COURSE INTRODUCTION

Like most major cities, Columbus’ relationship with its rivers and their watersheds has been an abusive one at best. Recent developments such as the City’s Wet Weather Management Plan have coupled with the emerging, obligatory, notion of sustainability/ecology as development driver, causing Columbus to reconsider this long-standing antagonism. The Olentangy River is, arguably, the most urbanized, and thus most highly impacted of Columbus’ urban rivers. For much of the last century, the Olentangy River has acted not only as funnel for the city’s urban run-off, but also as a convenient route for the city’s sanitary waste and transportation conduits. While the river will invariably continue to serve as a major hub and channel for civic infrastructure, can it become something else as well? A number of recent plans have suggested that the Olentangy River might be transformed into a river greenway, connecting important habitat and recreational landscapes along it’s lower reaches. But beyond the vision statements and sustainability aphorisms how will this happen?

This course will consider the 2012 study “Olentangy River Greenway” as a starting point for critical investigation into, and design speculation on, the future of the river. Throughout this project we will explore the central question: How does the suggestion of a highly public program act within and respond to a chemically, biologically and ecologically altered, infrastructuralized and highly dynamic site?
COURSE GOALS
During this course students will:

- Continue development of site analysis and site design skills.
- Develop a grounding in contemporary landscape theory around systems and infrastructure.
- Utilize systems diagramming as a method of breaking down complex systems into understandable parts.
- Utilize analysis as a way to identify a critical point for design intervention.
- Further site design skills relative to a medium scale, publicly accessible, site within a much larger context.
- Gain an understanding of tools and strategies for intervening within a dynamic site.
- Author a critical and responsive design intervention within the Lower Olentangy River Watershed.

COURSE ASSIGNMENTS

Studio Project
Each student will be responsible for two major assignments during the course of the quarter. The most important of these is, of course, the design project. The design project will be broken into four stages:

Site Analysis:
In site analysis we will elaborate on the physical site considerations and design drivers that have been introduced in previous classes. The site analysis will form the basis for understanding where and how to best intervene within the river in order to facilitate community desires expressed in the Low head dam removal plan. You will receive a progress grade at the end of the physical site analysis portion of the course.

Precedent Analysis:
We will look to two distinct types of precedent projects in order to inform our eventual proposals and design interventions. First, we will look to projects that are driven by both form and programmatic function in order to build a catalogue of projects that illuminate how others have addressed the constraints of similar sites and or programmatic desires. Second, we will look to projects that are driven by ecological function in order to build a catalogue of projects that illuminate how others have dealt with similar or interesting ecological conditions. You will receive a progress grade at the end of each precedent analysis.

Project Proposal:
Following the Site Analysis and Precedent Analysis portions of the course, each student or group will make a formal project proposal presentation to the class outlining his/her/their idea/concept for the project. Concepts should be grounded in the intellectual framework unearthed via the analysis and documented in the logics and discourse around the readings (see literature review below). You will receive a progress grade following the project proposal.

Site Design:
The second half of the course will be dedicated to individual/group site design. Site design should be accomplished as a direct result and reflection of the work carried out during the site and precedent analysis portions of the class with critical reference to the literature review. You will receive a progress grade at the mid-point of the site design portion of the class and a grade at the end of the site design portion of the class.

Literature Review
The second major grade for the course will be based on your performance as the discussion leader during the literature review portion of the course. In order to execute the project in an informed manner it is essential to enter the relevant discourse surrounding the project. We will do this through a series of twenty readings during the first half of the course. We will take the first 45 minutes of each scheduled class to discuss the reading. You are responsible for completing all readings by the date scheduled.
Discussion Lead
Each of you will lead the discussion around one reading. As the discussion leader you will be responsible for giving an initial summary of the reading and for asking and facilitating discussion around key issues and questions that come out of the reading.

Reading Summary
For every reading each of you will upload a 1/2 page reading summary to Carmen.

A NOTE ON GROUP WORK

We will work collaboratively in the studio in order to digest the background literature, site, and precedent. The scope and flexibility of this project is such that it is feasible for students to engage the problem as individuals or in groups. Groups of two will be permitted during the site design phase. If you would prefer to work alone, you may do so.

The ability to self-select your design team should mitigate conflicts, however, should circumstances arise in which a group member is not fulfilling their responsibilities it is paramount that this be brought to the attention of the instructor early. A private meeting with all group members and the instructor will be convened in order to resolve this conflict. Do not wait until the end of the quarter to notify the instructor of delinquent behaviors.

