

SSCI 578, The Practice of Geospatial Leadership

Syllabus

Units: 4

Term — Day — Time: Summer, 2020, Online

Location: Online

Instructor: Dr. John P. Wilson

Office: AHF B55F

Office Hours: Tuesdays, 9-10 a.m. and Thursdays, 4-5 p.m. PT, and by appointment at other times. I am always available asynchronously via email. I am also available for synchronous chats via Zoom, audio or video most days and times *by prior arrangement* via email. Just get in touch!

Contact Info: jpwilson@usc.edu, 213-740-1908 (office),
<https://usc.zoom.us/my/johnwilson>

Library Help: Andy Rutkowski

Office: VKC B36B

Office Hours: By appointment

Contact Info: arutkows@usc.edu, 213-740-6390 (office),
<http://bit.ly/andyhangout>

IT Help: Richard Tsung

Office: AHF 145D

Office Hours: By appointment

Contact Info: ctsung@usc.edu, 213-821-4415 (office)

Course Description

This course is a required capstone course for the M.S. in Human Security and Geospatial Intelligence and 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 information management organizations so they can achieve extraordinary results, keeping in mind the various ways in which geospatial information management is changing and the external trends that are driving at least 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:

The Geospatial Value Proposition – We start by reviewing 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 explore the range of qualities and skills that make for effective leadership using books by Sample and Kurtzman, and some you will find and choose yourselves. The Sample text is used to introduce the art of leadership and to kick off our exploration of this core topic. We will then spend the best part of a month reading the Kurtzman text 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.

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.

Innovation Practice – Here, we will take a second look at why ideas matter and how new ideas can be generated, converted, and diffused across an organization or firm to unleash a stream of valuable products, services, and businesses.

Leadership at Work (Workshop) – We will hear from and consult with a series of geospatial leaders who share long and distinguished records of leadership in the geospatial sector. We will use the U.S. Geospatial Intelligence Foundation's 2020 Geoint Symposium (Tampa, FL; 26-29 April) and 2020 Esri User Conference (San Diego, CA; 13-17 July) to situate these interactions and align them with student interests and aspirations.

Students will need to arrange and pay for their own travel, accommodation, and meals to attend one or the other of these meetings over parts of two days.

Future Trends – The course will conclude by exploring future trends in geospatial information management over the next 5-10 years. We will consider some of the ways in which disruptive technologies (i.e. data science, edge computing, the automation of knowledge work, the Internet of Things, 3D printing) and the business communication revolution, among others, will affect the ways in which geospatial information is acquired, analyzed, and used in the next few decades.

The course notes 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 Objectives

When you have completed this class, you will 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 such that other people will help geospatial information managers and organizations achieve extraordinary results.
- Assess the organizational culture and an individual's personal leadership contribution.
- Organize teamwork to help geospatial information managers and organizations achieve extraordinary results.
- Examine the role of personal leadership skills and styles in helping geospatial information managers and organizations achieve extraordinary results.
- Examine how to create spatial thinkers and a culture of geospatial understanding in an organization.
- Examine how to teach the capabilities of spatial thinkers and the use of geospatial technologies to all members of an organization.
- 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.
- Critically evaluate how disruptive technologies might affect geospatial information management and the potential to capture and use some of these changes to help a geospatial information manager or organization prosper.
- Develop a vision for how the geospatial information management domain is likely to grow and evolve during the next 5-10 years.

Prerequisite(s): None

Co-Requisite (s): None

Concurrent Enrollment: None

Recommended Preparation: SSCI 585: Geospatial Technology Project Management

Technological Proficiency and Hardware/Software Required

We have several technologies that will facilitate our course work and our interactions, despite our dispersed locations. These include:

Blackboard – All course materials and correspondence will be posted on the course Blackboard site. As a registered student, you will find this course will show up in your available classes no later than 12:00 noon, PT on the first day of classes.

Discussion forums – On the Blackboard site, we will post a number of discussion forums and threads related to various course topics. I may or may not participate in these discussions, but they are vitally important for organizing asynchronous conversations and opportunities for learning from one another.

Live meetings and presentations – We will use a browser-based service called Zoom to create synchronous interaction sessions. With voice and webcam capabilities, we will use Zoom to share presentations and even our desktops between two or more people.

Individual meetings – I find it easier to use either Zoom or the phone for individual meetings.

SSI server and tech support – This course may or may not require the use of GIS and/or remote sensing software. In the event one of you does 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 software applications. If you are unable to connect to the server or experience any type of technical issues, send an email to SSI Tech 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 presentation or 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.

- Kurtzman, J. 2010. *Common purpose: How great leaders get organizations to achieve extraordinary results*. San Francisco, CA: Jossey-Bass.

