

# Carnegie Mellon University Social and Decision Sciences

Dietrich College of Humanities and Social Sciences

Course	90-798 and 88-344: Systems Analysis: Environmental Policy			
Information	Fall 2024			
	Heinz College, H. John Heinz III School of Public Policy and Management and Dietrich College of Humanities and Social Sciences, Department of Social and Decision Sciences			
Carnegie Mellon University				
	Location: HBH 2003, Pittsburgh Campus			
	Meeting Day: Wednesday			
	Meeting Time: 6:30 – 9	9:20 PM		
	Faculty Instructor:	Matthew M. Mehalik, Ph.D.  Adjunct Professor of Environmental Policy (412) 445-0411  Email: <a href="mmehalik@andrew.cmu.edu">mmehalik@andrew.cmu.edu</a> Office Hours: by appointment		
Prerequisites	90-798: Graduate Level E 88-344: Knowledge of Ba or Permission of Instructo	sic Statistics or Equivalent		
Description	90-798/88-344: Environmental Policy and Planning provides an introduction to how environmental policies have been and can be designed/created, implemented, and evaluated amidst complex information-based, social, political, and cultural processes. The course emphasizes a systems-based methodological approach for addressing the complexities involved in framing, analyzing, and designing an implementation plan for policy construction.  The course also explores through landmark and contemporary case studies several dimensions of environmental policymaking:  • Contextual, historical, and structural aspects of environmental policymaking at the local, state, federal, and international levels  • Use of quantitative and qualitative analytical tools (from core program + new tools)  • The process of how policies derive their meanings.  • Contemporary challenges and opportunities in environmental policymaking.  • Strategies for successful policymaking in the contemporary landscape.  The course includes experiential, hands-on learning (projects, case studies, analyses, presentations, and guest lectures) as well as reflective components (readings, discussion, and			

papers). Students in this course work on a final environmental policy project to demonstrate mastery of the knowledge and skill-based exercises explored during the term. By the end of the course, each student will be able to: Learn and deploy a systems-based approach towards structuring and analyzing an environmental policy decision situation; Connect several analytical tools to policymaking processes, such as rate and weight decision methods, optimization, decision analysis and decision trees, economic modeling, and decisions under uncertainty; Evaluate and design potential alternative policy solutions; and Propose strategic ways of engaging with social and political processes in order to advance policy solution goals. Assess how the courses tools relate to career goals and objectives. **Required Course** Vig, Norman J. Rabe, Barry G., and Kraft, Michael E. (2024). Environmental Policy: New Materials Directions for the Twenty-First Century. 12th Edition. Washington, DC: CQ Press. Layzer, Judith A. and Rinfret, Sara R. (2023). The Environmental Case: Translating Values into Policy. 6th Edition. Washington, DC: CQ Press. Other Readings will be available online Your final grade will be based on: **Evaluation** • Case Assignments/Homework: 40% Method • Midterm 15% • Group Final Report 20% • Group Final Presentation 10% • Final Reflection 15% In addition, your final grade will incorporate a multiplier (from 0.7 to 1.1) based upon a team peer evaluation rubric and from instructor observations. Learning/Course Skills and knowledge students should gain and how they will be assessed **Objectives Learning Objective How Assessed** Learn and deploy a systems-based Group Cases, Homework, Midterm, Final approach towards structuring and Project analyzing an environmental policy decision situation Connect several analytical tools to Cases, Homework, Midterm, Final Project policymaking processes, such as rate and weight decision methods, optimization, decision analysis and decision trees, economic modeling, risk analysis, and GIS Cases, Homework, Midterm, Final Project Evaluate and design potential alternative policy solutions Propose strategic ways of engaging Cases, Homework, Midterm, Final Project with social and political processes in order to advance policy solution goals Assess how the courses tools relate to Final Reflection career goals and objectives

