



**Architectural and Engineering Design Department (AEDD) South Portland, Maine
04106**

Title: Basic Architecture CAD
Credit Hours: 3
Instructor: Instructor Name
address

Catalog Number: AEDD165
Total Contact Hours: 60 Lecture: 30 Lab: 30
Phone: Phone# email: E-mail

Course Syllabus

Course Description

This CAD based course offers the fundamentals of architectural design as it relates to light wood construction consistent with, but not limited, to residential construction. Designed for the student with prior design and CAD courses, this course introduces building elements, CAD techniques, building code requirements, and professional and regional influences.

Co-requisite(s): AEDD-100 Print Reading or AEDD-105 CAD Graphics

Course Objectives

1. Demonstrate an acceptable understanding of graphic representation as it relates to architecture.
2. Demonstrate understanding of construction methods and materials.
3. Demonstrate sound planning techniques, working within material limits and code allowances.

Topical Outline of Instruction

Architectural graphic standards AIA
Floor plans – schematic, design development and construction documentation
Foundations – pier, slab and t-type
Floor framing plans and detailing
Wall section detailing
Roof section detailing
Building sections
Stairs
Thermal and moisture protection
Doors and windows
Kitchen and bath design and codes
Elevations

Course Requirements

1. Active attendance
2. Active participation
3. Completion of all assignments

Student Evaluation and Grading

40% worksheets, 20% exams, 30% Design Project, 10% attendance

See department policies below.

Text, Tools, and/or Supplies

BUILDING CONSTRUCTION ILLUSTRATED / Francis D.K. Ching

Department Policies

1. Grading – grading policies may vary by instructor

A	4.00	9.3-10
A-	3.67	9-9.2
B+	3.33	8.7-8.9
B	3.00	8.3-8.6
B-	2.67	8-8.2
C+	2.33	7.7-7.9
C	2.00	7.3-7.6
C-	1.67	7.0-7.2
D+	1.33	6.7-6.9
D	1.00	6.3-6.6
F	0.00	>6.3 FAILURE
P	NONE	Equivalent to a "C" (2.0) or better
AF	0.00	Administrative Failure
I	None	Incomplete*
W	None	Official Withdrawal from course
NS	None	Failure to appear for any session of class

*Incomplete grades are given at the discretion of the Instructor. Incomplete grades may only be given after an incomplete contract between the instructor and student has been signed and submitted to Enrollment Services. Students may withdraw from a class up to the twelfth week into the semester to avoid a failing grade. Make note of the class withdrawal deadline date and time in the student handbook and academic calendar on the portal.

2. Work submitted that does not meet standards will be given and "N/A Resubmit". Instructions on how to correct your work will be provided through "Redlines" (comments by instructor). All "Redlines" must be addressed before resubmitting the assignment. NO PARTIAL credit will be given unless all Redlines have been corrected.
3. **Late work** will drop a letter grade per week late. Assignments turned in more than 4 weeks late will result in a failing grade for that assignment. Completion of all assignments is required.
4. Any student who submits work done by someone else will at the least, receive a failing grade for that assignment and must redo the assignment. Should the instructor see fit, the student involved will be reported to the Dean of Students in violation of the Student Code of Conduct which will result in the student receiving a failing grade for the class.
5. Any activity, conversation or behavior that is not considered appropriate for the classroom or professional environment will result in the request that the behavior cease. If it does not, the student(s) involved will be dismissed from class and referred to the dean of Students and may not return to class until they have met with the Dean of Students, Department Chair and Instructor.
6. Use of cell phones, and other electronic devices during class which are not for class purposes is prohibited. Cell phones **do not** need to be turned off, but should be set to **vibrate** or **silenced** during class. Class time is for class activities only.
7. Personally owned computers are not required to be successful in this program, however they are highly recommended. All students have access to free Autodesk software downloads available at <http://students.autodesk.com/>. If you do not have access to your own computer to complete your homework, computer labs are available during open building hours 8:00 AM – 9:30 PM M-F. At least 3-9 hours of homework time outside each 3 credit course is normal and to be expected.
8. Hours for faculty members are posted on the faculty member's door. You may also make appointments with faculty via e-mail.

