LANDSCAPE AT THE INTERSECTION OF LIFE AND DEATH

“We find it hard to escape the ‘resolutely flat perspectives’ to which we have become habituated…[which is both] a political failure as well as a perceptual one, for it disinclines us to attend to the sunken networks of extraction, exploitation and disposal that support the surfaced world.” —Robert Macfarlane, *Underland: A Deep Time Journey*, 2019

“It could be argued that within the productionist model the drive of soil care has mostly been for the crops…In the utilitarian–care vision, worn–out soils must be ‘put back to work’ through soil engineering technologies: fed liters of artificial fertilizers with little consideration for wider ecological effects or made host for enhanced crops that will work around soil’s impoverishment and exhaustion. In sum, soil care in a productionist frame is aimed at increasing soil’s efficiency to produce at the expense of all other relations. From the perspective of a feminist politics of care in human–soil relations, this is a form of exploitative and instrumentally regimented care, oriented by a one–way anthropocentric temporality.” —Maria Puig de la Bellacasa, *Matters of Care: Speculative Ethics in More than Human Worlds*, 2017
Course Description:
In this semester–long design–research studio, we turn our attention downward, to the literal foundation of landscape – the soil. As physical material, soil refers to the thin layer of earth, composed by organic matter and organized into “horizons” – extending from the thin yet nutritious layer of “humus” at the top to the solid bedrock below. As an environmental system, soil is considered one of the most crucial elements of the climate, being the second largest store of carbon after the ocean. As living matter, soil is composed of billions of microbes and micro–organisms such as fungi, bacteria, protonza, nematodes, anthropods and earthworms – a symbiotic collective known as the soil biota. The biota plays a vital role in determining how well the ecosystems and the life that it supports function above grade. Spatially, soil is where “we have long placed that which we fear and wish to lose, and that which we love and wish to save,” in the words of the British writer, Robert Macfarlane. And temporally, soil is the visible evidence of a number of dynamic processes, including: additions, losses, transformations, and translocations – spanning timescales that are too long to seem comprehensible to the human. Beyond the sciences, subterreanean lifeworlds have activated the social and literary imaginary across cultures and through time. And yet, all the while, our anthropocentric perspective and attitude towards soil, like that toward most landscape matter, continues to be largely productionist – focusing on its resource–value at the expense of all other relations – as the introductory statement from de la Bellacasa so eloquently frames.

Situating these varied and layered dimensions of soil within the near–catastrophic environmental context projected for the next century, particularly the looming threat of mass extinction that threatens our more–than–human partners, the studio will focus on Soil Building Processes by rethinking the future of burial landscapes through mortuary composting procedures. Interrogating our position in our environmental future, we will consider the types of future relationships that we might form with soil, putting in place acts of care that go beyond the exploitive and instrumentally regimented stewardship described by de la Bellacasa. We will consider how our bodies could facilitate this new form of co–existence, and how design could enable and accommodate this necessary exchange. Our collective efforts toward climate restoration will require not just innovative technologies, but social and economic transformation – a shift in our thinking about the biophysical world and our role and responsibility in it. We will tackle these challenges and more as we sift through the varied layers of soil – to ultimately address a more ethical way of living (and dying) in the ruins of what we have created.

Course Structure:
The semester will be broken down into three parts presenting three different scales of inquiry. We will begin with a focus on soil as a climate system (on the macro scale), zooming into our region to identify zones of opportunities for intervention. In the second part of studio we will focus on the body scale, engaging burial practices and the cemetery landscape within the context of mass extinction – particularly the destruction of a habitable world for many of the earth’s species, including the near–extinction of our own. And finally, we will descend into the depths of soil in the third part of the semester to consider the microbial scale and the processes of soil–building involved at the micro–scale. We will hopefully resurface at the end of the semester with site–scaled strategies and a renewed vision of a future world built on more collaborative and cooperative intraspecies relations.
### Topics

#### Part 1: Soil as Climate System (4 weeks)
- Living Soils + Soil Science
- Soil Futures (projections)
- Hotspots + Zones of opportunity

