URBAN 508 Course Syllabus

University of Washington

Department of Urban Design and Planning

URBDP 508B (SLN 23178)

SITE PLANNING FOR SUSTAINABLE DEVELOPMENT

APPLYING **EMERGENT TECHNOLOGIES**

CREATING **COMMUNITY**

Course Syllabus

Fall Quarter 2024

Tuesday, Thursday 1:30 p.m.- 5:20 p.m.

Gould 416

5 Credits per Quarter- Graded[1]

Office Hours by appointment

Instructors:

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Course Description

Sustainably designed sites generate less waste, minimize impact on the landscape, and use less energy, water, and natural resources than conventional development. While there is general agreement that fostering very low-impact development would be in the public interest, would our regulatory constructs, available technologies and design approaches allow us to achieve this goal? Would our economic and social patterns support this pattern of development? Can very low-impact development be environmentally and economically feasible? If not, what needs to change such that innovative approaches can become feasible?

This Fall Quarter's studio class will investigate these issues through the design and development of a site plan for a future community of 4,000 residents located in Whatcom County. The design of this site will incorporate leading-edge, decentralized infrastructure technology; progressive design standards and construction methods to lower operational (energy) and embodied (materials) carbon, promote innovative water use/reuse, and reduce/recycle waste in buildings; and low-impact development techniques. This class is part of an on-going initiative to explore the applicability of self-contained, lower impact development as a means of addressing future housing needs.

This Studio will focus on both advancing new approaches to address the realities of climate change and developing a new and replicable model for redefining low-impact residential development as

decentralized infrastructure and self-contained sustainable communities. The approach is multi-fold and involves technology, community building and the ability to predictably obtain regulatory entitlements in Washington State.

Key issues and questions to be considered:

- Current planning theory favors directing density to urban areas which already have infrastructure as a means of minimizing the cost and maximizing the benefits of providing services and utilities, reducing environmental impacts associated with transportation and preserving open space and rural lands. Can these goals be achieved through distributed infrastructure and self-contained communities?
- Could higher-density, self-contained communities which are supported by distributed infrastructure have less environmental impact and be more energy, water and waste neutral than conventional development of the same site at currently allowed lower densities? Could this approach provide for less-costly and more beneficial infrastructure and on-going services?
- Can developing technologies and development techniques be applied to facilitate innovative self-contained development in a cost-effective and environmentally beneficial manner? Would long-term operational costs negate any savings realized? What are long-term environmental costs and benefits?
- What regulatory constraints need to be revised to facilitate distributed infrastructure and self-contained communities? Are there new regulations or incentives that could enhance opportunities for their development?
- Would the anticipated social, environmental, and economic positive benefits for the surrounding community significantly off-set any real or perceived negative impacts? How could these impacts be reduced?

Objectives of Course

This course aims to accomplish the following objectives:

1. Assess whether the proposed distributed infrastructure and self-contained community approach would result in greater social, environmental, and economic benefits and lesser operational costs than conventional development of the same site at lesser density.
2. Determine if new technology can be employed to support more intensive development with greater environmental benefits than conventional development.
3. Assess which technologies are most applicable to the test site and would cost-effectively contribute to reaching project goals.
4. Identify development patterns and supporting uses that would help facilitate the creation of community and neighborhood identity. Identify thresholds that might support a limited local economy (to reduce off-site trips).
5. Identify challenges and opportunities associated with current regulations and technical approaches that reduce and/or can enhance the likelihood of lower-impact development.
6. Posit potential revisions and/or additions to existing regulations as well as those that would codify and allow new technology to be employed as a means of reducing negative impacts while increasing social, environmental, and economic benefits.
7. Develop professional skills in site assessment and design. Develop a functional understanding of the following steps in the site planning process: Defining the problem; Programing and the analysis of the site and user; and Schematic design and preliminary cost/impact estimates.

Required and Recommended Texts

Kevin Lynch and Gary Hack. 1984. *Site Planning* 3rd edition. Cambridge: MIT Press (**required**)

LaGro, James A. Jr. 2008. *Site Analysis: A Contextual Approach to Sustainable Land Planning and Site Design* John Wiley & Sons (**recommended**)

Participation and Assignments

This course will be highly participatory. Its success will rest on your participation and involvement. Participants are expected to work in teams and individually to complete assignments in a competent and timely manner.

Expectations and Grading

You are expected to:

1. Attend and actively participate in scheduled classes.
2. Prepare and submit assignments in a timely manner
3. Contribute to the effectiveness of your team.

Grades will be based on:

1. How regularly and actively you participate in class discussions and activities.
2. Completion of all assigned tasks.
3. Your effectiveness as a team member.

Grades are distributed by:

Class Participation and Attendance	45%
Preparation of Assigned Materials	40%
Leadership, Teamwork and Initiative	15%

[1] MLA and MArch students may register for an additional 1 credit via independent study to meet studio requirements.

COURSE SCHEDULE – PRELIMINARY DRAFT (19 September 2024)

Fall Quarter

	Tuesday	**Thursday**
WK 1		9.26 Introductions Course Overview

		Site Planning Process and Site Analysis (Lynch pp 1-12; 420-23) (URBDP 598H Final Report)
	SATURDAY SITE VISIT – 9.28 PROJECT SITE (Bellingham)	
WK 2	10.1 Site Analysis Team formed Technology Team formed (Lynch pp 29-66)	10.3 Work Day
WK 3	10.8 Site Analysis Pin-up Technology Takeaways Presentation	10.10 Program Development Technology Case Study Research **Presentation: Enabling Innovation: Finding the Legal Basis** (Robbie Sepler)
WK 4	10.15 Program Discussion (Lynch pp 107-125)	10.17 Site Planning Primer Site Planning Exercise (Lynch pp 127-143)
WK 5	10.22 Conceptual Site Planning Teams Formed (Lynch pp 193-250)	10.24 Work Day
WK 6	10.29 Work Day – Crits by Team	10.31 Concept + Program Pin-up by Team (Outside Reviewers)
WK 7	11.5	11.7

	Concept + Program Refinement Directed Research	Directed Research Discussion
WK 8	11.12 **Presentation: Setting the Stage for Assessment** (Julie Kriegh) Site Plan Alternatives Discussion	11.14 Schematic Site Planning Teams Formed
WK 9	11.19 Work Day – Crits by Team	11.21 Work Day – Crits by Team
WK 10	11.26 **Pin-up – Schematic Site Plan by Team** (Outside Reviewers)	11.28 No Class - Thanksgiving
WK 11	12.3 Work Day – Crits by Team	12.5 **Final Presentation** (Sponsors and Outside Reviewers)