### Document:
Computer Organization II Course Administration

### Revised:
November 26, 2012

### Course Title:
Computer Organization II

### Course Number:
CMSC 3833

### Section:
CRN 11847 Monday and Wednesday 5:45 – 7:00 p.m. MCS 115

### Instructor:
Dr. Thomas R. Turner; Office: MCS 134; Work Phone: 974-5383, e-mail: trturner@uco.edu

### Office Hours:

<table>
<thead>
<tr>
<th>Time</th>
<th>Monday</th>
<th>Wednesday</th>
<th>Friday</th>
</tr>
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<tbody>
<tr>
<td>9:00 – 9:50 p.m.</td>
<td>Office Hours MCS 134</td>
<td>Office Hours MCS 134</td>
<td>Office Hours MCS 134</td>
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<tr>
<td>4:30 – 5:30 p.m.</td>
<td>Office Hours MCS 134</td>
<td>Office Hours MCS 134</td>
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</tbody>
</table>

Please make an appointment to visit me during my office hours.

### Text:

### References:

### Prerequisites:
1. CMSC 2833, Computer Organization I

### Course due dates:
All assignments, projects, reports and quizzes are due at the beginning of class on the date given in this document unless otherwise specified. Exams that are administered in class are due at the end of the class period.

### Course Scoring:

<table>
<thead>
<tr>
<th>Task</th>
<th>Date</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Test 1</td>
<td>9-26</td>
<td>150</td>
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<tr>
<td>Test 2</td>
<td>11-7</td>
<td>150</td>
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<tr>
<td>Final Test</td>
<td>12-12</td>
<td>300</td>
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<tr>
<td>Quizzes</td>
<td>Table 2</td>
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<td>Projects</td>
<td>Table 3</td>
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<td>Reports</td>
<td>Table 4</td>
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<td><strong>Total</strong></td>
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### Grading:
A: 90% (810-900); B: 80-89% (720-809); C: 70-79% (630-719); D: 60-69% (540-629); F: 59% (0-539) and below.

### Notice:
Beepers and cellular phones are prohibited in class.

### Caveat:
This lecture schedule, programming projects, reports, quizzes, tests, and due dates are all subject to change. Changes are presented in class You are responsible for the material presented in class.

### Class Web Page:
The course administration and assignments can be found on URL [http://www.comsc.uco.edu/~trt/cs3833.html](http://www.comsc.uco.edu/~trt/cs3833.html)

### Course Directory
The course directory is on the department computer (cs.uco.edu). You can find project test data files in the course directory. [~tt/cs3833/](~tt/cs3833/)

### Student Disabilities:
Students with disabilities who require accommodations may contact Disability Support Services. [http://bronze.uco.edu/disability_support/](http://bronze.uco.edu/disability_support/)
**Excused absences:** Students need an excused absence to submit an assignment or report after it is due. Students need an excused absence to take a quiz or test after it has been given. Students are encouraged to attend every class but a student will not be asked to provide documentation warranting an excused absence unless the student wishes to submit an assignment or report after it is due or take a test after it has been given. Excused absences are granted when the conditions of notification, qualification, and documentation are satisfied.

1. **Notification.**
   1.1. You must notify your instructor, *in writing, as soon as possible*, if your absence is cause for submitting an assignment or report after it is due. In the same way, you must notify your instructor *in writing, as soon as possible*, if you wish to take a quiz or test after it has been collected. Written notification is very important.
   1.2. Please notify your instructor *before* your absence whenever possible. Notification after an assignment, report, quiz, or test was due will be accepted only in emergency situations such as a sudden, serious illness.
   1.3. Please send a note to trturner@uco.edu indicating the date of absence and your reason for absence.

2. **Qualification.** The following circumstances are accepted as valid reasons for excused absences:
   2.1. Travel considered part of the instructional program of the university; and requiring absence from class (e.g. field trips, research presentations, etc.)
   2.2. Invited participation in activities directly sponsored by and in the interest of the university (e.g. athletic teams, debate teams, dance company, etc.)
   2.3. Military obligation
   2.4. Serious illness or injury
   2.5. Death or serious illness in immediate family

3. **Documentation.** Appropriate documentation for absences is always required. For example, a note from your doctor can serve as adequate documentation if you are seriously ill or injured. An obituary is appropriate for a death in the family.