<b>Grading Scale for</b>	A+	99.0-100%	B+	88.0-90.9%	C+	78.0-80.9%
90-798	A	94.0-98.9%	В	84.0-87.9%	C	74.0-77.9%
	A-	91.0-93.9%	B-	81.0-83.9%	C-	71.0-73.9%
					D, R	70.9% and below
Grading Scale for	A	90.0-100%	D	60.0 – 69.9%		
88-344	В	80.0 - 89.9%	R	59.9% and bel	OW	
	C	70.0 - 79.9%				
Grading Rubrics		Presentation, Final Reportion Rubrics will be prov				Final
Academic		*		<u> </u>		
Integrity,	•	I expect that all worl	k students	submit for this	course w	ill be their own. I have
Plagiarism, and						o support your learning. Doing
Cheating Notice						ning objectives in this course.
						ect for the submitted work to
		list all team member			ica, i cap	sect for the submitted work to
		nst un teum memoer	s who pu	therpateu.		
	•	Placiarism: All wor	k in this c	elass must be voi	ır own I	t is unprofessional to copy or
						attribution to that person.
						s in violation of University
						do not hesitate to contact me
		for help.	questions	s about proper at	u iouuoii,	do not nestrate to contact me
		ioi neip.				
		Diagionism and other	. famma af		<del>nu</del> acantat	ion and talean autuamaly
	•					ion are taken extremely
						s own is widely recognized as
		_				arly flagrant when it occurs as
						ating on an examination,
		_				nination. The punishment for
			•	oulsion from the	program.	There are many other ways in
		which a violation car	n occur.			
				_		
	•					in the highest ethical standards
						nd term papers (i.e. plagiarism
				,	_	ed and will be treated
		appropriately. The u	sual pena	lty for violations	s is a faili	ng grade for the particular
		assignment in questi	on; howe	ver, in some inst	ances, su	ch actions may result in a
		failing grade for the	course.			
	•	Academic integrity g	governs th	ne way in which	classwor	k, writing, and research are
		done at a University.	. It is four	nded on the princ	ciples of	respect for knowledge, truth,
		•		_	_	and values are the foundation
		•	_	•	•	Mellon with its mission of
						ssionals. Academic integrity is
			_		_	ll faculty members to provide
						e integrity. As per university
		_				e associate dean in which there
						oached academic integrity by
		cheating or plagiaris		adem of studelli	s nave of	duction academic integrity by
		cheating of plagfalls	111.			
		00 780 Studenter Die	anna vinit	the Hairz Calles	a Studen	t Handbook CHADTED 16
						t Handbook, CHAPTER 16,
		ETHICS AND DIS	CIPLINE	, for guidance	on issues	related to academic integrity,

as these policies are in effect in this course: <a href="https://www.heinz.cmu.edu/heinz-shared/files/img/student-handbooks/heinz-college-student-handbook.pdf">https://www.heinz.cmu.edu/heinz-shared/files/img/student-handbooks/heinz-college-student-handbook.pdf</a>

90-489 Students: Please visit the Carnegie Mellon University Policy on Academic
 Integrity for guidance on issues related to academic integrity, as these policies are in
 effect in this course: <a href="https://www.cmu.edu/policies/student-and-student-life/academic-integrity.html">https://www.cmu.edu/policies/student-and-student-life/academic-integrity.html</a>

#### Guidance for Citation of Sources

Proper citation and formatting of sources are central to meeting the requirements of academic integrity. Here are some recommended guidelines. This course recommends using the APA Style Guide; however, you may choose any of the following styles if you are consistent in their use:

- American Psychological Association (APA) Style: <a href="https://apastyle.apa.org/style-grammar-guidelines">https://apastyle.apa.org/style-grammar-guidelines</a>
- Modern Language Association (MLA)
   style: <a href="https://owl.purdue.edu/owl/research\_and\_citation/mla\_style/mla\_formatting\_and\_style\_guide/mla\_general\_format.html">https://owl.purdue.edu/owl/research\_and\_citation/mla\_style/mla\_formatting\_and\_style\_guide/mla\_general\_format.html</a>
- Chicago Manual of Style: <a href="https://www.chicagomanualofstyle.org/tools-citationguide/citation-guide-1.html">https://www.chicagomanualofstyle.org/tools-citationguide/citation-guide-1.html</a>

### Use of Generative AI Programs

## These tools are <u>forbidden</u> to be used for the <u>midterm exam</u>, <u>final presentation</u>, and <u>final</u> reflection paper.

Generative AI programs (ChatGPT, DALL-E, etc.) can serve as useful <u>references</u> for case assignments and for supporting your research project. The content generated from these sources <u>are not substitutes</u> for your own research, generative thinking, analysis, expression, synthesis or reasoned arguments.

You must follow the academic integrity guidelines of the university and of this class. If you use one of these generative AI tools to develop content for an assignment, <u>you are</u> required to cite the tool's contribution to your work.

Treat information from these tools as if they are like the sharing of an algorithm's output (because that is what it is).

Any such use must be appropriately acknowledged and cited, following the guidelines established by the APA Style Guide (or equivalent in MLA or Chicago styles), including the specific version of the tool used.

