Course Syllabus

Department: Science and Technology

Date: 12/12/12

I. Course Prefix and Number: TECH 246

   Course Name: Commercial Design and Drafting

   Credit Hours and Contact Hours: 3 credit hours / 6 contact hours

Catalog Description including pre- and co-requisites:

Students will be introduced to the fundamental concepts required for the design and drafting of commercial buildings by working through the steps required for a commercial project. By the end of the semester a set of construction drawings will be prepared. Topics that will be explored include the building code, ADA requirements, the energy code, construction drawings, site plans, floor plans, ceiling plans, elevations, sections, foundations, framing plans, and schedules. Prerequisite: TECH 244 or permission of the instructor.

Relationship to Academic Programs and Curriculum including SUNY Gen Ed designation if applicable:

The course is required for A.A.S. Architectural Technology & Building Sciences. The course may be taken as a technology elective for A.A.S. Mechanical Technology. Students in other programs may take the course if they have the appropriate background.

II. Course Student Learning Outcomes:

   1. Identify the issues, objectives, and constraints related to commercial design.
   2. Apply a fundamental set of skills and strategies for addressing these design issues.
   3. Read and interpret construction drawings; assemble a clear, well-organized set of construction drawings for a commercial project.
   4. Read and interpret an architectural sketch; convert an architectural sketch to a construction drawing.
   5. Draw, annotate, and dimension commercial site plans, foundation plans, framing plans, floor plans, elevations, wall sections and other common architectural drawings.
   6. Produce door, window, and room finish schedules.
   7. Apply the Building Code of New York State to a commercial project.
   8. Apply the Energy Conservation Construction Code of New York State to a commercial project.
   9. Use CAD software to produce architectural drawings and models.
   10. Work efficiently; properly manage drawing files and file directories.
   11. Be a cooperative and productive member of a design team.
College Learning Outcomes Addressed by the Course:

- writing
- oral communications
- reading
- mathematics
- critical thinking
- computer literacy
- ethics/values
- citizenship
- global concerns
- information resources

III. Assessment Measures:

<table>
<thead>
<tr>
<th>Identified College Learning Outcomes</th>
<th>Specific Assessment Measures</th>
</tr>
</thead>
<tbody>
<tr>
<td>Critical Thinking (Problem Solving)</td>
<td>Students will work as part of a design team to complete construction drawings for a commercial project (for example, a small office building). Drawings will be submitted and reviewed at various milestones. A portion of each student’s evaluation will be based upon participation in and commitment to the team.</td>
</tr>
<tr>
<td>Computer Literacy</td>
<td></td>
</tr>
<tr>
<td>Citizenship</td>
<td></td>
</tr>
<tr>
<td>Information Resources</td>
<td></td>
</tr>
</tbody>
</table>

IV. Instructional Materials and Methods

Types of Course Materials:

- Textbook, computer software. Software is provided in the CAD lab.

Methods of Instruction:

- Lecture, lab, demonstrations, reading and writing assignments, drawing assignments, group project

V. General Outline of Topics Covered:
1. Introduction / Overview
2. The Site Plan
3. ADA Overview
4. Building Code Overview
5. Floor Plans
6. Elevations
7. Roof Plans
8. Furniture Plans
9. The Building Envelope
10. Structural Coordination
11. Interior Partitions
12. Enlarged Plans & Interior Elevations
13. Ceilings
14. Windows & Doors
15. Finishes
16. Final Drawing Coordination