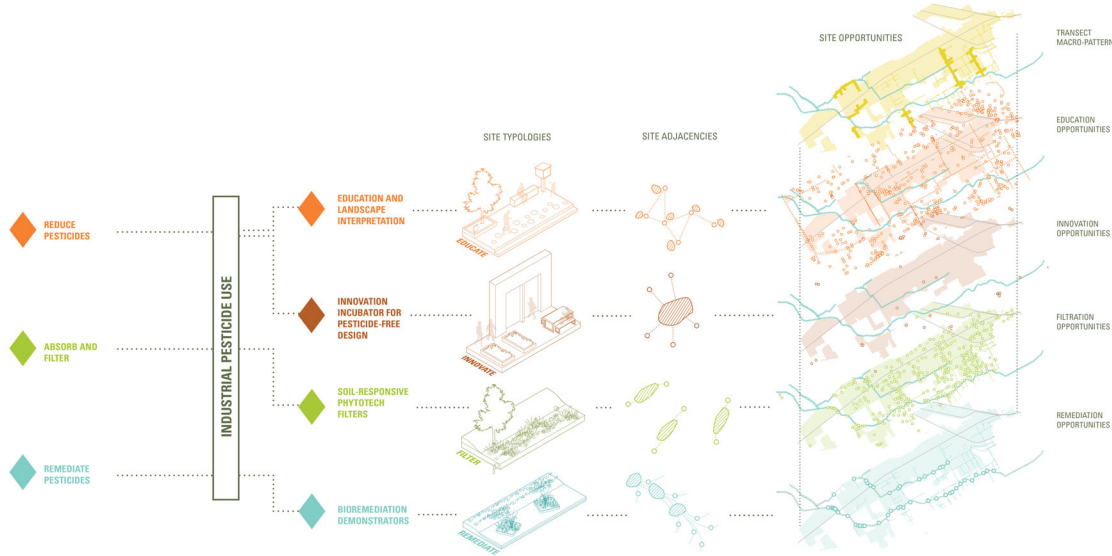# LA 610 Fall 2021
EMERGENT URBAN NATURES
CRN 18262 – Monday, Wednesday, Friday 1:00pm-4:50am in 312 LA Lawrence Hall

Instructor: **Ignacio López Busón**, ilopezbu@uoregon.edu (Office Lawrence 311)

Post-Pesticide Eugene. Fall 2020 LA539 Studio
J.Witzleben, G.Graham, N.Dorkina, D.Teller

"There are no separate systems. The world is a continuum. Where to draw a boundary around a system depends on the purpose of the discussion."

— *Donella H. Meadows, Thinking in Systems*

COURSE DESCRIPTION:

Referring to cities, Nicholas de Monchaux stated in his book Local Code that "it is impossible to imagine physical resilience without social, cultural and economic resilience as well." This also holds for the presence of nature in the urban realm. Unless landscape architects understand how social, cultural, and economic systems can affect and interweave with environmental systems, their role in shaping contemporary cities and the actual existence of urban natures will be at risk of becoming merely cosmetic.

The value of urban green infrastructure is beyond question today, and it will continue to grow exponentially in a rapidly urbanizing world. Green infrastructure can take many shapes, and its impact varies greatly depending on its scale, implementation, and purpose: stormwater management, heat-island effect, mental health, local ecosystems, urban comfort, food production, air pollution… Despite all these benefits, the ever-growing economic pressure in urban environments is a constant threat to the emergence of new bodies of nature. Consequently, understanding the multi-fold properties of green infrastructure and linking them to specific urban processes will be essential to guarantee their future existence.

This studio will focus on the study of symbiotic relationships between environmental, social, and economic phenomena in order to determine optimal locations for the potential design and development of green infrastructure within contemporary cities.

