**A red and white sign with yellow letters

Description automatically generatedDepartment of Building Construction Technology**

**School of Engineering, Technology, & Advanced Manufacturing**

**Course Syllabus** *for* **TAR2033C, CRN 21548/27728 – Spring 2025 Architectural Design**

**Class Meetings: Thursday nights 6:00 – 9:00 PM in Lab 9-204 on West Campus**

Instructor: **Andrew Ray**

eMail: [**ARay@valenciacollege.edu**](mailto:ARay@valenciacollege.edu)

Phone: **(407) 582-1847**

***Cell Phone:* 321-945-5995 *(no calls after 9:00pm)***

**Student Engagement Hours:** The engagement hours listed in the table on the first page of the syllabus represent the times that I will be in my office, at my computer responding to messages and/or holding Zoom meetings. This is when we can communicate *synchronously.*

|  |  |
| --- | --- |
| **Day** | **Time and Location** |
| Monday | 2:00 pm – 4:00 pm on ZOOM |
| Tuesday | May be available in Lab 9-204 or Lab 9-141 (by appointment) |
| Wednesday | 3:00 pm – 5:00 pm on ZOOM or Lab 9-204 |
| Thursday | 3:00 pm – 5:00 pm on ZOOM or Lab 9-204 |
| Friday | May be available in Lab 9-204 or Lab 9-141 (by appointment) |

**COURSE OUTCOMES:**

*From the Valencia Catalog)* **TAR2033C:** Prerequisite: TAR 1120C or Department Approval

Introduction to architectural planning and design. Use of project team concept. Student projects include shopping centers, industrial complexes, production facilities, apartment complexes, high-rise buildings, etc. Students prepare necessary drawings to construct project, including site plan, building plans, sections, etc. Students also build a model of their project. (Special Fee: $46.00)

***IMPORTANT:* Classroom Policies** and **Student Expectations** for this class are published on Faculty Front Door:

<http://frontdoor.valenciacollege.edu/syllabi.cfm?uid=aray>

***NOTE:*** ***Submission of your first assignment is considered proof that you have read, understand, and accept the classroom policies as published.***

***Revisions to this syllabus may be made by the instructor during the semester and will be posted***

***on the CANVAS portal for this class.***

**ASSESSMENT METHODS AND EVALUATION:**

**Student Performance Assessment: Grading Scale:**

Course Grade: 35% - **Design Project** (team effort) 90 - 100 % = A

25% - **Deprogramming, Architect Report** & **Design Exercises** 80 – 89.9 % = B

25% - **REVIT Assignment(s) & Photography Project** 70 – 79.9 % = C

15% - **Text Material Exam (Midterm)** 60 – 69.9 % = D

100% - **TOTAL** 0 – 59.9 % = F

***ASSIGNMENTS/PROJECTS:***

1. **Introduction:** Students will submit a brief introduction in a discussion post during the first week of class;
2. **Architect Report:** From the OBJ Lists of largest Central Florida architectural/engineering firms or other online resource, write a report on one local or national architecture firm; include the year founded, principal architects, number of employees, areas of specialization, most notable projects, and photos (from internet) of their most notable buildings.
3. **REVIT Family Assignment:** Each student will choose an existing design from a list provided by Instructor, verify the dimensions, and develop a REVIT Family (RFA) model of the object.
4. **Photography Project:** During this course, each student will need access to a camera (or smart phone) and must provide 24 digital pictures, following the project format and content supplied by the Instructor, uploaded to CANVAS.
5. **Deprogramming Exercise:** students will choose a completed commercial building of modest size and submit a brief illustrated report with copies of the floor plan describing the building as it exists, and illustrated to identify the significant features of the building, including structure, circulation, function, and/or other factors unique to the project.
6. **Design Exercises:** A variety of short-duration exercises will be assigned during the course, usually to be completed in class or by the following class period. These projects are intended to develop the design skills of the student and provide immediate feedback from the Instructor. Students missing an exercise must complete a make-up exercise, usually of increased difficulty, by the end of the class period one week after their return to class. Topics this semester include **Energy Conservation**, **Site Planning** and **Kiosk Design.**
7. **Design Project:** Students will be divided into teams. Each team will select a commercial building project to design and develop, from the concept phase to the completion phase. The project will be subject to guidelines set forth in various hand-outs, lectures, photos, movies and other data that may be used to supplement the text.