- Sample, S. B. 2003. *The contrarian's guide to leadership*. San Francisco, CA: Jossey-Bass.
- Tomlinson, R. 2013. *Thinking about GIS: Geographic information system planning for managers* (5th Edition). Redlands, CA: Esri Press.
- U.S. Department of the Army. 2012. *Army leadership*. Washington, DC: U.S. Department of Army Headquarters.

These books will be supplemented with course notes and a mixture of readings from monographs, academic journals, professional reports, and authoritative websites. The following books, monographs, and journal articles will be posted to Blackboard under Course Documents:

- AlphaBeta. 2016. *The economic impact of geospatial services: How consumers, businesses, and society benefit from location-based information*. Sydney, NSW, Australia: AlphaBeta.
- Binz, C., Truffer, B. 2017. Global Innovation Systems: A conceptual framework for innovation dynamics in transnational contexts. *Research Policy*, 46(7), 1284-1298.
- Boston Consulting Group. 2012. *Putting the U.S. geospatial services industry on the map*. Boston, MA: Boston Consulting Group.
- Carpenter, J., Snell, J. 2013. *United Nations Initiative on Global Geospatial Information Management: Future trends in geospatial information management, the five to ten year vision*. Southampton, UK: Ordnance Survey.
- Dangermond, J., Goodchild, M. F. 2019. Building geospatial infrastructure. *Geospatial Information Science*, 23, in press.
- Gahegan, M. 2018. Is our GIS too small? *Canadian Geographer*, 62(1), 15-26.
- Hansen, M. T., Birkinshaw, J. 2007. The innovation value chain. *Harvard Business Review* (June).
- Hughes, R. 2013. *The business communication revolution*. Redwood City, CA: BroadVision.
- Manyika, J., Chui, M., Bughin, J., Dobbs, R., Bisson, P., Marrs, A. 2013. *Disruptive technologies: Advances that will transform life, business, and the global economy*. San Francisco, CA: McKinsey Global Institute.
- McCall, M. 1997. *High flyers*. Boston, MA: Harvard Business School Press.
- Mueller, N., Rojas-Rueda, D., Khreis, H., Cirach, M., Andrés, D., Ballester, J., ... Nieuwenhuijsen, M. 2020. Changing the urban design of cities for health: The superblock model. *Environment International*, 134, 105132.
- National Geospatial Advisory Committee. 2015. *The changing geospatial landscape: A second look*. Washington, DC: Federal Geographic Data Committee
- ODI (Open Data Institute). 2018. *The UK's geospatial data infrastructure: Challenges and opportunities*. London, UK: Open Data Institute.
- Oxera. 2013. *What is the economic impact of geo services? Report prepared for Google*. Oxford, UK: Oxera Consulting.

- Pfeffer, K., Georgiadou, Y. 2019. Global ambitions, local contexts: Alternative ways of knowing the world. *International Journal of Geo-Information*, 8, 516.
- Reynard, D. 2018. Five classes of geospatial data and the barriers to using them. *Geography Compass*, 12(4), e12364.
- Ramirez-Rubio, O., Daher, C., Fanjul, G, Gascon, M., Mueller, N., Pajín, L., ... Nieuwenhuijsen, M. J. 2018. Urban health: an example of a “health in all policies” approach in the context of SDGs implementation. *Globalization and Health*, 15, 87.
- VoPham, T., Hart, J.E., Laden, F., Chiang, Y.-Y. 2018. Emerging trends in geospatial artificial intelligence (geoAI): potential applications for environmental epidemiology. *Environmental Health*, 17, 40 (2018).
- WGIC. 2019. *Geospatial outlook for user industries*. Amsterdam, the Netherlands: World Geospatial Industry Council.

Description and Assessment of Assignments

Your grade in this course will be determined on the basis of several different assessment tools:

Exercises – 3 worth a total of 10 points. The first will count for 2 points and require students to post and maintain a public resume, short biography and recent photo on our shared Spatial Sciences Institute (SSI) Student Community Blackboard 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. 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 Blackboard course site, soon thereafter, will include a "gallery of lives" during which all life maps will be on display for a short period of time.

Presentations – 1 worth a total of 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.

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, 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 self-assessments, your life map, 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 a total of 10 points. This presentation will provide students with an opportunity to present and discuss their final projects.

Project Report – 1 worth a total of 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.

Assignment	Number	Points Each	Points
Exercises	3	2-4	10
Presentation	1	10	10
Reflections	10	5	50
Final Projects			
Presentation	1	5	5
Final report	1	25	25
TOTALS	16	--	100

And finally, it is important to note from the outset that:

- You are expected to attend and participate in every course session and to complete and upload all assignments before the deadlines documented in the Course Schedule.
- Late postings and assignments will be docked one letter grade, and no grade will be given for postings or assignments turned in more than one week late.
- No written work will be accepted for grading after 5:00 p.m. PT on the last day of classes (i.e. 14th August, 2020).