9. Only SMCC E-mail addresses will be used by faculty to communicate to students. E-mails between student and faculty must meet the following criteria:
 - a. The subject line has the **class code** along with a reference to the e-mail subject
 - b. E-mails must be signed with the student's full name as it appears on the class list.

See the full e-mail etiquette policy in **R:\General\Department Policies**.

10. **Attendance policy** – attendance is taken at the beginning of each class. If the student is late for a class it is the responsibility of the student to review their attendance and make sure that they have been marked Tardy rather than absent. There are no excused absences. Students are either present or absent.
 - a. **For classes that meet once a week** – no more than 3 unexcused absences are allowed **total**, no more than 2 classes may be missed **in a row**. A student who misses a class will receive a warning e-mail; if two weeks in a row are missed without communication the student will receive an Administrative Fail (AF) for the class. A student who has a total of 3 classes will receive an AF.
 - b. **For classes that meet twice a week** – no more than a total of 5 unexcused absences are allowed; no more than 3 classes may be missed **in a row**. If a student fails to attend two classes in a row he/she will receive a warning e-mail. If no correspondence has been made and the student fails to show for the third class in a row, the student will receive an AF for the class. Students that have missed a total of 5 classes will receive an AF.
 - c. It is the responsibility of the student to make sure to get the course materials and assignments that were covered during his/her absence. Assignment due dates WILL NOT BE ADJUSTED DUE TO AN ABSENCE. See late work policy above.
11. All students are expected to take notes and maintain them for reference purposes throughout the class and future classes. Students must also be responsible for their own backup of course work. If work is lost it is NOT the AEDD responsibility to replace or find it.
12. All work must follow the Technical Graphics Standards Manual for the AEDD. A copy of the manual has been placed in R:\Standards Various Sources

End-of-Course Evaluation

Students complete evaluations for each course attended at SMCC. Evaluations are submitted online and can be accessed through the student portal. Students can access the course evaluations beginning one week before the end of classes. The deadline for submission of evaluations occurs Monday at 5 p.m. following the last day of the class. You will receive an e-mail to your student e-mail account when course evaluations are available.

ADA Syllabus Statement

Southern Maine Community College is an equal opportunity/affirmative action institution and employer. For more information, please call (207) 741-5798. If you have a disabling condition and wish to request accommodations in order to have reasonable access to the programs and services offered by SMCC, you must register with the Disability Services Coordinator, Sandra Lynham, who can be reached at 741-5923. Further information about services for students with disabilities and the accommodation process is available upon

request at this number. Course policies about online testing are modified to suit each individual's accommodations.

SMCC Pay-for-Print Policy

Each semester students receive a \$20 printing credit. The balance resets at the end of the semester and any remaining credits are removed. The College's pay-for-print system monitors printing on all printers (including those in general access labs, library printers, Tutoring Services, Campus Center Lounge and technology labs). Be sure to log OUT of the system when you've finished your printing, to prevent unauthorized access to your account. Students can check the number of pages they have printed by using the Printing Balance tool available on SMCC computers (located in the lower right corner of the screen, near the clock). Departments with work study students who need to print documents for the department should contact the Help Desk at 741-5696 to have a special account set up. To find ways to reduce your printing charges, please go to the IT Help tab on My SMCC. If you have questions about the pay-for-printing policy or your printing charges, please contact the Help Desk at 741-5696 or send an e-mail to helpdesk@smccme.edu.

Refunds

Print jobs are eligible for a refund in the event of mechanical or electronic error on the part of the printer, print server, or software used to submit the job. Jobs are not eligible for a refund in cases where the job was not set up correctly, was submitted multiple times, or the student is not satisfied with the result. To request a refund, please bring the offending print to the IT Department in the basement of the Ross Technology Center. Refunds will be granted in the form of a credit to the student's account.

