Course Syllabus
MIS-7160-001 – Computer Hardware and System Software
Spring 2016
3 Credit Hours

(Last updated: 1/13/2016)

Instructor: Dr. Chen Zhang, Associate Professor
Time and Room: 7:10 PM-8:35 PM Monday and Wednesday, FCB 373
Phone: 901-678-5671
E-mail: czhang12@memphis.edu
Office: FAB 301
Office Hours: 1:30 PM – 3:30 PM Monday
4:30 PM – 5:30 PM Wednesday

Course Overview

Introduction to the technology of computing; processor operation including fetch/execute, input/output, instruction types, interrupt handling, addressing schemes and multiprocessing; business systems software including operating systems from single-user single-task to multi-user multitask; major components of operating systems; enterprise architecture.

Pre-Requisite:
None

Required Texts and Related Materials:

Textbook:
Irv Englander
Publisher: John Wiley & Sons, Inc.
ISBN: 9780471715429

Location of Course Materials:
Course materials are available online by logging onto eCourseWare at elearn.memphis.edu. They include lecture slides, handouts, assignments, grades and related links. Course materials are organized into modules based on the topic.
**Course Objectives:**

After successfully completing this course, students will be able to:

- Identify, use, and translate basic number systems
- Understand and explain basic types of data formats
- Describe the components of a CPU and the fetch-execute instruction cycle
- Describe how computer memory works
- Understand and explain how various input and output devices work
- Describe the functions of an operating system and compare various types of operating systems
- Understand the components of mobile operating systems
- Become familiar with the current trends in computer hardware and system software in organizations
- Understand and evaluate the impact of these trends on organizational performance and society

**Fogelman College: Learning Outcomes for Your Degree**

This course is designed to help you to meet the overall learning objectives for the MSBA degree offered by the Fogelman College


The overall learning objectives for the MSBA degree include:

---

**Goal 1: Graduates will be competent in the use of technology.**

- Use typical business application software packages effectively.
- Demonstrate how to use social media to achieve business objectives.

**Goal 2: Graduates will be effective communicators.**

- State purpose: early, clearly, creatively, skillfully.
- Organize and develop: structure, connect, separate, and flow.

**Goal 3: Graduates will be knowledgeable about threats and opportunities in a global society.**

- Identify past, current and emerging global trends affecting organizations.
- Identify sources of information needed to track global trends affecting organizations.

**Goal 4: Graduates will be problem solvers.**

- Explain important theories and concepts needed to solve problems.
- Evaluate problem solving theories and concepts and the arguments surrounding them.

---

**Course Methodology**

Combination of lectures, in-class hands-on activities, in-class discussions, and case studies.
Professor's Expectations:
Students are expected to attend classes, actively participate in class discussions and activities, review the course content after class, and complete assignments on-time. Students are strongly encouraged to contact me to discuss any concerns about this course or seek any additional help with course materials if needed.

Student's Expectations:
Course materials will be well-organized and you will be engaged in an active and supporting learning environment. I will respond to your emails within 2 days if not sooner. Submissions will be graded within 4 to 5 business days and your up-to-date grade will be posted on elearn throughout the semester.

Grading and Evaluation Criteria

Final Course Grades
Assessment of students' performance will be based on participation, pop quizzes, exercises, assignments, exams, and group project. Class performance will be weighted as follows:

<table>
<thead>
<tr>
<th>Component</th>
<th>Percent of final grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>Participation</td>
<td>10%</td>
</tr>
<tr>
<td>Ignite Talk</td>
<td>5%</td>
</tr>
<tr>
<td>Assignments</td>
<td>15%</td>
</tr>
<tr>
<td>Exam 1</td>
<td>25%</td>
</tr>
<tr>
<td>Exam 2</td>
<td>25%</td>
</tr>
<tr>
<td>Group Project</td>
<td>20%</td>
</tr>
</tbody>
</table>

Grades will be assigned using the following percentages:

<table>
<thead>
<tr>
<th>Grade</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>90% and above</td>
</tr>
<tr>
<td>B</td>
<td>80% to 89%</td>
</tr>
<tr>
<td>C</td>
<td>70% to 79%</td>
</tr>
<tr>
<td>D</td>
<td>60% to 69%</td>
</tr>
<tr>
<td>F</td>
<td>Below 60%</td>
</tr>
</tbody>
</table>

Course Topics
- Fundamentals of systems architecture
- Number systems
- Data formats
- CPU and memory
- In-memory computing
- Input/output
- Peripheral devices
- Operating systems
- Mobile operating systems
- Server virtualization and cloud computing
- Internet of Things
List of Formal Assessed Activities

Participation
You are expected to attend all classes and participate in class discussions/exercises. You are responsible for the material we cover in class if you miss a class. Lecture slides will be posted on the course website. Please note that office hours are not a substitute for class attendance.

