. *American Economic Journal: Applied Economics* 15 (2): 125–156
- Andam, K. S., P. J. Ferraro, A. Pfaff, G. A. Sanchez-Azofeifa, and J. A. Robalino (2008): Measuring the effectiveness of protected area networks in reducing deforestation. *Proceedings of the National Academy of Sciences* 105 (42): 16,089–16,094

#### For research paper presentation:

- \*Nelson, A. and K. M. Chomitz (2011): Effectiveness of strict vs. multiple use protected areas in reducing tropical forest fires: A global analysis using matching methods. *PLoS ONE* 6 (8): e22,722
- \*West, T. A., J. L. Caviglia-Harris, F. S. Martins, D. E. Silva, and J. Börner (2022): Potential conservation gains from improved protected area management in the Brazilian Amazon. *Biological Conservation* 269: 109,526
- \*Araujo, R., J. Assunção, and A. Bragança (2023): The effects of transportation infrastructure on deforestationin the amazon: A general equilibrium approach. Technical Report WPS 10415, World Bank. Policy Research working paper
- Nolte, C., A. Agrawal, K. M. Silvius, and B. S. Soares-filho (2013): Governance regime and location influence avoided deforestation success of protected areas in the Brazilian Amazon. Proceedings of the National Academy of Sciences 110 (13): 4956–4961
- Wauchope, H. S., J. P. G. Jones, J. Geldmann, B. I. Simmons, T. Amano, D. E. Blanco, R. A. Fuller,
   A. Johnston, T. Langendoen, T. Mundkur, S. Nagy, and W. J. Sutherland (2022): Protected areas have
   a mixed impact on waterbirds, but management helps. *Nature* 605 (7908): 103–107
- Heilmayr, R. and E. F. Lambin (2016): Impacts of nonstate, market-driven governance on chilean forests. Proceedings of the National Academy of Sciences 113 (11): 2910–2915

#### Week 10: Payments for environmental services

- †Wunder, S. (2015): Revisiting the concept of payments for environmental services. Ecological Economics 117: 234 243
- †Persson, U. M. and F. Alpízar (2013): Conditional cash transfers and payments for environmental services a conceptual framework for explaining and judging differences in outcomes. World Development 43: 124 137
- Ferraro, P. J. and R. Simorangkir (2020): Conditional cash transfers to alleviate poverty also reduced deforestation in indonesia. Science Advances 6 (24)
- West, T. A. P., J. Börner, E. O. Sills, and A. Kontoleon (2020): Overstated carbon emission reductions from voluntary redd+ projects in the brazilian amazon. *Proceedings of the National Academy of Sciences* 117 (39): 24,188–24,194
- Pagiola, S. (2008): Payments for environmental services in Costa Rica. *Ecological Economics* 65 (4): 712–724. Payments for Environmental Services in Developing and Developed Countries

For research paper presentations:

- \*Arriagada, R. A., P. J. Ferraro, E. O. Sills, S. K. Pattanayak, and S. Cordero-Sancho (2012): Do payments for environmental services affect forest cover? A farm-level evaluation from Costa Rica. *Land Economics* 88 (2): 382–399
- \*Sims, K. R. and J. M. Alix-Garcia (2017): Parks versus PES: Evaluating direct and incentive-based land conservation in mexico. *Journal of Environmental Economics and Management* 86: 8 28. Special issue on environmental economics in developing countries
- \*Jayachandran, S., J. De Laat, E. F. Lambin, C. Y. Stanton, R. Audy, and N. E. Thomas (2017): Cash for carbon: A randomized trial of payments for ecosystem services to reduce deforestation. *Science* 357 (6348): 267–273
- \*Jack, B. K. and S. Jayachandran (2019): Self-selection into payments for ecosystem services programs.
   Proceedings of the National Academy of Sciences 116 (12): 5326-5333
- \*Jack, B. K., S. Jayachandran, N. Kala, and R. Pande (2022): Money (not) to burn: Payments for ecosystem services to reduce crop residue burning. Working Paper 30690, National Bureau of Economic Research

