

## SAE 515 - Sustainable Infrastructure Systems Course Syllabus - Spring 2025

While open to many different interpretations, “sustainability” generally implies the optimization of economic, environmental, and social factors when developing complex infrastructure systems. SAE 515 shows students how to create dynamic infrastructure models, how to include economic, environmental, and social attributes, and how to assess behavior under disruptive perturbations. Students will use these skills to evaluate an infrastructure system of their choice.

### Course Administration

SAE 515 meets on Tuesdays and Thursdays from 12:00 - 1:50 for “flipped” class discussion. Students should view a posted 45-minute lecture and read a related paper before each class time. The course also has a Friday discussion from 9:00 to 9:50 that covers modeling issues.

**To get the most from this course, you need to participate in class discussions.**

The last day to drop the class without a W grade is 28 February, and the last day to drop the class with a W grade is 11 April. Incomplete grades (IN) are rarely assigned. This grade may be justified only in exceptional cases such as student illness or a personally tragic event occurring after the twelfth week of the semester.

In the fifth week, students are divided into project groups. Each group will also be responsible for leading one discussion from the list of weekly course topics. The group will:

- Summarize key points from the readings
- Engage the class with thought-provoking questions
- Facilitate an interactive discussion incorporating additional resources and case studies

The SAE 515 grade is based on the following components:

Short Papers (3)	150 points	
Exercises (3)	150 points	
Discussion Facilitation	100 points	
Engagement and Facilitation		40 points
Quality of Questions		30 points
Summary of Key Issues in Readings		30 points
Term Project	600 points	
Presentation		150 points
Paper		400 points
Abstract		50 points

There are no midterm or final exams. The SAE 515 term project involves the simulation of a simple infrastructure system of interest to a team using standard system dynamics software. Up to four students per team is permitted. Teams are required to present their work to the class.

Once assigned, the SAE 515 letter grade is final except for grossly erroneous circumstances. Your grade cannot be changed via additional work --- don't even ask.

### **Instructor Information**

Julie Albright albright@usc.edu

No regular office hours. Send e-mail to schedule consultation.

Edward W. Maby maby@usc.edu

No regular office hours. Send e-mail to schedule consultation.

### **Academic Integrity**

The University of Southern California is foremost a learning community committed to fostering successful scholars and researchers dedicated to the pursuit of knowledge and the transmission of ideas. Academic misconduct is in contrast to the university's mission to educate students through a broad array of first-rank academic, professional, and extracurricular programs and includes any act of dishonesty in the submission of academic work (either in draft or final form). This course will follow the expectations for academic integrity as stated in the [USC Student Handbook](#). All students are expected to submit assignments that are original work and prepared specifically for the course/section in this academic term. You may not submit work written by others or "recycle" work prepared for other courses without obtaining written permission from the instructor(s). Students suspected of engaging in academic misconduct will be reported to the Office of Academic Integrity.

Other violations of academic misconduct include but are not limited to, cheating, plagiarism, fabrication (e.g., falsifying data), knowingly assisting others in acts of academic dishonesty, and any act that gains or is intended to gain an unfair academic advantage. The impact of academic dishonesty is far-reaching and is considered a serious offense against the university and could result in outcomes such as failure on the assignment, failure in the course, suspension, or even expulsion from the university.

Since creating, analytical, and critical thinking skills are part of the learning outcomes of this course, all assignments should be prepared by the student working individually or in groups. Students may not have another person or entity complete any substantive portion of the assignment. Developing strong competencies in these areas will prepare you for a competitive workplace. Therefore, using AI-generated tools like ChatGPT is prohibited in this course, will be identified as plagiarism, and will be reported to the Office of Academic Integrity.

For more information about academic integrity see [the student handbook](#) or the [Office of Academic Integrity's website](#), and university policies on [Research and Scholarship Misconduct](#). Please ask your instructor if you are unsure what constitutes unauthorized assistance on an exam or assignment, or what information requires citation and/or attribution.

## Tentative SAE 515 Schedule - Spring 2025

Black - Lecture Topic

Red - Assignments

Textbook Cited:

Blue - Required Reading Prior to Class Discussion

Green - Recommended Supplementary Readings

*Thinking in Systems*, Donella Meadows (Required)

### Week 1 -

*Tuesday, 14 January*

#### Sustainable Infrastructure Systems

*Sustainability: An Economist's Perspective* - Solow

*Creating the Future We Want* - Hecht et al.

