

PIMA CLIMATE ACTION & SUSTAINABILITY

Dr. Crystal McKenna

PAST ACCOMPLISHMENTS



SPRING 2022 Passed the Casp

Pima's <u>Climate Action &</u> <u>Sustainability Plan</u> adopted by governing board and integrated into the college strategic plan



FALL 2022 HIRED:

Phil Berry, Director, Office of Sustainability Dr. Maria Pereira, TLC Sustainability Faculty Fellow

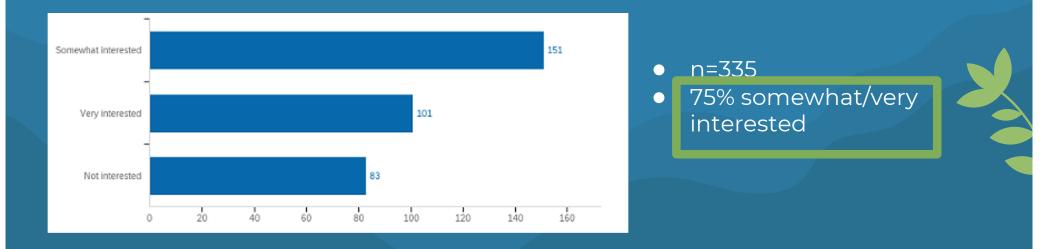


SPRING 2023 CLIMATE EVENTS, STUDENT SURVEY & CAS FACULTY SEARCH Hired: Dr. Crystal McKenna

FALL 2023 CAS COURSE PROPOSALS & SUBGROUP WORK

New prefix (CAS); 6 new courses; TLC workshops; pathway development; interdisciplinary collaborations

STUDENT SURVEY: HOW INTERESTED WOULD YOU BE IN TAKING A COURSE FOCUSED ON CLIMATE CHANGE AND/OR SUSTAINABILITY, AS PART OF YOUR GENERAL EDUCATION REQUIREMENTS?





CAS PLAN: 4 TARGETS



Target 2: Ensure **all learners** understand the key principles of climate action and sustainability, and can apply them in the field in which they are trained.

Climate Action and Sustainability Plan

July 2022 - June 2025



PimaCommunityCollege

Sciences Division

ES²: Earth Systems & Society Department

- → General education and majors' courses
- → In-person, hybrid, and online
- Hands-on lab activities
- → Field Trips
- → ePortfolios
- → Passionate & creative instructors
- Research & service-learning opportunities

ES²'s Courses:

- Climate Action & Sustainability (starting Fall 2024):
 - CAS101IN Sustainable Futures CAS110 Food, People, and the Planet CAS120 Systems, Logic & Sustainability
- ⇒ Geography:
 - GEO1011Ň Weather & Climate GEO102IN Oceans & Landforms GEO103 Cultural Geography GEO104 World & Regional Geography GEO105 Climate Change
- ⇒ Geology:
 - GLG101IN Physical Geology GLG102IN Historical Geology GLG110IN Disasters & Enviro. Geology GLG296 Independent Study

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Want to get involved in research and hands-on training? ES² has connections with: Constrained Second Geosciences Environmental Science



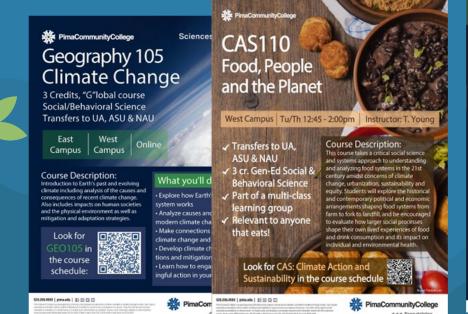
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NEW DEPARTMENT NAME

From Geology/Geography → Earth Systems & Society

CAS PLAN: TARGET 2

Ensure all learners understand the key principles of climate action and sustainability, and can apply them in the field in which they are trained.