CONTEXT:

Designing with systems is, by definition, both a multi-disciplinary and a multi-scalar challenge, and if specific goals are to be achieved, it is essential to know where to draw a boundary. For this studio's purpose, we will focus on urban and spatial systems in the city of Eugene (Oregon) as a way of answering why and where new bodies of nature could or should exist. To center the focus of this course, we will be analyzing natural and urban phenomena along Amazon Creek, "the largest and most complex waterway managed by the City of Eugene". The Open Waterway Maintenance Plans document developed by Eugene's Public Works department in 2014, outlines the environmental challenges the creek is undergoing today:

> "Amazon Creek receives a significant amount of stormwater runoff from residential, commercial and industrial properties, associated roadways, and other impervious surfaces. Thus, water quality issues along the entire creek length are primarily related to non-point source pollution created from runoff from the urban environment. Throughout the basin this runoff has led to increased peak flows, increased erosion, and associated bank stability problems, all of which have led to increased sediment loading. In addition, runoff carrying pollutants such as heavy metals, pesticides, fertilizers, and bacteria are also contributing to the degradation of water quality in the basin."

The Amazon Creek's watershed, with a total area of 10.000 acres, provides enough diversity of urban conditions (including natural, suburban, agricultural and industrial land) for the students to face the challenge of analyzing, understanding, and designing for complex systems.

It will be the students' task to evaluate social and environmental variables at the city scale (along the creek); find optimal spaces for green infrastructure, plan for their systemic implementation; determine their program and purpose based on their location; and finally develop design rules that would guarantee the ecological integration and sustainable growth of these new emergent urban natures.

METHODS AND DELIVERABLES:

This studio is the first chapter in the 2021 Landscape studios sequence: Systems (Fall), Landforms (Winter) and Materials (Spring). As such, more emphasis will be put on how the analysis of social-environmental systems and their relationship across scales determine the location, purpose and program of urban green infrastructure. The material and technical development of such spaces will be potentially the topic of subsequent studios.

This studio will have the support of the **LA 551 – Landscape Media I** class to ensure a high quality output throughout the entire course.

The course will be structure in four main phases to be detailed in the course calendar:

1. Introduction to GIS technology and methods (1 week)
2. Mapping and analysis (2 weeks)
3. Strategic planning (2 weeks)
4. Design guidelines (2 weeks)
5. Documentation and presentation (2 weeks)

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Each phase will start with an introductory lecture to describe the goals, process and references. The rest of the time will be used for specific workflows tutorials and desk-crits. The students are expected to work continuously on their projects and be ready to present their progress on every class. Every class will be recorded and uploaded online to be accessible to all students.

Students will team up in groups of three to work collaboratively for the entire studio. Each group will generate a presentation at the end of each phase to show their progress. The final presentation will include a booklet documenting their entire studio research.

RECOMMENDED SOFTWARE:

While the **LA 551 – Landscape Media I** class will guide the students in the use of the Adobe Suite, we will allocate some time in this studio to learn specific workflows related to QGIS and Rhino 7. The use of QGIS will be necessary for the collection of GIS data. Rhino 7 will be used for the generation of a site 3d model and further analysis and 3d visualization. The Adobe Suite will be used for 2d diagrams, collages and layouts for the presentations and final booklets.

Please, have the following software ready to use before the start of the course:

- **Rhino 7.0** (Free 90-day trial. Download at https://www.rhino3d.com/
- **QGIS** (Free software. Download at https://qgis.org/en/site/forusers/download.html
- **Adobe Suite** (Photoshop, Illustrator, InDesign)
  Download at: https://www.adobe.com/creativecloud/buy/students.html

GRADING:

Consistent with all Department of Landscape Architecture studios, this course is graded Pass/No Pass with formative and summative feedback throughout the quarter. Formative feedback will be provided by the instructors throughout the session. Summative feedback based on achievement of the course learning objectives will be provided by the instructors after the final class.

The following grading rubric provides a qualitative assessment of how student work does or does not meet class expectations:

- **Pass:** The student has completed all work, and shown an adequate ability to grasp design concepts, theories, and practices, producing adequate creative/critical work. The student has demonstrated an adequate ability to present these ideas in a clear, organized, and evocative manner.