*Response* - Stutz

*Rejoinder* - Hecht et al.

*Is Sustainability Sustainable?* - Bonevac

*The Limits to Growth and the Limits to Computer Modeling* - Hayes

*Environmental Alarmism, Then and Now* - Lomborg

*Transforming Our World: The 2030 Agenda for Sustainable Development*

- United Nations

*Infrastructure: A Field Guide to the Industrial Landscape* - Hayes

Invaluable Resource, Highly Recommended!

*Report Card for California's Infrastructure: 2019* - ASCE

*Thursday, 16 January*

#### Systems Thinking

*Systems Thinking as a Paradigm Shift for Sustainability Transformation*

- Voulvoulis et al.

*Systems Integration for Global Sustainability* - Liu et al.

*Integrated Infrastructure Systems—A Review* - Saidi et al.

*Resilience, Adaptability, and Transformability in Social-Ecological Systems*

- Walker et al.

*Catastrophic Shifts in Ecosystems* - Scheffer et al.

*Infrastructure as a Complex Adaptive System* - Oughton et al.

*Complexity, Problem Solving, Sustainability and Resilience* - Tainter and Taylor

*Friday, 17 January*

System Dynamics: The Modeling Process

Why Model? - Epstein

*Reflections on the Foundations of System Dynamics - Richardson*

*A Critical Review of the Criticisms of System Dynamics - Featherston and Doolan*

*A Skeptic's Guide to Computer Models - Sterman*

*Behavioural Issues in Environmental Modelling—The Missing Perspective - Hämäläinen*

*Boundary Matters: The Potential of System Dynamics to Support Sustainability*

- Nabavi et al.

**Assignment: Personal introduction and sustainability perspective (Paper 1) - Due 24 January**

**Week 2 -**

*Tuesday, 21 January*

Running the System: Core Actors

*The Role of Organizational Structure and Values in the Performance of Critical Infrastructure Systems - Little*

*The Social Requirements of Technical Systems - Whitworth*

*Path Dependence in Energy Systems and Economic Development - Fouquet*

*Understanding Carbon Lock-In - Unruh*

*Thursday, 23 January*

Engaging the System: Peripheral Actors and the Social License to Operate

*The Social License to Operate: A Critical Review - Moffat et al.*

*The Inner Dimension of Sustainability: Personal and Cultural Values - Horlings*

*The Politics of Sustainability and Development - Scoones*

*Sustainability and Regime Type: Do Democracies Perform Better in Promoting Sustainable Development than Autocracies? - Wurster*

*The Drivers of Greenwashing - Delmas and Burbano*

*Friday, 24 January*

System Dynamics: Stocks, Flows, and Links

Meadows: Chapters 1 and 2

Assignment: Notice of Team Memberships (not graded) - Due 7 February

**Week 3 -**

*Tuesday, 28 January*

Commodity Chains

*A Framework for Sustainable Materials Management - Fiksel*

*Strategies for Improving the Sustainability of Structural Metals - Raabe et al.*

*Global Lithium Sources—Industrial Use and Future in the Electric Vehicle Industry:*

*A Review - Kavanagh et al.*

*Towards the Lithium-Ion Battery Production Network:*

*Thinking Beyond Mineral Supply Chains - Bridge and Faigen*

*Energy-Critical Elements for Sustainable Development - Hurd et al.*

*Rare Earth Elements—Critical Resources for High Technology - USGS*

*Aluminum, Commodity Chains, and the Environmental History of the Second World War*

*- Evenden*

*Thursday, 30 January*

Whose Resources? The Tragedy of the Commons and the Free-Rider Problem

*The Tragedy of the Commons - Hardin*

*Extensions of the “Tragedy of the Commons” - Hardin*

*Tending the Infrastructure Commons: Ensuring the Vitality of Our Public Systems - Little*

*The Struggle to Govern the Commons - Dietz*

*Nothing to Fear but a Lack of Fear: Climate Change and the Fear Deficit*

*- Lowenstein and Schwartz*

*A Looming Tragedy of the Sand Commons - Torres et al.*

*The Climate Club - Nordhaus*

*Climate Clubs: Politically Feasible and Desirable? - Falkner et al.*

*Friday, 31 January*

System Dynamics: Stories and Causal Diagrams

Meadows: Chapters 3 and 4

*Problems with Causal-Loop Diagrams* - Richardson  
*Problems in Causal Loop Diagrams Revisited* - Richardson

*Daisyworld: A Review* - Wood

**Assignment: System Dynamics Exercise 1 - Due 7 February**

**Week 4 -**

*Tuesday, 4 February*

Stocks and Flows I - Energy (Water, Land Use, and Nonrenewable Resources)

*Stocks, Flows, and Prospects of Energy* - Löschel et al.