2 PimaCommunityCollege CAS101IN Sustainable Futures

✓ Transfers to UA, ASU & NAU, 4cr ✓ Meets Gen-ed Science & SBS requir ✓ Part of a multi-class learning group

Course Description: What you'll do:

o of scientific data with p

PimaCommunityCollege

CAS111

 Explore the concepts of sustain able development and climate change in relation to your life and local environment Perform local field observations in areas near where you live/work Investigate your local watersheds, food systems, climate, eco

What you'll do

sustainability and resilie

Investigate urban sustainability

Analyze case studies of sustain

·Use current data to explore the

the Tucson and Phoenix metro

areas • Propose local solutions to Tuc-

son-specific sustainability issues

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in this class:

able ur

Sustainable Cities & Societies

✓ 3 credits

Transfers to UA, ASU & NAU Gen-Ed Social & Behavioral Science Great introduction to the relationshi

between people, place, and the plan Course Description

ban places at scales ranging fro Look for

in the class schedule

nity based on sustainability

PimaCommunityCollege CAS102IN Environmental **Explorations**

✓4 cr. gen-ed science ✓ No prerequisites ✓ Transfers to UA, ASU & NAU

Part of a multi-class learning group

West Campus | Tu/Th 9:45am-12:25pm | Instructor: C. McKenna

Course Description: Introduction to natural and social systems in What you'll do: environmental contexts. Includes explora tion of essential scientific methods and processes, interconnectedness of ecosys-

· Explore the key environmental challenges and opportunities of the Sonoran Desert bioregion the application of environmental concepts

RimaCommunityCollege **CAS120** Systems, Logic and Sustainability

✓ Transfers to UA, ASU & NAU

✓ 3cr. Gen-Ed Social & Behavioral Sci

 Relevant to business, politics, science and much more

Course Description:

Look for

Action and

West Campus | Tu/Th 12:45 - 2:00pm | Instructor: C. McKenna

tems thinking, sustainability, and leade ship. Includes analysis of natural and · Learn how systems thinking human systems structure, leverage helps to solve complex probpoints, management and problem-solv ing approaches. Also includes personal Explore the connections between natural systems and

human infrastructure Leverage systems thinking to develop and apply leadership CAS: Climate Sustainability in the course schedule

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skills in your field of study . Investigate how we can build resilience in natural, social and economic systems.

PimaCommunityCollege CAS101IN Sustainable Futures

✓ Transfers to UA, ASU & NAU, 4cr

Meets Gen-ed Science & SBS requirements

Part of a multi-class learning group

Fall West Campus 2024 Tu/Th 9:45am-12:25pm

Course Description:

Explores sustainability's complex interplay with scientific literacy, human values, environmental impacts, and global dynamics - learning from the past while preparing solutions for the future. Includes evaluation of scientific data with personal, societal, and environmental implications, critical analysis of current practices, and envisioning sustainable solutions for the future. Also includes examination of real-world local and global challenges, interdisciplinary perspectives, and the United Nations Sustainable Development Goals

Look for **CAS: Climate** Action and Sustainability in the course schedule

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What you'll do:

Northwest Campus

Fri 9:45am-12:25pm & online

• Explore the concepts of sustainable development and climate change in relation to your life and local environment

 Perform local field observations in areas near where you live/work Investigate your local watersheds, food systems, climate, ecosystems, and social justice issues Research and gather data on sustainability issues and investigate viable local solutions · Learn how to take action in creating a more sustainable future!

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CASIOI: SUSTAINABLE FUTURES

4-credit transferable general education science and socialbehavioral course with no prerequisites

Explores sustainability's complex interplay with scientific literacy, human values, environmental impacts, and global dynamics learning from the past while preparing solutions for the future. Includes evaluation of scientific data with personal, societal, and environmental implications, critical analysis of current practices, and envisioning sustainable solutions for the future. Also includes examination of real-world local and global challenges, interdisciplinary perspectives, and the United Nations Sustainable Development Goals.



PimaCommunityCollege CAS102IN Environmental **Explorations**



✓4 cr. gen-ed science

- ✓No prerequisites
- Transfers to UA, ASU & NAU
- Part of a multi-class learning group

Spring 2024

West Campus Tu/Th 9:45am-12:25pm

Course Description:

Introduction to natural and social systems in environmental contexts. Includes exploration of essential scientific methods and processes, interconnectedness of ecosystems, key environmental institutions, and the application of environmental concepts to real-world challenges. Also includes analysis of environmental data, biodiversity, policy, conservation strategies, and articulating environmental arguments.