- **Marginal Pass:** The student's work did not meet all of the requirements, and/or demonstrated a minimal understanding of the fundamental nature of design with a performance that does not adequately examine the concepts, theories, and practices of design critically or constructively.
  The student has demonstrated a limited ability to present these ideas in a clear, organized, and evocative manner. A marginal pass may also signify limited effort and/or poor attendance.

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- **No Pass:** The student has demonstrated a lack of understanding or familiarity with design concepts, theories, and practices. Their performance has been inadequate. Failure is often the result of minimal effort and poor attendance that may indicate that the student is not in the proper field of study.

TERM SCHEDULE (subject to change):

Week 1	M	09/27	STUDIO INTRO
	W	09/29	INTRO TO GIS
	F	10/1	TUTORIALS
Week 2	M	10/4	INTRO TO MAPPING AND ANALYSIS + TUTORIALS
	W	10/6	TUTORIALS
	F	10/8	DESK-CRITS
Week 3	M	10/11	DESK-CRITS
	W	10/13	DESK-CRITS
	F	10/15	INTERNAL PRESENTATION
Week 4	M	10/18	INTRO TO STRATEGIC PLANNING + TUTORIALS
	W	10/20	DESK-CRITS
	F	10/22	DESK-CRITS
Week 5	M	10/25	DESK-CRITS
	W	10/27	DESK-CRITS
	F	10/29	INTERNAL PRESENTATION
Week 6	M	11/1	INTRO TO DESIGN GUIDELINES + TUTORIALS
	W	11/3	DESK-CRITS
	F	11/5	DESK-CRITS
Week 7	M	11/8	DESK-CRITS
	W	11/10	DESK-CRITS
	F	11/12	INTERNAL PRESENTATION
Week 8	M	11/15	MID-TERM REVIEW
	W	11/17	DESK-CRITS
	F	11/19	DESK-CRITS
Week 9	M	11/22	DESK-CRITS
	W	11/24	THANKSGIVING
	F	11/26	THANKSGIVING
Week 10	M	11/29	STUDIO FINAL REVIEW WEEK
	W	12/1	STUDIO FINAL REVIEW WEEK
	F	12/3	STUDIO FINAL REVIEW WEEK
Week 11	M	12/6	NO CLASS
	W	12/8	NO CLASS
	F	12/10	FINAL SUBMISSION

CLASS FORMAT AND COMMUNICATION:

Class meeting times will be as stated above unless agreed otherwise beforehand. Students will be expected to be working asynchronously outside of class time to learn the computational techniques of the course. There will be tutorials provided customized to this courses content. Class time will be to discuss the tutorials and review the developments of the students. To facilitate communication between students and teacher, the following provided platforms will be used:

- **Canvas:** General info, schedule, announcements, grades, submissions and links
- **Microsoft Teams:** For quick questions and informal communication
- **Zoom:** For specific reviews and lectures
- **Miro:** Reviews and brainstorming
- **OneDrive:** File exchange and work repository

OFFICE HOURS:

The instructor holds regular office hours throughout the week. If your schedule conflicts with scheduled office hours, please email the instructors to set up an alternate day/time to meet.

Office hours are a good opportunity to:

- discuss the class, and landscape architecture generally (for academic and/or professional purposes)
- discuss or ask questions about an assignment, including provisional ideas, concepts, theses, approaches
- review a draft of an assignment
- request clarification of feedback, comment, assessment, or grade

EXPECTATIONS:

Highest professional standards will be expected and maintained throughout the class, including, but not limited to: active in-class participation and progress, preparation for class activities and milestones, respecting the rights and property of others, working cooperatively with other students as needed, and completing assignments to the best of your abilities and on time.

ATTENDANCE POLICY:

Class times are crucial moments in both space and time for the design development of the student. All class meetings are required. Absences will require prior approval (only for special and urgent personal circumstances, such as severe illness, medical emergencies, family bereavement, etc.); absences beyond that allowed in this policy without prior approval may result in failing the class.