*On the Sustainability of Renewable Energy Sources* - Edenhofer et al.

*Stocks, Flows, and Prospects of Land* - Seto et al.

*Stocks, Flows, and Prospects of Mineral Resources* - MacLean et al.

*Infrastructure and the Environment* - Doyle and Havlik

*Linkages of Sustainability* - Graedel and van der Voet (Highly recommended)

*Thursday, 6 February*

What Resources? Energy Poverty / Equity

*Energy and Social Issues* - Reddy

*Energy Poverty: An Overview* - González-Eguino

*Climate Change and Social Inequality* - Islam and Winkel

*Friday, 7 February*

System Dynamics: Archetypes and Intervention Strategies

**Meadows: Chapters 5 and 6**

*Eight Archetypes of Sustainable Development Goal (SDG) Synergies and Trade-Offs*  
- Moallemi et al.

*Using Systems Thinking to Understand and Enlarge Mental Models: Helping the  
Transition to a Sustainable World* - Garrity

*Anti-Archetypes: Patterns of Hope* - Zaidi

Assignment: Project Abstract - Due 21 February

**Week 5 -**

*Tuesday, 11 February*

Stocks and Flows II - Water (Energy, Land Use, and Nonrenewable Resources)

*Groundwater in Peril - Jones*

*Global Hydrological Cycles and World Water Resources - Oki and Kanae*

*Water and Energy Interactions - McMahon and Price*

*Water Scarcity: The Most Understated Global Security Risk - Stuckenberg and Contento*

*A System Dynamics Model to Facilitate Public Understanding of Water Management*

*Options in Las Vegas, Nevada - Stave*

*Thursday, 13 February*

Who Has a Voice? Environmental Justice

*Environmental Justice - Mohai et al.*

*Renewable Energy for Whom? A Global Systemic Review of the Environmental Justice*

*Implications of Renewable Energy Technologies - Levenda et al.*

*Toolkit for Assessing Potential Allegations of Environmental Injustice - EPA*

*A Case Study of Environmental Injustice: The Failure in Flint - Campbell et al.*

*The Flint Water Crisis: What Happened and Why - Masten et al.*

*Friday, 14 February*

System Dynamics: Causal Diagram to Dynamic Model

*Developing System Dynamics Models from Causal Loop Diagrams - Binder et al.*

*Causality and Diagrams for Systems Dynamics - Schaffernicht*

Assignment: Social Analysis of a Water or Energy Infrastructure System (Paper 2)  
- Due 21 February

## Week 6 -

*Tuesday, 18 February*

### Sustainable Agriculture

*Solutions for a Cultivated Planet - Foley*

*Agricultural Sustainability and Intensive Production Practices - Tilman et al.*

*Net Carbon Flux from Agricultural Ecosystems:*

*Methodology for Full Carbon Cycle Analyses - West and Marland*

*Nitrogen in Crop Production: An Account of Global Flows - Smil*

*Phosphorus in the Environment: Natural Flows and Human Interferences - Smil*

*Global Consequences of Land Use - Foley et al.*

*Anatomy and Resilience of the Global Production Ecosystem - Nyström et al.*

*System Dynamics Modeling for Agricultural and Natural Resource Management Issues:*

*Review of Some Past Cases and Forecasting Future Roles - Turner et al.*

*Thursday, 20 February*

### Sustainability Ethics

*Sustainability Science: Ethical Foundations and Emerging Challenges -*

*Nelson and Vucetich*

*Sustainability: Virtuous or Vulgar - Vucetich and Nelson*

*The Psychology of Environmental Decisions - Newell et al.*

*The Agricultural Ethics of Biofuels: The Food vs. Fuel Debate - Thompson*

*Principles of Water Ethics - Jennings et al.*

*The Politics and Poetics of Infrastructure - Larkin*

*Friday, 21 February*

### System Dynamics: Estimating Model Parameters

*Mistakes and Misunderstandings: Examining Dimensional Inconsistency - Gary*

**Assignment: System Dynamics Exercise 2 - Due 28 February**

## Week 7 -

*Tuesday, 25 February*



## Growing the Network: Human Demographics

*Migration and Climate Change: An Overview* - Piguet et al.