#### Week 11: US Clean Water Act

- †Moore, C. C., J. Corona, C. Griffiths, M. T. Heberling, J. A. Hewitt, D. A. Keiser, C. L. Kling, D. M. Massey, M. Papenfus, D. J. Phaneuf, D. J. Smith, C. A. Vossler, and W. Wheeler (2023): Measuring the social benefits of water quality improvements to support regulatory objectives: Progress and future directions. *Proceedings of the National Academy of Sciences* 120 (18)
- von Haefen, R. H., G. V. Houtven, A. Naumenko, D. R. Obenour, J. W. Miller, M. A. Kenney, M. D. Gerst, and H. Waters (2023): Estimating the benefits of stream water quality improvements in urbanizing watersheds: An ecological production function approach. *Proceedings of the National Academy of Sciences* 120 (18)
- Bianucci, R. R., Larry R. Goodenow (1991-1992): UCLA journal of environmental law and policy.
   UCLA Journal of Environmental Law and Policy 10: 41
- Hepner, H. P. (2021): Oklahoma law review. Oklahoma Law Review 73: 337
- Mueller, J. T. and S. Gasteyer (2021): The widespread and unjust drinking water and clean water crisis in the united states. Nature Communications 12 (1): 3544
- Hennighausen, H., Y. Liao, C. Nolte, and A. Pollack (2023): Flood insurance reforms, housing market dynamics, and adaptation to climate risks. *Journal of Housing Economics* p. 101953

#### For research paper presentations:

- \*Taylor, C. A. and H. Druckenmiller (2022): Wetlands, flooding, and the clean water act. *American Economic Review* 112 (4): 1334–1363
- \*Grooms, K. K. (2015): Enforcing the clean water act: The effect of state-level corruption on compliance.
   Journal of Environmental Economics and Management 73: 50–78
- \*Flynn, P. and T. Smith (2022): Rivers, lakes and revenue streams: The heterogeneous effects of clean water act grants on local spending. *Journal of Public Economics* 212: 104,711
- \*Jerch, R. L. (2020): The local benefits of federal mandates: Evidence from the clean water act. Proceedings. Annual Conference on Taxation and Minutes of the Annual Meeting of the National Tax Association 113: pp. 1–69
- \*Chakraborti, L. (2016): Do plants' emissions respond to ambient environmental quality? evidence from the clean water act. Journal of Environmental Economics and Management 79: 55–69

#### Week 12: US Clean Air Act

- †Currie, J. and R. Walker (2019): What do economists have to say about the clean air act 50 years after the establishment of the environmental protection agency? *Journal of Economic Perspectives* 33 (4): 3–26
- †Aldy, J. E., M. Auffhammer, M. Cropper, A. Fraas, and R. Morgenstern (2022): Looking back at 50 years of the clean air act. *Journal of Economic Literature* 60 (1): 179–232
- †Schmalensee, R. and R. N. Stavins (2019): Policy evolution under the clean air act. *Journal of Economic Perspectives* 33 (4): 27–50
- Burtraw, D., A. Fraas, and N. Richardson (2011): Policy monitor—greenhouse gas regulation under the clean air act: A guide for economists. Review of Environmental Economics and Policy 5 (2): 293–313
- Greenstone, M. (2002): The impacts of environmental regulations on industrial activity: Evidence from the 1970 and 1977 clean air act amendments and the census of manufactures. *Journal of Political Economy* 110 (6): 1175–1219
- Chay, K. Y. and M. Greenstone (2003): Air quality, infant mortality, and the clean air act of 1970.
   Working Paper 10053, National Bureau of Economic Research