Submitted work should <u>include the exact prompt used to generate the content as well as</u> the AI's full response in an Appendix.

Following the APA Style Guide, the proper handling of the citation is to give credit to the author of the algorithm. Include this information as an entry in a reference list. Provide a corresponding in-text citation. The results should be acknowledged as a source and checked for validity and credibility with your own additional research.

Cutting and pasting content from any source without citation is plagiarism. Likewise, paraphrasing content from a generative AI without citation is plagiarism. Similarly, <u>using any generative AI tool without appropriate acknowledgement will be treated as plagiarism</u>. The university's policy on plagiarism applies to all uncited or improperly cited

use of work, whether that work is created by human beings alone or in collaboration with a generative AI.

#### You may not use generative AI programs to:

- Generate content that you cut and paste into an assignment with a written component without quotations and a citation and appendix
- o Generate content that is not adequately paraphrased without a citation
- o Generate bibliographies for topics that you have not researched yourself
- Generate other content (images, video, others) unless expressly permitted and following provided guidance
- Otherwise use or present generative AI content that you pass off as your own work, when really it is not

Finally, it is important that you recognize that large language models frequently provide users with incorrect information, create professional-looking citations that are not real, generate contradictory statements, incorporate copyrighted material without appropriate attribution, and can sometimes integrate biased concepts. Code generation models may produce inaccurate outputs. Image generation models may create misleading or offensive content.

It is important to note that you understand **you are ultimately responsible for the content that you submit.** Work that is inaccurate, biased, unethical, offensive, plagiarized, or incorrect will be penalized.

### Course Policies & Expectations

- Professionalism: Your entire experience is geared toward helping you develop skills
  necessary to participate in the world as a qualified professional. This means taking
  responsibility for the work that you produce and for your conduct among your student
  colleagues and other members of the university community. Quality work in
  developing knowledge, skills, and wisdom are the most important goals to keep in
  mind. Quantity of product and number of hours spent working are secondary to
  overall quality.
- Attendance: Students are expected to attend all sessions. Students may be excused from two classes for professional, health, or personal reasons when the instructor is notified of the pending absence. Attendance performance is used as a multiplying factor in the final grade.
- Participation: It is essential for all students to participate fully in class in their case evaluation teams. Students will complete a peer evaluation of their team's performance. The instructor will note class participation observations. The results of the evaluation scores are used as a multiplying factor in the final grade, using a statistical distribution of the scores with mean and cut point performance thresholds based on standard deviations from mean performance.
- **Recording of Class:** Some students find it helpful to record class sessions. Because there may be times when recording of class may be inappropriate, students must request the instructor's permission prior to recording classes. All such recordings are for personal use. Copies of these recordings may not be distributed to anyone else in any format or fashion.

	• Contacting me for help: Send me an e-mail to set up an appointment. Email is the best way to get in contact with me.		
Student Well-Being	<ul> <li>We are all under a lot of stress. Make sure to move regularly, eat well, and reach out to your support system or me (mmehalik@andrew.cmu.edu) if you need to. We can all benefit from support in times of stress, and this semester is no exception.</li> <li>The CMU Community Health and Well Being website provides information and resources for all members of the CMU community:         https://www.cmu.edu/wellbeing/index.html     </li> </ul>		
	• Take care of yourself. Do your best to maintain a healthy lifestyle this semester by eating well, exercising, avoiding drugs and alcohol, getting enough sleep and taking some time to relax. This will help you achieve your goals and cope with stress. All of us benefit from support during times of struggle. You are not alone. There are many helpful resources available on campus and an important part of the college experience is learning how to ask for help. Asking for support sooner rather than later is often helpful. If you or anyone you know experiences any academic stress, difficult life events, or feelings like anxiety or depression, we strongly encourage you to seek support. Counseling and Psychological Services (CaPS) is here to help: call 412-268-2922 and visit their website at http://www.cmu.edu/counseling/. Consider reaching out to a friend, faculty or family member you trust for help getting connected to the support that can help. If you or someone you know is feeling suicidal or in danger of self-harm, call someone immediately, day or night:		
	CaPS: 412-268-2922 Re:solve Crisis Network: 888-796-8226		
	If the situation is life threatening, call the police: On campus: CMU Police: 412-268-2323 Off campus: 911 If you have questions about this or your coursework, please let me know.		
	<ul> <li>Food Security: If you are worried about affording food or feeling insecure about food, there are resources on campus that can help. Any undergraduate or graduate student can visit the CMU Pantry and receive food for free. Follow the directions on the <a href="MU Pantry website">CMU Pantry website</a> to schedule your visit.</li> </ul>		
Transferring to fully remote during the semester	• If the class needs to go fully remote, you will receive an email from me and an announcement will be published on our course website on Canvas.		
Use of technology during class	• This class involves regular use of technology—both for in-person and remote students. Research has shown that divided attention is detrimental to learning, so I encourage you to close any windows not directly related to what we are doing while you are in class. Please turn off your phone notifications and limit other likely sources of technology disruption, so you can fully engage with the material, each other, and me. Also, if applicable, people in remote mode should have their video turned on during the entire class time. This will create a better learning environment for everyone. A laptop will be needed for our in-person classes, so if you do not have access to one, please email me (mmehalik@andrew.cmu.edu) as soon as possible so we can find a solution.		

