SOS 311: Futures Thinking and Strategies

Class Number: 66238, 66162

Credit Hours: 3 credits

Semester & Year: Fall 2025 A

Prerequisite: PUP 190 or SOS 111 with C or better; SOS 110 with C or better OR Visiting University Student

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Instructor Information

Name: Dr. Janna Goebel

Phone: 480-727-9236 - Canvas Inbox is the fastest way to reach me.

Office: WCPH 372B

Office Hours: Listed on the Office Hours page and by appointment

Course Communication Policy

All student/instructor communication will be directed through the Canvas Inbox. This ensures the security, privacy, and record of the communication. Note: You must have your primary Canvas email address set as your asurite@asu.edu, not firstname.lastname@asu.edu or a personal email account.

Reminder: the Community Forum in Canvas should be used for general questions about the course. You are encouraged to respond to your classmates' questions and comments.

Course Textbook and Materials

Required Textbook(s)

All required readings and viewings are included in this course Canvas.

Computer Requirements

Student success requires a computer with internet access and the following for access to digital content:

- Web browsers (Chrome, Microsoft Edge, Mozilla Firefox, or Safari)
- Adobe Acrobat Reader(free)
- A webcam, microphone, headset/earbuds, and speaker
- Microsoft Office (Microsoft 365is free for all currently-enrolled ASU students)
- Reliable internet connection to engage with content

A smartphone, iPad, Chromebook, etc. will not be sufficient for completing your coursework, especially in the Canvas LMS. While you will be able to access course content with mobile devices, you must use a computer for some assessments.

Additional Course Technology

Below is a list of course technologies that may be used at anytime during this course. Not every technology will be used.

- Zoom – ASU utilizes the Zoom Online Meeting platform to conduct meetings, host classes, and conduct conferences
- VoiceThread – This course uses VoiceThread for presentations
- Yellowdig – This course uses Yellowdig as our discussion platform
- Perusall – This course uses Perusall to complete annotated discussion around specific readings and other course materials
- Respondus LockDown Browser – This course uses Respondus LockDown Browser as a proctoring resource for all quizzes and exams

Technical Support

Technology Support is available to all students enrolled at Arizona State University. All students can contact the University Technology Help Desk by any of the following methods:

- Login to MyASU and click on “Help”
- Call 1-855-ASU-5080 (1-855-278-5080)

Course Information

Catalog Description

Offers a critical introduction to future-oriented theories and methods. Explores anticipation in contemporary society through a series of cases studies that probe real-world sustainability issues and how the future is created and contested. By

characterizing and critiquing future-oriented practices across governmental, academic and private sectors, offers a critical perspective on different methodological approaches and the implications of their use.

ASU Gold Standards

This course meets ASU Maroon Standards. It is not an ASU Gold course.

Course Objectives

This course will*:*

- CO 1: Explain concepts of the future such as uncertainty, likelihood, plausibility, and desirability as pertains to sustainability.
- CO 2: Examine sustainability challenges as decision challenges including how stakeholder interests, values, needs, and influences become key drivers in problems and systems.
- CO 3: Select and apply appropriate futures-thinking methods such as constructing scenarios, developing simulations, and envisioning future states that pertain to sustainability.
- CO 4: Describe, evaluate, and use models, scenarios, visions, and simulations and articulate and critically reflect on future consequences of actions and interventions across different scales.
- CO 5: Reflect on their own thoughts about the future in the context of their background and values.

Learning Outcomes

By the end of this course, you will be able to…

- 1.1 Identify the differences between anticipation, foresight, and prediction.
- 1.2 Appreciate the range of methods categorized as foresight.
- 1.3 Become fluent in the basic terminology of future studies.
- 1.4 Characterize the dilemmas of contemporary decision-making.
- 2.1: Understand cognitive science in relation to futures thinking.
- 2.2: Appreciate the role of psychology in how groups explore the future.
- 2.3: Distinguish the different cognitive and cultural obstacles to thinking about the future.
- 2.4: Identify strategies for avoiding cognitive errors.
- 2.5: Identify the contours of sustainability problems.
- 3.1: Distinguish different schools of scenario planning.
- 3.2: Appreciate the historical context of scenario development.
- 3.3: List the varied purposes and uses of scenarios.
- 3.4: Understand the variety of relevant sources of data.
- 3.5: Identify and drivers of mega trends within complex environments and uncertain futures.
- 4.1: Identify elements of system framework.
- 4.2: Analyze and synthesize interview and trends findings.
- 4.3: Structure a focal problem using the system framework.
- 5.1: Structure a decision problem using influence diagram and decision tree.