#### For research paper presentations:

- \*Innes, R. and A. Mitra (2015): Parties, politics, and regulation: Evidence from clean air act enforcement. *Economic Inquiry* 53 (1): 522–539
- \*Auffhammer, M., A. M. Bento, and S. E. Lowe (2009): Measuring the effects of the clean air act amendments on ambient pm10 concentrations: The critical importance of a spatially disaggregated analysis. *Journal of Environmental Economics and Management* 58 (1): 15–26
- \*Currie, J., J. Voorheis, and R. Walker (2023): What caused racial disparities in particulate exposure to fall? new evidence from the clean air act and satellite-based measures of air quality. American Economic Review 113 (1): 71–97
- \*Auffhammer, M., A. M. Bento, and S. E. Lowe (2011): The city-level effects of the 1990 clean air act amendments. *Land Economics* 87 (1): 1–18
- \*Rachel C. Nethery, J. D. S., Fabrizia Mealli and F. Dominici (2021): Evaluation of the health impacts of the 1990 clean air act amendments using causal inference and machine learning. *Journal of the American Statistical Association* 116 (535): 1128–1139
- \*Evans, M. F. and S. L. Stafford (2019): The clean air act watch list and federal oversight of state enforcement efforts. *Journal of Environmental Economics and Management* 93: 170–184
- \*Sadana, D. (2023): Effects of early childhood exposure to pollution on crime: Evidence from 1970 clean air act. *Environmental and Resource Economics* 84 (1): 279–312
- Raff, Z., A. Meyer, and J. M. Walter (2022): Political differences in air pollution abatement under the clean air act. *Journal of Public Economics* 212: 104,688
- Walker, W. R. (2013): The Transitional Costs of Sectoral Reallocation: Evidence From the Clean Air Act and the Workforce\*. The Quarterly Journal of Economics 128 (4): 1787–1835
- Grainger, C. A. (2012): The distributional effects of pollution regulations: Do renters fully pay for cleaner air? *Journal of Public Economics* 96 (9): 840–852
- Thomas, R. B., S. E. Spal, K. R. Smith, and J. B. Nippert (2013): Evidence of recovery of ji¿juniperus virginianaj/i¿ trees from sulfur pollution after the clean air act. *Proceedings of the National Academy of Sciences* 110 (38): 15,319–15,324
- Isen, A., M. Rossin-Slater, and W. R. Walker (2017): Every breath you take—every dollar you'll make:
   The long-term consequences of the clean air act of 1970. Journal of Political Economy 125 (3): 848–902

#### Week 13: Presentations

- \*Read presentation slides
- Prepare questions (especially if you are the assigned discussant)

#### Week 14: Presentations

- \*Read presentation slides
- Prepare questions (especially if you are the assigned discussant)

#### Week 15: Presentations

- \*Read presentation slides
- Prepare questions (especially if you are the assigned discussant)

## Course Policies

Class Materials The instructor may provide class materials that will be made available to all students registered for this class as they are intended to supplement the classroom experience. These materials may be downloaded during the course, however, these materials are for registered students' use only. Classroom materials may not be reproduced or shared with those not in class, or uploaded to other online environments except to implement an approved Office of Student AccessAbility accommodation. Failure to comply with these University requirements is a violation of the Student Code of Conduct.

Class Attendance The University's attendance policy requirement is that individual faculty set their course attendance requirements. Regular and punctual class attendance is expected regardless of modality. Students who fail to attend class regularly are inviting scholastic difficulty.

Regular class participation is expected regardless of course modality. Participation includes in-person attendance, and engaging in group or other activities during class that solicit your feedback on homework assignments, readings, or materials covered in the lectures. Successful participation is defined as consistently adhering to University requirements, as presented in this syllabus. Failure to comply with these University requirements is a violation of the Student Code of Conduct.

Class Participation Regular class participation is expected regardless of course modality. Students who fail to participate in class regularly are inviting scholastic difficulty. Successful participation is defined as consistently adhering to University requirements, as presented in this syllabus. Failure to comply with these University requirements is a violation of the Student Code of Conduct.

