Instructor: Rob Eastwood
Office location: Washington Square Hall (WSQ) 218
Telephone: 408-299-5792
Email: rob.eastwood@pln.sccgov.org
Office hours: Tuesday 6:30 – 7:30 PM (appointments preferred)
Class days/time: Tuesday 7:30 – 10:15 pm
Classroom: Clark Hall 243
Prerequisites: None
Units 2 units

Course Catalog Description:
An overview of urban sustainability covering topics such as the origins of urban sustainability, tools for sustainability planning, global dimensions of sustainability (including different approaches to planning across world regions), and visions for creating sustainable futures.

Course Description and Course Learning Objectives:
Class is intended to provide students with a strong grounding in the theoretical paradigm of sustainability, evaluating how we understand the relationships between human civilization, economic growth, “nature” and environmental limits. From this theoretical base, the class will shift to evaluating sustainability principles in action, analyzing how cities and regions across the world have taken actions to embed sustainability principles, policies, and actions into land use planning.

A key objective of this course will be to establish the philosophical and ethical tenants of sustainability within each student’s understanding and approach to urban planning with an ability to translate abstract principles driving sustainability into everyday land use planning actions.

Upon successful completion of the course, students will be able to:

1. Describe and explain the philosophical foundations underlying modern western society with respect to how we view and understand “the environment” and its relationship with our society and economy.
2. Describe and explain how environmental limits and social inequities frame our approach to sustainability.
3. Describe and explain the core tenants of sustainability in a concise manner, interweaving the three “E”s that guide sustainability – environment, economy, and equity.

4. Describe and explain the modern origins of land use planning and how the regulatory approach of addressing the externalities of land development can serve to implement sustainability objectives.

5. Apply and critique sustainability planning tools such as sustainability indicators, ecological footprint analysis, and green building certification.

6. Identify specific subject areas related to urban sustainability such as land use, urban design, transportation, environmental planning, resource use, environmental justice, local economic development, and architecture and building construction practices, and explain how these individual topics fit together.

7. Describe and explain natural resource and pollution control factors in planning, as well as how to create sustainable futures.

8. Describe and explain urban sustainable development practices used in cities and regions across the world, including those in Europe, Asia, and South America.

9. Describe and explain interactions, flows of people and materials, cultures, and differing approaches to urban sustainability planning across world regions.

10. Describe and explain how to effectively communicate sustainability principles to the public and elected officials to inspire action.

Planning Accreditation Board (PAB) Knowledge Components

This course covers the following PAB Knowledge Components:

1d) Human Settlements and History of Planning: understanding of the growth and development of places over time and across space.
1e) The Future: understanding of the relationships between past, present, and future in planning domains, as well as the potential for methods of design, analysis, and intervention to influence the future.
1f) Global Dimensions of Planning: appreciation of interactions, flows of people and materials, cultures, and differing approaches to planning across world regions.
2c) Quantitative and Qualitative Methods: data collection, analysis and modeling tools for forecasting, policy analysis, and design of projects and plans.
3c) Sustainability and Environmental Quality: appreciation of natural resource and pollution control factors in planning, and understanding of how to create sustainable futures.

A complete list of the PAB Knowledge Components can be found at http://www.sjsu.edu/urbanplanning/courses/pabknowledge.html

Required Course Readings:

All Readings are available either online through weblinks as listed within this Syllabus or will be uploaded to Canvas.

Course Assignments and Grading Policy:

Your grade for the course will be based on the following assignments:
<table>
<thead>
<tr>
<th>Assignment Title</th>
<th>Percent of Total Grade</th>
<th>Course Learning objectives covered</th>
</tr>
</thead>
<tbody>
<tr>
<td>Participation</td>
<td>20%</td>
<td></td>
</tr>
<tr>
<td>Personal Sustainability Goals</td>
<td>15%</td>
<td>5,10</td>
</tr>
<tr>
<td>Intro and Summary</td>
<td></td>
<td></td>
</tr>
<tr>
<td>First Paper – Community Analysis</td>
<td>15%</td>
<td>2,3,5,6,7</td>
</tr>
<tr>
<td>Second Paper – International</td>
<td>15%</td>
<td>5,6,7,8,9</td>
</tr>
<tr>
<td>Examples</td>
<td></td>
<td></td>
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<tr>
<td>Third Paper – Sustainability</td>
<td>20%</td>
<td>6,7,8,9,10</td>
</tr>
<tr>
<td>Proposal</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Take Home Exam</td>
<td>15%</td>
<td>1,2,3,7,9</td>
</tr>
</tbody>
</table>

