Fall 2005

CEG 255: Introduction to the Design of Information Technology Systems

Eric Matson
Wright State University - Main Campus

Follow this and additional works at: http://corescholar.libraries.wright.edu/cecs_syllabi

Part of the Computer Engineering Commons, and the Computer Sciences Commons

Repository Citation

This Syllabus is brought to you for free and open access by the College of Engineering and Computer Science at CORE Scholar. It has been accepted for inclusion in Computer Science & Engineering Syllabi by an authorized administrator of CORE Scholar. For more information, please contact corescholar@www.libraries.wright.edu.
Computer Engineering (CEG) 255
Introduction to the Design of Information Technology Systems

Autumn Quarter 2005
Wright State University

Course Description
Information systems consist of modern elements such as database systems, networks, multi-
platform distributed computing, web infrastructure and multimedia computing. In this course we
will address these areas individually and also where they intersect to gain a basic understanding
of how information technology can be used to solve real problems.

We will develop techniques to design, develop and implement distributed business software. Emphasis will be on the following areas:
• Graphical User Interfaces (GUI) using Java Swing classes
• Management of data in Relational Database Management Systems (RDBMS) with SQL
• Integration of distributed systems using object brokered systems such as CORBA

Goal
There are several goals to accomplish in CEG 255:
1. Master the individual techniques in Java for implementing IT Systems (CORBA, GUI, etc.)
2. Conceptualize how the individual techniques can be used together
3. Learn how to solve real, complex problems
4. Have some fun!

Lecturer
Eric Matson
Office: 336 Russ Engineering Center
Phone: 937-775-5108
Office Hours: Tuesday/Thursday 10:00 - 12:00 Russ 336 or by appt.
Email: eric.matson@wright.edu
Web: www.cs.wright.edu/-matson
Class: Tuesday/Thursday 2:15 - 3:30 Russ Engineering Center 153

Text
Required: Big Java, 2nd Edition, Cay Horstmann, John Wiley and Sons, Inc.

Prerequisites
For this class the official prerequisite is CS 241. Please let me know the first lecture if you do not
meet this prerequisite, and we can talk about your preparation if it differs.

Grading
Homework 40%
Project 10%
Midterm Exam 25%
Final Exam 25%

The base scale is: A: 90-100, B: 80-89, C: 70-79, D: 60-69, F: 0-59. This is the highest
requirement that will be used. The scales may be lowered or revised if necessary.
**Schedule** (always subject to changes)

<table>
<thead>
<tr>
<th>#</th>
<th>Day</th>
<th>Date</th>
<th>Topic</th>
<th>Reading</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>T</td>
<td>Sept 6</td>
<td>Introduction</td>
<td>1</td>
</tr>
<tr>
<td>2</td>
<td>U</td>
<td>Sept 8</td>
<td>Objects and Classes</td>
<td>2, 3</td>
</tr>
<tr>
<td>3</td>
<td>T</td>
<td>Sept 13</td>
<td>Data Types, Decisions, Iteration</td>
<td>4-6</td>
</tr>
<tr>
<td>4</td>
<td>U</td>
<td>Sept 15</td>
<td>Design of Classes, Arrays</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>T</td>
<td>Sept 20</td>
<td>Basic Graphics</td>
<td>5</td>
</tr>
<tr>
<td>6</td>
<td>U</td>
<td>Sept 22</td>
<td>Basic Graphics</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>T</td>
<td>Sept 27</td>
<td>Event Handling</td>
<td>12</td>
</tr>
<tr>
<td>8</td>
<td>U</td>
<td>Sept 29</td>
<td>GUI</td>
<td>14</td>
</tr>
<tr>
<td>9</td>
<td>T</td>
<td>Oct 4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>U</td>
<td>Oct 6</td>
<td>Midterm Exam</td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>T</td>
<td>Oct 11</td>
<td>RDBMS Connections</td>
<td>24.1 – 24.4</td>
</tr>
<tr>
<td>12</td>
<td>U</td>
<td>Oct 13</td>
<td>RDBMS/JDBC</td>
<td>25</td>
</tr>
<tr>
<td>13</td>
<td>T</td>
<td>Oct 18</td>
<td>RDBMS/JDBC</td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>U</td>
<td>Oct 20</td>
<td>RDBMS/JDBC</td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>T</td>
<td>Oct 25</td>
<td>RDBMS/JDBC</td>
<td></td>
</tr>
<tr>
<td>16</td>
<td>U</td>
<td>Oct 27</td>
<td>CORBA</td>
<td></td>
</tr>
<tr>
<td>17</td>
<td>T</td>
<td>Nov 1</td>
<td>CORBA</td>
<td></td>
</tr>
<tr>
<td>18</td>
<td>U</td>
<td>Nov 7</td>
<td>CORBA</td>
<td></td>
</tr>
<tr>
<td>19</td>
<td>T</td>
<td>Nov 8</td>
<td>CORBA</td>
<td></td>
</tr>
<tr>
<td>20</td>
<td>U</td>
<td>Nov 10</td>
<td>Review</td>
<td></td>
</tr>
<tr>
<td>21</td>
<td>U</td>
<td>Nov 17</td>
<td>Final Exam 3:15 – 5:15 pm</td>
<td></td>
</tr>
</tbody>
</table>

Always have readings scheduled for that day complete prior to the class meeting.

Note:  
T = Tuesday  
U = Thursday
Policies and Notes

• Attendance: Attendance is not required, nor will it be taken after the first couple of lectures. If you are not a regular attendee, it will be your responsibility to seek out what material was covered in the lecture and learn it. Most of my exam questions will be taken directly from ideas covered during the lecture, so it greatly helps if you attend!

• I will utilize my CS web page (www.cs.wright.edu/~matson) to post updates to the course, sample code, projects, announcements, schedule, etc. Get in the habit of checking it regularly.

• The prerequisites of the course are basic understanding of high-level development in C++ and object-oriented concepts. If you are not confident in your skills or do not have the required prerequisites, then visit with me and I can evaluate how to catch your skills up to the appropriate level and develop a plan to do so.

• Always make backups of all of your work. Never have just one copy of anything!

• If you are going to miss an exam, for any reason, discuss it with me in advance. If it is an emergency situation, please notify me as soon as possible.

• You can reach me a number of ways. Email is normally the best as I check it about 18 hours a day normally. You can also reach me by phone during the day at 775-5108. If you need human contact either step in during my office hours, make an appointment, or just come by my office. If I am in and not on a deadline to get something else completed, I will normally try to help as much as possible.

• There are technologies we will use in this class that you may not already know, such as file transfer, command line, text editors, file systems, etc. We will cover some of these technologies as we go.

• The key to learning in this class will be spending time working through the problems. Don’t wait until 2 hours before something is due to try to learn the concept and then write the program. This normally ends in a disaster! Stay up with the readings and try to work through some of the examples in the book. I will post what I call, “10 minute programs” which are exercises that you can work through to learn key concepts. And yes, they are programs you can write and execute in 10 minutes (unless you are a really slow typist, like me. In that case, they become “20 minute programs”.)

Academic Misconduct

In this class, the only way to truly learn the concepts is to do the work yourself. I encourage working with other people on the course concepts. When you begin to write the program, complete and submit your own work.

Work that has obviously been copied or in the more extreme case, when the original author’s name has not even been changed, both parties will receive a 0 grade for that assignment. Both parties will also be turned over to the Office of Judicial Affairs.