GRADING

Grades will be given for each part of the course

<table>
<thead>
<tr>
<th>Component</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Studio Project</td>
<td>90%</td>
</tr>
<tr>
<td>Site Analysis</td>
<td>15%</td>
</tr>
<tr>
<td>Lit. Review</td>
<td>10% (based on quality of reading summaries and discussion leadership)</td>
</tr>
<tr>
<td>Precedent Analysis I</td>
<td>5%</td>
</tr>
<tr>
<td>Precedent Analysis II</td>
<td>5%</td>
</tr>
<tr>
<td>Formal Project Proposal</td>
<td>15%</td>
</tr>
<tr>
<td>Site Design</td>
<td>40%</td>
</tr>
</tbody>
</table>

Participation: 10% (based on participation and peer review where appropriate)

ATTENDANCE

You are expected to attend and to be present during all scheduled class meetings. Showing up consistently late for class will be considered as an absence. The Ohio State University considers three unexcused absences cause for dismissal from the course.

REVIEWS

Reviews are scheduled during class time because they are not optional. Failure to be present during a review for any but the most grave of reasons will result in not greater than a 50% mark for that review point.

STUDIO CLEAN-UP

Students are responsible for keeping their areas clean and floors free of obstructions. Each Friday, studios will clear floors of all materials, and place this material in trash bags and the appropriate containers throughout the studio. At the end of the quarter, each studio will remove all material (including models, constructions, and drawings), place this material in the loading dock dumpsters, sweep the floors including beneath desks and credenzas, and return oval tables,
desks, and chairs to their rightful places. Grades will be withheld from all students in any studio that does not comply by 5PM on the Monday of final exam week.

**FINAL DOCUMENTATION**

All individuals and groups will be expected to submit final documentation of their studio project. Failure to submit final documentation will result in grade withholding.

**LITERATURE REVIEW TEXTS**

**Contextual Background/Scientific Theory**


City of Columbus “Wet Weather Management Plan.” 2009

City of Columbus. “2010 Downtown Columbus Strategic Plan.” 2010


**Landscape Theory**


STUDENT CONDUCT

Students are required to adhere to all codes and academic policies of The Ohio State University and the Knowlton School of Architecture. In particular, plagiarism (the use of the ideas, words or works of intellectual content of another person as if they are one’s own or without crediting the source) is strictly forbidden.

The Student Code of Conduct (http://studentaffairs.osu.edu/resource_csc.asp) defines academic misconduct as: any activity that tends to compromise the academic integrity of the university, or subvert the educational process. All students are required to review the code and understand the implications of a code violation. If there is any suspicion of academic misconduct, the faculty member/instructor will report the alleged violation to the section head and the Committee on Academic Misconduct (http://oaa.osu.edu/coam/home.html) for investigation and any further action.

Sexual Harassment: O.S.U.’s Sexual Harassment policy, which applies to all faculty, staff, and students, includes lewd remarks and inappropriate comments made in the studio environment, classroom, and computer labs as well as the “display of inappropriate sexually oriented materials in a location where others can see it.” Students can file a complaint by contacting Student Judicial Affairs at 292-0748. Sanctions include reprimand, suspension, and dismissal from the University.

Students with Disabilities: If a student requires accommodation for a disability, he or she should immediately arrange an appointment with the professors and the Office for Disability Services. At the appointment, the professors, disability counselors, and student can discuss the course format, anticipate needs and decide upon accommodations. Professors rely on the Office for Disability Services for assistance in verifying the need for accommodations and developing accommodation strategies.

The following items are prohibited in Knowlton Hall: non-KSA furniture, liquor, weapons, bicycles, skateboards, rollerblades, pets, spray paints, foam cutter wands, welding devices, heat guns, and any flame or gaseous liquid device.

The following safety compliances must be observed: electrical power cords cannot be connected in a series or extend over traffic areas; fire extinguishers must remain accessible and in full view; access to stairwells, corridors, and aisles must maintain a 44” clear width and handrails must be unobstructed.

Building surfaces cannot be marked, anchored to, or penetrated.

Installations may not occur in any part of the building except by permission of the KSA Building Coordinator. Power tools are restricted to the shop except when permission is granted by the KSA Building Coordinator. Loud noise is forbidden. Graffiti and vandalism are grounds for disciplinary action.

STUDENT RESOURCES

If you need an accommodation related to a disability, you should contact the Office for Disability Services or the ADA Coordinator’s Office for assistance in verifying the need for accommodations and developing accommodation strategies. Your needs and potential accommodations will be considered relative to the course format. If you have not previously contacted the Office for Disability Services, you are encouraged to do so.

ADA Coordinator’s Office: http://ada.osu.edu
Office for Disability Services: http://www.ods.ohio-state.edu/
(614) 292-3307 | Fax: (614) 292-4190 | TDD: (614) 292-0901

Other resources for students can be found at: http://studentaffairs.osu.edu.
SITE ANALYSIS

Site analysis will be conducted collectively, with each member of the class taking on an aspect of the site for investigation, inventory and analysis. To this end, the site analysis has been broken into five distinct parts: Site History; Zoning and Site Regulations; Vegetation, Soils, and Bedrock; Critical Infrastructure; Hydrology and Stream Dynamics. Due to differences in the relative scope of each investigation, students will be asked to work either as individuals or in groups.