**Participation**

This class only meets ten times during the semester. As such, each student is expected to be in attendance for every class. If you are sick or have an unavoidable conflict, please notify me in advance by email. Students will be expected to have read the required readings before the start of each class and be ready to discuss the key questions and issues raised. Class discussion is an important part of each class and thus participation is large contributor to the participation grade. Class discussions may include student presentations of selected readings.

**Additional details regarding the papers below and presentation will be provided in class handouts.**

**Personal Sustainability Goals**

At the start and during the course, students will identify a personal sustainability goal to accomplish during the course. The objective will be for each student to identify a personal target with respect to sustainability that they would like to achieve during the course of the 15-week semester. Sustainability goals could include a commitment to reduce electricity, natural gas, or water usage in the home, switch from driving to other transportation means, such as mass transit, biking, or walking, or another identifiable goal. Students will be asked to provide a brief ‘check in’ paper around week 6 and a final write up by the last class summarizing their accomplishments (or not) and lessons learned (for broader society) from the experience.

**Sustainability in Action – Three Part Evaluation**

Your main assignment for the class will be a three-part evaluation of sustainability principals in action through the lens of a selected community to study. Specifically, within these three related assignments, you will evaluate the principals of sustainability planning by examining (a) what are the characteristics of the community with respect to resource needs (energy, water, food), their ecological footprint, socio-economic characteristics (b) evaluating an international case study of a city or region that has incorporated sustainability practices and principles into the community, and (c) proposing a specific sustainability measure to ‘move the needle’ so that the community is more sustainable and resilient. The three specific components of this assignment are described further below and will be described more closely in class handouts –

**I. First Paper: Community Summary (Individual Assignment)**

The first paper will identify a community for evaluation – ideally a community encapsulated by one government jurisdiction (County, City) that has specific geographic boundaries and community characteristics. The first paper will summarize (a) the general characteristics of
the community (size, demographics, economic activity) (b) its resource needs and where they come from (power, water, food, materials), and (c) an initial evaluation of the community’s environmental “footprint” and socioeconomic characteristics.

II. Second Paper: Planning and Gap Analysis (Individual Assignment)
The second paper will provide a case study of an international city that has incorporated sustainability principles and practices into the community. The paper will specifically evaluate areas where the international community provides innovation, leadership, and best practices, with respect to sustainability, that would apply to the community you evaluated in the first paper.

III. Third Paper: Sustainability Policy / Proposal (Group Paper & Presentation)
In groups, based the research and background information from the first two papers – for one community, you will draft a proposal for a program, policy or tool that you will advocate be adopted by the community to address sustainability needs. This assignment will include both a report containing research and recommendations, and a presentation, to be conducted during Finals week in class.

Exam
One take home exam will be given, and will include essay questions.

Calculation of Final Course Letter Grade

<table>
<thead>
<tr>
<th>Grades</th>
<th>Criteria and Interpretation</th>
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<tbody>
<tr>
<td>A-, A and A+</td>
<td>For assignments that clearly demonstrate excellence, workplace-quality professionalism obvious dedication to meeting course learning objectives.</td>
</tr>
<tr>
<td>B-, B and B+</td>
<td>If work is above average in quality, thoroughness and presentation, where the student has demonstrated more of a commitment to quality work than an assignment graded with a C.</td>
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<tr>
<td>C-, C and C+</td>
<td>If student work is sufficient and acceptable, reserved for work of average quality.</td>
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<tr>
<td>D and F</td>
<td>Student work that is sub-par on all levels (D’s) or demonstrates the barest of minimal effort (F).</td>
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<tr>
<td>Zero</td>
<td>For assignments that are not submitted and/or assignments which do not adhere to the late-submission policy described herein.</td>
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Grades on student work will be assigned as follows:

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<th>Grades</th>
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<th>94-97</th>
<th>90-93</th>
<th>88-89</th>
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The course grade is comprised of six factors as described above (participation, assignments, and an exam). For each factor above, grades will be provided on a point scale (for example the first paper will be worth 15 points) and grades will be determined based on the percentage of the points available. Total grades will be added using this same methodology, based on the cumulative points totaled from the six factors.

**Other Grading Issues**

LATE PAPERS: Class Policy is that full credit for papers can only be earned if papers are submitted when required. For each week late, a paper will be marked down one whole letter grade (e.g., from an A to a B).

**Course Workload**

Success in this course is based on the expectation that students will spend, for each unit of credit, a minimum of forty-five hours over the length of the course (normally 3 hours per unit per week with 1 of the hours used for lecture) for instruction or preparation/studying or course related activities including but not limited to internships, labs, clinical practica. Other course structures will have equivalent workload expectations as described in the syllabus.

**Classroom Protocol**

Students should come to class prepared. Please be respectful of your colleagues and refrain from using electronic devices in a distracting manner. Students are encouraged to utilize technology to enhance classroom discussion, but should not plan to check email, Facebook, text messages, etc. during the class period.

**University Policies**

Per University Policy S16-9, university-wide policy information relevant to all courses, such as academic integrity, accommodations, etc. will be available on Office of Graduate and Undergraduate Programs’ Syllabus Information web page at http://www.sjsu.edu/gup/syllabusinfo/”

**Academic Integrity Statement, Plagiarism, and Citing Sources Properly**

Your commitment, as a student, to learning is evidenced by your enrollment at San Jose State University. The University Academic Integrity Policy S07-2 at http://www.sjsu.edu/senate/docs/S07-2.pdf requires you to be honest in all your academic course work. Faculty members are required to report all infractions to the office of Student Conduct and Ethical Development. The Student Conduct and Ethical Development website is available at http://www.sjsu.edu/studentconduct/.

Plagiarism is the use of someone else's language, images, data, or ideas without proper attribution. It is a very serious offense both in the university and in your professional work. In essence, plagiarism is both theft and lying: you have stolen someone else's ideas, and then lied by implying that they are your own.

Plagiarism will lead to grade penalties and a record filed with the Office of Student Conduct and Ethical Development. In severe cases, students may also fail the course or even be expelled from the university.
If you are unsure what constitutes plagiarism, it is your responsibility to make sure you clarify the issues before you hand in draft or final work.

Learning when to cite a source and when not to is an art, not a science. However, here are some common examples of plagiarism that you should be careful to avoid:

- Using a sentence (or even a part of a sentence) that someone else wrote without identifying the language as a quote by putting the text in quote marks and referencing the source.
- Paraphrasing somebody else's theory or idea without referencing the source.
- Using a picture or table from a webpage or book without reference the source.
- Using data some other person or organization has collected without referencing the source.

The University of Indiana has developed a very helpful website with concrete examples about proper paraphrasing and quotation. See in particular the following pages:

- Overview of plagiarism at www.indiana.edu/~istd/overview.html
- Examples of plagiarism at www.indiana.edu/~istd/examples.html
- Plagiarism quiz at www.indiana.edu/~istd/test.html

If you still have questions, feel free to talk to me personally. There is nothing wrong with asking for help, whereas even unintentional plagiarism is a serious offense.

Citation style

It is important to properly cite any references you use in your assignments. The Department of Urban and Regional Planning uses Kate Turabian's *A Manual for Writers of Research Papers, Theses, and Dissertations*, 8th edition (University of Chicago Press, 2013, ISBN 978-0226816388). Copies are available in the SJSU King Library. Additionally, the book is relatively inexpensive, and you may wish to purchase a copy. Please note that Turabian's book describes two systems for referencing materials: (1) “notes” (footnotes or endnotes), plus a corresponding bibliography, and (2) in-text parenthetical references, plus a corresponding reference list. In this class, students can select whichever system they prefer, so long as they use the same system consistently.

