Class Description.
In this course students will learn the latest design programs, graphic communication styles, and their role in the production process. Advanced Graphical Communication for Planners (AGCP) was designed to teach students Rhino, Maxwell Studio, and Photoshop while learning to create working drawings, 3D models, photorealistic images and renderings. Students understand how their computer graphics skills improve their communication, design, design exploration, perception of scale, visualization and design development techniques. The course will help students experience the process of refining a conceptual plan using accurate land survey information, ortho-photos, and GIS data to discover the development capacity and financial outcome of a final plan. Class exercises help students learn the most effective techniques necessary to precisely model, digitize, document and print 3D. The lessons are calibrated to enhance and develop the skills in graphical and oral communication expected by planning agencies and private design firms.

Class Format.
The course is broken down into three focused areas; Digitizing plan information, 3D Modeling and Visualization. This course is formatted to help students understand the interface between Rhino, Maxwell Studio, and Photoshop. Students will learn to use these programs to produce site plans; extrude a site plan into a 3D model, and create up to 3 photorealistic images of selected scenes in your plan. The final product will be a project board using all of your graphics to illustrate a final plan.

Text
There are no required books for this course. You will be provided with a list of recommended readings. We will use these readings as prescribed in each assignment. When needed, on-line tutorials or program tutorials will be used to clarify information, program use or new techniques.

Grades
Grades will be based on the following:
40% - Assignments. There are 3 general assignments for each section of the schedule; 2-site plan drawings (a concept plan will be provided); a set of unit types; and a minimum of 3 photorealistic images.
20% - Class Participation – Complete all assignments on time and participate in the class discussions and reviews to receive full credit.
40% - Final Project – Everyone will be required to complete a project board. The final board will be a compendium of your work.
Grade distribution is based on the student’s level of understanding graphic techniques; use of computer programs; and the application of these skills and understanding of presentation. Grades are distributed as follows:

A  93 – 100   Exceptional
B+ 87 – 92   High
B 80 – 86   Very Good
C+ 75 – 79   Good
C 70 – 74   Fair
D 65 – 69   Weak
F 64 or lower  Insufficient

Assignments
Assignments are due on the dates we agree to in class and as shown on Sakai. Any missing assignments will be recorded as an F. Late assignments will be accepted. However, a reduction of 5% will apply for every day it is late. Your assignments are graded based on clarity of graphics, design intent, and your understanding of the graphic design principles from corresponding lectures and some readings. All assignments shall be submitted in electronic form on the day it is due.

Student Design Brief
A Student Design Brief packet will be issued on the second week of class. It contains a list of the assignments and project information. It will be used to manage the time spent on the computer and provide a clear direction of assignments and learning objectives. Students will refine a concept plan and assemble a 3D model of their design. From the 3D model, students will be guided through the process of selecting, setting, and illustrating scenarios of the plan. Image sequencing will be used to illustrate design intent and understand environments.

Class Participation
Your assignments are integrated into each lesson. Each lesson builds from the previous lesson. Together they achieve the goal set for the course. Class participation allows you to test ideas, explore related topics and discover other techniques for accomplishing a particular graphic affect. Therefore, students are expected to attend all classes (on time and the full length). If you expect to miss one or two classes, please use the University absence reporting website https://sims.rutgers.edu/ssra/ to indicate the date and reason for your absence. An email is automatically sent to me. Points will be deducted for being unprepared and working on other class assignments during class time. Anyone found continuously emailing, texting and interrupting class will have 5 point deducted for every incident. Games, news, videos and email are not allowed during class and should not be on the monitors at any time. 5 points will be deducted. Emergency phone calls may be attended to at any time -- however outside the classroom.

My policy for absence is; If you miss more than 2 unexcused classes your final grade will drop a full grade. Partial attendance must be explained in writing directly to me in an email. Leaving class without a written notice will count against your grade (see class participation above). Students are responsible to learn the information missed while absent or late to class and are required to complete any assignment by the due date. If you are late more than 10 minutes you will be marked absent. All other situations and conditions shall be discussed between the student, instructor and student advisor if necessary.
Office Hours & Appointments
Office hours are meant to provide students with extra help during a consistent time frame every week. The time is for students who wish to learn more; practice class exercises under supervision; clarify information from class and get additional direction. Office hours will not be used to go over missed lectures or assignments.

Academic Integrity
Students are expected to uphold the school’s Academic Integrity policy. It is your responsibility to understand the violation and the consequences of breaking any of the codes before attending class. The school’s Academic Integrity policy can be found in http://academicintegrity.rutgers.edu/integrity.shtml#

Course Schedule & Scope of Work

PROJECT DEVELOPMENT SCHEDULE

DIGITIZING PLAN INFORMATION: RHINO 2D

Week One - ---------------------------------------------------------------
Course Introduction
Class Exercises in CAD, Photoshop and InDesign

Week Two - ---------------------------------------------------------------
Discussion: Site Attributes, Drawing Tools, Layers
Exercise: export/print, scale, layers, import, drawing set-up; unit set-up
Assignment 1: Digitizing a Site Plan Sketch

Week Three - ---------------------------------------------------------------
Discussion: Base Map, Street Typologies, Topography
Exercises: Modify Tools, Drawing Tools, Layers, Blocks
Assignment 2: Organizing Digitized Information: A Strategy

Week Four - ---------------------------------------------------------------
Discussion: Work Charts, Site Plan Program Documentation
Exercises: Align, Annotate, Dimension, Chart

Week Five - ---------------------------------------------------------------
Discussion: Initial Layout of Final Project Board
Exercises: Competition Board Layout, Object Tags, Field Entry
Assignment 2: Due

3D MODELING: RHINO 3D

Week Six - ---------------------------------------------------------------
Discussion: 3D modeling Tools
Exercise: Extruding Structures in Rhino 5

Week Seven - ---------------------------------------------------------------
Studio: Class time: Modeling site plan
Discussion: Layer Management
Exercise: Model Site & Unit Types: Extrusion
Week Eight: Review: Review progress set
Discussion: Graphic Display of Site Plan and Understand the Spatial Relationships

Week Nine: Studio: Class time: Refining Drawings
Exercise: Unit Distribution and Layout

VISUALIZATION: MAXWELL STUDIO & PHOTOSHOP

Week Ten: Review: Final 3D Plan
Maxwell Studio: Adjusting Environment, Assigning Material and Natural Lighting

Week Eleven: Discussion: Selecting Scenes, Exporting Scenes
Rendering 1: Selected Scene
Maxwell Studio: Lighting
Assignment: Create a digital chip board model

Week Twelve: Discussion: Adjusting materials, scenes, environment, effects
Maxwell Studio: Rendering Grass

Week Thirteen: Rendering 2: Selected Scene
Advanced Photoshop: Rendering Landscapes

Week Fourteen: Rendering 3: Selected Scene
Advanced Photoshop: Rendering Scenarios

Week Fifteen: Final Project Presentation
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