

THREE RIVERS COMMUNITY COLLEGE
ALTERNATIVE BUILDING SYSTEMS – ARC K225

Tuesday & Thursday 4pm - 5:15pm

Professor: Mark Comeau (885-2387), email MComeau@trcc.commnet.edu, web www.ProfessorComeau.com

Grade: Quizzes (4) 50% Final Exam 25% Case Study 25%

Course Objectives:

Students will gain working knowledge of alternative building systems (students should have previous knowledge of traditional building systems). Areas covered include building siting, structural alternatives, envelope and weathering systems, industry-standard design and performance criteria (LEED & BPI), interior environmental quality, and mechanical-electrical-plumbing systems. Students will demonstrate applied learning through case-study work.

Method: Lectures, Slide Lectures, Simulations, Class Discussion, Case Studies

Text: **Instructor Supplements**

(Note: Documentation appropriate to the scheduled lecture will be distributed at the time of each lesson.)

<u>Week 1</u> (8/26)	Over-view (Traditional Systems) Structure, Envelope, Mech/Elec/Plmb	<u>Week 9</u> (10/19)	Building Interior Environment Indoor Quality, Daylighting, VOC's
<u>Week 2</u> (8/31)	Site Selection "Smart-planning", Infrastructure & Siting	<u>Week 10</u> (10/26)	Building MEP Systems Geo-therm, Passive/Active, Controls
<u>Week 3</u> (9/07)	Structural Systems ICF, SIP, Composite Systems	<u>Week 11</u> (11/02)	Building MEP Systems Operation, Life-cycle & Maintenance
<u>Week 4</u> (9/14)	Envelope Envelope Systems	<u>Week 12</u> (11/09)	Building FF&E Fixtures, Furniture & Equipment
<u>Week 5</u> (9/21)	Weathering Fenestration, Siding, Roofing, Sealants	<u>Week 13</u> (11/16)	Thanksgiving Break (Schedule Float)
<u>Week 6</u> (9/28)	Energy Resources Renewable/Non & Co-generation	<u>Week 14</u> (11/23)	Sustainable Communities Design & Conversion Adapting
<u>Week 7</u> (10/05)	Building Design LEED Criteria	<u>Week 15</u> (12/30)	Case Study (Students conduct home evaluation)
<u>Week 8</u> (10/12)	Building Performance BPI Criteria	<u>Week 16</u> (12/07)	Conclusion Exam, Final Projects Due

COURSE REQUIREMENTS:

Notebook

Students will assemble a notebook, to be made up of handouts distributed at the beginning of each class. A 3" "Slant-ring" notebook with plastic sheet protectors is recommended – this will be a good resource for future reference.

Case Study

Case study will be due no later than the beginning of the last (16th) week but no sooner than the 15th. More details will be discussed in class.