Accommodation for Disabilities

If you need course adaptations or accommodations because of a disability, or if you need to make special arrangements in case the building must be evacuated, please make an appointment with me as soon as possible, or see me during office hours. Presidential Directive 97-03 at http://www.sjsu.edu/president/docs/directives/PD_1997-03.pdf requires that students with disabilities requesting accommodations must register with the Accessible Education Center (AEC) at http://www.sjsu.edu/aec to establish a record of their disability.

You can find information about the services SJSU offers to accommodate students with disabilities at the Accessible Education Center website at www.sjsu.edu/aec.
Accommodation to Students' Religious Holidays

San José State University shall provide accommodation on any graded class work or activities for students wishing to observe religious holidays when such observances require students to be absent from class. It is the responsibility of the student to inform the instructor, in writing, about such holidays before the add deadline at the start of each semester. If such holidays occur before the add deadline, the student must notify the instructor, in writing, at least three days before the date that he/she will be absent. It is the responsibility of the instructor to make every reasonable effort to honor the student request without penalty, and of the student to make up the work missed. See University Policy S14-7 at http://www.sjsu.edu/senate/docs/S14-7.pdf.

Consent for Recording of Class and Public Sharing of Instructor Material

Common courtesy and professional behavior dictate that you notify someone when you are recording him/her. You must obtain the instructor’s permission to make audio or video recordings in this class. Such permission allows the recordings to be used for your private, study purposes only. The recordings are the intellectual property of the instructor; you have not been given any rights to reproduce or distribute the material.

Library Liaison

The SJSU Library Liaison for the Urban and Regional Planning Department is Ms. Toby Matoush. If you have questions, you can contact her at toby.matoush@sjsu.edu or 408-808-2096.

SJSU Writing Center

The SJSU Writing Center is located in Clark Hall, Suite 126. All Writing Specialists have gone through a rigorous hiring process, and they are well trained to assist all students at all levels within all disciplines to become better writers. In addition to one-on-one tutoring services, the Writing Center also offers workshops every semester on a variety of writing topics. To make an appointment or to refer to the numerous online resources offered through the Writing Center, visit the Writing Center website at http://www.sjsu.edu/writingcenter. The SJSU Writing Center is located in Room 126 in Clark Hall.

SJSU Counseling and Psychological Services

The SJSU Counseling and Psychological Services is located on the corner of 7th Street and San Fernando Street, in Room 201, Administration Building. Professional psychologists, social workers, and counselors are available to provide consultations on issues of student mental health, campus climate or psychological and academic issues on an individual, couple, or group basis. To schedule an appointment or learn more information, visit Counseling and Psychological Services website at http://www.sjsu.edu/counseling.

Dropping and Adding

Students are responsible for understanding the policies and procedures about add/drop, grade forgiveness, etc. Refer to the current semester’s Catalog Policies section at http://info.sjsu.edu/static/catalog/policies.html. Add/drop deadlines can be found on the current academic year calendars document on the Academic Calendars webpage at http://www.sjsu.edu/provost/services/academic_calendars/. The Late Drop Policy is available at
http://www.sjsu.edu/aars/policies/latedrops/policy/. Students should be aware of the current deadlines and penalties for dropping classes. Information about the latest changes and news is available at the Advising Hub at http://www.sjsu.edu/advising/.
## Overview of Course