#### Part 2: Burial Practices (5 weeks)
- Mass Extinction
- Cemeteries
- Soil toxicity and burial practice

#### Part 3: The Future of Death (6 weeks)
- Ecological Grief
- Death as Process
- Multispecies Collaborations

### Activities

#### Part 1: Mapping Soils
- Drawing Soil
- Mapping Soil Futures
- Organizational Strategies

#### Part 2: Burial Practices
- Mortuary Composting Procedures
- Earth Forming Practices
- New Rituals

#### Part 3: Site Design
- Soil Catalog
- Deep Sections
- Temporal Animations

### Deliverables:
Assignments will be distributed in detail over the semester.

### LEARNING OBJECTIVES AND OUTCOMES

In-class exercises, assigned readings, discussions and studio assignments in this course are designed to support the following goals:

1. **Analysis**: Demonstrate ability to gather, assess, record, and comparatively evaluate relevant information, data, and performance in order to support ideas across design scales.

2. **Design–Research**: Demonstrate ability to raise clear, precise critical questions, use abstract ideas to interpret information, consider diverse points of view, develop well-reasoned theories, take a position and test alternative outcomes against relevant criteria and standards.

3. **Strategic Design**: Demonstrate ability to identify site specific themes/ issues that materialize and anchor the vision in tangible projects at a number of scales that address localized systems and communities.

4. **Design Innovation**: Demonstrate ability to design bold multi-purpose landscape systems, which address future paradigms and spatially and ideologically challenge the status quo.

5. **Technical Innovation**: Demonstrate technical mastery and specificity of analog and digital media and its appropriateness in depicting material properties, static and dynamic states, future projections, and across multiple scales through innovative processes of media-making.
DESCRIPTION AND ASSESSMENT OF ASSIGNMENTS
Requirements for each of your assignments will be handed out in writing in advance. Full completion of assignments is expected and required for success in this course.

Your assignments will be evaluated based on the following criteria:
Research: You will be evaluated based on the ability to conduct proper, cited research.
Process: You will be evaluated on the iterative process of making. You are expected to take risks and engage in design exploration. Your project must develop over time and respond to critique.
Intent: You will be evaluated based on the ability to articulate your rationale in all aspects of your work including the following: verbal, visual, digital, technical, and physical modelmaking.
Craft: You will be evaluated on the quality of your drawings, models and verbal presentation, which demonstrate your mastery of verbal, visual, technical, and graphic skills.

Participation in discussions of readings, during pinups and desk critis is also required for success in this course.

GRADING BREAKDOWN

<table>
<thead>
<tr>
<th>Assignments</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>Assignment 1: Mapping Soil Imaginaries</td>
<td>13%</td>
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<td>Assignment 2: Territorial Logics: structuring zones of opportunity + organizational strategies (Plot/Model)</td>
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<tr>
<td>Assignment 3: Burial Practice: investigating soil toxicity + burial systems (Deep Sections)</td>
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<td>Assignment 4: Soil Building Strategies: investigating soil building + mortuary composting + earth forming practices (Sectional Perspectives)</td>
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<td>Assignment 5: Site Strategies: structuring time and change (Temporal Drawings/Models)</td>
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<td>Assignment 6: Site Design: structuring experiential qualities + new rituals (Design Drawings/Models)</td>
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<tr>
<th>In–Class Activities</th>
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<tr>
<td>In–Class Exercise 1: Personal Narrative (Written/Drawn)</td>
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<tr>
<td>In–Class Exercise 2: Soil Catalog (Field Collections)</td>
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<td>In–Class Exercise 3: New Rituals (Game)</td>
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<tr>
<td>Reading Discussions</td>
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GRADING SCALE
Course final grades will be determined using the following scale:
A  95–100
A− 90–94
B+ 87–89
B  83–86
B− 80–82
C+ 77–79
C  73–76
C− 70–72
D+ 67–69
D  63–66
D− 60–62
F  59 and below

ASSIGNMENT SUBMISSION POLICY
Please upload high resolution files in the appropriate format (jpeg, pdf, etc), 3D model files, and properly photographed images of completed assignments to the Google Drive folder for the course here: https://drive.google.com/open?id=1iBYNF84mZFa3a1mocsi4nQC7Pxgsas27

GRADING TIMELINE
I will provide regular feedback during pinups and desk-crits. I will additionally meet with each of you individually following your midterm and final reviews to recap comments from the critics and to discuss your progress. I am also available during office hours should you need course feedback at any point during the semester.