#### **Accommodations** If you have a disability and have an accommodations letter from the Disability for students with Resources office, I encourage you to discuss your accommodations and needs with disabilities me as early in the semester as possible. I will work with you to ensure that accommodations are provided as appropriate. If you suspect that you may have a disability and would benefit from accommodations but are not yet registered with the Office of Disability Resources, I encourage you to contact them at access@andrew.cmu.edu. **Diversity statement** We must treat every individual with respect. We are diverse in many ways, and this diversity is fundamental to building and maintaining an equitable and inclusive campus community. Diversity can refer to multiple ways that we identify ourselves, including but not limited to race, color, national origin, language, sex, disability, age, sexual orientation, gender identity, religion, creed, ancestry, belief, veteran status, or genetic information. Each of these diverse identities, along with many others not mentioned here, shape the perspectives our students, faculty, and staff bring to our campus. We, at CMU, will work to promote diversity, equity and inclusion not only because diversity fuels excellence and innovation, but because we want to pursue justice. We acknowledge our imperfections while we also fully commit to the work, inside and outside of our classrooms, of building and sustaining a campus community that increasingly embraces these core values. Each of us is responsible for creating a safer, more inclusive environment. Unfortunately, incidents of bias or discrimination do occur, whether intentional or unintentional. They contribute to creating an unwelcoming environment for individuals and groups at the university. Therefore, the university encourages anyone who experiences or observes unfair or hostile treatment on the basis of identity to speak out for justice and support, within the moment of the incident or after the incident has passed. Anyone can share these experiences using the following resources: Center for Student Diversity and Inclusion: csdi@andrew.cmu.edu, (412) 268-2150 Ethics Reporting Hotline. Students, faculty, and staff can anonymously file a report by calling 844-587-0793 or visiting cmu.ethicspoint.com. All reports will be documented and deliberated to determine if there should be any following actions. Regardless of incident type, the university will use all shared experiences to transform our campus climate to be more equitable and just. Recording of class sessions For this course, I will be recording class sessions and making them available to you for your personal, educational use. Recordings of class sessions are covered under the Family Educational Rights and Privacy Act (FERPA) and must not be shared with anyone outside your course-section. The purpose of these recordings is so students in this course (and only students in this course) can watch or re-watch past class sessions. Feel free to use the recordings if you would like to review something we discussed in class or if you are temporarily unable to attend class. The links to the recorded sessions will be available on Canvas. If the situation presents itself where we will need to transition to remote learning, please make sure that your Internet connection and equipment are set up to use Zoom and able to share audio and video during class meetings. (See this page from Computing Resources for information on the technology you are likely to need: https://www.cmu.edu/computing/start/students.html)

