

# University of Michigan-Dearborn Syllabus



## ITM 331, Advanced Computer Applications, 3 credits

Professor Edward Williams

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Office Hours: 4:30pm-5:30pm Thursdays, just before/ after class, and by appointment

Course Meeting Times and Format(s): 8:00am – 9:15am Thursdays, 191 FCS

### Course Description:

This course provides a foundation in systems analysis and design concepts, methodologies, techniques, and tools. Students will learn to analyze an organizational problem, define user requirements, design an information system, and plan an implementation. Methodologies covered will include the traditional life cycle approach as well as newer methodologies such as object-oriented, joint applications development, and prototyping. A semester-long project gives students the opportunity to apply these techniques to a business problem. This project will use technologies such as a computer-aided software engineering tool, a database management system, or a fourth-generation language.

### Program Goals:

The BBA Program Goals and Objectives may be found at [umdearborn.edu/cob/bba-goals-and-objectives](http://umdearborn.edu/cob/bba-goals-and-objectives).

This course contributes extensively toward several of these learning objectives, as follows:

- a. It will expand your knowledge of information systems and their capabilities (objective #1).
- b. It will improve your communication skills, particularly orally (your homework presentation and project presentation) (objective #2).
- c. It will improve your interpersonal and teamwork skills because you will be working in teams on homework assignments and the project (objective #3).
- d. It will hone your ability to use and critically evaluate electronic information (portions of objective #4).
- e. It will increase both your ability and your skill set for solving business quantitative problems (objective #7).

### Dearborn Discovery Core Goals:

The Dearborn Discovery Core Goals may be found at <http://umdearborn.edu/696973>.

## **Course Objectives:**

- a. Have an understanding of “systems.”
- b. Understand the process required to develop information systems.
- c. Be able to analyze business needs for information and develop an appropriate strategy to solve the project and hence provide the required information service.
- d. Understand how Information Systems fit into overall corporate strategy.
- e. Be able to prepare, use, and evaluate various information gathering techniques for eliciting user information requirements.
- f. Be able to use a number of relevant analysis techniques (e.g., process, logic, and conceptual data models) to aid in defining information requirements.
- g. Be able to produce appropriate systems documentation at each phase of systems development.
- h. Be able to communicate systems specifications effectively and persuasively in both written and oral forms.
- i. Be able to describe what CASE (computer-aided software engineering) tools do and know strengths and weaknesses of at least one CASE tool.
- j. Understand the issues associated with physical design and implementation.

## **Required Materials and/or Technology:**

1. Hoffer, George, & Valacich. Modern Systems Analysis and Design, 7/e.
2. Handouts posted on the course website.

## **Course Structure:**

You are to assume that you have been hired as a junior analyst/designer by a consulting firm which specializes in SAD. The consulting firm is a corporation with a CEO (me) and a board of directors (faculty from throughout the school). The firm has recently been contracted to investigate the possibility of developing an information system (IS) for a growing organization.

Because of the number of activities and the complexity of tasks which are to be performed, each employee will be assigned to a team (there will be  $n$  teams [ $n$  a function of class size, ideally 3 or 4 people per team] with team rosters to be determined by the end of class 2). Each team will regularly consult with the firm’s CEO, report their progress (2 presentations per semester) to the client’s management team and system users (non-presenting classmates), the other members of the firm (the class), their supervisor(s) (maybe; depends on if we have any graduate students floating around this semester), and possibly the firm’s board of directors (faculty members will attend when they are able).

Prior to the presentation, the teams are expected to prepare written reports for distribution to these actors. Each presenter will be evaluated individually by the other team members.

Required Roles

Team member. Chances are that you will (in varying degrees) be working in groups for the rest of your careers. You should learn how to effectively function within a group setting. Groups have good points and bad points. Because there are a number of people involved in a group, there should be a synergistic effect. They should somehow reflect each of the member's ideas and contributions. On the negative side, it is sometimes too easy for some individuals to “slide by” without doing as much of the work as they should. This is very troublesome. After each presentation, you, as a member of the presenting team, are to evaluate each other member of the team. You can expect one of the major obstacles to overcome in this type of group environment will be regular and efficient communication with your team members. E-mail communication will help, but it will not substitute for several hours of face-to-face meetings with your colleagues.