*Global Population Growth and Sustainable Development* - United Nations  
*Assessment of the Natural Environment: A Determinant of Natural Preferences* -  
Weichert

*Urbanization, Rural-Urban Migration, and Urban Poverty*- Tacoli et al.

*An Ill Wind? Climate Change, Migration, and Health* - McMichael et al.

*Complexity and Unintended Consequences in a Human Security Crisis:*

*A System Dynamic Model of the Refugee Migration to Europe* - Taylor and Masys

*Thursday, 27 February*

## Growing the Network: Patterns of Development

*Electric Vehicles and Psychology* - Viola

*Smart Growth: A Prescription for Livable Cities* - Geller

*Urban Patterns for a Green Economy: Optimizing Infrastructure* - UN Habitat

*Spatial Structure and Evolution of Infrastructure Networks* - Dunn et al.

*The Size, Scale, and Shape of Cities* - Batty

*The Dynamics of Brownfield Redevelopment* - BenDor et al.

*Charging Infrastructure Planning for Promoting Battery Electric Vehicles:*

*An Activity-Based Approach Using Multiday Travel Data* - Dong et al.

*Friday, 28 February*

**Assignment: Sustainability Ethics (Paper 3) - Due 7 March**

## Spatial System Dynamics

*Modeling Structural Change in Spatial System Dynamics: A Daisyworld Example*  
- Neuwirth et al.

*A Theory of Spatial System Archetypes* - BenDor

**Week 8 -**

*Tuesday, 4 March*

## Green Data: Digital Infrastructure and Sustainability

Green Data: A 4-Pillar Approach for Green Data Centers - Deloitte

*A New Methodology Toward Effectively Assessing Data Center Sustainability - Lykou et al.*

*The Resilient Community and Communication Practice - Nicholls*

*The Big Smart-Grid Challenges - Bullis*

*The Bright Future of the Internet of Things - Campolargo*

*Thursday, 6 March*

Information in an Era of Hyperconnectivity

*Online Misinformation About Climate Change - Treen et al.*

*Expert Survey on the Global Information Environment 2024 - IPIE*

*The Digital Divide: A Review and Future Research Agenda - Lythreatis et al.*

*Online Community as Space for Knowledge Flows - Faraj et al.*

*Toward New Guardrails for the Information Society - Bauer*

*Friday, 7 March*

System Dynamics: Model Evaluation

**Assignment: System Dynamics Exercise 3 - Due 14 March**

**Week 9 -**

*Tuesday, 11 March*

Dynamic Urban Systems

*Designing and Advancing a Systems Approach for Sustainable Cities - Bai et al.*

*Cities as Systems of Networks and Flows - Batty*

*Cities, Systems, and Sustainability: Status and Perspectives of Research on Urban Transformations - Wolfram et al.*

*Measuring the Complexity of Urban Form and Design - Boeing*

*Thursday, 13 March*

Smart Communities    Regenerative Infrastructure

*Smart Growth: A Prescription for Livable Cities - Geller*

*Friday, 14 March - No Class*

17 March - 21 March            SPRING BREAK

**Week 10 -**

*Tuesday, 25 March*

Moving People and Freight (TBD)

*Public Transportation and Sustainability: A Review - Miller et al.*

*The Future of Transportation in Sustainable Energy Systems: Opportunities and Barriers in a Clean Energy Transition - Dominkovic et al.*

*Addressing Sustainability in Transportation Systems:*

*Definitions, Indicators, and Metrics - Jeon and Amekudzi*

*A Review of System Dynamics Models Applied in Transportation - Shepherd*

*Thursday, 27 March*

Transport Service: Who Benefits? Who Pays? (Albright)

*Do Artifacts Have Politics? - Winner*

*A Systematic Overview of Transportation Equity in Terms of Accessibility, Emissions, and Safety Outcomes: From Conventional to Emerging Technologies - Guo et al.*

*Effects of Diesel Engine Emission Controls on Environmental Equity and Justice - Patterson and Harley*

