Masonry Design and Behaviour  
Winter 2011  
Engineering CIVE 5200

Instructor: Khaled Ibrahim, Ph.D., P.Eng.  
E-mail: Please direct all e-mail contact through WebCT e-mail.  
Office Hours: TBA  
Class Time: Monday 6:05PM – 8:55PM Paterson Hall Rm 118  
Teaching Assistant: TBA

COURSE OUTLINE

1. COURSE DESCRIPTION

Properties of masonry materials and assemblages. Behaviour and design of walls, quality control, plain and reinforced masonry, beams, walls, slender walls, columns, load-moment interaction curves, shear load distribution, shear walls, code provisions,. Treatment of specialized design and construction topics. Discussion of masonry problems. Treatment of issues related the rehabilitation, restoration, and conservation of masonry structures. Some emphasis will also be placed on the seismic upgrade (retrofit) of masonry structures and obtaining stress levels and material properties through employing destructive and non-destructive testing techniques.

Prerequisites: Knowledge of concrete design and behaviour is a must.

2. WebCT

This course will be supported by the WebCT Course Management System. All correspondence with the instructor should be carried out through the WebCT e-mail system only. A discussion group will be available for students, and a variety of resources will be made available through the WebCT site. Students must activate their accounts by going to the following page: Webct.carleton.ca and following the links from the “student Resources” site on the left hand side.

Students will be fully responsible for reading and responding appropriately to all information distributed to students through WebCT Course Page. Information provided on this page will be considered to have been provided to all registered students within 24 hours of posting.
3. EVALUATION

The final grade will be based on the following components:

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<thead>
<tr>
<th>Component</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>Assignments</td>
<td>20 %</td>
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<tr>
<td>Project</td>
<td>20 %</td>
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<tr>
<td>Mid-Term Exam</td>
<td>20 %</td>
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<tr>
<td>Final Examination</td>
<td>40 %</td>
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<tr>
<td>Total</td>
<td>100 %</td>
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It is necessary to earn a passing grade (50%) on the final exam in order to pass the course as a whole.

4. ACADEMIC MISCONDUCT/PLAGIARISM

It is an instructional offense to use or pass off as one’s own an idea or product which is the work of another without expressly giving credit to that other. It is also as instructional offense to copy the work of a fellow student. If students do plagiarize or cheat, the Dean’s Office will be notified and appropriate action will be taken.

5. USE OF ELECTRONIC DEVICES

Any handheld calculator may be used during examinations. No other electronic transmission or receiving devices may be used during examinations.

No electronic devices such as laptops or cell phones may be used in the classroom.

6. TEXTBOOK

The following textbook is required for CIVE 5200 and may be provided to the student at no charge courtesy of the Canada Masonry Design Centre:


The following textbook will also be used to complement the lecture notes and the above text. This textbook may be provided to the student at no charge courtesy of the Canadian Concrete Masonry Producers Association:

Masonry Design for Engineers and Architects, Hatzinikolas, M., & Korany, Y., Canadian Masonry Publications, Edmonton, AB, 2005