SSCI 578, The Practice of Geospatial Leadership

Syllabus

Units: 4

Term—Day—Time: Summer, 2023, Tuesdays and Thursdays, 3:10 to 5:00 p.m.

Location: AHF 145A and DEN@Dornsife

Instructor: Dr. John P. Wilson
Office: AHF B55F
Office Hours: Mondays, 3-4 p.m. and Fridays, 4-5 p.m. PT, and by appointment at other times. I am nearly always available asynchronously via email. I am also available for synchronous chats via audio or video on most days and times by prior arrangement via email. Just get in touch!

Contact Info: jpwilson@usc.edu, 213-740-1908 (office), see welcome message on D2L for Zoom room

Library Help: Andy Rutkowski
Office: LIPA B40-A
Office Hours: By appointment
Contact Info: arutkows@usc.edu

IT Help: Myron Medalla
Office: AHF B56B
Office Hours: By appointment
Contact Info: spatial_support@usc.edu, 213-740-4415
**Course Scope and Purpose**

This course is required for the M.S. in Human Security and Geospatial Intelligence and is the capstone for the Graduate Certificate in Geospatial Leadership. The course serves those who aspire to or are considering a future leadership role and want to know what is involved as well as those already in a leadership role, who want to get better at it.

The first part of the course focuses on the fundamental challenges of leadership in the geospatial domain. We will start by examining the qualities and skills leaders need to help steer geospatial management so they can achieve extraordinary results, keeping in mind the various ways in which geospatial information use cases are growing and evolving, and the pervasive trends that are driving some of these changes.

The second and final part of the course will focus on you, affording you the opportunity to reflect on your life and career by completing a life map and a series of self-assessments, culminating in a personal leadership development plan for the final project.

That said, this course covers six broad groups of topics:

*Key concepts*—We will use the first few classes to get everyone situated on where the spatial sciences are situated today.

*The geospatial value proposition*—We will next review the geospatial value proposition, identifying the multitude of ways in which geospatial information may add value to human activities, and clarifying some of the ways in which spatially-explicit data can be gathered, organized, and used to serve specific needs.

*Leadership Fundamentals*—We will then explore the range of qualities and skills that make for effective leadership using books by Sample, Kurtzman and the U.S. Department of the Army, and some you will find and choose yourselves. The Sample text focuses on the art of leadership and kicks off our exploration of this core topic. We will then spend the best part of a month reading the Kurtzman and U.S. Department of the Army texts to help us grasp how a clear understanding and anticipation of the organizational context, an individual’s personal leadership contribution, the role of teamwork, and the importance of new ideas along with leadership skills, can be harnessed and deployed so organizations can achieve extraordinary results.

*Leadership at Work*—We will use the 2023 Esri User Conference to take a close up look at one or more leaders who share long and distinguished records of leadership in the geospatial sector.

*The geospatial leadership value proposition*—We will also explore how to create spatial thinkers and a culture of geospatial understanding within an organization. The motivation here is to think bigger than most current geospatial users and to clarify how we might teach the capabilities of spatial thinking and the use of geospatial technologies to all members of the organization.
Current trends, future opportunities and threats—We will then explore current trends in society as well as geospatial information management. We will consider some of the ways in which disruptive technologies (i.e., cloud computing, big data, data science, open science, reproducibility and replicability, among others) will affect the ways geospatial information is acquired, analyzed and used in the immediate future.

Closing arguments—The final class will take a look at why ideas matter and how some of the scientific and technological advances in the geospatial domain and society at large can generate, convert, and diffuse across an organization or firm to unleash a stream of valuable products, services, and businesses in the next few years and decades.

The class sessions and assigned readings will convey the main theoretical concepts, and the assignments will give students an opportunity to internalize and apply the concepts and theory learned from readings. Some assignments require student interaction, all will benefit from it.

Learning Outcomes

On completion of this course, students should be able to:

- Describe the geospatial value proposition, identifying all of the ways in which geospatial information and spatial thinking can promote human well-being.
- Examine how leaders can help shape the context so that all involved will help geospatial information managers and organizations achieve extraordinary results.
- Assess the organizational culture and an individual’s personal leadership contribution.
- Discuss why new and innovative ideas matter and how the various elements of a geospatial information management group or organization’s innovation practices influence the successful generation, adoption, and deployment of new ideas.
- Develop a personal leadership plan and a vision for how geospatial information management is likely to grow and evolve in importance during the next 5-10 years.

Students may vary in their competence levels on these abilities. You can expect to acquire these abilities only if you honor all course policies, attend classes regularly, complete all assigned work in good faith and on time, and meet all other course expectations of you as a student.