*Friday, 28 March*

No Class

**Week 11 -**

*Tuesday, 1 April*

Getting Things Built (Wayne Kalayjian)

*Sustainable Project Management Through Project Control in Infrastructure Projects - Kivila et al.*

*Thursday, 3 April*

## Regulatory Oversight

*Solving the Problems We Face: The United States Environmental Protection Agency, Sustainability, and the Challenges of the Twenty-First Century - Hecht and Fiksel*

*Moving from Protection to Prosperity: Evolving the U.S. Environmental Protection Agency for the Next 50 Years - Anastas and Zimmerman*  
*The EPA at 40: An Historical Perspective - Andrews*  
*Politics, Political Leadership, and Public Management - Cook*

*Friday, 4 April*

## System Dynamics: Sustainia - The Environmental Model

### **Week 12 -**

*Tuesday, 8 April*

## Social Media Campaigns

*Green Sustainability and New Social Media - Williams et al.*

*Can We Tweet, Post, and Share Our Way to a More Sustainable Society?  
A Review of the Current Contributions and Future Potential of  
#Socialmediaforsustainability - Pearson et al.*

*Domestic Wastewater Recycling: "Toilet-to-Toilet" and "Tap-to-Tap" Instead of  
"Toilet-to-Tap" - A New Approach - Antholz*

*Organizational and Celebrity Activism - Collins*

*Environmental Movements in Advanced Industrial Democracies: Heterogeneity,  
Transformation, and Institutionalization - Giugni and Grasso*

*Thursday, 10 April*

## Documentaries and Film

*Green Shooting: Media Sustainability, A New Trend - Lopara-Mármol et al.*

*"No Fracking Way!" Documentary Film, Discursive Opportunity, and Local Opposition  
against Hydraulic Fracking in the United States, 2010 to 2013 - Vasi et al.*

*Friday, 11 April*

System Dynamics: Sustainia - The Social Model

**Week 13 -**

*Tuesday, 15 April*

The Economic Pillar of Sustainability

*Assessing the Cost of Regulatory Proposals for Reducing Greenhouse Gas Emissions - Aldy*

*Thirty Years of Economics at the Environmental Protection Agency - McGartland*

*Duke's Fifth Fuel - Cicchetti*

*Sustainable Finance - Edmans and Kacperczyk*

*Creating Shared Value: How to Reinvent Capitalism—and Unleash a Wave of Innovation and Growth - Porter and Kramer*

*Thursday, 17 April*

Behavioral Gamification

*Gamification: The Intersection Between Behavior Analysis and Game Design Technologies - Morford and Killingsworth*

*Gamification to Prevent Climate Change: A Review of Games and Apps for Sustainability - Douglas and Brauer*

*A Survey on the Design of Gamified Systems for Energy and Water Sustainability - Albertarelli et al.*

*A Review of Water-Related Serious Games to Specify Use in Environmental Multi-Criteria Decision Analysis - Aubert et al.*

*Gamification and Serious Games Within the Domain of Domestic Energy Consumption: A Systematic Review - Johnson et al.*

*Friday, 18 April*

System Dynamics: Sustainia - The Economic Model

**Week 14 -**

*Tuesday, 22 April*

Risk and Resilience

*A Methodological Approach to Political Risk - Little*

*Engaging with the Politics of Sustainability Transitions - Meadowcroft*

*The Centrality of Communication and Media in Fostering Community Resilience: A*

*Framework for Assessment and Intervention - Houston et al.*

*The Resilient Community and Communication Practice - Nicholls*

*Thursday, 24 April*

Distributing Risk: Microgrids and Microsystems

*Possibilities, Challenges, and Future Opportunities of Microgrids: A Review - Sharzad*

*Friday, 25 April*

No Class

**Week 15**

Student Presentations

## **Course Content Distribution and Synchronous Session Recordings Policies**

USC has policies that prohibit recording and distribution of any synchronous and asynchronous course content outside of the learning environment. Recording a university class without the express permission of the instructor and announcement to the class, or unless conducted pursuant to an Office of Student Accessibility Services (OSAS) accommodation. Recording can inhibit free discussion in the future, and thus infringe on the academic freedom of other students as well as the instructor. ([Living our Unifying Values: The USC Student Handbook](#), page 13).