Assignment Submission Policy

Assignments will be submitted for grading via Blackboard using the due dates specified in the Course Schedule below.

Additional Policies

Communications – This is a distance learning course, so most of our interactions will be asynchronous (not at the same time). All materials to be handed in will be submitted via the Blackboard Assessment link. I will also create one Blackboard discussion forum at the start of the semester, and I may create and/or monitor additional Blackboard discussion

forums through which we can discuss challenges, ideas, and issues connected with the course assignments, exercises, and projects as the need arises.

In addition, I will send via e-mail through Blackboard any notices that are time sensitive. Please be sure that you read as soon as possible all e-mail sent from Blackboard or from me. Check now to make sure that mail sent from both USC Blackboard and my private domain (jpwilson@usc.edu) does not go into your junk mail!

While I am usually online and will probably respond to emails from students relatively quickly, I will endeavor to respond to all email within 24 hours of receipt, aiming for no more than a 72-hour delay. In the rare case when I expect to be offline for more than 72 hours, I will post an announcement on the Blackboard site.

That said, it is each student's responsibility to stay informed about what is going on in our course. In addition to email about time-sensitive topics, any important announcements will be posted on the Announcement page in Blackboard. Be sure to check these each time you log onto Blackboard.

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.

Course Schedule

	Topics/Daily Activities	Readings and Homework	Deliverables/ Due Dates
Week 1 5/20* *Class starts on Wednesday, 5/20	Introduction: Introduction to the course and the ways in which the various topics and tasks will be woven together	Tomlinson (2015) Reynard (2018) Dangermond (2020)	Submit Exercise #1 no later than 11:59 p.m. on Wednesday, 5/26
Week 2 5/26* *Monday, 5/25 is a university holiday	US Geospatial Services Industry: A first look at the geospatial value proposition and the various ways in which geospatial information may add value to human activities	Boston CG (2012) NGAC (2015)	Submit Reflection #1 no later than 11:59 p.m. on Tuesday, 6/2
Week 3 6/1	Economic Impact of Geospatial Services: A second take on the same topics – this time through reports from Australia, the United Kingdom, and Google compliments of the a report on the economic impact of geographic information services prepared by the Oxera Consulting Group	Oxera (2013) AlphaBeta (2016) ODI (2018)	Submit Reflection #2 no later than 11:59 p.m. on Tuesday, 6/9
Week 4 6/8	The Art of Leadership: A first look at the art of leadership through the eyes of Steven B. Sample, the tenth president of the University of Southern California	Sample (2003)	Submit Reflection #3 no later than 11:59 p.m. on Tuesday, 6/16

<p>Week 5 6/15</p>	<p>Leadership Fundamentals – The Organizational Context: We will use the Kurtzman and U.S. Department of the Army texts to take a deeper look at the art of leadership over the next four weeks – this first week we look at the leadership disconnect, the new rules of employment, the need for leaders at all levels, and the role of a common purpose for internalizing what an organization stands for</p>	<p>Kurtzman, Ch. 1-4 U.S. Department of the Army, Ch. 1-2</p>	<p>Submit Reflection #4 no later than 11:59 p.m. on Tuesday, 6/23</p>
<p>Week 6 6/22</p>	<p>Leadership Fundamentals – Role of Teamwork: We continue working our way through the Kurtzman and the U.S. Department of the Army texts, focusing this week on why the best leaders are part of the group, the need to cultivate curiosity, rather than complacency, and the need to cultivate a culture of leadership and inclusiveness</p>	<p>Kurtzman, Ch. 5-8 U.S. Department of the Army, Ch. 3-5</p>	<p>Submit Exercise #2 no later than 11:59 p.m. on Tuesday, 6/30</p>
<p>Week 7 6/29* *Friday, 7/3 is a university holiday</p>	<p>Leadership Fundamentals – How to Lead: We continue working our way through the Kurtzman and the U.S. Department of the Army texts, focusing this week on how leaders stay positive and determined, the "mental" aspects of leadership, different strokes for different generations, and why you do not need to be ruthless to be an effective leader.</p>	<p>Kurtzman, Ch. 9-12 U.S. Department of the Army, Ch. 6-11</p>	<p>Submit Reflection #5 no later than 11:59 p.m. on Tuesday, 7/7</p>
<p>Week 8 7/6</p>	<p>Leadership Fundamentals – Conversations with Geospatial Leaders: We will start with a couple of texts that offer different takes on leadership and conclude this part of the class with a two-day workshop spent in conversation with 2-3 geospatial leaders and listening to leaders at the opening sessions of either the 2020 GeoINT Symposium in Tampa, FL or the 2020 Esri User Conference in San Diego, CA</p>	<p>McCall (1997) Selected Blog Posts</p>	<p>Submit Reflection #6 no later than 11:59 p.m. on Tuesday, 7/14</p>
<p>Week 9 7/13</p>	<p>Leadership Fundamentals – Why Ideas Matter: We finish up the Kurtzman text with a review of the first 12 chapters and a first look at why ideas matter if an organization is to achieve extraordinary results</p>	<p>Kurtzman, Ch. 13</p>	<p>Submit Reflection #7 no later than 11:59 p.m. on Tuesday, 7/21</p>