Prerequisite(s): None
Co-Requisite(s): None
Concurrent Enrollment: None
Recommended Preparation: SSCI 585: Geospatial Technology Project Management
Class Conduct

**Harassment, sexual misconduct, interpersonal violence, and stalking** are not tolerated by the university. All faculty and most staff are considered Responsible Employees by the university and must forward all information they receive about these types of situations to the Title IX Coordinator. The Title IX Coordinator is responsible for assisting students with supportive accommodations, including academic accommodations, as well as investigating these incidents if the reporting student wants an investigation. The Title IX office is also responsible for coordinating supportive measures for transgender and nonbinary students such as faculty notifications, and more. If you need supportive accommodations you may contact the Title IX Coordinator directly (titleix@usc.edu or 213-821-8298) without sharing any personal information with me. If you would like to speak with a confidential counselor, Relationship and Sexual Violence Prevention Services (RSVP) provides 24/7 confidential support for students (213-740-9355 (WELL); press 0 after hours).

**COVID-19 policy**—Students are expected to comply with all aspects of USC’s COVID-19 policy including, but not limited to, vaccination, indoor mask mandate, and daily Trojan Check. Failure to do so may result in removal from the class and referral to Student Judicial Affairs and Community Standards. Students are recommended to keep safe physical distancing, whenever possible, to prevent any possible transmission. Please contact your instructor if you have any safety concerns.

**Diversity and inclusion**—It is my intent that students from all diverse backgrounds and perspectives be well served by this course, that student’s learning needs be addressed both in and out of class, and that the diversity that students bring to this class be viewed as a resource, strength, and benefit. It is my intent to present materials and activities that are respectful to everyone, and you are also expected to respect of others regardless of their race, ethnicity, gender identity and expressions, cultural beliefs, religion, sexual orientation, national origin, age, abilities, ideas and perspectives, or socioeconomic status. Your suggestions are encouraged and appreciated. Feel free to let me know ways to improve the effectiveness of the course for you personally and for other students.

**Learning Management System (LMS)**

This course will utilize the Desire2Learn (D2L) learning management system which allows students to access course content, upload assignments, participate in discussion forms, among other learning experiences. The D2L platform provides flexibility in the learning experience where students can participate in the course residentially or remotely, synchronously (meeting together at the same time) or asynchronously (accessing videos and course content outside of class).

**SSI Server and Technical Support**

This course may or may not require the use of GIS and/or remote sensing software. In the event you do want or need to use these software tools, you may use the SSI Server that is a virtual desktop giving access to many different professional geospatial software.
applications. If you are unable to connect to the server or experience any type of technical issues, send an email to SSI Technical Support at spatial_support@usc.edu and make sure to copy (cc) me on the email.

You will all need a computer with a fast Internet connection, a functional webcam and a microphone for use whenever a class presentation or one-on-one meeting is scheduled, and a modern web browser throughout the semester for this course.

Required Readings and Supplementary Materials

There are four books required for this course. Some are available online and some are available from the USC Bookstore or an online outlet such as Amazon. We encourage you to acquire or purchase these books quickly since you need these materials from the first day of class.


A mixture of readings from academic journals, monographs, and professional reports will supplement these books and course notes. I have added the books, monographs and journal articles listed below to the weekly folders in Desire to Learn (D2L):

- BCG (Boston Consulting Group). 2012. Putting the U.S. geospatial services industry on the map. BCG.
- FGDC (Federal Geographic Data Committee). 2020. National Spatial Data Infrastructure Strategic Plan, 2021-2024. FGDC.
• Geospatial Commission. 2022. *How FAIR are the UK’s national geospatial data assets?* Geospatial Commission.


• GSW / UBSD (Geospatial World & UN Statistics Division). 2021. *The power of where: A geospatial knowledge infrastructure to enhance the world economy, society and environment.* GSW.


• Lawrence, M.G., Williams, S., Nanz, P., Renn, O. 2022. Characteristics, potentials, and challenges of transdisciplinary research. *One Earth, 5*(1), 44-61.


• ODI (Open Data Institute). 2018. *The UK’s geospatial data infrastructure: Challenges and opportunities.* ODI.