DEADLINES, EXTENSIONS, INCOMPLETE POLICY:

Assignments are due as noted by the instructors. Email the instructors as soon as you can if anything may prevent you from meeting a deadline as scheduled. Failure to submit an assignment(s) on time may result in a Marginal Pass or a No Pass grade.

RETAINING COPIES OF ALL COURSEWORK:

Please retain copies of all work submitted and the original copy of all work returned to you during the session until the final course grade has been posted. In the event of any question concerning whether grades have been accurately recorded, it is your responsibility to provide these copies as documentation.

PROJECT OWNERSHIP, PUBLICATION, & PUBLICITY:

Work created for credit and/or using the facilities of the School of Architecture and Environment belongs jointly to the school and the student. The SAE reserves the right to document and display all original work for the purpose of documenting student performance as mandated by the National Architecture Accrediting Board [NAAB]. Furthermore, the school reserves the non-exclusive right to use images or likenesses of the work for publicity and display in print and electronic media as well as to submit such work for competitively reviewed exhibitions or to various award programs, The School and its representatives [including faculty and teaching staff] have the non-exclusive right to use such work as illustrations in scholarly and/or technical publications and presentations.

ACADEMIC RESOURCES:

The University's Tutoring and Academic Engagement Center (Knight Library, 4th Floor, 541.346.3226) provides various programs, workshops, courses, tutors, and mentors to aid you in your coursework at the University of Oregon. One of the services that may be of particular benefit for this class is the Center's Writing Tutor sessions, which provides one-on-one feedback on writing assignments. See **https://engage.uoregon.edu/tutoring/** for information on session days and times.

ACADEMIC MISCONDUCT:

The University Student Conduct Code (available at https://conduct.uoregon.edu) defines academic misconduct. Students are prohibited from committing or attempting to commit any act that constitutes academic misconduct. By way of example, students should not give or receive (or attempt to give or receive) unauthorized help on assignments or examinations without express permission from the Instructor. Students should properly acknowledge and document all sources of information (e.g. quotations, paraphrases, ideas) and use only the sources and resources authorized by the Instructor. If there is any question about whether an act constitutes academic misconduct, it is the students' obligation to clarify the question with the Instructor before committing or attempting to commit the act. Additional information about a common form of academic misconduct, plagiarism, is available at https://researchguides.uoregon.edu/citing-plagiarism.

ACCESSIBLE EDUCATION:

The University of Oregon is working to create inclusive learning environments. Please notify the Instructor if there are aspects of the instruction or design of this course that result in disability-related barriers to your participation. You are also encouraged to contact the Accessible Education Center in 360 Oregon Hall at 541-346-1155 or uoaec@uoregon.edu.

EQUITY AND INCLUSION:

The University of Oregon is a place where people from different cultures and experiences learn together; understanding and respecting these differences are critical for the University to be a place of open-minded inquiry where, in challenging the boundaries of knowledge, we include and value all members of our community. The university values our diversity and seeks to foster equity and inclusion in a welcoming, safe, and respectful community.

For more information or assistance, you are also encouraged to contact the following campus services:

- Division of Equity and Inclusion
  1 Johnson Hall
  541.346.3175
  http://inclusion.uoregon.edu/

- Center for Multicultural Academic Excellence (CMAE)
  164 Oregon Hall
  541.346.3479
  https://inclusion.uoregon.edu/content/center-multicultural-academicexcellence-cmae

- Center on Diversity and Community (CoDaC)
  54 Susan Campbell Hall
  541.346.3212
  http://codac.uoregon.edu/

UO COVID-10 REGULATIONS:

The campus is open to the public. Before coming to campus check your symptoms. The University of Oregon (UO), in accordance with guidance from the Centers for Disease Control, Oregon Health Authority, and Lane County Public Health requires faculty, staff, students, visitors, and vendors across all UO locations to use face coverings indoors in all UO facilities regardless of vaccination status. Face coverings can be removed when alone in a room or cubicle, or in an area specifically designated for eating. Face coverings must fully cover the nose and mouth. Mesh masks, lace masks, and other face coverings with openings, valves, holes, vents, or other visible gaps in the design or material are not in compliance with this policy. Students unable to wear face coverings can work with the Accessible Education Center to find a reasonable accommodation. Students refusing to wear a face covering will be asked to leave the building. Face coverings are not required outdoors.