Look for

Action and Sustainability

in the course schedule

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Northwest Campus Fri 9:45am-12:25pm & online

What you'll do:

· Explore the key environmental challenges and opportunities of the Sonoran Desert bioregion • Perform and analyze air, soil, and water quality tests from local environments

 Observe the intricacies of local ecosystems, watersheds, and food systems

· Learn about key thinkers in environmental conservation and sustainability

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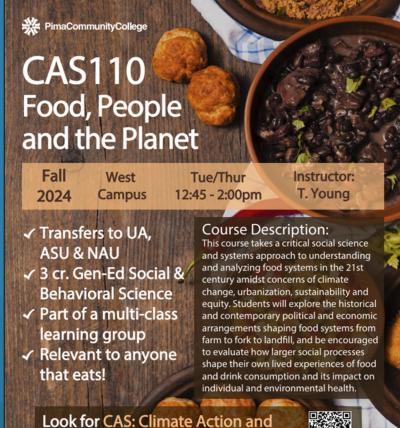
CASIO2: ENVIRONMENTAL EXPLORATIONS

4-credit transferable general education science and global awareness course with no prerequisites

Introduction to natural and social systems in environmental contexts. Includes exploration of essential scientific methods and processes, interconnectedness of ecosystems, key environmental institutions, and the application of environmental concepts to real-world challenges. Also includes analysis of environmental data, biodiversity, policy, conservation strategies, and articulating environmental arguments.







Look for CAS: Climate Action and Sustainability in the course schedule

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CASIIO: FOOD, PEOPLE AND THE PLANET

3-credit transferable socialbehavioral course with no prerequisites

This course takes a critical social science and systems approach to understanding and analyzing food systems in the 21st century amidst concerns of climate change, urbanization, sustainability and equity. Students will explore the historical and contemporary political and economic arrangements shaping food systems from farm to fork to landfill, and be encouraged to evaluate how larger social processes shape their own lived experiences of food and drink consumption and its impact on individual and environmental health.

PimaCommunityCollege CAS111 Sustainable Cities & Societies



✓ 3 credits

- Transfers to UA, ASU & NAU
- Gen-Ed Social & Behavioral Science
- Great introduction to the relationship between people, place, and the planet

Course Description

Explores the intricate web of urban living and sustainable development including current and anticipated issues specific to urban places at scales ranging from local to global with an emphasis on environmental, social, and economic dimensions. Also includes urban planning and design, historical and contemporary social-political approaches to sustainable development, including the United Nations Sustainable Development Goals, Traditional Ecological Knowledge, and societal approaches to encouraging sustainable intention, awareness, equity, and action.



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in this class: Investigate urban sustainability

What you'll do

 Analyze case studies of sustainable urban design
 Use current data to explore the

sustainability and resiliency of the Tucson and Phoenix metro areas

 Propose local solutions to Tucson-specific sustainability issues
 Design a mock urban community based on sustainability principles

CASIII: SUSTAINABLE CITIES & SOCIETIES

3-credit transferable socialbehavioral and global awareness course with no prerequisites

Explores the intricate web of urban living and sustainable development including current and anticipated issues specific to urban places at scales ranging from local to global with an emphasis on environmental, social, and economic dimensions. Also includes urban planning and design, historical and contemporary social-political approaches to sustainable development, including the United Nations Sustainable Development Goals, Traditional Ecological Knowledge, and societal approaches to encouraging sustainable intention, awareness, equity, and action.

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PimaCommunityCollege CAS120 Systems, Logic and Sustainability

- ✓ Transfers to UA, ASU & NAU
- ✓ 3cr. Gen-Ed Social & Behavioral Science
- Relevant to business, politics, science and much more

West Campus Tu/Th 12:45 - 2:00pm Instructor: C. McKenna

Course Description:

Explores the intersection between systems thinking, sustainability, and leadership. Includes analysis of natural and human systems structure, leverage points, management and problem-solving approaches. Also includes personal applications of systems concepts in knowledge acquisition and leadership.

Look for CAS: Climate Action and Sustainability in the course schedule

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What you'll do:

 Learn how systems thinking helps to solve complex problems

• Explore the connections between natural systems and human infrastructure

• Leverage systems thinking to develop and apply leadership skills in your field of study • Investigate how we can build resilience in natural, social and economic systems.