**Final presentation** of the projects will be made to experts in design and construction; each team member will be responsible for presenting a portion of the project.

A. The project will involve a **Feasibility study**; **site location** and **building schematics** must be “sold” to the instructor before proceeding. After approval, the team will develop their project.

B. The **project package** will consist of the following:

1. Abbreviated **Design Development** sheets based on REVIT model file, including **color presentation rendering**.

2. Approximate **estimate** of total construction cost, including breakdown estimate of several items used in the building.

3. Complete **index of materials** used, with minimum (2) **abbreviated specification** sections.

4. A small-scale **study model** of the building(s) and **wall section model** (built over wall section at ¾” = 1’ scale).

9. **Final report**, including percentage of participation by all team members.

C. **Three Major Milestones** have been established in the development of your project. They are as follows:

Phase 1: **Feasibility study, site selection** and **schematic design sketches.**

Phase 2: **Preliminary drawings** and **specifications**.

Phase 3: **Completed project package,** including **drawings, documents, model(s)** and **rendering** (optional)

|  |  |  |
| --- | --- | --- |
| **TAR2033C SPRING 2025 - TENTATIVE SCHEDULE** | | |
| ***Date*** | ***Discussion Topics & Assignments*** | ***Read:*** |
| 1/9 | Introductions; **Ch.1:** Office Practices; ***contracts activity***, Review REVIT families  **Ch.2:** Drafting Standards; **Ch.3:** BIM/Revit/SketchUp;  ***Homework: Begin Deprogramming Assignment, upload Intro*** | **1, 2, 3, 4** |
| 1/16 | **Ch.4:** Sustainable/Green Arch; ***Energy conservation activity***  Work on **Sustainability assignment in class; choose Deprogramming subject**  ***Assign A/E Firm*** | **5, 6, 7** |
| 1/23 | **Ch.5:** Construction Materials & Methods; Review wall sections;  ADA & Commercial; **A/E Firm report Due**; ***start Kiosk project***  *Homework:* ***start photographing buildings for Photo Assignment*** | **14+ 15** |
| 1/30 | Design Phases; **Ch.6:** Initial Prep for CD’s; **Ch.7:** Site & Grading Plan;  **17.** Case study: Two-story, wood-framed residence  Homework: ***Finish Deprogramming Report*** | **8, 9 & 16** |
| 2/6 | **Deprogramming Report Due; *Parking layout exercise in class***  **8.** Floor Plan; **9.** Foundation & Roof Plans, Framing Systems;  Review previous project drawings & models; ***assign teams*** | **10, 11 & 17** |
| 2/13 | Review team assignments; ***develop scope of projects & program***  **18.** Case study: Steel and masonry 6-screen theater; ***bubble diagram exercise***  ***Homework: develop list of programmatic criteria*** |  |
| 2/20 | **10.** Building Sections; **11.** Exterior & Interior Elevations; ***kiosk design due***  ***Design Assignment: each team member creates schematic design for project*** | **12, 13 & 18** |
| 2/27 | **12.** Schedules: Door, Window, & Finishes; **13.** Architectural Details and Vertical Links  **Showcase:** Research Library & prior projects; **Parking Due;** ***Review for Midterm*** | **Review** |
| 3/6 | **Mid-Term Exam;**  **Schematic Designs Due;** groups select schematic design for project  Review schematic designs and assign project tasks; model building supplies |  |
| 3/13 | **Review exam;** Begin Revit model; choose specs; Review Revit tools; Complete photo assignment |  |
| **3/20** | **SPRING BREAK – College Closed** |  |
| 3/27 | **Discuss Final Project presentation format and requirements**, wall section models;  ***Complete site analysis*** and design; list of materials; |  |
| 4/3 | **\*\*Photo Assignment Due\*\*;** Advanced Revit features  Present progress and updated plan for completion |  |
| 4/10 | **Review progress** on Revit model, project manual, and photos of scale model |  |
| 4/17 | **ALL drawings, models, project manual due;** discuss presentation techniques |  |
| **4/24** | **Final Presentation** to design professionals |  |