

**UNIVERSITY OF CINCINNATI  
COLLEGE OF DESIGN, ART, ARCHITECTURE, AND PLANNING  
SCHOOL OF PLANNING**

**SITE PLANNING AND DESIGN**

***Fall Semester 2012***

Room: 6479 DAAP

23-PLAN-2011 001

Office: 7100 E DAAP

Office Hours: TH 10:00-11:30

MWF 8:00-10:50 AM

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**Course Description**

Investigation of two- and three-dimensional basic design principles; color; human physiological constraints, basic man-environment relationships.

**Pre-Requisite Courses**

Planning Graphics and Communication II/Studio

**Course Objectives**

This is the first part of a studio series on design and planning. The intention is to help you develop, synthesize, and apply multiple skills, including site analysis, suitability analysis, street layout, project conceptualization, and design. This is a collaborative experience and involves teamwork based on specific set of tasks for teams. We hope to gain a better understanding of the site planning process by:

- Developing skills to capture the complexity of a site;
- Examining the historical, cultural, and physical aspects of the site;
- Quantifying programming requirements;
- Communicating and presenting the design outcomes to clients

**Course Outcomes**

After taking this course, the students will be able to:

- Demonstrate skills in analyzing topography;
- Identify relationships between site planning and site design;
- Understand and identify relationships between (site) planning and other relevant disciplines affecting it (i.e., engineering, landscape architecture, architecture, and environmental management);
- Demonstrate skills to propose a subdivision development plan of a site with significant topography;

**Project Description**

You will use Mt. Airy Forest as your site. The goal is to develop this site for residential purposes. Although in reality, you should NEVER develop a precious green land like Mt. Airy Forest (or Park), and indeed, preserve it at all costs, but as a site planning exercise, you will learn tremendously from this experience. The reasons why this site is

appropriate for honing your design skills include its size (it is over 3,000 acres), the topography with its rolling hills and exquisite views. You will perform a number of tasks in order to propose a detailed subdivision plan for this site. Working in teams of 2-3, you will carry out multiple short-term projects on selected parts of the site:

### **I) Context Analysis:**

- Location analysis (amenities within certain radii of the area);
- Traffic patterns and accessibility;
- Zoning ordinance;
- Land use regulations;
- Building conditions;

In the first assignment you will look at the physical characteristics surrounding Mt. Airy Forest including its locational aspects (you can use a 5 minute walk circle which is roughly equivalent to ¼ mile, 15 minute and 30 minute radii, and mark the important amenities within those circles), traffic patterns and accessibility (the hierarchical structure of the street patterns from the local to collector, arterial and ultimately the freeway), zoning (you can obtain this information from CAGIS or Hamilton County Planning Commission) and land use (how the land is actually used vs. how it is legally or formally zoned). You should incorporate field observation with the information you collect from various primary or secondary sources and organize them in such a way that can become a basis for making planning decisions.

Observation starts with walking in and around Mt. Airy Forest. You should **MAKE** and **RECORD** your own observations and develop ideas about the area and its development potentials. The quality of your graphics should be impeccable and flawless. Sloppy work will be marked down.

### **II) Site Analysis**

In this assignment you will explore the intrinsic qualities of the site (i.e., visual uniqueness, topography, and infrastructure) through:

- Topographic, and drainage analysis (topography plays a major role in where to build and where not to build. Also, paying attention to slope would guide you to better understand the runoff direction and drainage patterns in and around the forest);
- Climatic analysis (mainly focusing on the annual temperature fluctuations and the prevailing wind directions. You can show these by drawing arrows showing directions. Using good professional graphics as models or precedents would immensely help you to develop your own visual language);
- Vegetation (the variety of flora and fauna, etc. You do not have to worry about precise names of the plants but their sizes and how they affect the environment visually);
- Public infrastructure (roads, water, sewer, electric networks);
- Visual analysis (ranking the forest in terms of views to and from. You can choose specific station points in the forest and start evaluating the views they entail from exceptional or scenic to good, moderate or bad)

### **III) Suitability Analysis**

The purpose of this exercise is to integrate the previous two assignments in order to produce a composite suitability map. This map should show different things (i.e., what parts of the site are appropriate for building construction, streets, open or green space, or areas you should not build at all). So, specifically, you will deal with the following categories:

- Built-form suitability (specifically by examining the slope and soil type);
- Open space network (examining access to and from, vegetation cover, view, etc.);

### **IV) Case Study Analysis**

In this assignment you will explore site planning examples that have been recognized for design excellence and responsiveness to the natural environment. These examples could be selected from national or even international projects that have been implemented. In your analyses, you should pay special attention to the following points:

- Name and the location of the project;
- Designer/developer;
- Year designed/built;
- Program;
- Size of the project (# of dwelling units, acres of developed land, square footage of office/retail space, etc.);
- Planning and design principles;
- Plans, sections, views, details of the project;
- Critical appraisal of the project;

### **V) Street Layout**

In this exercise you will design the complete network of streets, pedestrian walkways, bike trails, and so on. Specifically, focus on the following for your proposed housing subdivision:

- Site boundaries;
- Access routes to the site and the streets surrounding the site;
- 10' contour lines (or as you see fit);
- Proposed streets with median, curb, number of lanes, parking lanes, street widths, etc.;
- Sidewalks, walkways, bike trails;
- Turning radii of the streets;
- Proposed parking areas (on- and off-street);

### **VI) Concept and Final Development Plan**

This stage involves developing visions by translating the requirements of the program into rough forms and relationships. To do this, 13 areas of roughly 250 (+ or -) acres (each acre = 43,560 sq ft) have been identified and assigned in Mt. Airy Forest. Your sites typically contain low, moderate and steep slopes. As such, all of your sites have a

mixed balance of low to high slopes. The entire forest has been divided roughly into 13 subdivisions as mentioned. Each team of two students will pick one designated site. You will select a designated design area and ultimately highlight areas suitable for buildings, open space, circulation (roads, streets, sidewalks, and parking), and green space. Obviously, like other places, the idea is to design a mixed residential community:

### **Concept Plan**

- Designated areas for each residential type;
- Open and green space;
- Circulation system (network of roads, streets, paths, parking);
- Some small community facilities (i.e., a clinic or a post office);

In this exercise you develop your main concepts based on your fieldwork, observation, and the knowledge of site planning gained from the class lectures. In other words, at this stage you are not expected to finalize your planning decisions, and you can utilize your hand drawing skills and show your ideas using markers and quick mock-ups. However, you are expected to justify your ideas and once you compare the pros and cons, then you can produce formal presentable drawings.

### **Development Plan**

This stage builds on your concepts. You will need to accurately quantify and calculate the necessary areas for the given program. Produce the following items:

- Location and context map;
- Housing: around 80 single family, 20 or more apartments, and 20 mixed-use units);
- The figure-ground map, circulation network, parking, landscape treatment and vegetation (shows the figure in solid black color and ground white);
- Plan of housing types (remember that every scale lends itself to certain amount of detail. Obviously, the planning scale does not involve detailed architectural information for each unit, but it does include the accurate placement of the buildings within their parcels as well as the parcel lines);
- Plan of landscaped or green and open spaces;
- 3-D images and working models of the built environment;
- Executive summary (a report discussing your design philosophy and approach);

Note that these are minimum recommended estimates and you can exceed these numbers if you can justify your case. You are expected to visit the site on your own. Cameras are necessary for visual documentation and contextual analysis of the site.

Projects must be accompanied by a short report in the form of an executive summary that explains the rationale of the project. All interim assignments should be printed on A0 size white paper in black and white. However, your final project proposals should be printed in color. The final reports should include drawings reduced on 11"x17" papers with adequate descriptions. You will also submit all your assignments and the final assignment electronically.

### **Recommended Books**

You will find the following book helpful:

Untermann Richard and Small, Robert. 1977. Site Planning for Cluster Housing (for comprehensive design). Van Nostrand Reinhold Company.

Kasprisin, Ron. 2011. Urban Design: The Composition of Complexity (Chapter 8: Experiments in Composition for model making). Routledge.

### **Studio Etiquette**

You should work in the studio during the studio time. Leaving the studio without permission from the instructor will affect the final grade. You will also be held personally responsible for damage to desks and stools in the studio. Please put a protective covering on the desk before you do any work on the desk. Do not write on the desks, the stools or the lockers, including declarations of ownership.

### **Grading Criteria**

You are required to attend the studio regularly, complete all projects, and participate actively in discussions. No studio work may be conducted during the studio crits.