**Description and Assessment of Assignments**

Several different assessment tools determine your grade in this course as follows:

*Exercises—3 worth a total of 10 points.* The first will count for 2 points (out of a total of 100 points for the class as a whole) and requires students to post and maintain a public resume, short biography and recent photo on our shared Spatial Sciences Institute (SSI) Student Community D2L site. With your permission, your photo and short biographical sketch may be posted to the SSI website and your resume will be included in the SSI Resume Book. This exercise also will be used to share your career trajectories with one another. You might also want to create and publish a LinkedIn profile (if you have not already done this) and then connect with your fellow classmates and myself. For the second exercise, which will count for 4 points, students will fill out a self-assessment of their own strengths and weaknesses. For the third and final exercise, which also counts for 4 points, students will prepare life maps and the D2L course site, soon thereafter, will include a "gallery of lives" during which all life maps will be on display for a short period.

*Presentation—1 worth 10 points.* This presentation will follow the gallery of lives and afford each of you an opportunity to tell your story in a small (virtual) group. Please note that there is a second presentation that is part of your final projects (as described below) as well.

*Reflections—10 for a total of 50 points.* Taking time for reflection provides one of the most important opportunities in learning from experience. For this part of the course, we will ask you to reflect on what was said and/or read, and then write 10 short papers (four-page maximum, typed using a 12-point font, single spacing, and standard margins). Your answers will respond to two sets of prompts. The first set will ask you about the significance and implications of the topics covered that week and the second set will ask you of identify two things you learned that were important to you, explain why these things were important to you, and draw some implications for your future actions.

*Final Project*

The final project will provide you the opportunity to craft a personal plan for the next phase of your growth as a leader. The final report and accompanying presentation should draw on material from the entire course. You may want to include in appendices your self-assessments, life maps, LinkedIn profile, etc., so hang on to them, and you may also want to include materials from outside the course that you consider relevant, such as past performance evaluations or advertisements documenting the kind of position you aspire to apply for in the near future. The two components of the final project are:
Presentation—1 worth 5 points. This (second) presentation will provide students with an opportunity to present and discuss their final projects.

Project Report—1 worth 25 points. A written report detailing your personal plan and the various materials and threads you used to develop this plan.

Grading Breakdown

Careful planning and a serious, consistent commitment will be required for you to navigate the various deliverables in this course. The table below summarizes the SSCI 578 course assignments and their point distribution.

<table>
<thead>
<tr>
<th>Assignment</th>
<th>Number</th>
<th>Points Each</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exercises</td>
<td>3</td>
<td>2-4</td>
<td>10</td>
</tr>
<tr>
<td>Presentation</td>
<td>1</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td>Reflections</td>
<td>10</td>
<td>5</td>
<td>50</td>
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<tr>
<td>Final Projects</td>
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<tr>
<td>Presentation</td>
<td>1</td>
<td>5</td>
<td>5</td>
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<tr>
<td>Final report</td>
<td>1</td>
<td>25</td>
<td>25</td>
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<tr>
<td><strong>TOTALS</strong></td>
<td>16</td>
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<td>100</td>
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</tbody>
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In addition, it is important to note from the outset that:

- You are expected to attend and participate in every class session and to complete and upload all assignments before the deadlines documented in the Course Schedule. The DEN model used for this course means that you may participate in-person or remotely and synchronously or asynchronously—you will choose the modalities to fit your own circumstances and therefore participate in each class session in one of these three modalities (i.e., in-person and synchronous, remote and synchronous, or remote and asynchronous).

- I will deduct one letter grade for late postings and assignments, and no credit will be assigned for postings or assignments turned in more than one week late.

- No written work will be accepted for grading after 11:59 p.m. PT on the last day of classes (i.e. Friday, August 11, 2023).

Assignment Submission Policy

You will submit assignments for grading via D2L using the due dates specified in the Course Schedule below.

Workload

This is a four-credit, one-semester course. Students should expect to spend 12-15 hours per week completing the work in this course.
### Schedule