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CASI2O: SYSTEMS, LOGIC & Sustainability

3-credit transferable socialbehavioral and global awareness course with no prerequisites

Explores the intersection between systems thinking, sustainability, and leadership. Includes analysis of natural and human systems structure, leverage points, management and problemsolving approaches. Also includes personal applications of systems concepts in knowledge acquisition and leadership.



FALL 2024:



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SPRING 2025:



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Look for CAS: Climate Action and Sustainability

in the course schedule

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Northwest Campus Fri 9:45am-12:25pm & online

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applications of systems concepts in

Look for

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CAS: Climate

Sustainability

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 Explore the connections between natural systems and human infrastructure Leverage systems thinking to develop and apply leadership skills in your field of study

 Investigate how we can build resilience in natural, social and economic systems.

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Sciences Division

Geography 105 **Climate Change**

3 Credits, "G"lobal course Social/Behavioral Science Transfers to UA, ASU & NAU

East West Campus

Course Description:

consequences of recent climate change.

and the physical environment as well as

mitigation and adaptation strategies.

Look for

Online Campus

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What you'll do: Introduction to Earth's past and evolving

climate including analysis of the causes and Explore how Earth's climate Also includes impacts on human societies system works Analyze causes and impacts of modern climate change Make connections between climate change and social justice Develop climate change solutions and mitigation strategies · Learn how to engage in meaningful action in your community



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GENERAL EDUCATION WITH A THEME @ PCC: WHY, HOW, WHEN, ETC... -Casp curriculum team, and You?

CASP
page 1Learners apply key
principles of climate
action and sustainability
in their trained field

"I needed a science class, and this fit my schedule"

aztransfer / make every credit count /

AGEC Redesign – Category, Credit Ranges, and Criteria

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GEN-ED WITH A THEME: CLIMATE **ACTION & SUSTAINABILITY**

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Social & Behavioral Sciences (6 credits):

ANT130 History & Cultures of the SW Borderlands^{G,CUHur}

AIS/HIS148 History of Indians of North America GCUHum

Choose 2 from 2 prefixes

CAS101IN Sustainable Futures^{G,Sci}

CAS110 Food, People, & the Planet^{G,C}

ECN201 Microeconomic Principles

ECN202 Macroeconomic Principles

SOC120 Current Social Problems^{G,CJ}

GWS100 Intro to Feminist Studies^{G,C}

PHI130 Ethics & Social Philosophy^{Hur}

ANT210 Cultural Anthropology

HUM260 Intercultural Perspectives^{CUltur}

▸ GEO105 Climate Change^G

CAS111 Sustainable Cities & Societies⁶

CAS120 Systems, Logic & Sustainability⁶

Recommended:

Gen-Ed with a Theme: **Climate Action & Sustainability**

Focus your general education on shaping a sustainable future for you and your community.

Other good options: AIS122, AIS124, GEO103, GEO104, GLS/SOC110 GWS/MAS201. GWS202, HIS102, HIS103, HIS147. HIS160, HIS254, HIS274, MAS165, SOC201 Race, Gender, Minority Groups & Social Justice^{GC} MAS219, POS201 POS202, POS203, POS210, PSY132, PSY216, SOC204 SSE110, SSE182

Writing, Mathematics, Fine Arts, and "Options" Categories Check with your advisor

Many areas of study to consider including Art (ART), Business (BUS), Communications (CMN), Computer Information Systems (CIS), Fashion Design (FDC), Food Science & Nutrituion (FSN), Mathematics (MAT) and Writing (WRT)

AGEC Special Requirements: At least one class with a G, C, and I designation

G: Global/Historical Awareness; C: Ethnic/Gender/Race/Class Awareness: | Intensive Writing & Critical Inquiry; Hum Also a Humanities class; Sci: Also a Physical/Biological Science class: Sbs: Also a Social & Behavioral Science class

These classes all directly address at least 2 UN Sustainable Development Goals and provide a comprehensive training to contribute to meaningful solutions.



Contact cmckenna3@pima.edu for info on careers in this field!