Format

Diagrams are one of the designer’s most critical tools. In this phase of the project we will use diagramming as a way to break down, digest, and organize a variety of complex information. The architectural scholar Hyungmin Pai has referred to this type of diagramming as “operational diagraming” in that it expresses the functional relationships within and between complex systems; i.e., this type of diagramming explains how things work. Maps can be thought of as a type of operational diagram though this mode of working is certainly not limited to traditional forms of mapping. Examples of successful operational diagrams can be found on Carmen.

Your job will be to digest the information within your portion of the analysis and to re-present that information as a series of clear and concise visual diagrams. These diagrams should aid you in understanding and communicating the subject matter, while also making the subject more easily understood by the other members of the studio. Each group will present their operational diagrams as a series of 11x17 (landscape) pages. A formal presentation of this information will be made on January 25th.

Topic, scope and questions to consider

Site History (1)
- How has the river and its tributaries changed over time?
- How has the city changed in this area?
- How has land use along the river changed?
- Are there historic patterns or historically important landmarks/landscapes/infrastructures we should be aware of?

Zoning and Site Regulations(1)
- What types of zoning are necessary for the uses specified in the Olentangy Greenway Plan
- What are the regulatory bodies that oversee the Olentangy
- What regulations are in place governing use of and building near the lower reaches of the Olentangy?

Vegetation, Soils and bedrock (2)
- What is the vegetative cover?
- Typical vegetative cross sections.
- Mapping of Pervious vs. impervious surfaces.
- What is possible given soil types?
- What do we need to think about when interacting with the bedrock present?

Critical Infrastructure (2)
- How does the sewer system work?
- Where is it? Where does it go?
- How do CSO’s and SSO’s work
- Where are the CSOs and SSOs and how often do they overflow?
- The river houses several forms of transportation infrastructure. What are these? How do they work? Do they work well?

Stream Dynamics (3)
- How does a river like the Olentangy work ideally? How does it work now?
- What are the issues caused within the Olentangy by urbanization?
- Do the Olentangy’s tributaries experience similar or different dynamics?
BACKGROUND READINGS

In order to come up to speed quickly on the issues inherent in the studio project we will begin the semester with a series of background readings directly related to the project interspersed with a series of current scholarly/scientific readings concerning issues of urban watersheds and ecological restoration. All students should read/skim these background documents. One student will be assigned to thoroughly read, research and present the information contained within each document. Presentations will be made on the dates indicated below and on the course calendar. Visual presentations (powerpoint, pdf, etc.) are encouraged, but not required. Presentations should be limited to approximately 20 - 30 minutes. All readings are available on Carmen. Students are encouraged to track down opinions/analysis of all plan documents.

Questions to ask yourself as you read and prepare to present

- What is the main purpose of the document?
- How specifically is the information contained within the document relevant to the question of the studio?
- To your knowledge, has the information contained within the document changed since the document was published?
- Is the information biased in any way?
- Is the information internally contradictory or contradictory with information you have heard in other presentations?

Dates + Readings

1/11 -- City of Columbus “Wet Weather Management Plan.” 2009
1/14 -- City of Columbus. “2010 Downtown Columbus Strategic Plan.” 2010
Precedent Analysis

Like site analysis, precedent analysis will be conducted collectively, with each member of the class taking on a particular work of precedent for investigation and analysis. Each student will prepare a graphic analysis of their assigned precedent project. Analyses should be done as a series of 11x17 (landscape oriented pages). Each 11x17 should contain an analysis corresponding to the following questions:

**Formal/Programmatic Diagrams**
- **Location:** Where is your work of precedent? What is it’s immediate context.
- **Scale:** How big is your work of precedent? Please compare its scale to that of a known object or site.
- **Program:** What does your work of precedent do, or what are people supposed to do there? How is that program distributed within the project?
- **Circulation:** How do people, bikes, cars, horses etc. move through your project?

**Ecological/Operational Diagrams**
- **Location:** Where is your work of precedent? What is its immediate context?
- **Scale:** How big is your work of precedent? Please compare its scale to that of a known object.
- **Program:** What does your work of precedent do, or what are people supposed to do there? How is that program distributed within the project?
- **Circulation:** How do people, bikes, cars, horses etc. move through your project?
- **Process:** How does your project work? (What is the ecological/mechanical process of the project?)
- **Operational Value:** What value does it produce? (Gallons treated, dollars saved, etc...)
- **Operational Scale:** What scale does it operate at? (Site, watershed, region, etc...)