Course Organization

The course consists of four major components (plus the two examinations):

1. Lectures In addition to presenting classroom theory and concepts, I will try to emphasize areas of special concern for the upcoming reports and presentations. In other words, I will also be assuming the role of your supervisor. The lectures will cover generally the chapters of the textbook (except chapter 12, the topic of another course) in order – the order of the software life cycle.
2. Presentations For each assigned case problem(s) a team presentation is required (each team will present two cases during the semester). Non-presenters are required to be familiar with the case, ask questions of the presenters, and evaluate presentations from the perspective of a firm associate and as either the decision maker responsible for the IS or a system user.
3. Group Meetings .Presentation groups are expected to meet regularly. Generally, these meetings will take place outside of the class. However, if time allows, meetings may take place at the end of class. At such times, I will move from group to group, answering any questions you might have.
4. All parties are expected to comment about the group’s presentation in the Discussion forum. These comments are intended to be constructive in nature. They should expound upon and/or note specific points which were not covered in the presentation but are relevant to the case or presentation.

**Assignment and Grading Distribution:**

Evaluation Area	Weight
=====	=====
First Examination (February 18)	25%
Presentation Evaluations (2 Total)	30%
Participation (presentations, discussions, comments, etc.)	15%

Second Examination (April 14)

30%  
=====  
100%

There will be two individual examinations, as specified above. They will be based on material covered in the text, in the lecture portion of the class, and in the case presentations - i.e., they cover all aspects of the class. There will be (almost) *absolutely* no make-ups.

If you are absent on the day of a presentation, you will receive no credit for participation in that presentation. Documented extenuating circumstances are exceptions to this rule.

Participation in discussions will be evaluated following each class session.

**Grading Scale:**

94%- 100%	A	80%- 83%	B-	67%-69%	D+
90%- 93%	A-	77%-79%	C+	64%-66%	D
87%- 89%	B+	74%-76%	C	60%-63%	D
84%- 86%	B	70%-73%	C-		

**Grade Grievance:**

A student may grieve a final course grade or a grade on an examination, project, thesis or any other graded material required for graduation. This grievance process is intended to provide the student the protection against evaluations which are prejudicial, arbitrary, or capricious.

Examples of grading problems which can be grieved are:

- a. Clerical error
- b. Prejudicial evaluation
- c. Inconsistent or inequitably applied standards of evaluation

There is a presumption that the grades assigned are correct and therefore the student has the burden of proof in the grievance process (i.e. s/he must establish clerical error; capricious or prejudicial evaluation; or inconsistent or inequitably applied standards of evaluation). To start this process, the student should contact the Department Chair or Program Director before the end of the fifth week of classes in the first full term following the term in which the disputed grade was issued.

**Tentative Course Outline:**

Date	Activity and Content
Week 1	Systems Development and Origins of Software
Week 2	Managing an Information Systems Project
Week 3	Identifying & Selecting Systems Development Projects
Week 4	Starting & Planning Systems Development Projects

Week 5	Determining System Requirements
Week 6	Structuring System Process Requirements
Week 7	<b>Test #1</b>
Week 8	Structuring System Data Requirements
Week 9	Designing Databases
Week 10	Designing Forms and Reports
Week 11	Designing Interfaces and Dialogues
Week 12	System Implementation
Week 13	System Maintenance
Week 14	<b>Test #2</b>

**University Attendance Policy:**

A student is expected to attend every class and laboratory for which he or she has registered. Each instructor may make known to the student his or her policy with respect to absences in the course. It is the student’s responsibility to be aware of this policy. The instructor makes the final decision to excuse or not to excuse an absence. An instructor is entitled to give a failing grade (E) for excessive absences or an Unofficial Drop (UE) for a student who stops attending class at some point during the semester.

**Academic Integrity Policy:**

The University of Michigan-Dearborn values academic honesty and integrity. Each student has a responsibility to understand, accept, and comply with the University’s standards of academic conduct as set forth by the Code of Academic Conduct (<http://umdearborn.edu/697817/>), as well as policies established by each college. Cheating, collusion, misconduct, fabrication, and plagiarism are considered serious offenses and violations can result in penalties up to and including expulsion from the University.

**Disability Statement:**

The University will make reasonable accommodations for persons with documented disabilities. Students need to register with Disability Resource Services (DRS) every semester they are enrolled. DRS is located in Counseling & Support Services, 2157 UC ([http://www.umd.umich.edu/cs\\_disability/](http://www.umd.umich.edu/cs_disability/)). To be assured of having services when they are needed, students should register no later than the end of the add/drop deadline of each term. If you have a disability that necessitates an accommodation or adjustment to the academic requirements stated in this syllabus, you must register with DRS as described above and notify your professor.

**Safety:**

All students are strongly encouraged to register in the campus Emergency Alert System, for communications during an emergency. The following link includes information on registering as well as safety and emergency procedures information:

<http://umemergencyalert.umd.umich.edu/> Finally, all students are also encouraged to program 911 and UM-Dearborn's Public Safety phone number (313) 593-5333 into personal cell phones. In case of emergency, first dial 911 and then if the situation allows call UM-Dearborn Public Safety.