- 5.2: Explain the concept of utility and apply the concept to decision tree model.
- 5.3: Construct a means-objective network for generating solutions.
- 6.1: Learn to hold multiple divergent trends in tension.
- 6.2: Develop consistent, challenging, plausible scenario logics.
- 6.3: Craft informative and compelling narratives.
- 6.4: Account for elements of a good story.
- 7.1: Appreciate different approaches to strategic thinking and strategy development.
- 7.2: Gain experience with SWOT analysis.

Course Workload Expectations

SOS 311 is offered both in online and face-to-face modalities. Whatever modality you are enrolled in, you are required to actively participate in discussions (in class for immersion students, on Canvas for online students), conduct independent reading and viewing, and complete all assignments in a timely manner. This course requires group work. You are expected to be an accountable, communicative, and responsible group member.

You should expect to spend approximately *10-18 hrs per week* on this course in order to be successful.

Student Success

To be successful, you are expected to:

- Check the Canvas regularly
- Actively participate in online work (online) or Attend class regularly (immersion)
- Communicate with instructors, TAs, and peers often
- Read course announcements and engage in discussion

Assignment Information and Policies

Assessment Weights

Assessment Weighting

Assessment	% of Grade
Discussion Posts and/or In-class Participation	15%
Individual Assignments	50%
Group Assignments	35%
Total	**100%**

Assessment Descriptions

Responses to Reading/Viewing

You will submit detailed responses to the module readings based on the topic and theories covered. If you are an immersion student, you may submit some assignments in a discussion board on Canvas while others will take place during class. Your participation in class is expected.

Submitting Assignments

All assignments, *unless otherwise announced*, MUST be submitted to the designated area of Canvas. Do not submit an assignment via email (unless asked to do so).

Submit the assignment in the requested format per the assignment directions.

Artificial Intelligence

Use of Generative AI is Generally Permitted Within Guidelines

Use of AI tools (e.g., ChatGPT, Copilot, Gemini, etc.) is generally welcome in this class, but please carefully consider your environmental footprint when using it. Examples of ways that AI tools can be used include summarizing readings, generating outlines, and generating images or infographics. You must inform the instructor when you have used an AI tool. This site provides examples of how to properly cite any use of generative AI. Any submitted course assignment that does not explicitly articulate how generative AI was used will be assumed to have been created entirely without its use. Using AI tools to generate content without proper acknowledgement will be considered a violation of the ASU Academic Integrity Policy, and students may be subject to sanctions for non-allowable use. If you have any questions about what is permitted, please contact the instructor to discuss *before* submitting your work.

Late or Missed Assignments Policy

All assignments are due at the listed date and time based on Arizona Standard Time. Notify the instructor ***before*** an assignment is due if an urgent situation arises and your work cannot be completed on time. Late assignments can be submitted up to one week late, but there may be a grade penalty.

Please follow the appropriate University policies to request an accommodation for religious practices or to accommodate a missed assignment due to University-sanctioned activities.

IMPORTANT NOTE: Arizona ***does not*** observe Daylight Savings Time. Please utilize a relevant resource to check on local times such as the Time Zone Converter, the National Institute of Standards and Technology Official US Time, or Time and Date.

Grading Scale

This course will be graded on an A-E plus/minus scale.

Grading Scale

%	Grade
97 to 100%	A+
94 to < 97%	A
90 to < 94%	A-
87 to < 90%	B+
84 to < 87%	B
80 to < 84%	B-
77 to < 80%	C+
70 to < 77%	C
60 to < 70%	D
Below 60%	• E = Failing, participated in class • EN = Failing, never participated • EU = Failing, insufficient participation in class and did not complete • XE - Academic dishonesty

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Arizona State University Policies

Accommodation for Religious Practices

The university community should, in all its activities, be sensitive to the religious practices of the various religious faiths represented in its student body and employees. Faculty are asked to recognize the obligations of their students who may be participating in the observance of religious holidays. Students should notify faculty at the beginning of the semester about the need to be absent from class due to religious observances. For more information, visit ACD 304-04: Accommodation for Religious Practices

Missed Classes Due to University-Sanctioned Activities

Students who participate in university-sanctioned activities that require classes to be missed, shall be given opportunities to make up examinations and other graded in-class

work. Normally, the made-up work will be due on the class day immediately after the absence. Absence from class or examinations due to university-sanctioned activities does not relieve students from responsibility for any part of the coursework required during the period of the absence. For more information, visit ACD 304-02: Missed Classes Due to University-Sanctioned Activities

Academic Integrity/Anti-Plagiarism Policy

Academic honesty is expected of all students in any materials intended to be used for an academic evaluation, including, but not limited to: all examinations, papers, presentations, laboratory work, academic transactions, and records. The possible sanctions for academic integrity violations include but are not limited to, appropriate grade penalties, course failure (indicated on the transcript as a grade of E), course failure due to academic dishonesty (indicated on the transcript as a grade of XE), loss of registration privileges, disqualification, and dismissal. For more information, see Office of the University Provost: Academic Integrity

Plagiarism of any kind will not be tolerated. Students must take the exams independently without assistance from other students. Students may not submit papers written by persons other than themselves.