Physical distancing is not required. However, individuals are encouraged to maintain distance when possible, especially when eating or if not fully vaccinated.

Students should make use of hand sanitizer upon entering UO buildings where available, and should make use disinfecting wipes in classrooms and common areas where available.

For more information on UO COVID-19 regulations and expectations, see the UO coronavirus website.

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MENTAL HEALTH AND WELLNESS:

Life at college can be very complicated. Students often feel overwhelmed or stressed, experience anxiety or depression, struggle with relationships, or just need help navigating challenges in their life. If you are facing such challenges, you do not need to handle them on your own-—there is help and support on campus.

As your Instructor if I believe you may need additional support, I will express my concerns, the reasons for them, and refer you to resources that might be helpful. It is not my intention to know the details of what might be bothering you, but simply to let you know I care and that help is available. Getting help is a courageous thing to do—for yourself and those you care about.

University Health Services helps students cope with difficult emotions and life stressors. If you need general resources on coping with stress or want to talk with another student who has been in the same place as you, visit the Duck Nest (located in the EMU on the ground floor) and get help from one of the specially trained Peer Wellness Advocates. Find out more at: https://health.uoregon.edu/ducknest

University Counseling Services (UCS) has a team of dedicated staff members to support you with your concerns, many of whom can provide identity based support. All clinical services are free and confidential. Find out more at https://counseling.uoregon.edu or by calling 541-346-3227 (anytime UCS is closed, the After-Hours Support and Crisis Line is available by calling this same number).

PROHIBITED DISCRIMINATION AND HARASSMENT REPORTING:

The instructors are student-directed employees. For information about our reporting obligations as an employee, please see Employee Reporting Obligations on the Office of Investigations and Civil Rights Compliance (OICRC) website: https://investigations.uoregon.edu/employeeresponsibilities#employee-obligations.

Students experiencing any form of prohibited discrimination or harassment, including sex or gender-based violence, may seek information and resources at safe.uoregon.edu, respect. uoregon.edu, or investigations.uoregon.edu or contact the non-confidential Title IX office/Office of Civil Rights Compliance (541-346-3123), or Dean of Students offices (541-346-3216), or call the 24-7 hotline 541-346-SAFE for help. We are also mandatory reporters of child abuse. Please find more information at Mandatory Reporting of Child Abuse and Neglect (https://hr.uoregon.edu/policies-leaves/general-information/mandatory-reportingchild-abuse-and-neglect).

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SCHEDULE AND PROJECT CHANGES:

The schedule and/or the projects may be adjusted at the discretion of the instructors during the course of the term. Any adjustments will be communicated to you as soon as is reasonably possible.

INCLEMENT WEATHER:

It is generally expected that class will meet unless the University is officially closed for inclement weather. If it becomes necessary to cancel class while the University remains open, this will be announced on Canvas and by email. Updates on inclement weather and closure are also communicated in other ways described here: https://hr.uoregon.edu/about-hr/campus-notifications/inclement-weather/inclement-weather-immediate-updates

ACADEMIC DISRUPTION DUE TO CAMPUS EMERGENCY:

In the event of a campus emergency that disrupts academic activities, course requirements, deadlines, and grading percentages are subject to change. Information about changes in this course will be communicated as soon as possible by email, and on Canvas. If we are not able to meet face-to-face, students should immediately log onto Canvas and read any announcements and/or access alternative assignments. Students are also encouraged to continue the readings and other assignments as outlined in this syllabus or subsequent syllabi.

EMERGENCY INFORMATION:

In Case of Emergency: CALL 911.