<table>
<thead>
<tr>
<th>Week</th>
<th>Topic</th>
<th>Assignments Due</th>
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</thead>
<tbody>
<tr>
<td>Week 1</td>
<td>Introduction</td>
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<tr>
<td>August 21</td>
<td>Why sustainability?</td>
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<td></td>
<td>Sustainability &amp; Planning</td>
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<td>Easter Island – A cautionary tale</td>
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<tr>
<td>Week 2</td>
<td>Sustainability Theory I</td>
<td>Personal Sustainability Goals Paper</td>
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<tr>
<td>August 28</td>
<td>Ecological Worldviews</td>
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<td>Humans, Human Nature &amp; “Nature”</td>
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<td>September 4th</td>
<td>No Class</td>
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<td>Week 3</td>
<td>Sustainability Theory II</td>
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<td>September 11th</td>
<td>Capitalism, Economic Growth, and Environmental Limits</td>
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<td>Growth on a Finite Planet</td>
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<td>Week 4</td>
<td>Environmental and Socio-Economic Metrics</td>
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<td>September 18th</td>
<td>Climate Change, Peak Oil, Toxics</td>
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<td>Resource Depletion, Income inequality</td>
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<tr>
<td>September 25th</td>
<td>No Class</td>
<td>First Paper Due</td>
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<td>Week 5</td>
<td>Paradigm Shift to Sustainability</td>
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<td>October 2nd</td>
<td>Changes to our systems and worldviews</td>
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<td>Week 6</td>
<td>Planning and Sustainability</td>
<td>Sustainability Goal Check In</td>
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<tr>
<td>October 9th</td>
<td>Methodology &amp; Measurement Tools</td>
<td>Take Home Exam Given</td>
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<tr>
<td>October 16th</td>
<td>No Class</td>
<td>Take Home Exam Due</td>
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<td>Week 7</td>
<td>Sustainability Planning in Practice – Part 1</td>
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<td>October 23rd</td>
<td>Approaching Sustainable Development Principles, Values, Models</td>
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<tr>
<td>April 17</td>
<td>No Class</td>
<td>Second Paper Due</td>
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<td>Week 8</td>
<td>Sustainability Planning in Practice – Part 2</td>
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<td>November 6th</td>
<td>Methods, Case Studies</td>
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<td>November 13th</td>
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<td>November 20th</td>
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<td>Week 9</td>
<td>Sustainability Planning in Practice – Part 3</td>
<td>Guest Speaker</td>
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<td>November 27th</td>
<td>Case Studies continued</td>
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<td>Week 10</td>
<td>Sustainability in Everyday Planning – Translating Abstract Ideas</td>
<td>Personal Sustainability Goals Summary</td>
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<td>December 4th</td>
<td>Engaging the Public and Elected Officials</td>
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<tr>
<td>Finals Week</td>
<td></td>
<td>Group Papers Due</td>
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<td>Class Presentations</td>
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INTRODUCTION TO SUSTAINABILITY

Week 1 – Introduction – Why Sustainability? How does Sustainability relate to Planning?
The first week shall provide orientation as to what sustainability is and how it fits into the context of urban planning. The first class will also include a pop quiz (not graded) that will inform our later discussions in class and a presentation on the cautionary tale of Easter Island and how its experience informs sustainability planning.

Required Readings

SUSTAINABILITY THEORY

Week 2 – Ecological Worldviews – Understanding Nature and how we relate to it
What is nature? What is the environment? How do we perceive ourselves and humanity with respect to the environment and nature and vice versa? This week will explore human worldviews in how our concept of nature, the environment, and natural resources has changed from the dawn of civilization through the scientific revolution, enlightenment, modernism, and post-modernism to today – and how this affects sustainability. We also explore the psychology of the human brain, what influences our day to day decision-making, our tendencies to discount the future and avoid cognitive dissonance, and implications regarding sustainability.

Required Readings

Week 3 – Our Economy, Economic and Population Growth, and Environmental Limits
What are the origins of our current economic system, including the creation of money, banking and debt? What economic theories provide the foundation for how our economy works? How and why does our current economy depend on “growth”? How does a reliance and presumption of continued growth present environmental and sustainability challenges within a finite planet? What
potential future lies ahead if these growth rates continue? Can technology, innovation and resource substitution allow for continued economic and population growth on a finite planet?