Add-Drop Policy

Students who drop a course during the one-week "add/drop" period in the fall and spring semesters and the first three days of summer sessions receive a 100% refund of the tuition and associated fees for that course. Please note any course that meets for less than the traditional semester length, i.e., 15 weeks, has a pro-rated add/drop period. There is no refund for non-attendance.

Withdrawal Policy

A student may withdraw from a course only during the semester in which s/he is registered for that course. The withdrawal period is the second through twelfth week of the Fall and Spring semesters and the second through ninth week of twelve-week Summer courses. This period is pro-rated for shorter-length courses (usually 75 percent of course meeting times; please check with the Registration Office. To withdraw from a course, a student must complete and submit the appropriate course withdrawal form, available at the Registration Office. This process must be completed either in person or by using SMCC e-mail accounts.

Plagiarism Statement

If an instructor suspects that a student has knowingly committed a violation defined in the Maine Community College System Policy on Student Grade Appeals and Academic Misconduct, the instructor has the authority to review the alleged misconduct and determine the grade that the student should receive for the assignment and the course. The instructor may assign a failing grade for the assignment or course and may require the student to complete additional work for the course. The instructor may consult with the department chair and/or the College's chief academic officer prior to making such decisions. If a student seeks to challenge an instructor's determination, the student should submit a grade appeal. Grade appeal forms are available in the Advising Office on the South Portland Campus or in the administrative offices in the Learning Commons on the Midcoast Campus. An instructor may also refer the matter to the College's disciplinary officer for review under the procedures of the MCCS Student Code of Conduct

Lesson Plan

- Unit 1 Introduction to course content
Syllabus and lesson plan
Example plans

House structural anatomy and terminology

HOMEWORK: Worksheet 1A
- Unit 2 Foundations: Pier
Introductions to the three basic foundation systems: Pier, Slab and T-Type

HOMEWORK: Worksheet 2A – Pier foundations worksheet
Worksheet 2B – foundation details
- Unit 3 Foundations: Slab

HOMEWORK: Worksheet 3A - Slab
- Unit 4 Foundations: T-Type

HOMEWORK: Worksheet 4A – foundation plan
- Unit 5 Floor framing: lumber

HOMEWORK: Worksheet 5A – Framing plan
Worksheet 5B – Pier framing materials list
Worksheet 5C – Cost comparison

Floor framing: Engineered
Worksheet 5D – Engineered wood materials list
- EXAM **FOUNDATIONS & FRAMING EXAM**
- Unit 6 Wall construction
HOMEWORK: Worksheet 6A – wall framing elevation

- Unit 7 Sections and Stairs
 HOMEWORK: **Worksheet 7A** – wall section
 Worksheet 7B – Stairs
 Worksheet 7C – add openings for stairs and chimney to framing plan
 Worksheet 5A
- Unit 8 Roof construction thermal and moisture protection
 HOMEWORK: Worksheet 8A – add roof to the wall section Worksheet 7A
- Unit 9 The floor plan
 Typical residential living spaces and sizes – what kind of rooms are in an
 average house? Critique of house plans.
- HOMEWORK: Worksheet 9A** – Revit camp
 Revit Design Project 9B – Plan schematic
- Unit 10 Kitchens and Bathrooms
 HOMEWORK: Revit Design Project 10A – add a kitchen and bathroom to
 the plan from 9B
- Unit 11 Doors and Windows
 HOMEWORK: Revit Design Project 11A – Create a door and window
 schedule and tag all doors and windows from Worksheet 10A
- Unit 12 Elevations
 HOMEWORK: Revit Design Project 12A – Project the elevations from the
 plan and section information
- Unit 13 Applying dimensions
 HOMEWORK:
 Design Project 11C – Apply dimension to Design Project 10A
- FINAL **FINAL EXAM**