### **Additional Administrative Information:**

**Timeliness.** If you expect full credit for any assignment, you will have to be prepared to turn it in at (or before) the beginning of the class period on the day it is due. Late work will not be accepted except in cases of severe and externally documented extenuating circumstances, and then only at my discretion. Examples of such circumstances are illness, bereavement, jury duty, witness duty, and business travel. If you have obligations that conflict with assignment due dates, you should make arrangements with the instructor as soon as possible.

**Score/Grade Appeals.** It is important to recognize that a grade reflects another's judgment of your work. In this sense, all grading is subjective. Of course, any grade you receive is subject to appeal. However, score changes are at the discretion of the instructor and may be up or down based upon a complete review of the work in question. Changing a few points on an assignment rarely makes a difference in the final grade. Time is much better spent discussing and clarifying the content presented in the course.

**Electronic Communication Devices in the Classroom.** All electronic devices (cellular phones, pagers, etc.) should be turned off or set on "vibrate" prior to the beginning of each class session. Failure to do so will result in a disruption of the class. If such a device rings aloud during a class session, you might (I reserve discretion) lose one full letter grade from your final course grade. If you receive an emergency incoming call via *vibration*, please leave the classroom quietly and unobtrusively to answer it, and return to the classroom likewise. Please do your part to ensure that the class is not interrupted and that you do not lose any points in the course.

**Email Accounts and Responsibilities.** Each of you has received a UM-Dearborn email account. It is your responsibility to read any and all email messages sent to this account. I will be using your UM-D account for email communication regarding this course. This does not mean that you cannot have other email accounts - it means you are responsible for any information sent to your UM-D account. This could be accomplished by using this UM-D account on a regular basis (as some students do) or by forwarding all email sent to the UM-D account to another account of your choosing. This forwarding process is very simple.

To forward your email:

1. Go to <http://directory.umd.umich.edu> and click the My Account button
2. Enter your "username" and click the Continue button
3. Enter your password and click the Continue button
4. Click the Continue button again, if necessary
5. Under the Mail section (on the left-hand side of the screen) click on Delivery Options
6. Enter your other email address in the "Forward a copy of your messages to:" text box
7. Click the Change button

The course Canvas website also contains an email function and an announcement. You are welcome to utilize this for communicating with each other and/or with me. You are

responsible for all email sent by me to this internal, course account and to your UM-D account, plus all announcements I make via Canvas.

**Incomplete Grades Policy.** A grade of Incomplete may be awarded to students who have a legitimate reason for needing additional time to complete a course. Legitimate reasons include emergencies or extenuating circumstances that prevent a student from completing the course requirements within the normal time frame, such as illness, accident, or bereavement. Students must initiate the request for an incomplete prior to the end of the semester. In no case will a grade of incomplete be awarded to someone seeking more time to master the course material in order to improve their grade (this prohibition is university policy, not mine).

**Drop and Add.** The final day to drop any College of Business course is specified each semester in the Schedule of Classes. This policy applies to all students enrolled in any College of Business course. Check the information contained in the Schedule of Classes or the Undergraduate Announcement for the detailed withdrawal policy if you have any questions.

You are expected to abide by all aspects of the Statement of Student Rights and Code of Conduct in this course. The two basic tenets of this Code are:

1. Students will behave honorably, ethically, and responsibly in all academic matters both inside the classroom and in outside work related to their courses.
2. Students who are aware of academic misconduct in any form will report the violation to the instructor or other school representative. Students who are aware of academic misconduct and who fail to report the violation are themselves guilty of academic misconduct.

It is assumed that you have a copy and have read and understand this code. Further, you are expected, especially as information systems professionals in training, to respect campus computer resources and to use them productively and wisely.

**Travel Plans.** Advance purchase of airline tickets, hotel reservations, etc. for holiday or leisure travel is an inadequate excuse to miss examinations or other course deliverables. Travel required for work (business troubleshooting, visiting a business branch or client, or attending a technical conference) when documented by a letter from your boss on corporate letterhead, will be considered an extenuating circumstance.

**Campus Closure (Severe Weather) Information Line.** 313-436-9157. In case of a University closure due to weather or other conditions, check your email for announcements and an updated course schedule.

This syllabus is largely based upon, and almost entirely the intellectual property of, Professor Lee Freeman, who recently designed and “pioneered” this course – in large measure by careful listening to corporate answers to the question “How can UM-Dearborn students be made more competitive in the jobs marketplace?” His permission (and indeed, encouragement) to use and adapt it is gratefully acknowledged.