Disruptive, Threatening, or Violent Behavior

In the classroom and out, students are required to conduct themselves in a manner that promotes an environment that is safe and conducive to learning and conducting other university-related business. All incidents and allegations of violent or threatening conduct by an ASU student will be reported to the ASU Police Department (ASU PD) and the Office of the Dean of Students. Such incidents will be dealt with in accordance with the policies and procedures described in Section 104-02 of the Student Services Manual, available at SSM 104–02: Handling Disruptive, Threatening, or Violent Individuals on Campus

Disability Accommodation

If you are a student with a disability and have need of assistance or special accommodations, contact Student Accessibility and Inclusive Learning Services (SAILS) https://eoss.asu.edu/accessibility. Students requesting accommodations for a disability must register with SAILS, and must submit appropriate documentation to the instructor from SAILS. For more information, please review the policy at SSM 701-03: Accommodations for Students with Disabilities

Copyright

Students must refrain from uploading to any course shell, discussion board, or website used by the course instructor or other course forum, material that is not the student's original work, unless the students first comply with all applicable copyright laws; faculty

members reserve the right to delete materials on the grounds of suspected copyright infringement. For more information, see the Computer, Internet, & Electronic Communications Policy at ACD 125: Computer, Internet, and Electronic Communications Information Management Policy

Prohibition Against Discrimination, Harassment, and Retaliation

Title IX is a federal law that provides that no person be excluded on the basis of sex from participation in, be denied benefits of, or be subjected to discrimination under any education program or activity. Both Title IX and university policy make clear that sexual violence and harassment based on sex is prohibited. An individual who believes they have been subjected to sexual violence or harassed on the basis of sex can seek support, including counseling and academic support, from the university. If you or someone you know has been harassed on the basis of sex or sexually assaulted, you can find information and resources at Sexual Violence Awareness, Prevention and Response: FAQ

As a mandated reporter, I am obligated to report any information I become aware of regarding alleged acts of sexual discrimination, including sexual violence and dating violence. ASU Counseling Services is available if you wish to discuss any concerns confidentially and privately.

Schedule and Due Dates *(Subject to change: see syllabus disclaimer)*

Overview of Module Contents and Due Dates

*** All Readings and Viewings available on Canvas**

Module Topics and Objectives	Readings/Viewings	Assessments	Due Dates
Course Information and Resources	Welcome to SOS 311 Course Introduction Video	None	
Module 1: 1.1 Identify the differences between anticipation, foresight, and prediction. 1.2 Appreciate the range of methods categorized as foresight.	**Reading** • Chen, K.H. & Hsu, L. P. (2020). Visioning the future: Evaluating learning outcomes and impacts of futures-oriented education. *Journal of Futures Studies, 24*(4), 103-116.	1. Create an infographic or image 2. Scenario Case Study Analysis 3. Discussion post – Setting the Scene and Sharing Interests	August 31

1.3 Become fluent in the basic terminology of future studies. 1.4 Characterize the dilemmas of contemporary decision-making.	• McBride, M. F., Lambert, K. F., Huff, E. S., Theoharides, K. A., Field, P., & Thompson, J. R. (2017). Increasing the effectiveness of participatory scenario development through codesign. *Ecology and Society*, *22*(3). • Iwaniec, D. M., Cook, E. M., Davidson, M. J., Berbés-Blázquez, M., Georgescu, M., Krayenhoff, E. S., ... & Grimm, N. B. (2020). The co-production of sustainable future scenarios. *Landscape and Urban Planning*, *197*, 103744. **Viewing** • Introduction to Futures Thinking • Introduction to Scenario Planning • Decision Problems and Focal Questions • What is Futures Thinking? [03:27] • Imagining the next seven generations | Skawennati | TEDxMontrealWomen • Indigenous Futurisms: Cultures of Radical Love | Jordan Cocker | TEDxOklahomaCity		

