

11:550:439 Suburbia Transformed: Residential Design in the Age of Sustainability  
Spring 2015



“A garden is an experience. It is not flowers or plants of any kind. It is not flagstone, brick, grass or pebbles. It is not a barbeque or a Fiberglas screen. It is an experience. If it were possible to distill the essence of a garden, I think it would be the sense of being within something while still out of doors. That is the substance of it; for until you have that, you do not have a garden at all.”

---James Rose, 1958

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### **Course Description:**

If the essence of a garden is spatial and experiential, as landscape theorist, James Rose suggested in 1957, how might contemporary sustainable strategies, tactics and technologies influence the design of spatial experience in the pervasive single-family residential landscape characteristic of Suburbia today? Asked another way, how can we design residential landscape spaces that conserve, celebrate and even create resources, while accommodating a family's need for outdoor activities? The goal of this course is to explore this question largely through the design and continuous critique of a typical, small suburban single-family property, and examination of a series of case studies which demonstrate the fundamental elements of residential design and the application of "green" strategies, technologies and tactics in creating habitat for the family. In so doing, we will examine the fundamental components of residential design, including entry and arrival at site and shelter; the fluency between indoor and outdoor living spaces; and the applications of traditional landscape spatial media of land, water, plants and structures to make space that can satisfy a contemporary family's mundane needs and sublime desires. We will also examine "greener" contemporary strategies, technologies and tactics that can be employed. And we will contemplate the larger question of if by thus beginning in someone's own backyard, we can transform Suburbia into a greener, more inspiring, place, one garden at a time.

### **Objectives:**

- To understand the regulatory framework that is "designing" the suburban residential landscape. Students successfully completing this course will become familiar with relevant zoning and building codes applicable to contemporary local residential design, including set back and coverage regulations, as well as construction requirements for typical landscape structures such as decks, railings and steps, fences and screens, paving and planting.
- To learn the component elements of residential design through case study and applied design. Students successfully completing this course will examine and design residential spatial experiences addressing entry and arrival at site and house; fluency between indoor and outdoor space; and possible uses of landscape spatial media of plants, landform, water and structures.
- To understand and apply principles of contemporary green residential landscape design. Students successfully completing this course will design residential spaces which make small interior spaces feel larger; make the most of what's already on the site before importing or removing anything; use local, inexpensive, low-energy-consumptive, non-polluting materials and construction techniques before others; consider the landscape's potential to create useful resources rather than consume them; and manage all rainwater through collection and/or infiltration on site.
- To recognize the importance of individual human perception by designing residential landscape spaces which reveal natural process and features in an inspired and inspiring way, while satisfying mundane needs.

### **Deliverables:**

- 1/4 scale model
- 2 (minimum) rendered sectional elevations at 1/4 scale or larger (digital, hand or combination)
- Rendered plan (digital, hand or combination)
- Materials list
- Plant list
- Research power point presentation

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### Research Presentation:

The purpose of researching and sharing an analysis of the works of designers in this genre with each other is to support your own individual design enquiry. In addition to these case studies, one of you will research applicable zoning regulations and building codes. Each of you is responsible for producing a power point 15-20 minute presentation and leading a 15-20 minute discussion. In all but the case of the one who is researching the zoning code and building regulations that govern design in this genre, your power point presentation should be primarily images, with minimal supporting text on the screen (if any). These images must contain a plan of the project. Projects can be selected from the following list:

- Applicable Local Zoning Regulations and Building Codes
- Classic or Modern American Gardens:
  - \*Dunbarton Oaks---Beatrix Farrand
  - \*The Donnell Garden---Thomas Church
  - \*The Miller Garden---Dan Kiley
  - \*The James Rose Garden---James Rose
- Contemporary Gardens Using Green Strategies, Tactics and Technologies from *Suburbia Transformed*:
  - \*Urban Spring---Bionic
  - \*Reordering Old Quarry---Reed-Hilderbrand
  - \*Carriage House Garden---Joseph S.R. Volpe
  - \*A Subdivision in the Sand---Dirtworks
  - \*Mid-Century Revival---Dane Spencer
  - \*Modern Revival---Shades of Green
  - \*Suburbia Infiltrated---Auburn University Students

In all gardens you should ask the following questions: How has the garden space been organized? Sequential? Axial? Nodes and corridors or open? Other? What is the geometry of the form of the space(s)? Rectilinear? Geomorphic? Biomorphic? Circular? A mixture? What media are being used and how? Earth? Plants? Rocks? Water? Other? What compositional principles are being employed? Bilateral Symmetry? Asymmetry? Other? What ideas does the garden express? How does it do this? What is the relation of the garden to its site, context and to any architecture that is present? In general, what is the relation between the physical spatial experience being examined and the world of ideas?