Week 10 7/20	Innovation Practice: A second look at why ideas matter and how new ideas can be generated, converted, and diffused across an organization or firm to unleash a stream of valuable products, services, and businesses.	Hansen (2007) Binz (2017) Gahegan (2018)	Submit Exercise #3 & Reflection #8 no later than 11:59 p.m. on Tuesday, 7/28
Week 11 7/27	Disruptive Technologies: The first of three classes looking at the current and emerging trends that are likely to affect geospatial information management in the next few decades – this first class focuses on the mobile Internet, the automation of knowledge work, the Internet of Things, 3D printing, and other disruptive technologies	Manykia (2013) VoPham (2018) WGIC (2019)	Schedule Presentation #1 no later than Friday, 7/31, & submit Reflection #9 no later than 11:59 p.m. on Tuesday, 8/4
Week 12 8/3	Business Communication Revolution: This second look at current and emerging trends focuses on the business communications revolution and how this is likely to affect the ways in which geospatial information is acquired, analyzed and shared in the future	Hughes (2013)	Submit Reflection #10 no later than 11:59 p.m. on Tuesday, 8/6
Week 13 8/10* *Friday, 8/14 is the last day of classes	Future Trends in Geospatial Information Management: A third and final look at current and emerging trends, this time through the eyes of the UN Initiative on Global Geospatial Information Management and the Barcelona Institute for Global Health (ISGLOBAL)	Carpenter (2013) Ramirez-Rubio (2018) Pfeffer (2019) Mueller (2020)	Submit your Final Report & complete your Final Presentation no later than 11:59 p.m. on Friday, 8/14

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” (<http://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

Student Counseling Services (SCS) – (213) 740-7711 – 24/7 on call

Free and confidential mental health treatment for students, including short-term psychotherapy, group counseling, stress fitness workshops, and crisis intervention. <https://engemannshc.usc.edu/counseling>

National Suicide Prevention Lifeline – 1 (800) 273-8255

Provides free and confidential emotional support to people in suicidal crisis or emotional distress 24 hours a day, 7 days a week. <https://www.suicidepreventionlifeline.org>

Relationship and Sexual Violence Prevention Services (RSVP) – (213) 740-4900 – 24/7 on call

Free and confidential therapy services, workshops, and training for situations related to gender-based harm. <https://engemannshc.usc.edu/rsvp>

Sexual Assault Resource Center

For more information about how to get help or help a survivor, rights, reporting options, and additional resources, visit the website: <https://sarc.usc.edu>

Office of Equity and Diversity (OED)/Title IX Compliance – (213) 740-5086

Works with faculty, staff, visitors, applicants, and students around issues of protected class. <https://equity.usc.edu>

Bias Assessment Response and Support

Incidents of bias, hate crimes and micro aggressions need to be reported allowing for appropriate investigation and response. <https://titleix.usc.edu/reporting-options/>

The Office of Disability Services and Programs

Provides certification for students with disabilities and helps arrange relevant accommodations. <https://dsp.usc.edu>

Student Support and Advocacy – (213) 821-4710

Assists students and families in resolving complex issues adversely affecting their success as a student EX: personal, financial, and academic. <https://studentaffairs.usc.edu/ssa>

Diversity at USC

Information on events, programs and training, the Diversity Task Force (including representatives for each school), chronology, participation, and various resources for students. <https://diversity.usc.edu>

USC Emergency Information

Provides safety and other updates, including ways in which instruction continue if an officially declared emergency makes travel to campus infeasible. <https://emergency.usc.edu>

USC Department of Public Safety – UPC: (213) 740-4321 – HSC: (323) 442-1000 – 24-hour emergency or to report a crime

Provides overall safety to USC community. <https://dps.usc.edu>

Resources for Online Students

The Course Blackboard page and the GIST Community Blackboard page have many resources available for distance students enrolled in our graduate programs. In addition,

all registered students can access electronic library resources through the link <https://libraries.usc.edu/>. In addition, the USC Libraries have many important resources available for distance students through the link <http://libguides.usc.edu/distancelearning>. This includes instructional videos, remote access to university resources, and other key contact information for distance students.