COURSE NOTES
Students are expected to be in class during the designated timeframe (Mon/Wed/Fri 2PM–5:50PM). While the schedule might vary from week to week, we will try to devote Mondays and Wednesdays to desk-crits and Fridays to pinups. Discussions around the topics raised through the readings will usually take place during the first half of the course on Fridays, along with any scheduled field-trips and lectures. The second half of the day on Fridays will be devoted to group crits.

TECHNOLOGICAL UTILIZATION
We will utilize ArcCIS, Adobe Illustrator, Photoshop, After Effects, Rhinoseros 3D, Rendering Engines (of your choice), Laser cutting, Physical modeling, and Photogrammetry. While I will make myself available during office hours for help with technology, students who have not had exposure to specific software utilized in the class are expected to practice on their own using online instruction through Lynda.com available to USC students for free through the MyUSC portal. Focus will be given to visualization techniques that describe the material specificity of soils, and the temporal dynamics of the projects.

COURSE READINGS AND SUPPLEMENTARY MATERIALS
Course readings will be used as reference and as theoretical foundations to the practical work of the studio. Readings can be accessed via the Google Drive folder for this course: https://drive.google.com/open?id=1PnnvHJT2FjfmJhVOyQ1VRKGL2UG_q6xM. In addition to the readings, certain resources such as environmental reports and studies will be made available in the Resources folder on the Google Drive. Links to relevant websites will be listed in the syllabus following the bibliography for the course.
<table>
<thead>
<tr>
<th>WEEK</th>
<th>DATE</th>
<th>CONTENT: DAILY ACTIVITIES / TOPICS / DELIVERABLES</th>
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<tbody>
<tr>
<td>Week 1</td>
<td>01/13</td>
<td>Monday: Course Introduction</td>
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<td>Wednesday: Review Narratives + Assign Research Categories</td>
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<td>01/17</td>
<td>Friday: Desk–crits: Soil Systems Research</td>
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<td>01/20</td>
<td>Monday: MLK Day – No Class</td>
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<td>01/22</td>
<td>Wednesday: Lecture: Mapping Soil Imaginaries</td>
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<td>01/24</td>
<td>Friday: Pinup + Discussion: Soil Research Progress</td>
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<td>Week 2</td>
<td>01/27</td>
<td>Monday: Desk–crits: Soil Systems Research</td>
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<td>01/29</td>
<td>Wednesday: Desk–crits: Soil Systems Research</td>
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<td>01/31</td>
<td>Friday: Pinup + Discussion: Mapping Soil Imaginaries Draft</td>
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<td>Week 3</td>
<td>02/03</td>
<td>Monday: Pinup Assignment 1: Mapping Soil Imaginaries</td>
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<td>02/05</td>
<td>Wednesday: Assignment 1: Mapping Soil Imaginaries Due</td>
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<td>02/07</td>
<td>Friday: Lecture: Organizational Strategies</td>
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<td>Week 4</td>
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<td>Monday: Desk–crits: Territorial Plots: organizational strategies</td>
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<td>02/12</td>
<td>Wednesday: Desk–crits: Territorial Strategies: zones of opportunity</td>
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<td>02/14</td>
<td>Friday: Pinup + Discussion: Territorial Strategies Progress</td>
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<td>Week 5</td>
<td>02/17</td>
<td>Monday: Presidents Day – No Class</td>
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<td>02/19</td>
<td>Wednesday: Desk–crits: Territorial Strategies: zones of opportunity</td>
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<td>02/21</td>
<td>Friday: Pinup + Discussion: Territorial Strategies Draft</td>
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<td>Week 6</td>
<td>02/24</td>
<td>Monday: Pinup Assignment 2: Territorial Strategies</td>