Let me know if there is a gap in your technology set-up (mmehalik@andrew.cmu.edu) as soon as possible, and we can see about finding solutions. Sharing video: In this course, being able to see one another helps to facilitate a better learning environment and promote more engaging discussions. Therefore, if we are in remote learning mode, our default will be to expect students to have their cameras on during lectures and discussions. However, I also completely understand there may be reasons students would not want to have their cameras on. If you have any concerns about sharing your video, please email me as soon as possible (mmehalik@andrew.cmu.edu) and we can discuss possible adjustments. Note: You may use a background image in your video if you wish; just check in advance that this works with your device(s) and internet bandwidth. If you are logged in remotely during our class meetings, please keep your mic muted unless you are sharing with the class or your breakout group. If you have a question or want to answer a question, please use the chat or the "raise hand" feature. I will be monitoring these channels in order to call on students to contribute. Our synchronous meetings may involve breakout room discussions, and those will work better if everyone in your small group has their camera turned on. During large group debriefs, you may keep your video off. **Grading policies** All assignments have due dates indicated on the syllabus. In general, submitting and late assignments on time lets me provide feedback in a more timely and efficient manner. assignments Assignments build on each other, so timely submissions are crucial to your progress in the class. However, sometimes life happens. If you cannot submit an assignment on time, the default will be that you will be eligible for 90% of the grade the first 48 hours that the assignment is late. If you have to submit beyond 48 hours past the due date, please contact me (mmehalik@andrew.cmu.edu) as soon as possible so we can make arrangements. **Student Academic Student Academic Success Center (SASC) Success Center** SASC focuses on creating spaces for students to engage in their coursework and approach (SASC) learning through a variety of group and individual tutoring options. We offer many opportunities for students to deepen their understanding of who they are as learners, communicators, and scholars. Our workshops are free to the CMU community and meet the needs of all disciplines and levels of study. SASC programs to support student learning include the following (program titles link to webpages): Academic Coaching--This program provides holistic, one-on-one peer support and group workshops to help undergraduate and graduate students implement habits for success. Request an initial consultation here. **Peer Tutoring**--Peer Tutoring is offered in two formats for students seeking support related to their coursework. Visit the webpage to see courses currently being supported by Peer Tutoring. **Communication Support**--Communication Support offers free one-on-one communication consulting as well as group workshops to support strong written, oral, and visual communication in texts including IMRaD and thesis-driven essays, datadriven reports, oral presentations, posters and visual design, advanced research, application materials, grant proposals, business and public policy documents, data visualisation, and team projects. Schedule an appointment on our website (in-person, zoom synchronous, or recorded video), attend a workshop, or consult handouts or videos to strengthen communication skills.

Language and Cross-Cultural Support--This program supports students seeking

help with language and cross-cultural skills for academic and professional success
through individual and group sessions. Make an appointment with a Language
Development Specialist to get individualized coaching.
• Supplemental Instruction (SI)This program offers a non-remedial approach to
learning in historically difficult courses at CMU. Visit the website to see courses with
SI available here.

### **Schedule and Specific Learning Objectives**

Week	Date	Assignment			
1	8/28	Learning Objectives:			
		<ul> <li>Framing the Need for Environmental Policy</li> </ul>			
		<ul> <li>Course Overview</li> </ul>			
		<ul> <li>Introduction to Systems Perspective</li> </ul>			
		Overview of Case Analysis			
2	9/4	Learning Objectives:			
		<ul> <li>Understand context of American Environmentalism and its impact</li> </ul>			
		<ul> <li>Environmental Justice and Environmental Racism</li> </ul>			
		<ul> <li>Get broad perspective on the evolution of government's role</li> </ul>			
		<ul> <li>Systems Analysis Methodologies</li> </ul>			
		Readings Due:			
		o V&K, Chs. 1 & 2			
		o Gibson-Scherer, Ch. 2 (Canvas)			
		o EJ Reading #1 (On Canvas)			
		Case Studies Due (Individual Assignment)			
		A. Layzer, (Clean Air & Water Acts)			
	0/11	o B. Layzer, (Love Canal)			
3	9/11	• Learning Objective:			
		<ul> <li>Learn frameworks for addressing Values, Goals, Agenda Setting &amp; Policy</li> </ul>			
		Processes			
		• Readings Due:			
		o Gibson-Scherer, Ch. 3			
		o Cohen, Chs. 1-4			
		o V&K, Ch. 3			
		Skill Development Objectives:     Determining the Cools of a system			
		Determining the Goals of a system     Goal Studies Bus (Group Assignment)			
		Case Studies Due (Group Assignment)  A Loyzer (Community Activism Dudley St., on Convey)			
		<ul> <li>A. Layzer, (Community Activism – Dudley St. – on Canvas)</li> <li>B. Layzer, (Cape Wind)</li> </ul>			
4	9/18	C. Layzer, (Federal Grazing)      Learning Objectives:			
4	9/10	<ul> <li>Earning Objectives.</li> <li>Environmental Justice and Frontline Communities</li> </ul>			
		Congressional and Executive Branch Regulatory Approaches			
		Policy Processes and Rulemaking			
		Skill Development Objectives:			
		Establishing Indices of Performance			
		Rate and Weight methods			
		Dominance, Utility Values			
		• Readings Due:			
		o Gibson & Scherer, Ch. 4			
l	1				