Grading scale: Studio Attendance	10%
Assignment 1	10%
Assignment 2	10%
Assignment 3	10%
Assignment 4	10%
Assignment 5	10%
Assignment 6	10%
Final Project	30%

**SITE ANALYSIS AND SITE PLANNING**  
**Fall Semester 2012**

**Course Schedule**

<i>Wednesday,</i>	<i>08/27</i>	Project Introduction and Overview
<i>Friday,</i>	<i>09/29</i>	Introduce Assignment 1: Site Analysis I- Contextual Parameters
<b><i>Monday,</i></b>	<b><i>09/03</i></b>	<b>LABOR DAY CLOSED</b>
<i>Wednesday,</i>	<i>09/05</i>	Visit Site, take pictures, notes, first impressions, excursion
<i>Friday,</i>	<i>09/07</i>	Work on Assignment 1
<i>Monday,</i>	<i>09/10</i>	Work on Assignment 1
<i>Wednesday,</i>	<i>09/12</i>	Work on Assignment 1
<i>Friday,</i>	<i>09/14</i>	<b>Context Analysis Due: Studio Presentation</b>
<i>Monday,</i>	<i>09/17</i>	Work on Site Analysis
<i>Wednesday,</i>	<i>09/19</i>	Work on Site Analysis
<i>Friday,</i>	<i>09/21</i>	Work on Site Analysis
<i>Monday,</i>	<i>09/24</i>	Work on Site Analysis
<i>Wednesday,</i>	<i>09/26</i>	<b>Site Analysis Due: Studio Presentation</b>
<i>Friday,</i>	<i>09/28</i>	Work on Suitability Analysis
<i>Monday,</i>	<i>10/01</i>	Work on Suitability Analysis
<i>Wednesday,</i>	<i>10/03</i>	Work on Suitability Analysis
<i>Friday,</i>	<i>10/05</i>	Work on Suitability Analysis
<i>Monday,</i>	<i>10/08</i>	Work on Suitability Analysis
<i>Wednesday,</i>	<i>10/10</i>	<b>Suitability Analysis Due: Studio Presentation</b>
<i>Friday,</i>	<i>10/12</i>	Search the Internet, books, consulting firms' websites, popular projects, etc.

<i>Monday, 10/15</i>	Collect information and take inventory of what you have
<i>Wednesday, 10/17</i>	Compare different case studies and choose the one that best serves your design
<i>Friday, 10/19</i>	Work on your presentation
<i>Monday, 10/22</i>	<b>Case Study Due: Studio Presentation</b>
<i>Wednesday, 10/24</i>	Work on street layout
<i>Friday, 10/26</i>	Work on street layout
<i>Monday, 10/29</i>	Work on street layout
<i>Wednesday, 10/31</i>	<b>Street Layout Due: Studio Presentation</b>
<i>Friday, 11/02</i>	Work on concept plans
<i>Monday, 11/05</i>	Check with Jim Burns: get clearance for using workshop
<i>Wednesday, 11/07</i>	Check with Jim Burns: get clearance for using workshop
<i>Friday, 11/09</i>	Use Working Models (consult site planning lectures). Use Styrofoam from DAAP Workshop; cut to scale and place them on base plan
<b><i>Monday, 11/12</i></b>	<b>VETERAN'S DAY CLOSED</b>
<i>Wednesday, 11/14</i>	Work on Concept Plan
<i>Friday, 11/16</i>	Work on Concept Plan
<i>Monday, 11/19</i>	Work on Concept Plan
<i>Wednesday, 11/21</i>	<b>Concept Plans Due: Studio Presentation</b>
<b><i>Friday, 11/23</i></b>	<b>THANKSGIVING DAY CLOSED</b>
<i>Monday, 11/26</i>	Adjust, modify, tweak your concepts
<i>Wednesday, 11/28</i>	Finalize concepts
<i>Friday, 11/30</i>	Work on board layouts and storyboards
<i>Monday, 12/03</i>	Check board flows, and pieces of your story
<i>Wednesday, 12/05</i>	Work on final presentation
<b><i>Friday, 12/07</i></b>	<b><i>FINAL PRESENTATION (of during exam week!)</i></b>

NOTE: This is a tentative schedule and, therefore, subject to change.



## Mt. Airy Forest Location Plan