In case of non-emergency assistance: Call the UO Police Department at 541.346.2919

If we need to evacuate the building during class, two possible evacuation routes include exiting LA 400 and taking the stairs next to the studio to the ground floor, and then a) exiting through the front (south) of Lawrence Hall, or b) exiting through a side (west) entrance of Lawrence Hall.

If we need to evacuate the building during class, our designated assembly point is on the Old Quad, located west of Lawrence Hall.

Be sure your cell phone is set up to receive UO Alert text messages: 1) Login to DuckWeb, 2) Click on the "Personal Information" menu, and 3) Click on "Enter/Update Emergency Alert Phone."

More information on emergency preparedness can be found online: https://emc.uoregon.edu/content/resources-students

SUGGESTED READING:

Alexander, C., Ishikawa, S., & Silverstein, M. (2010). A pattern language: Towns, buildings, construction. New York: Oxford Univ. Pr.

Alexander, C., & Poyner, B. (1966). The atoms of environmental structure. London, Eng.: Great Britain, Directorate of Development.

Benedict, M. A., McMahon, E. T., & A., T. C. (2012). Green Infrastructure: Linking Landscapes and Communities. Washington: Island Press.

Brown, R. D., & Gillespie, T. J. (1995). Microclimatic landscape design: Creating thermal comfort and energy efficiency. New York: Wiley.

Cantrell, Bradley. Responsive Landscapes: Strategies for Responsive Technologies in Landscape Architecture. Routledge, 2017.

Cantrell, B., & Mekies, A. (2018). Codify: Parametric and computational design in landscape architecture. London: Routledge.

Cantrell, Bradley. Modeling the Environment: Techniques and Tools for the 3D Illustration of Dynamic Landscapes. 2012.

Cheshire, J. U. (2018). Where the animals go: Tracking wildlife with technology in 50 maps and graphics. UK: Penguin Books.

De Monchaux, Nicholas. Local Code - 3,659 Proposal about Data, Design & the Nature of Cities. Princeton Architectural Press, 2016

Dover, J. W. (2015). Green infrastructure: Incorporating plants and enhancing biodiversity in buildings and urban environments. London: Routledge, Taylor & Francis Group, Earthscan from Routledge.

Forman, R. T. (2014). Urban ecology: Science of cities. Cambridge: Cambridge University Press.

Gehl, J. (2003). Life between buildings. Seul: Pronsol Publishing.

Jacobs, J. (2011). The death and life of great American cities. New York, NY: Modern Libray.

Johnson, S. (2002). Emergence: The connected lives of ants, brains, cities and software. London: Penguin.

Lima, Manuel. Visual Complexity: Mapping Patterns of Information. Princeton Architectural Press, 2013.

Lynch, K. (1979). The image of the city. Cambridge, MA: MIT Pr.

Marshall, S. (2005). Streets and patterns: The structure of urban geometry. London: Spon.

Marshall, S. (2009). Cities design and evolution. Abingdon, Oxon: Routledge.

McHarg, I. L. (1995). Design with nature. New York: John Wiley.

Meadows, D. H. (2015). Thinking in systems: A primer. White River Junction, VT: Chelsea Green Publishing.

Olgyay, V. (2015). Design with climate: Bioclimatic approach to architectural regionalism. Princeton: Princeton University Press.

Otto, F. (2011). Occupying and connecting: Thoughts on territories and spheres of influence with particular reference to human settlement. Stuttgart: Menges.

Waldheim, C. (2006). The landscape urbanism reader. New York: Princeton Architectural Press.

Walliss, Jillian, and Heike Rahmann. Landscape Architecture and Digital Technologies: Re-Conceptualising Design and Making. Routledge, 2016.

Weinstock, M. (2013). System City: Infrastructure and the space of flows. Chichester: Wiley.

Wilson, W. (2011). Constructed climates: A primer on urban environments. Chicago: The University of Chicago Press.

Wilson, W. (2017). Stormwater: A resource for scientists, engineers, and policy makers. Chicago: The University of Chicago Press.