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<td>02/26</td>
<td>Wednesday: Assignment 2: Territorial Strategies Due</td>
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<td>02/28</td>
<td>Friday: Pinup + Discussion: Burial Practice Progress + Soil Building Strategies Progress</td>
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<td>Week 7</td>
<td>03/02</td>
<td>Monday: Desk–crits: Burial Practice + Soil Building Strategies</td>
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<td>03/04</td>
<td>Wednesday: Desk–crits: Burial Practice + Soil Building Strategies</td>
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<td>03/06</td>
<td>Friday: Pinup Assignment 3: Burial Practice + Assignment 4: Soil Building Strategies</td>
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<td>Week 8</td>
<td>03/09</td>
<td>MIDTERM REVIEW</td>
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<td>Week</td>
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<td>Week 10</td>
<td>03/16</td>
<td>SPRING RECESS</td>
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<td>Week 11</td>
<td>03/23</td>
<td>Monday: Introduce Assignment 5: Site Strategies</td>
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<td>03/25 Wednesday: Desk-crits: Site Strategies</td>
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<td>03/26 Danika Cooper Lecture: Required</td>
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<td>03/27 Friday: Pinup + Discussion: Site Strategies Progress</td>
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<td>Week 12</td>
<td>03/30</td>
<td>Monday: Desk-crits: Site Strategies</td>
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<td>04/01</td>
<td>Wednesday: Field Trip/Field Collections: In-class Exercise Soil Catalog</td>
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<td>04/03</td>
<td>Friday: Aroussiak in Philadelphia – Working session</td>
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<td>Week 13</td>
<td>04/06</td>
<td>Monday: Desk-crits: Site Strategies</td>
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<td>04/08</td>
<td>Wednesday: Desk-crits: Site Strategies</td>
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<td>04/10</td>
<td>Friday: Pinup + Discussion: Site Strategies Progress</td>
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<td>Week 14</td>
<td>04/13</td>
<td>Monday: Pinup Assignment 5: Site Strategies + Soils Catalog</td>
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<td>04/15</td>
<td>Wednesday: Assignment 5: Site Strategies + Soils Catalog Due</td>
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<td>04/17</td>
<td>Friday: Pinup + Discussion: Site Design Progress</td>
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<td>Week 15</td>
<td>04/20</td>
<td>Monday: Desk-crits: Site Design</td>
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<td>04/22</td>
<td>Wednesday: Desk-crits: Site Design</td>
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<td>04/24</td>
<td>Friday: Pinup + Discussion: Site Design Progress</td>
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<td>Week 16</td>
<td>04/27</td>
<td>Monday: Desk-crits: Site Design</td>
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<td>04/29</td>
<td>Wednesday: Desk-crits: Site Design</td>
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<td>05/01</td>
<td>Friday: Pinup Assignment 6: Site Design</td>
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<td>Week 17</td>
<td>05/04</td>
<td>STUDY DAYS – PRODUCTION</td>
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<td>Week 18</td>
<td>5/11</td>
<td>FINAL REVIEW</td>
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COURSE RESOURCES

Richard Weller’s Atlas for the End of the World: https://atlas-for-the-end-of-the-world.com/world_maps_main.html#world_map_target


United Nations Convention to Combat Desertification: https://www.unccd.int/convention/about-convention


World Soil Information: https://www.isric.org/

Critical Ecosystem Partnership Fund Biodiversity Hotspots: https://www.cepf.net/our-work/biodiversity-hotspots/

Kiss the Ground: https://kisstheground.com/


The Berkshire Edge: Enrich the Soil, Cool the Planet: https://theberkshireedge.com/enrich-the-soil-cool-the-planet/

USA Soils Map: https://www.arcgis.com/home/item.html?id=c2b408ba5c0a4fe1a79377906935c1a4