For contemporary gardens from the exhibition *Suburbia Transformed*, the following additional questions should be also considered: How are greener strategies, tactics and technologies being employed to not only conserve (or create) resources, but to make spaces in which the user can better sense his connection to the natural features and systems.

Remember these studies are studies of the projects themselves, not the biography of the designer or other related, but peripheral facts.

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**Required Materials:**

You will be required to have on hand any drafting, rendering, or model building tools and materials needed to complete the work outlined in the accompanying schedule. **You are required to have these materials with you at each and every class.** Additional materials may be required by your instructors as the class goes on.

**Required Modeling Supplies:**

No. 1 X-Acto Knife  
No. 11 X-Acto Blades (you will go through many blades during the semester)  
Mat knife  
24" (or greater) Steel Ruler with Cork Backing (not aluminum; the cork is an important safety feature)  
White glue  
Glue gun  
Inexpensive paintbrush(es)—1/4"-1" wide (used for applying gesso to models, so the emphasis is on *inexpensive*.)  
Utility knife  
Scissors  
30" (or greater) cutting mat

**Required Drawing Supplies:**

T-Square (select one from studio, do not buy)  
Two triangles- 30-60 and 45-90, one 14" and the other 8" or larger (Optional 8" or 10" adjustable triangle; an inking edge is recommended)  
Architect's Triangular Scale (12" plastic or wood & plastic combination)  
Engineer's Triangular Scale (12" plastic or wood & plastic combination)  
Erasing Shield  
Drafting Brush  
Circle Template (should accommodate circles ranging from 1/8" - 2 1/4")  
Drafting Dots or Drafting Tape, Scotch Tape, single and double sided  
White Plastic Eraser  
Kneaded Rubber Eraser  
Handkerchief, bandanna, or small bar towel (to wipe your hands)

Note for the following items, you may draft with pencils or Lead Holders, you do need to purchase both:

Two (2) Lead Holders (plastic or metal—one to use with a hard lead for layout lines, one to use with a softer lead for drafting)  
Lead Pointer (device to sharpen the lead—actually graphite—in lead pointers)  
Pencil Sharpener (that can sharpen both standard and thick wood pencils)  
Leads for use in Lead Holder, 4H, HB, and 2B (made by Staedtler-Mars or Sanford). They come in packages of 2's and 12's  
Wooden drawing pencils, 2H, H, HB, 2B, (These can be purchased individually or bought in sets)  
Two rolls of Tracing Paper, 18" white and 12" or 14" yellow  
9" x 12" Sketch Pad- tear out sheets, non spiral bound  
Sketching Pencils—a good general purpose sketching pencil is what was once called the Berrol "Drafting  
314 or a variety of HB, B, 2B, 4B and 6B.  
Sharpies markers, fine point, extra fine point, etc.  
Drafting Lamp for your desk  
Combination Lock for your locker

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**Attendance Policy:**

Attendance is required at all class sessions and no tardiness or absentees are allowed except for legitimate health problems or other serious reasons. If this should occur, notify the instructor by e-mail and also by a written statement preferably before your absence. **For each unexcused absence beyond one, your final letter grade will be lowered 1/2 a letter grade (i.e. A to B+; B to C+)**

**Grading:**

The final course grades are given as letters A, B+, B, C+, C, D, and F, explained thusly:

A- Outstanding- This not only means fulfilling requirements, but impressing and going beyond the initial expectations of the project. The student has demonstrated a superior grasp of the subject matter coupled with a high degree of creative or logical expression, and a strong ability to present these ideas in an organized and analytical manner.

B- Very good- The student has demonstrated a solid grasp of the material with an ability to organize and examine the material in an organized, critical, and constructive manner. The projects and in-class performance reveal a solid understanding of the issues and related theories or literature.

C- Acceptable- The student has shown a moderate ability to grasp concepts and theories for the class, producing work that, while basically adequate, is not in any way exceptional. The student displays a basic familiarity with the relevant literature and techniques.

D- Unacceptable- The work demonstrates a minimal understanding of the fundamental nature of the material or the assignment with a performance that does not adequately examine the course material critically or constructively. Students cannot graduate from the Landscape Architecture program with 2 D's in required 550 classes.

F- Failure- The student has demonstrated a lack of understanding or familiarity with course concepts and materials. The student's performance has been inadequate. Failure is often the result of limited effort and poor attendance which may indicate that the student is not in the proper field of study.

You will be graded each day of class as to your preparedness as described in the schedule, totaling 15% of your grade.

Your powerpoint presentation will count another 15% of your grade.

The quality of your design, as evidenced by your model, plan, sections, lists and written description will count 60% of your grade.

The remaining 10% will be based upon progress.

**Work Becomes Department Property:**

Submitted drawings, models, photographs, or written papers for any project assigned in Landscape Architecture courses are considered the property of the Department and may be retained in its archives for exhibition and accreditation purposes.