Module 2: 2.1: Understand cognitive science in relation to futures thinking. 2.2: Appreciate the role of psychology in how groups explore the future. 2.3: Distinguish the different cognitive and cultural obstacles to thinking about the future. 2.4: Identify strategies for avoiding cognitive errors. 2.5: Identify the contours of sustainability problems.	**Reading** • Energy with EY: Accelerating AI and the energy transition • EY US Four Futures: An Immersive Experience • How can emerging technologies shape industries for sustainable growth and future impact? **Viewing** • Cognitive Bias and Logical Fallacies in Decision Making (19:13) • Optional Viewing: Indigenous Futures Thinking Lecture (full video) [55:53]	1. Futures Thinking at EY 2. Selecting a Focal Location and Decision Context 3. Discussion Post – Cultural Contexts	September 7
Module 3: 3.1: Distinguish different schools of scenario planning. 3.2: Appreciate the historical context of scenario development. 3.3: List the varied purposes and uses of scenarios. 3.4: Understand the variety of	**Reading** • EY Megatrends 2015: Making Sense in a World of Motion • Megatrend Mashup **Viewing** • Scenario Planning (20:34) • Megatrends (12:36)	1. Hypothetical Interview Assignment 2. Trends Analysis 3. Group Charter	September 14

relevant sources of data. 3.5: Identify and drivers of mega trends within complex environments and uncertain futures.			
Module 4: 4.1: Identify elements of system framework. 4.2: Analyze and synthesize interview and trends findings. 4.3: Structure a focal problem using the system framework.	**Reading** • En-ROADS Climate Solution Simulator (webpage that you will use to explore scenario questions) • EJNYC ArcGIS Mapping Tool (webpage that you will use to explore) • Background on the EJNYC Mapping Tool (read website) • XPIROV examples **Viewing** • Systems Perspectives and XPIROV Systems Framework (20:56) • Systems Perspectives and XPIROV Systems Framework (PowerPoint Slides) • Leyla Acaroglu: Paper beats plastic? How to rethink environmental folklore [18:07] • Environmental Justice NYC Mapping Tool [02:03] • En-ROADS Climate Solutions Simulator - Overview and Introduction [10:06] **Optional Viewing**	1. Exploring En-ROADS and EJNYC Tools 2. Definition and Specification of a Systems Framework (XPIROV)	September 21

	• What kinds of systems thinkers are they? • The secret language of trees - Camille Defrenne and Suzanne Simard • Why elephants never forget - Alex Gendler • The Turing test: Can a computer pass for a human? - Alex Gendler • The amazing ways plants defend themselves - Valentin Hammoudi • How smart are dolphins? - Lori Marino • Why certain naturally occurring wildfires are necessary - Jim Schulz		
Module 5: 5.1: Structure a decision problem using influence diagram and decision tree. 5.2: Explain the concept of utility and apply the concept to decision tree model. 5.3: Construct a means-objective network for generating solutions.	**Reading** • Lozano, R., & Lozano, F. J. (2024). Developing a decision-making tree for circular economy. Sustainable Development, 32(3), 1589-1598. **Viewing** • Decision Trees and Utility Functions (27:31) • Decision Theory Under Uncertainty - Itzhak Gilboa [17:10] **Optional Viewings** • Decision Theory Basics [12:32] • Utility and Risk Preferences Part 1 -	1. Survey – Team Pulse Check 2. Means-Objective Network 3. Create your Scenario Matrix	September 28

	Utility Function [08:54] • Expected Utility and Insurance [06:43]		
Module 6: 6.1: Learn to hold multiple divergent trends in tension. 6.2: Develop consistent, challenging, plausible scenario logics. 6.3: Craft informative and compelling narratives. 6.4: Account for elements of a good story.	**Reading** • East and southern Africa Coastal and ocean futures • Futures of Big Tech in Europe: Scenarios and Policy Implications • KESHO MPYA (New Tomorrow): Envisioning a Sustainable Future for the Southern Agricultural Growth Corridor of Tanzania **Viewing** • Scenario Building (21:01) • Creativity and Storytelling (8:46) • Kim Stanley Robinson: Remembering climate change ... a message from the year 2071 | TED Countdown [10:12]	1. Writing your Scenario Story 2. Sharing your Stories	October 1 and October 5
Module 7: 7.1: Appreciate different approaches to strategic thinking and strategy development. 7.2: Gain experience with SWOT analysis.	• How To Perform A SWOT Analysis For Your Organization • (Optional) How to Perform a SWOT Analysis (*from Investopedia, website contains advertisements) **Viewing** • Strategy and Scenarios (19:21) • SWOT analysis explained [03:07] • Starbucks SWOT analysis [03:35]	1. SWOT Analysis of your Scenario 2. Final Reflection 3. Final Presentation	October 9 and October 10

	• Drafting SMART Goals [video starts at 10:58]		

Syllabus Disclaimer: All syllabi are subject to minor changes to meet the needs of the instructor, school, or class. Every effort will be made to avoid changing the course schedule, but the possibility exists that unforeseen events will make syllabus changes necessary. The instructor reserves the right to make changes to the syllabus as deemed necessary. Students will be notified in a timely manner of any syllabus changes. Please check your ASU email and the Announcements on the course site often. Updated Fall, 2025