**Required Readings**


**Week 4 – Current Environmental Challenges**

What is the status of the world today with respect to the health of our environment? What major environmental challenges have we identified that threaten the continuance of our modern societies? What will occur if we continue on a “business as usual” approach as a global society?

**Required Readings**

- Heinberg, Chapter 3.
- Heinberg, Richard – Museletter #311, The End of Growth, Seven Years Later
  [http://richardheinberg.com/museletter-311-end-growth-seven-years-later](http://richardheinberg.com/museletter-311-end-growth-seven-years-later)
- Turner, Graham and Alexander, Cathy - Limits to Growth was Right. The Guardian, September 1, 2014
  [https://www.theguardian.com/commentisfree/2014/sep/02/limits-to-growth-was-right-new-research-shows-were-nearing-collapse](https://www.theguardian.com/commentisfree/2014/sep/02/limits-to-growth-was-right-new-research-shows-were-nearing-collapse)
- Steffen, Will, et all Trajectories of the Earth System in the Anthropocene. Proceedings of the Natural Academy of Sciences of the United States. August 6, 2018
  [http://www.pnas.org/content/early/2018/07/31/1810141115](http://www.pnas.org/content/early/2018/07/31/1810141115)

**Week 5 – A Paradigm Shift to Sustainability**

What is the status of the world today with respect to wealth distribution, income disparity, and environmental justice? Are there viable alternatives to our current socio-economic system that result in a more sustainable society? What are these alternatives and what structural changes to our current worldview, values and socio-economic framework would be required?

**Required Readings**

- Heinberg, Chapter 6
PLANNING & SUSTAINABILITY

Week 6 – Land Use Planning and Sustainability – Methodology and Tools
How can land use planning address sustainability? What tools and metrics can we use to evaluate sustainability and provide a barometer for meeting sustainability objectives? What programmatic approaches can be used in planning to address environmental challenges associated with Climate Change, energy needs, water and natural resources?

Required Readings
- Wheeler, Chapter 6 - “Tools for Sustainability Planning”
  [link]
- Sustainable San Mateo. Indicators for a Sustainable San Mateo County. 2016. Materials found at [link]

Week 7 – Sustainability Planning in Practice – Principles
What principles and methodologies are used in approaching Sustainability Planning and Sustainable Development? What utopian ideals that form in part the origins of modern land use planning relevant for regional planning and sustainability?

Required Readings
  [link]
- Heinberg, Richard and Fridley, David, Our Renewable Future, 2016, Chapters 9 & 10
  [link]

Week 8 – Sustainability Planning in Planning – Greening / Food Systems / Biophilic Design / and methods
What are examples and principles of urban planning that incorporates sustainability principles through creating resilient local sustainable food systems and introducing greening and biophilic design to better integrate our built environment with nature and avoid concepts of duality between civilization and the environment.

- Roseland, Mark. Towards Sustainable Communities Chapter 4
  [link]
• Beatley, Thomas. *Handbook of Biophilic City Planning and Design*. 2017. Chapters 2 & 4

**Week 9 – Sustainability Planning in Planning – Energy / Water / Climate Change – mitigation & adaptation**

What are examples and principles of urban planning that incorporate sustainability principles in sustainable energy and water systems? How have cities acted to both reduce climate change impacts and become more resilient through climate change adaptation?

**Required Readings**

• Roseland, Mark. *Towards Sustainable Communities* Chapter 5, 7, 13, 14
• Wheeler, Stephen B. *Planning for Sustainability: Creating Livable, Equitable, and Ecological Communities*, Chapters 7 & 8

**Week 10 – Sustainability in Everyday Planning**

Can we truly change our worldviews, values, and basic life goals to meet sustainability needs? Given the environmental challenges ahead, can we do it in time? What is it about humanity & the human brain that makes it difficult for us to “think sustainably”? How do we convince elected officials to pursue, and continue to pursue sustainability goals, given our cultural paradigm and natural inclinations work against this?

**Required Readings**


**Finals Week - Student Presentations**

Students make a 15-20-minute presentation (using PowerPoint, overheads, or other necessary aids).
Supplemental Bibliography