All projects will be graded and returned to the student at a location designated by the instructor. Should your drawings be retained by the Department, you will be given the opportunity to obtain a print or photographic record of your work. Department files are OFF LIMITS to students.

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### **Use of Facilities:**

Landscape Architecture courses cannot be taught without reliable facilities. Your use of the facilities is dependent upon responsible use with particular regard to the clearly established rules about their use as specified in the student handbook:  
[http://landarch.rutgers.edu/current students/students%20handbook/StudentHandbook web SectI.pdf](http://landarch.rutgers.edu/current%20students/students%20handbook/StudentHandbook%20web%20SectI.pdf)  
These rules cover access to the computer lab and vandalism, personalization of work space, smoking and drinking, use of lockers, access to the reference collection, and basic rules governing the use of computer lab. Failure to observe rules may result in loss of access.

### **Equipment:**

The student handbook also includes a section governing the use of equipment:  
[http://landarch.rutgers.edu/current students/students%20handbook/StudentHandbook web SectII.pdf](http://landarch.rutgers.edu/current%20students/students%20handbook/StudentHandbook%20web%20SectII.pdf)  
This section includes rules specifying use of department equipment including projection equipment, department cameras, computers, scanners, printers, and plotters.

### **Academic Integrity Policy:**

The intentional copying of another student's file or portion of the file and presenting it as your own work is in direct violation of the University Integrity Policy:  
❑ Plagiarism: Plagiarism is the representation of the words or ideas of another as one's own in any academic work.  
❑ Facilitating Violations of Academic Integrity: It is a violation of academic integrity for a student to aid others in violating academic integrity. A student who knowingly or negligently facilitates a violation of academic integrity is as culpable as the student who receives the impermissible aid, even if the former student does not benefit from the violation.

As a result, any copying and/or "sharing" of exercise, assignments and projects will be treated as Level 2 violations and subject to the sanctions as outlined in the Integrity Policy:

1. A failing grade on the assignment.
2. A failing grade for the course.
3. Disciplinary warning or probation.

Repeat violations will be treated as separable Level Three violations and referred to the AIF of the school for adjudication. Please refer to the complete Integrity Policy at:  
<http://academicintegrity.rutgers.edu/integrity.shtml>

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**Schedule:**

<b>Date</b>	<b>Topic and Activity</b>	<b>Assignment</b>
20-Jan	Introduction Site Visit and Client Interview	interpolate contours establish base plan build base model
27-Jan	<b>Class Base Model Due</b> Topic: Principles of Green Residential Design Discuss case studies Activity: Site Analysis and Spatial Concepts	do site analysis begin case studies  concept diagram
3-Feb	<b>Preliminary Concept Diagrams Due</b> <b>Site Analysis Due</b> Topic: Designing in section and plan Presentation: Residential Zoning and Building Codes Activity: Critique	continue case studies create base sections
10-Feb	<b>Concept Diagrams and Case Studies Due</b> Topic: Sectional Elevations and Space Activity: Sectional Elevations Guest Lecture: T. Horton, A Green Materials Approach	continue case studies
17-Feb	<b>Design Advances Due</b> Topic: Development of Residential Design Activity: Critique and Design Development	design in model, plan and Section; case studies due
24-Feb	<b>Case Studie and Design Advances Due</b> Topic: Development of Residential Design Presentation: Case Studies 1,2 and 3 Activity: Critique and Design Development	design in model, plan and section
3-Mar	<b>Design Advances Due</b>	design in model, plan and

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	Topic: Development of Residential Design Presentation: Case Studies 4,5 and 6 Activity: Critique and Design Development	section
10-Mar	<b>Design Advances Due</b> Topic: Development of Residential Design Presentation: Case Studies 7,8 and 9 Activity: Critique and Design Development	design in model, plan and section
17-Mar	<b>SPRING BREAK      SPRING BREAK      SPRING BREAK      SPRING BREAK</b>	
24-Mar	<b>Design Advances Due</b> Topic: Development of Residential Design Activity: Critique and Design Development	design in model, plan and section
31-Mar	<b>Landform Virtually Complete</b> Topic: Development of Residential Design Activity: Critique and Design Development	design in model, plan and section
7-Apr	<b>Structures Virtually Complete</b> Topic: Development of Residential Design Activity: Critique and Design Development	design in model, plan and section
14-Apr	<b>Planting Virtually Complete</b> Topic: Development of Residential Design Activity: Critique and Design Development	design in model, plan and section
21-Apr	<b>All Design Virtually Complete</b> Topic: Presentation Graphics Activity; Preparing drawings and models to present	presentation graphics
28-Apr	<b>Presentation Graphics 50%</b> Topic: Presentation Graphics Activity; Preparing drawings and models to present	presentation graphics
5-May	<b>Final Presentation</b>	



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