Class Recordings The instructor may record meetings of this course. Any recordings will be available to all students registered for this class as they are intended to supplement the classroom experience. Students are expected to follow appropriate University policies and maintain the security of passwords used to access recorded lectures. Unless the Office of Student AccessAbility has approved the student to record the instruction, students are expressly prohibited from recording any part of this course. Recordings may not be published, reproduced, or shared with those, not in the class, or uploaded to other online environments except to implement an approved Office of Student AccessAbility accommodation. If the instructor or a UTD school/department/office plans any other uses for the recordings, consent of the students identifiable in the recordings is required prior to such use unless an exception is allowed by law. Failure to comply with these University requirements is a violation of the Student Code of Conduct.

Academic Dishonesty Policy Cheating and plagiarism will not be tolerated. I strongly encourage you to review the University's policies regarding academic honesty: UT Dallas Syllabus Policies and Procedures, Academic Dishonesty.

The emergence of generative AI tools<sup>2</sup> (such as ChatGPT and DALL-E) has sparked large interest among many students and researchers. The use of these tools for brainstorming ideas, exploring possible responses to questions or problems, and creative engagement with the materials may be useful for you as you craft responses to class assignments. While there is no substitute for working directly with your instructor, the potential for generative AI tools to provide automatic feedback, assistive technology and language assistance is clearly developing. Course assignments may use Generative AI tools if indicated in the syllabus. AI-generated content can only be presented as *your own work* with the instructor's *written permission*. Include an acknowledgment of how generative AI has been used after your reference or Works Cited page. TurnItIn or other methods may be used to detect the use of AI. Under UTD rules about due process, referrals may be made to the Office of Community Standards and Conduct (OCSC). Inappropriate use of AI may result in penalties, including a 0 on an assignment.

Disabilities Policy Please find the disability policy here: https://go.utdallas.edu/syllabus-policies. It is the policy and practice of The University of Texas at Dallas to make reasonable accommodations for students with properly documented disabilities. However, written notification from the AccessAbility Resource Center (ARC) is required. If you are eligible to receive an accommodation and would like to request it for this course, please discuss it with me and allow one-week advance notice. Students who have questions about receiving accommodations, or those who have, or think they may have, a disability (mobility, sensory, health, psychological, learning, etc.) are invited to contact ARC for a confidential discussion. ARC is located in the Administration Building, AD 2.224. They can be reached by phone at 972-883-2098, or by email at studentaccess@utdallas.edu.

Resources for student success UTD has a constellation of resources aimed at helping students. Please find them here: https://go.utdallas.edu/academic-support-resources or see the UTD Student Resource Guide 2023 on eLearning. One example is the Graduation Help Desk which supports undergraduate students, faculty and staff to develop solutions to complex academic and non-academic issues (online appointments or write to graduationhelpdesk@utdallas.edu). Have a look at the Comet Cupboard which is a UT Dallas food pantry initiative dedicated to helping students in need. Also, take notice of the Student Counselling Center (972-883-2575).

Further UT Dallas Syllabus Policies and Procedures The information contained in the following link constitutes the University's policies and procedures segment of the course syllabus. Please go to <a href="http://go.utdallas.edu/syllabus-policies">http://go.utdallas.edu/syllabus-policies</a> for these policies.

The descriptions and timelines contained in this syllabus are subject to change at the discretion of the Professor.

<sup>&</sup>lt;sup>2</sup> "Generative AI is a broad term that refers to a type of artificial intelligence (AI) application that is designed to use a variety of machine learning algorithms to create new content (text, images, video, music, artwork, synthetic data, etc.) based on user input that was not explicitly programmed into the AI application. Generative AI systems are "trained" by using complex algorithms to learn from an existing large corpus of datasets (often consisting of millions of examples) and to analyze patterns, rules and statistical structures from the sample data to be used in generating new content that is similar in style and characteristics to the original training datasets." (ASU, 2023, https://provost.asu.edu/generative-ai)