<table>
<thead>
<tr>
<th>Date</th>
<th>Class Topic/Activity</th>
<th>Readings and Assignments</th>
<th>Deliverables: Due Dates</th>
</tr>
</thead>
<tbody>
<tr>
<td>**Module 1</td>
<td>Key Concepts**</td>
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<tr>
<td><strong>Week 1</strong></td>
<td>5/18</td>
<td>Introduction to class</td>
<td>Exercise 1</td>
</tr>
<tr>
<td><strong>Week 2</strong></td>
<td>5/23</td>
<td>A short history of the spatial sciences</td>
<td><strong>Reflection 1</strong> Goodchild (2018)</td>
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<td>Dangermond &amp; Goodchild (2020)</td>
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<td></td>
<td>5/25</td>
<td>The vision for ArcGIS – A comprehensive geospatial system</td>
<td>Wright &amp; Harder (2019, 2020, 2021)</td>
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<tr>
<td><strong>Week 3</strong></td>
<td>5/30</td>
<td>Leveraging the power of place, space, and time to build spatial science careers</td>
<td><strong>Reflection 2</strong> Wilson (2023, Ch. 2)</td>
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<tr>
<td>**Module 2</td>
<td>The Geospatial Value Proposition**</td>
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<tr>
<td>6/1</td>
<td>Private sector perspectives</td>
<td>BCG (2012)</td>
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<td>Oxera (2013)</td>
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<td>AlphaBeta (2016)</td>
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<td><strong>Week 4</strong></td>
<td>6/6</td>
<td>U.S. federal government perspectives</td>
<td><strong>Reflection 3</strong> NGAC (2015)</td>
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<td>FGDC (2020)</td>
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<td>6/8</td>
<td>UK perspectives</td>
<td>ODI (2018)</td>
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<td>Geospatial Commission (2022)</td>
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<td><strong>Week 5</strong></td>
<td>6/13</td>
<td>International perspectives</td>
<td><strong>Reflection 4</strong> WGIC (2019)</td>
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<td>GSW &amp; UNSD (2021)</td>
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<tr>
<td>**Module 3</td>
<td>Leadership Fundamentals**</td>
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<tr>
<td>6/15</td>
<td>The art of leadership</td>
<td>Sample (2003)</td>
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<td><strong>Week 6</strong></td>
<td>6/20</td>
<td>The organizational context (Part I)</td>
<td><strong>Exercise 2</strong> Kurtzman (2010, Ch. 1-4)</td>
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<td>Kurtzman (2010, Ch. 1-4)</td>
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<td></td>
<td>6/22</td>
<td>The organizational context (Part II)</td>
<td>U.S. Department of the Army (2019, Ch. 1-2)</td>
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<tr>
<td><strong>Week 7</strong></td>
<td>6/27</td>
<td>Role of teamwork (Part I)</td>
<td><strong>Reflection 5</strong> Kurtzman (2010, Ch. 5-8)</td>
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<td></td>
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<td>Kurtzman (2010, Ch. 5-8)</td>
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<td></td>
<td>6/29</td>
<td>Role of teamwork (Part II)</td>
<td>U.S. Department of the Army (2019, Ch. 3-5)</td>
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<tr>
<td><strong>Week 8</strong></td>
<td>7/4</td>
<td>NO CLASS—July 4th Holiday</td>
<td><strong>Reflection 6</strong></td>
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<td>2023 Esri User Conference: Getting up close and personal with geospatial leaders on Monday, 7/10</td>
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<tr>
<td>7/6</td>
<td>How to lead (Part I)</td>
<td>Kurtzman (2010, Ch. 9-12)</td>
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<td><strong>Week 9</strong></td>
<td>7/11</td>
<td>How to lead (Part II)</td>
<td><strong>Reflection 7</strong> U.S. Department of the Army (2019, Ch. 6-10)</td>
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Statement on Academic Conduct and Support Systems

Academic Integrity

The University of Southern California is a learning community committed to developing successful scholars and researchers dedicated to the pursuit of knowledge and the dissemination of ideas. Academic misconduct, which includes any act of dishonesty in the production or submission of academic work, comprises the integrity of the person who commits the act and can impugn the perceived integrity of the entire university community. It stands in opposition to the university’s mission to research, educate, and contribute productively to our community and the world.

All students are expected to submit assignments that represent their own original work, and that have been prepared specifically for the course or section for which they have been submitted. You may not submit work written by others or “recycle” work prepared for other courses without obtaining written permission from the instructor(s).

Last Revised on 5/16/23
Other violations of academic integrity include, but are not limited to, cheating, plagiarism, fabrication (e.g., falsifying data), collusion, 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. All incidences of academic misconduct will be reported to the Office of Academic Integrity and could result in outcomes such as failure on the assignment, failure in the course, suspension, or even expulsion from the university.

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.

**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. You may contact OSAS at (213) 740-0776 or via email at 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 otp@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.

**Resources for Remote Students**

The Course D2L page and Spatial Sciences Community D2L page have many resources available for remote students enrolled in our graduate programs. In addition, all registered students can access electronic library resources through the link [https://libraries.usc.edu/](https://libraries.usc.edu/). Also, the USC Libraries have many important resources available for distance students through the link: [https://libraries.usc.edu/faculty-students/distance-learners](https://libraries.usc.edu/faculty-students/distance-learners). These include instructional videos, remote access to university resources, and other key contact information for distance students.