Projects

**Formal/Programmatic Precedent (due 2/1/13)**
- Ocean Front Swimming Pools – Porto, Portugal – Alvaro Siza
- Badeschiff Swimming Pool – Berlin, Germany – Susanne Lorenz
- Water Proving Ground – New York, New York – LTL (competition)
- Buffalo Bayou – Houston, Texas – SWA
- Fox Riverfront Park – Green Bay, WI - Stoss LU (built)
- Oystertecture – New York, NY – Scape (competition)
- Herman Miller Headquarters – Cherokee County, GA – MVVA (built).
- Parque del Lago – Quito, Ecuador – Paisajes Emergentes (competition)
- Mt. Tabor Reservoirs – Portland, OR – Stoss LU (competition)

**Ecological/Operational Precedent (due 2/8/13)**
- Devils Lake Wastewater Treatment Plant – Devils Lake, ND – Viet Ngo (built).
- Kolkata Wetlands – Kolkata, India – Vernacular (built).
- Lake Whitney Wastewater Treatment Plant – New Haven, CT – MVVA and Steven Holl (built).
- Industrial Waste Treatment Restorer – Berlin, MD – John Todd (built).
- Nine Mile Run – Pittsburgh, PA – Andropogon Assoc. (built).
- AMD Art Park – Vintondale, PA – Dirt Studio (built).
- Environmental Restoration of Besos River – Barcelona, Spain – Agency for the Development of Urban Infrastructures, Spain (built).
Landscape Theory


Project Proposals

The project proposal is your opportunity to frame a project within the given context of the Lower Olentangy Watershed and the Olentangy River Greenway Plan. Consider this the first stage of design. Your proposal should take its cue from an issue, problem, or opportunity presented within the context of the site analysis and/or background readings. Project proposals should consist of a logically stated argument for a project that has clearly defined goals and limits.

Project Proposals should consist of four 15” x 15” boards outlining the context and argument for your proposed intervention. At minimum, your project proposal should document what, where, why and how you plan to make an intervention.

**What?** What is it that you’re proposing? What does it do (what is it’s formal and performative program)?

**Where?** Where is your project to be located? What is it’s area of affect? What are the issues (problem, opportunities, challenges) at this site?

**Why?** Why are you proposing this thing? Why does your proposal make sense given the context and background of the site? How does it take solve or take advantage of particular problems or opportunities?

**How?** How are you going to do this? How does it work? How does its form reflect its intended? (This can be done through a number of means. (plan section elevation, axonometric, vignette).

**Due:** 2/25 with a dry run on 2/18
Blitzkrieg: ˈblits-ˌkrēɡ: From the German “blitz” - lightning and “krieg” - war. Meriam Webster’s English dictionary defines blitzkrieg as: “war conducted with great speed and force; specifically : a violent surprise offensive by massed air forces and mechanized ground forces in close coordination.” Blitzkrieg tactics were perhaps most famously used by German forces during WWII in order to rapidly advance military lines, plunging deep into the heart of both Poland and France -- effectively incapacitating those forces before they were able to recoup a defensive front. Arguably this same tactic was employed by American forces to great affect during Operation Desert Storm in the early 1990s.

In this class we will use the blitzkrieg in order to rapidly advance the specificity and resolution of your projects over a very short time -- allowing time after Spring Break to be spent critiquing and refining those rapidly produced projects. Effectively I am asking you to invert the normal cycle of a studio project which often places this intense period of design cramming at the end -- leaving no time for critical revision or elaboration. Do it now, we’ll correct and refine things later.

For Friday, March 8th:

BLITZKRIEG!

Deliverables:

1 - Rendered site plan.
3 - Rendered sections.
1 - Scale model illustrating site or performance (You should determine a scale that suits your project).

Diagrams Illustrating (where applicable):

Context
Contextual human connections
Contextual animal connections
Contextual programmatic connections
Contextual functional connections
Internal functions
Internal human circulation
Internal animal circulation
Internal water circulation
Internal program
Internal vegetative strategy
Internal phasing strategy
Internal seasonal strategy

Advice:

You should attempt to make these appear as professional as possible. There will be some guess work and some assumptions that have to made on your part. Acknowledge these, attempt to address them to the best of your ability, but don’t get stuck in information, or lack of information, paralysis.

- Advance from the proposal you made on 2/25 and the feedback you received on it: It is not necessary to take all feedback to the letter, but you should consider and attempt to address the issues and concerns that were raised by the jurors.

- Sweat the details: Rendered plans and sections require attention to the detailed inner workings of a project. A rendered site plan should show grading, materials and specific vegetation.

- Try to figure out how things work: resolve questions of function, connection, flow, phasing and management. Look at precedents to aid you in this.

- Help one another. WORK IN STUDIO! Working at home is tempting, but your projects will be better if you engage and utilize your classmates for feedback and advice.