COURSE OBJECTIVES

To provide the student with an introduction to building construction as it relates to firefighter and life safety. Course will cover building construction terms, types, fire protection features, codes and prevention characteristics of various buildings. Text: Knowing Your Buildings: A Firefighter’s Reference Guide by Craig Schwinge (Delmar/Cengage 2010).

Students needing accommodations should contact the instructor ASAP. As required by the Americans with Disabilities Act (ADA), accommodations are provided to insure equal opportunity for students with verified disabilities. If you need assistance with an accommodation, please contact Disabled Student Services, Room 810, (479-6379) or Learning Skills Program, Room 1073, (479-6220).

ATTENDANCE/PARTICIPATION: This course requires active participation each day of class so it is important for you to attend every class session, arrive on time, and come prepared. Your participation not only enhances your own learning, it benefits other students in the class, especially when the class is doing group work. Your level of participation is reflected in your grade and since you can’t participate if you are not in class, absences will also be reflected in your grade. Students deciding not to attend are responsible for completing drop procedures.

IMPORTANT DATES:

Semester Dates: February 6 – June 2
Holidays: Presidents Holiday February 10, 20; Spring Break April 9 – 14; Memorial Day May 28
Last day to add or drop (with a refund) full term classes: February 18
Last day for students to withdraw without a “W” (full term course): March 3
Withdrawal deadline with a “W” (full term course): May 5
Deadline for pass/no pass option: March 9
Finals Week: May 29 – June 2

GRADING SCHEDULE

<table>
<thead>
<tr>
<th>Component</th>
<th>Points Available</th>
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<tbody>
<tr>
<td>12 Handouts</td>
<td>120 points</td>
</tr>
<tr>
<td>3 Exams at 80 points each</td>
<td>240 points</td>
</tr>
<tr>
<td>Building Project Report</td>
<td>80 points</td>
</tr>
<tr>
<td>NIOSH or Near Miss Report</td>
<td>40 points</td>
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<td>480 points total</td>
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No make-up exams without prior approval. Late project or report will receive one-half credit. All written work is to be typed and well organized. Syllabus and handout worksheets available at my Cabrillo website:
http://www.cabrillo.edu/~cschwinge/
SYLLABUS SPRING 2012

Students are to print out worksheet handouts (12) before class on Monday which are to be completed and turned in Wednesdays at the end of class. ([http://www.cabrillo.edu/~cschwinge/](http://www.cabrillo.edu/~cschwinge/)). Additional homework reading will be required for some weeks.

The text chapter, “Construction Essentials for Structural Firefighting Success” will be referred to frequently throughout the semester and requires re-reading. See the above link to view powerpoints from that chapter. The three (3) exams will include vocabulary (see Assignment below) as well as material from the handout worksheets and class discussions.