**Academic Honesty and Collaboration:** Students are encouraged to collaborate. However, each student must make a unique contribution to any joint effort and that unique contribution must be visible in the work submitted by the student. Partially or completely copied assignments shall be considered a prima facie case for academic dishonesty.
<table>
<thead>
<tr>
<th>Lecture</th>
<th>Date</th>
<th>Topic</th>
<th>Reference</th>
</tr>
</thead>
</table>
| 1       | 8-20  | Course Administration  
Registers and Load Enable  
Register Transfer  
Register Transfer Operations | Lecture 1, Mano & Kime 7-1  
Lecture 2, Mano & Kime 7-2  
Lecture 3, Mano & Kime 7-3 |
| 2       | 8-22  | A Note for VHDL and Verilog Users Only  
Microoperations  
Microoperations on a Single Register | Lecture 4, Mano & Kime 7-4  
Lecture 5, Mano & Kime 7-5  
Lecture 6, Mano & Kime 7-6 |
| 3       | 8-27  | Register-Cell Design  
Submit Quiz 1  
7-16 Dawn  
7-17 Travis  
7-18 Dustin & Jace  
7-19 Gang of 4  
7-20 Taehwan & Zhibin | Lecture 7, Mano & Kime 7-7 |
| 4       | 8-29  | Problems                                                             |                                               |
| 5       | 9-5   | Multiplexer and Bus-Based Transfers for Multiple Registers  
Submit Quiz 2 | Lecture 8, Mano & Kime 7-8 |
| 6       | 9-10  | Serial Transfer and Microoperations  
Microprogrammed Control | Lecture 9, Mano & Kime 7-9  
Lecture 10, Mano & Kime 7-13 |
| 7       | 9-12  | 7-30, 7-31  
Memory Definitions  
Random Access Memory | Lecture 11, Mano & Kime 8-1  
Lecture 12, Mano & Kime 8-2  
Lecture 13, Mano & Kime 8-3 |
| 8       | 9-17  | SRAM Integrated Circuits  
Array of SRAM ICs DRAM ICs  
8-1,8-2,8-3 | Lecture 14, Mano & Kime 8-4  
Lecture 15, Mano & Kime 8-5 |
| 9       | 9-19  | Problems  
8-3.1, 8.3-2, 8-8, 8-8.1, 8-9 |                                               |
| 10      | 9-24  | DRAM Types  
Arrays of Dynamic RAM ICs  
Submit Quiz 3 | Lecture 16, Mano & Kime 8-6  
Lecture 17, Mano & Kime 8-7 |
| 11      | 9-26  | Test 1  
Submit Quiz 4 | Lectures 1-14 |
| 12      | 10-1  | No Class  
Submit Quiz 4 |                                               |
| 13      | 10-3  | Test 1 Reprise  
Problem 8-7-Heru  
Quiz 4 Reprise |                                               |
| 14      | 10-8  | Computer Architecture Concepts  
Operand Addressing  
Addressing Modes  
Instruction Set Architectures  
Report r01 due | Lecture 18, Mano & Kime 10-1  
Lecture 19, Mano & Kime 10-2  
Lecture 20, Mano & Kime 10-3  
Lecture 21, Mano & Kime 10-4 |
| 15      | 10-10 | “Designing a Supercomputer” by Dr. Henry Neeman, Howell Hall Atrium, 2:00 p.m.  
Submit Quiz 5 |                                               |
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<th>Lecture</th>
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| 16      | 10-15 | Data-Transfer Instructions  
Data Manipulation Instructions  
Floating-Point Computations  
10-1 S. Vincent et. al.  
10-2 C. Brown LLC  
10-3 T. Theis & Dawn  
10-4 A. Pettus & Jace B. | Lecture 22, Mano & Kime  
Lecture 23, Mano & Kime  
Lecture 24, Mano & Kime |
| 17      | 10-17 | Program Control Instructions  
Program Interrupt | Lecture 25, Mano & Kime  
Lecture 26, Mano & Kime |
| 18      | 10-22 | 10-6: Jace-Andrew  
10-7: Taehwan-Zhibin  
10-10: Justin-Sachet  
10-11: Sean-Cameron  
10-18: Derek-Stephen  
10-21: Heru-Drew  
10-25: Travis-Dawn  
10-26: Anthony-Dustin | Lecture 27, Mano & Kime  
Lecture 28, Mano & Kime  
Lecture 29, Mano & Kime |
| 19      | 10-24 | Computer I/O  
Sample Peripherals  
I/O Interfaces | Lecture 30, Mano & Kime  
Lecture 31, Mano & Kime |
| 20      | 10-29 | Serial Communication  
Modes of Transfer  
Project p01 due | Lecture 32, Mano & Kime  
Lecture 33, Mano & Kime |
| 21      | 11-5  | Derek & Stephen: 12-1  
Travis & Dawn: 12-2  
Sean & Cameron: 12-3  
Priority Interrupt  
Direct Memory Access | Lecture 34, Mano & Kime  
Lecture 35, Mano & Kime |
| 22      | 11-7  | Test 2  
Lectures 15-27 | Test 2 Reprise  
Cache Memory | Lecture 36, Mano & Kime |
| 26      | 11-19 | 13-1 Orr&Vincent  
13-2 Taehwan&Zhibin  
13-3 Dawn&Travis  
13-4 Anthony&Justin  
Virtual Memory  
Submit Quiz 8 | Lecture 37, Mano & Kime |
| 27      | 11-26 | Margin | 

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<td>30</td>
<td>12-5</td>
<td>Distribute summary score sheets and final remarks.</td>
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<td>31</td>
<td>12-12</td>
<td>Final Exam, Due 5:30 p.m. Wednesday, December 12, 2012</td>
<td>Comprehensive</td>
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<td>8-27</td>
<td>10</td>
<td>Shift Register Design</td>
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<td>9-5</td>
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<td>Static RAM Design</td>
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<td>Assembly Language</td>
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<td>Two’s Complement Addition</td>
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Table 4. Reports

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