Distribution or use of notes, recordings, exams, or other intellectual property, based on university classes or lectures without the express permission of the instructor for purposes other than individual or group study. This includes but is not limited to providing materials for distribution by services publishing course materials. This restriction on unauthorized use also applies to all information, which had been distributed to students or in any way had been displayed for use in relationship to the class, whether obtained in class, via email, on the internet, or via any other media. ([Living our Unifying Values: The USC Student Handbook](#), page 13).

## **Students and Disability Accommodations**

USC welcomes students with disabilities into all of the University's educational programs . [The Office of Student Accessibility Services](#) (OSAS) is responsible for the determination of appropriate accommodations for students who encounter disability-related barriers. Once a student has completed the OSAS process (registration, initial appointment, and submitted documentation) and accommodations are determined to be reasonable and appropriate, a Letter of Accommodation (LOA) will be available to generate for each course. The LOA must be given to each course instructor by the student and followed up with a discussion. This should be done as early in the semester as possible as accommodations are not retroactive. More information can be found at [osas.usc.edu](http://osas.usc.edu). You may contact OSAS at (213) 740-0776 or via email at [osasfrontdesk@usc.edu](mailto:osasfrontdesk@usc.edu).

### **Support Systems:**

[Counseling and Mental Health](#) - (213) 740-9355 – 24/7 on call

Free and confidential mental health treatment for students, including short-term psychotherapy, group counseling, stress fitness workshops, and crisis intervention.

[988 Suicide and Crisis Lifeline](#) - 988 for both calls and text messages – 24/7 on call

The 988 Suicide and Crisis Lifeline (formerly known as the National Suicide Prevention Lifeline) provides free and confidential emotional support to people in suicidal crisis or emotional distress 24 hours a day, 7 days a week, across the United States. The Lifeline is comprised of a national network of over 200 local crisis centers, combining custom local care and resources with national standards and best practices. The new, shorter phone number makes it easier for people to remember and access mental health crisis services (though the previous 1

(800) 273-8255 number will continue to function indefinitely) and represents a continued commitment to those in crisis.

[Relationship and Sexual Violence Prevention Services \(RSVP\)](#) - (213) 740-9355(WELL) – 24/7 on call Free and confidential therapy services, workshops, and training for situations related to gender- and power-based harm (including sexual assault, intimate partner violence, and stalking).

[Office for Equity, Equal Opportunity, and Title IX \(EEO-TIX\)](#) - (213) 740-5086  
Information about how to get help or help someone affected by harassment or discrimination, rights of protected classes, reporting options, and additional resources for students, faculty, staff, visitors, and applicants.

[Reporting Incidents of Bias or Harassment](#) - (213) 740-5086 or (213) 821-8298  
Avenue to report incidents of bias, hate crimes, and microaggressions to the Office for Equity, Equal Opportunity, and Title for appropriate investigation, supportive measures, and response.

[The Office of Student Accessibility Services \(OSAS\)](#) - (213) 740-0776  
OSAS ensures equal access for students with disabilities through providing academic accommodations and auxiliary aids in accordance with federal laws and university policy.

[USC Campus Support and Intervention](#) - (213) 740-0411  
Assists students and families in resolving complex personal, financial, and academic issues adversely affecting their success as a student.

[Diversity, Equity and Inclusion](#) - (213) 740-2101  
Information on events, programs and training, the Provost's Diversity and Inclusion Council, Diversity Liaisons for each academic school, chronology, participation, and various resources for students.

[USC Emergency](#) - UPC: (213) 740-4321, HSC: (323) 442-1000 – 24/7 on call  
Emergency assistance and avenue to report a crime. Latest updates regarding safety, including ways in which instruction will be continued if an officially declared emergency makes travel to campus infeasible.

[USC Department of Public Safety](#) - UPC: (213) 740-6000, HSC: (323) 442-1200 – 24/7 on call  
Non-emergency assistance or information.

[Office of the Ombuds](#) - (213) 821-9556 (UPC) / (323-442-0382 (HSC)  
A safe and confidential place to share your USC-related issues with a University Ombuds who will work with you to explore options or paths to manage your concern.

[Occupational Therapy Faculty Practice](#) - (323) 442-2850 or [otfp@med.usc.edu](mailto:otfp@med.usc.edu)  
Confidential Lifestyle Redesign services for USC students to support health promoting habits and routines that enhance quality of life and academic performance.