Participation will be evaluated using the following categories:
- **Good** – (8% - 10% of final grade)
  - Attends every class; participates in class discussions; asks meaningful questions; frequent communication with the instructor
- **Fair** – (5% – 7% of final grade)
  - Attends most classes, but rarely participates in class discussions or distracts others during class; infrequent communication with the instructor
- **Poor** – (4% and below of final grade)
  - Attendance is spotty; rarely participates in class discussions or distracts others during class; little communication with the instructor

Ignite Talk
Given the diverse background, interest, opinion, and experience that students bring into our classroom, each student will give one Ignite talk (five-minute talk accompanied by 20 slides. Each slide is displayed for 15 seconds, and slides are automatically advanced) sharing his/her knowledge, expertise, experience, or opinion about a topic related to computer hardware, software, information, and information technology.

Assignments
There will be three assignments. Each assignment carries the same weight and your final assignment score will be based on the average of the three assignment scores. Assignments will be submitted through the course website unless specified otherwise. Assignments are to be done individually. Due dates for all assignments will be strictly observed and no late submission will be accepted. Turnitin and other tools will be used to detect plagiarisms.

Exams
There will be one mid-term exam and one final exam for this course. It will cover lecture material, class discussion, case studies, and textbook reading materials. The exam consists of multiple choice and essay questions. Please see the schedule for the dates of the exams.

If you know in advance that you will be absent the day of the scheduled exam, you need to make arrangements with me as soon as possible. If you miss an exam because of illness or other unforeseeable emergency (proper documentation required), you must contact me by email or phone within three days of the scheduled exam date to make arrangement for a makeup exam. Failure to do so will result in a grade of zero for the exam.

Projects
Groups will consist of 2-3 individuals. Each group will select a topic from a list of topics provided by the instructor related to computer hardware, system software, and emerging technologies. Project deliverables include a presentation and a report at the end of the semester. Detailed requirement will be provided in handouts. **Students are not allowed to use projects done for other classes for this class.**
Schedule of Activities
See course schedule on course website.

Final Exam Schedule
The final exam for this class will be in the form of a group project presentation that will take place on the scheduled exam date as noted on the Registrar's academic calendar website.

Course Policies

E-MAIL:
All students are required to maintain and access their University of Memphis (@memphis.edu) email Account on a regular basis. You will receive all official course correspondence at this email account. It is your responsibility to make sure you are able to receive incoming mail in a timely fashion. If you prefer using your alternate email address (gmail, yahoo, etc.), you should inform me in an email during the first week of class.

Attendance and Participation:
This is a standard classroom course. It is important that you consistently attend classes throughout the semester and stay active and engaged in the classroom. Your full engagement in the class begins on the first day of the semester and should be maintained until the end of the semester. For students receiving federal student loans, any lack of engagement in the course may be treated as non-attendance and potentially impact access to student loans in the future.

Students are expected participate in all interactive aspects of the course. You should also regularly communicate with the instructor as part of your overall learning experience, check the course website and email frequently for announcements, and actively participate in classrooms discussions (both formal and informal).

Note that class attendance and participation will contribute to your overall grade in the semester as noted under earlier in this syllabus.

Adding/Dropping:
If you have questions about adding or dropping classes, please refer to this page on the Registrar's website.

Academic Integrity:
The University of Memphis has clear codes regarding cheating and classroom misconduct. Please refer to the Student Handbook section on academic misconduct for a discussion of these codes. Note that using a “Solutions Manual” IS considered cheating. Should your professor have evidence that using a "Solutions Manual" has occurred, he/she may take steps as described on the campus' Office of Student Conduct website.

If you have any questions about academic integrity or plagiarism, you are strongly encouraged to review the Fogelman College’s Website on Academic Integrity. Note that Turnitin will be used extensively on submitted work, especially research and associated writing. Strong evidence of plagiarism will result in a zero on the submitted assignment.
**Classroom Behavior:**
All participants in the course should be considerate of the other participants and treat them and their opinions with respect. Use of cell phones or engaging in activities unrelated to class is not allowed in class.

**Extra Credit:**
There is no extra credit offered in this course. Your final grade will be computed based on your work on the assessed activities previously described in this syllabus.

**Reporting Illness or Absence:**
Due dates and deadlines have been established and will be followed for each graded course component. If an emergency should arise, it is the student's responsibility to contact the instructor prior to the deadline to discuss the matter. A deadline extension will be considered only if both of the following conditions are met: (1) Extreme and unforeseeable emergency and (2) Instructor contacted prior to the due date.

**Inclement Weather:**
In the event that inclement weather requires the cancellation of classes at The University of Memphis, local radio and television media will be immediately notified. Additionally, The University of Memphis has established an Inclement Weather Hotline at 678-0888 as well as TigerText (New Window), an emergency alert text messaging service to students, faculty and staff. This optional service is used in the event of an on-campus emergency, an unscheduled university closing, or a delay or cancellation of classes due to, for instance, inclement weather.

**Syllabus Changes:**
The instructor reserves the right to make changes as necessary to this syllabus. If changes are necessitated during the semester, the instructor will immediately notify students of such changes both by class email communication and posting both notification and nature of change(s) on the course website.

---

**Student Services**

Please access the [FCBE Student Services](#) page for information about:

- Students with Disabilities
- Tutoring and other Academic Assistance
- Advising Services for Fogelman Students
- Technical Assistance