		0.1.0=.11			
		<ul> <li>Stokey &amp; Zechhauser, pp.237 – 254</li> </ul>			
		o V&K Chs. 4, 5, 7			
		o EJ Reading			
		Case Studies:			
		A. Layzer, (Spotted Owl)			
		B. Layzer, (Drilling in ANWR)			
		<ul> <li>C. Layzer, (Snowmobiles in Yellowstone)</li> </ul>			
5	9/25	Skill Development Objectives:			
		o Utility Values, Cont.			
		o Multi-Attribute Utility Values (MAUT)			
		Learning Objectives:			
		Court Actions and Reviews			
		Readings Due:			
		o V&K, 6			
		Stokey & Zechhauser, pp. 201 – 236			
		• Case Studies			
		A. Layzer, (NE Fisheries)			
6	10/2	o B. Layzer, (Deepwater Horizon)			
0	10/2	Skill Development Objectives:      MALIT (cont.) Decision Analysis and Considering Termode Discrepance			
		o MAUT (cont.), Decision Analysis, and Sensitivity Analysis/Tornado Diagrams			
		o Economic Modeling			
		• Readings Due:			
		<ul> <li>Stokey &amp; Zechhauser, pp. 201 – 236</li> </ul>			
		<ul> <li>Stokey &amp; Zechhauser, pp. 134 - 176</li> </ul>			
		Case Studies			
		o A. Layzer, (Acid Rain) + Special Handout on Acid Rain			
		o B. Layzer, (Chesapeake Bay)			
		Midterm Assigned			
7	10/9	Learning Objectives:			
		<ul> <li>○ Meaning Making and Sense Making</li> </ul>			
		<ul> <li>Effective Communication for Policymaking</li> </ul>			
		∘ Role of Science			
		Skill Development Objectives:			
		<ul> <li>Decision Modeling with Uncertainty</li> </ul>			
		o In-class exercises			
		Readings Due:			
		o V&K, 8, 11, 12			
		<ul> <li>M. Callon, pp. 196-233.</li> </ul>			
		<ul> <li>W. Bijker, T. Pinch and T. Hughes, pp. 17-50.</li> </ul>			
		• ***Midterm Due 11:59:59 pm***			
8	10/16	Fall Break (No Class)			
9	10/23	Post-Midterm Discussion			
		Learning Objectives:			
		○ Meaning Making and Sense Making, cont.			
		Effective Communication for Policymaking, cont.			
		• EJ Readings			
10	10/30	Learning Objectives:			
	10,00	○ Special Topics I: Climate Change Policies			
		○ V&K, 13			
L	1	5 var., 10			

		Skill Development Objectives:		
		<ul><li>Developing the Transition Scenario</li><li>Case Studies</li></ul>		
		<ul><li>A. Layzer, (Acid Rain) + Special Handout on Acid Rain</li><li>B. Layzer, (Climate Change)</li></ul>		
		∘ C. Layzer, (Hurricane Katrina)		
11	11/6	• Learning Objectives:		
11	11/0	<ul> <li>Special Topics II: Energy (Marcellus, Alternative Energy Future)</li> </ul>		
		V&K, 8		
		o Layzer, Ch. 18		
		• Skill Development Objectives:		
		Effective Communication for Policymaking		
		Transition Scenario, Continued		
		o Mehalik & Gorman		
		o monami di commani		
		Case Studies		
		o Layzer, (Fracking Wars)		
		o Special Topics Case		
12	11/13	Learning Objectives:		
		<ul> <li>Special Topics III: Transportation and Suburbanization</li> </ul>		
		o V&K, 12		
		Skill Development Objective:		
		○ Advocacy Strategies		
		○ Strategic Systems Change		
		Case Studies		
		o Layzer, (Urban Sprawl)		
		○ Special Topics Case		
13	11/20	. Learning Objectives		
13	11/20	<ul> <li>Learning Objectives:</li> <li>Special Topics IV: International Environmental Policy Challenges and Human</li> </ul>		
		Development; Frontline Action on Sustainability and Resiliency		
		V&K, 13, 14, 15		
		• Skill Development Objective:		
		○ Strategic Systems Change, Cont.		
		Agency Amidst Contingency and Complexity		
14	11/27	Thanksgiving Holiday (No Class)		
15	12/4	Final Presentations		
		Final Reflection Discussion		
	12/11	Final Project and Final Reflection Paper: Due December 11, 2024, 11:59:59 pm		
		in the state of th		