<table>
<thead>
<tr>
<th>DATE</th>
<th>SESSION</th>
<th>TOPIC</th>
<th>ASSIGNMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>2/6 &amp; 2/8</td>
<td>1</td>
<td>Introductions, course outline review</td>
<td>Study “A” through “H”</td>
</tr>
<tr>
<td>2/13 &amp; 2/15</td>
<td>2</td>
<td>Codes, Prevention, Resistance, Occupancy</td>
<td>Study “A” through “H”</td>
</tr>
<tr>
<td>(2/20 holiday) 2/22</td>
<td>3</td>
<td>Building Types</td>
<td>Study “A” through “H”</td>
</tr>
<tr>
<td>2/27 &amp; 2/29</td>
<td>4</td>
<td>Forces, Stresses, Loads and Failure</td>
<td>Study “A” through “H”</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>Prepare for EXAM #1</td>
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<tr>
<td>3/5 &amp; 3/7</td>
<td>5</td>
<td>Monday EXAM #1; Wednesday - Structural Components and Connections</td>
<td>Study “I” through “M”</td>
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<tr>
<td>3/12 &amp; 3/14</td>
<td>6</td>
<td>Materials</td>
<td>Study “I” through “M”</td>
</tr>
<tr>
<td>3/19 &amp; 3/21</td>
<td>7</td>
<td>Roofs</td>
<td>Study “I” through “M”</td>
</tr>
<tr>
<td>3/26 &amp; 3/28</td>
<td>8</td>
<td>Floors</td>
<td>Study “I” through “M”</td>
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<tr>
<td>4/2 &amp; 4/4</td>
<td>9</td>
<td>Walls</td>
<td>Prepare for EXAM #2 Complete NIOSH Report</td>
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<tr>
<td>4/9 &amp; 4/11</td>
<td>10</td>
<td>SPRING BREAK</td>
<td>Study “N” through “Z”</td>
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<tr>
<td>4/16 &amp; 4/18</td>
<td>11</td>
<td>Monday EXAM #2; Wednesday NIOSH/NM REPORTS</td>
<td>Study “N” through “Z”</td>
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<tr>
<td>4/23 &amp; 4/25</td>
<td>12</td>
<td>Hazardous Building Features and Conditions</td>
<td>Study “N” through “Z”</td>
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<tr>
<td>4/30 &amp; 5/2</td>
<td>13</td>
<td>Hazardous Building Features and Conditions</td>
<td>Study “N” through “Z”</td>
</tr>
<tr>
<td>5/7 &amp; 5/9</td>
<td>14</td>
<td>Failure Indicators and Causes</td>
<td>Study “N” through “Z”</td>
</tr>
<tr>
<td>5/21 &amp; 5/23</td>
<td>16</td>
<td>BUILDING PROJECT REPORTS</td>
<td>Prepare for EXAM #3</td>
</tr>
<tr>
<td>(5/28 holiday) &amp; 5/30</td>
<td>17</td>
<td>Wednesday EXAM #3</td>
<td></td>
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CABRILLO COLLEGE  
FT 4 BUILDING CONSTRUCTION FOR FIRE PROTECTION  
Instructor Craig Schwinge
BUILDING PROJECT REPORT

Provide a photograph and prepare a type-written report on each of the following buildings:
1. Wood frame
2. Concrete or masonry wall bearing building
3. Steel frame

For each building provide the following as applicable:
A. Building information
   1. Address
   2. Age (best estimate)
   3. Size (best estimate)
   4. Type (if able to determine)
   5. Occupancy code
   6. Number and type of exits
   7. Fire protection systems (sprinklers, detectors, alarm panel, etc)

B. Description of construction features/elements
   1. Frame material and sizes (structural elements for walls, floors roof). Give approximate sizes of joists, rafters, trusses, studs.
   2. Exterior wall coverings/surfaces
   3. Interior wall coverings/surfaces
   4. Floors and ceilings frame materials and coverings
   5. Roof (flat, pitched or curved); roof deck material and exterior covering

C. Firefighting hazards
   1. Construction features (concealed void spaces, trusses, unprotected structural elements, light weight construction features/materials, URM, tilt-up, flame spread issues, etc).
   2. Fire loading (contents, products, hazardous materials, etc)
   3. Life safety concerns (rescue potential, elderly, infirm, etc)
   4. Fire and smoke spread characteristics (voids, non fire-stopped attic spaces, open hallways, large open areas, etc)
   5. Failure/collapse potential (age, condition, connections, lack of fire protection systems, construction elements/features, etc)

Due date May 21, 2012.

NIOSH LINE OF DUTY DEATH OR FIREFIGHTER NEAR MISS REPORT

Prepare a type-written, three-page (minimum) report on a line of duty death or near miss due to a failure of a building construction element (www.cdc.gov/niosh/fire/) or (www.firefighternearmiss.com/). Describe and discuss hazardous building features, fire conditions or warning signs, if any that could have alerted firefighters prior to the event. Cite the source of your information and provide the date and location of the LODD or near miss. Due April 18, 2012.
EXTRA CREDIT

Up to 20 points extra for digital photos on terms from book.

Useful websites and additional information:

http://www.everyonegoeshome.com/partners/fsculture_p1.html
http://www.fire.gov/FFTG/index.htm
http://www.cdc.gov/niosh/fire/
http://www.cdc.gov/niosh/docs/2009-100/
http://www.cdc.gov/niosh/fire/othpubs.html
http://www.cdc.gov/niosh/fire/quizinstr.html
http://www.fire.nist.gov/
http://www.everyonegoeshome.com/resources/
http://www.everyonegoeshome.com/media/
http://www.fireserviceslt.com/index.html
http://www.firefighternearmiss.com/
http://www.firefighterclosecalls.com/home.php
http://www.usfa.dhs.gov/index.shtm
http://wtc.nist.gov/