COEN 7501 Grading Scheme

- 2 Tests: 60%
- Project: 40%
COEN 7501: Test 1

- Tuesday May 21 at 1.15pm!
- Classroom: MB-S2.135
- Extra Office Hours
  - Monday May 20: 12-1pm
- Topics ...
COEN 7501: Test #1 Topics

► Introduction
  ▪ VLSI Design Flow
  ▪ What’s verification
  ▪ Verification Challenges
  ▪ Types of Verification
  ▪ Formal Verification (Techniques, Tools, Limitations, etc.)

► Equivalence Checking
  ▪ Combinational Equivalence Checking (Principles, Tools)
  ▪ Propositional Resolution, Stalmark Procedure, ROBDDS
  ▪ Sequential Equivalence Checking (Principles, Re. Anal.)
  ▪ Case Study (ATM Switch)

► Material allowed: Only Calculators (closed book!)
COEN 7501: Test 2

- Thursday June 13 at 1.15pm!
- Classroom: MB-S2.135
- Extra Office Hours
  - Wednesday June 12: 12-1pm
- Topics …
COEN 7501: Test #2 Topics

► Model Checking
  ▪ Temporal Logics (LTL, CTL)
  ▪ Properties Specification
  ▪ Model Checking Algorithm
  ▪ Symbolic Model Checking
  ▪ Case Study (ATM Switch)

► Theorem Proving
  ▪ First and Higher-order Logics
  ▪ HOL Theorem Prover
  ▪ Hardware Modeling in HOL
  ▪ Hardware Verification in HOL
  ▪ Case Study (RISC Processor)

► Material allowed: Only Calculators (closed book!)
COEN 7501: Project Grading Scheme

- **Project (40%)**
  - 60% Project Report
  - 20% Project Presentation
  - 10% Participation (Peer Evaluation Form)
  - 10% Project Demo (TA’s Evaluation)
max. 20 pages (w/o code)

1. Description of system behavior and function using state machines, block diagrams or circuit structures.
2. RTL synthesis using Synposys Design Compiler
3. RTL-gate level Equivalence Checking
4. Gate-gate level Equivalence Checking (bug hunting)
5. Description of Verification process in Synopsys Formality/Cadence Conformal
6. Analysis of verification results
7. Conclusions (Comments and Challenges)
COEN 7501: Project Presentation

- 15 min. Incl. Q&A
1. System behavior and function
2. RTL Synthesis
3. Equivalence Checking (RTL-gate/gate-gate)
4. Verification process
5. Analysis of results
6. Comparison Conformal vs. Formality
7. Conclusions (Comments and Challenges)
8. Presentation Skills
9. Answering Questions
TEAMMATE AND SELF-EVALUATION SHEET

GROUP NUMBER: __________________________

TEAMMATE NAMES:                    YOUR NAME: __________________________

1. __________________________________
2. __________________________________
3. __________________________________
4. __________________________________

Please assign the ratings you feel appropriate for each of your teammates and yourself in the categories below. Use the following grade scale in making your judgments:

   A+/A --an exceptional contribution
   A-/B+ --a good contribution
   B--an acceptable contribution
   B-/C+ --a marginal contribution
   C--poor contribution
   F--no contribution

<table>
<thead>
<tr>
<th></th>
<th>Self Rating</th>
<th>Teammate Ratings</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>#1</td>
<td>#2</td>
</tr>
<tr>
<td>Attendance at planned meetings</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Preparation for his/her contribution to project</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gave supportive and helpful suggestions and feedback</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Allowed and encouraged others to present their ideas; did not dominate or intimidate</td>
<td></td>
<td></td>
</tr>
<tr>
<td>OVERALL RATING OF PARTICIPATION AND CONTRIBUTION</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Additional comments:

CSCP Center for the Study of Classroom Processes
Corcoran University, 864-222-2222

u5teameval_fm: 20/02/00
Having researched and prepared this report for submission to the Faculty of Engineering & Computer Science, the undersigned certify that the following statements are to the best of my/our knowledge true:

1. The undersigned have written this report myself/themselves.
2. This report consists entirely of ideas, observations, references, information and conclusions composed or paraphrased by the undersigned, as the case may be, except for statements contained within quotation marks and attributed to the best of my/our knowledge to their proper source in footnotes or otherwise referenced.
3. With the exception of material in appendices, the undersigned have endeavored to ensure that direct quotations make up a very small proportion of the attached report, not exceeding 5% of the word count.
4. Each paragraph of this report that contains material which the undersigned have paraphrased from a source (print sources, multimedia sources, web-based sources, course notes or personal interviews, etc), has been identified by numerical reference citation.
5. All of the sources that the undersigned consulted and/or included in the report have been listed in the Reference section of the report.
6. All drawings, diagrams, photos, maps or other visual items derived from sources have been identified by numerical reference citations in the caption.
7. Each of the undersigned has revised, edited and proofread this report individually.
8. In preparing this report the undersigned have read and followed the guidelines found in Form and Style, by Patrick MacDonagh and Jack Border (Fourth Edition: May 2000), available at http://www.encs.concordia.ca/acs/Forms/Form8Style.pdf.

Name: ___________________________ ID No:_________ Signature:_____________________ Date:_________

(please print clearly)

Name: ___________________________ ID No:_________ Signature:_____________________ Date:_________

(please print clearly)

Name: ___________________________ ID No:_________ Signature:_____________________ Date:_________

(please print clearly)

Name: ___________________________ ID No:_________ Signature:_____________________ Date:_________

(please print clearly)

Name: ___________________________ ID No:_________ Signature:_____________________ Date:_________

(please print clearly)

Name: ___________________________ ID No:_________ Signature:_____________________ Date:_________

(please print clearly)

Do Not Write in this Space – Reserved for Instructor
COEN 7501: Project Deadlines

► Project Reports:
  - Monday June 10, before 5pm!
  - Mailbox of Dr. Tahar or ECE Dept. Secretary in EV005.139

► Project Presentations:
  - Tuesday June 11 at 1.15pm!
  - Classroom: MB-S2.135