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Pina Community College is an equal eccenturity, afferentive action employee and educational institution convolted to excellence through diversity. Upon request its will be made for individuals with disabilities to support access to all programs and services. Every effort will be made to pr essonable accomodations in a timely manner. For student, public and employees accomodation requests and for information related to the ADA compliance increas, please contact ADAIveloppinus.edu, 500 206-6688, or West Campus noom C00, 2282 W. Aviklam Road, Tucson AZ 85709-0016.

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create a plan for meeting AGEC-A requirements. Physical & Biological Sciences (8 credits): Choose 2 **Recommended:** CAS101IN Sustainable Futures^{G,Sbs} CAS102IN Environmental Explorations^G

AA

Liberal Arts

Students: Use

the guide below to

 BIO105IN Environmental Biology⁶ Other good options: BIO100IN, BIO108IN, CHM121IN, FSN127IN, GEO101IN, GLG101IN, GLG102IN, GLG110IN

Humanities (3 credits): Choose 1 (diff. from S&BS)

Recommended: LIT227 Literature & the Environment¹ HUM260 Intercultural Perspectives^{CLSB} GWS100 Intro to Feminist Studies^{6,C:86} PHI130 Ethics & Social Philosophy^{Ses}

Other Good Options: AIS122, AIS124, BIO250, HIS102, HIS103, HIS160, HIS274, GWS/MAS201, SSE184

CASIOI WORKSHOP: INTRODUCTION TO CLIMATE ACTION AND SUSTAINABILITY

Dr. Crystal McKenna, CAS Faculty Dr. Maria Pereira, Sustainability Faculty Fellow

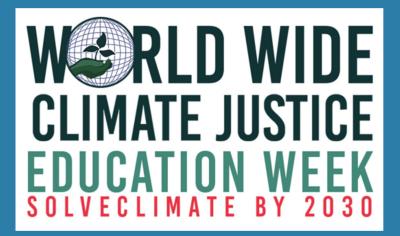


Questions for today:

- What is CAS and why does it matter
- How does sustainability connect to your teaching practice?
- What's next?

#MCAC WORKSHOP: Makeclimateaclass

Dr. Maria Pereira, TLC Sustainability Faculty Fellow Dr. Crystal McKenna, CAS Faculty









Climate Community Day: Contribute to Real Solutions in Your Community

Get involved! Learn about:

Developing Climate **Policies and Solutions**

- Local Organizations Making a Difference
- Careers in Climate Action
- & Sustainbility
- Related degree programs

Schedule

Morning Sessions

In person in the Amethyst Room and on Zoom

- 09:00 Coffee & Bagels
- 09:10 Climate Solutions 101
- 10:00 Interim Chancellor Remarks
- 10:15 Career Panel: "Every job is a climate job"
- 11:00 Spotlight: Community Organizations
- 11:30 Workshop: En-ROADS policy simulator

April 2, 2024 9am - 4pm

- **Downtown Campus**
- ✓ Amethyst Room
- Students, Faculty,
- Staff & Community

Members All Invited!

Featured Speaker: Dr. PennElys Droz "Building Collective (Indigenous) Futures" Downtown Campus, Amethyst Room, 2:00pm

Dr. PennElys Droz, Anishinaabe and mixed European descendent, is a mother of five, Power Building and Curriculum Coordinator with NDN Collective, and founding board member of Sustainable Nations, an Indigenous regenerative community development organization. She has worked in Indigenous engineering and regenerative development for over twenty years, with the vision of the re-development of thriving ecologically, culturally and economically sustainable Native Nations. She is a natural builder and lover of all things dirt, moss, lichen, and fungi.



MacommunityCollege



WorldWide Climate & Justice Education Week



Chat with Community Partners

Outdoor Activities

Lunch [12:30 - 1:30]

Food Trucks and Free Lunch for Students

Afternoon Sessions

In person in the Amethyst Room and on Zoom

- Acting Provost Remarks & Reading 1:30
- Guest Speaker: Dr. PennElys Droz 2:00
- 3:00 15% Solutions - Roundtables

SWEETGRASS

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'A hymn of love to the world'

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Indigenous Wisdom, Scientific Knowledge and the Teachings of Plants

ROBIN WALL KIMMERER





Do you have any questions? cmckenna3@pima.edu





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