BIBLIOGRAPHY


STATEMENT ON ACADEMIC CONDUCT AND SUPPORT SYSTEMS

Academic Conduct:
Plagiarism – presenting someone else’s ideas as your own, either verbatim or recast in your own words – is a serious academic offense with serious consequences. Please familiarize yourself with the discussion of plagiarism in SCampus in Part B, Section 11, “Behavior Violating University Standards” policy.usc.edu/scampus-part-b. Other forms of academic dishonesty are equally unacceptable. See additional information in SCampus and university policies on scientific misconduct, http://policy.usc.edu/scientific-misconduct

Support Systems:
USC Student Health is available through the single phone number 213–740–9355 (WELL)—including all services 24/7.
https://studenthealth.usc.edu/

Counseling and Mental Health Services, a division of the Department of Psychiatry and Behavioral Sciences, Keck School of Medicine of USC

Medical Services, with providers on clinical faculty of the Departments of Family Medicine, Obstetrics and Gynecology, Dermatology, Orthopaedic Surgery, Keck School of Medicine of USC; and professional affiliations with the USC Chan Division of Occupational Science and Occupational Therapy, the USC School of Pharmacy, and the Division of Physical Therapy and Biokinesiology.

Relationship and Sexual Violence Prevention and Services, with counselors who are clinical faculty of the Department of Psychiatry and Behavioral Sciences, Keck School of Medicine of USC
A nurse (for medical concerns) or licensed counselor (for mental health concerns) is available 24 hours a day, even when the student health centers are closed and during university closures.

Students in crisis may walk–in for urgent mental health services at the health centers (Engemann Student Health Center on UPC or Eric Cohen Student Health Center at HSC) during operational hours without an appointment: this may include urgent matters involving a death in the family, suicide concern, crime/sexual assault survivor counseling, or other high–risk matters.

Urgent "sick" appointments for medical care are available “same–day” for students needing care during operational hours.

The evening operators of the 24/7 phone service line can connect to USC Student Health services when an urgent matter presents itself.

Sexual assault survivors requiring transportation to a SART center can ask RSVP to call a Lyft ride (an “on–call” staff advocates program to accompany survivors is currently staffing operations and will be activated this fall). MySHR (the student health record portal) shows all available regular appointment times: many appointments can be made within 24–48 hours.
Campus incident post-ventions are regularly provided by Counseling and Mental Health Services on campus for students: departments are encouraged to contact us to learn more or to make arrangements.

National Suicide Prevention Lifeline – 1 (800) 273–8255
www.suicidepreventionlifeline.org
Provides free and confidential emotional support to people in suicidal crisis or emotional distress 24 hours a day, 7 days a week.

Office of Equity and Diversity (OED) | Title IX – (213) 740–5086
equity.usc.edu, titleix.usc.edu
Information about how to get help or help a survivor of harassment or discrimination, rights of protected classes, reporting options, and additional resources for students, faculty, staff, visitors, and applicants. The university prohibits discrimination or harassment based on the following protected characteristics: race, color, national origin, ancestry, religion, sex, gender, gender identity, gender expression, sexual orientation, age, physical disability, medical condition, mental disability, marital status, pregnancy, veteran status, genetic information, and any other characteristic which may be specified in applicable laws and governmental regulations.

Bias Assessment Response and Support – (213) 821–8298
https://campussupport.usc.edu/trojans-care-4-trojans/
Avenue to report incidents of bias, hate crimes, and microaggressions for appropriate investigation and response.

The Office of Disability Services and Programs – (213) 740–0776
dsp.usc.edu
Support and accommodations for students with disabilities. Services include assistance in providing readers/notetakers/interpreters, special accommodations for test taking needs, assistance with architectural barriers, assistive technology, and support for individual needs.

USC Campus Support & Intervention – (213) 821–4710
https://campussupport.usc.edu/
Assists students, faculty, and staff in navigating complex issues.

Diversity at USC – (213) 740–2101
diversity.usc.edu
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– 24/7 on call
dps.usc.edu, emergency.usc.edu
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 – 24/7 on call
dps.usc.edu
Non–emergency assistance or information.