

MBA643A: SIMULATION OF BUSINESS SYSTEMS

Spring 2018

Instructor Information

- Dr. Deepu Philip, Room # IME-219/Smart Systems & Operations Lab (IME-103), I&ME Department, IIT Kanpur.
- Office No: 0512-2597460; e-mail: dphilip@iitk.ac.in
- Class Information: M 12:00 PM – 1:30 PM and T 9:00 AM – 10:30 AM in Room IME C5.
- Office hours: M & T 3:00 – 4:00 PM, except when I am sick, or on leave, or on holidays. Other times through appointment only. Use e-mail/office telephone to schedule appointments. Missed office hours will be compensated. My mobile phone number is personal and should not be used for official matters.

Course Requirements

- Required textbooks (any two minimum)
 - Simulation Modeling and Analysis by Law & Kelton, referred as L&K.
 - Simulation with Arena by Kelton, Sadowski & Sweats, referred as KS&S.
 - Computer Simulation by Watson & Blackstone, referred as W&B
- Completed IME 602/MBA 651 or instructor's approval
- Basic programming logic & skills, especially C++
- Basic writing & presentation skills
- Common sense, ethics, & humility

General Policies

- Signing up for my course implies that you understand my policies and are willing to abide by them.
- I **DO NOT** entertain students who are not interested in attending lectures/labs.
- If you arrive after I started to lecture; you are late. Latecomers lose the right to ask questions during the lecture they are late.
- Lectures will be conducted in English only.
- Please **switch off** your mobile phones before entering the class.
- I use e-mail filtering. Please put the course number "MBA643A" somewhere in the subject line for all course related e-mail communications.
- Please come to the class prepared by completing the assigned reading in Table 1.
- It is **required** that the particulars of source code files of every assignment and/or projects be submitted to me on or before the deadline, with any particulars (e.g. folder names required, library files needed, etc). All your reports will be checked through plagiarism tracker and source code will be cross-validated for copying.
- Assignments are due on the specific date & time. Anything after that is late. Incomplete assignments are also considered late. Late assignments are penalized 100% of the points.

- You are expected to follow good writing and presentation styles. If you don't have one; please follow the one provided. Maintain style consistency throughout the semester.
- You will be asked to evaluate your peers during presentations; please do it ethically.
- You will not be excused from any examinations or projects; unless there is a very **valid** reason. The student is responsible for making the written request for such absences and to obtain the necessary permissions. The instructor will be the soul judge of the *validity*.
- In engineering profession; you are not just expected to work, but succeed. Your work will be evaluated on the final outcomes; **NOT** your efforts!
- Any code you write in the class should follow the ANSI standards. For example, in case of C++ code, it should compile without errors and warnings on a g++ compiler (ANSI certified) running under a Linux environment. I do not entertain comments like – “it worked on my computer before, now it is not working.”
- This is a very involved and applied course. You are expected to have basics of Operations Research, and Probability & Statistics done before joining the course. I will not explain the underlying OR, Probability & Statistics principles during the lecture.

Grading Policies

- Weighting of various components towards the final score (100%) is:
 - Course Assignments & Pop Quizzes: 15%
 - Project-I (individual): 20%
 - Project-II (Team – group of minimum two (2) and maximum three (3)): 20%
 - Mid Semester Exam: 20%
 - Final Exam: 25%
- Final grades may be curved at the discretion of the instructor; based on the class performance.

Assigned Reading

The assigned reading for each week of the course is given in Table 1. Please use it as a guideline for preparing for the lecture.

Table 1: Weekly Assigned Reading & Major Events for MBA643A¹

Week (Ending on)	Assigned Reading
Week-1 (Jan 10)	L&K Chap-1, KS&S Chap-1
Week-2 (Jan 17)	L&K Chap-2
Week-3 (Jan 24)	L&K Chap-4
Week-4 (Jan 31)	L&K Chap-3, KS&S Chap-2
Week-5 (Feb 7)	L&K Chap-5, L&K Chap-6
Week-6 (Feb 14)	L&K Chap-9, Project – I problem provided
Week-7 (Feb 21)	Mid Semester Exam
Week-8 (Feb 28)	Mid Semester Break
Week-9 (Mar 7)	L&K Chap-10, Project –I report due

Week-10 (Mar 14)	KS&S Chap-3
Week-11 (Mar 21)	KS&S Chap-4, Project-II Proposals Due
Week-12 (Mar 28)	L&K Chap-12
Week-13 (Apr 4)	KS&S Chap-5
Week-14 (Apr 11)	KS&S Chap-7
Week-15 (Apr 18)	Siemens Technomatix Plant Simulation, Project-II report due & presentations
Week-16 (Apr 25)	End Semester Exam KS&S Chap-13

Group/Team Work and Ethics

All group or team assignments will be identified as such. Otherwise collaboration on homework that involves sharing solutions, dividing the problems up, solving as a group, etc. are strictly forbidden. Ethical behavior means that you only accept credit for the work *you* have done! The following policies are applicable in this course.

- Students are responsible for the honest completion and representation of their work, the appropriate citation of sources and the respect and recognition of others' academic endeavors.
- Any student(s) found guilty of dishonest conduct will be given an **F grade** for the course and will be reported to the institute level for appropriate disciplinary actions.
- Specific tasks sharing plan is necessary for all teamwork. Individual performances will be evaluated against that plan.

Examination Policies

All examinations will be closed book, and closed notes. But you will be permitted to bring an 8.5' X 11' (A4 paper), both sides **hand-written** as a reference sheet into the examination hall. You are allowed to put whatever you want in that sheet that could be helpful for the examination. Additionally:

- No mobile phones are allowed during the exam, even as a calculator.
- Bring your own calculator (not mobile phone calculators) and writing materials (pen, pencil & eraser).
- No cheating is allowed. Anyone caught in the process is guaranteed of an **F grade** and will be reported to the institute committee for further actions.

IME Computer Lab Policies

Computing facilities available in the IME Lab is available for your usage. Specific software will be made available in the IME Lab computers only, meaning no copies for your personal computers. When you are using the Lab, be careful of the systems and software. Additionally:

- You are not allowed to install or remove any software on the machines in the Lab. If you need any specific software installed, then let your instructor know.
- The lab is accessible **ONLY** between 9 AM to 6 PM on Monday to Friday, every week during the semester, except on holidays.
- Please do not bring food and beverages onto the computer tables. If you are thirsty go out and drink. If you are hungry, go out and eat. Any violation will result in serious consequences.

- Bags are to be kept inside the lab, near the entry gate. Only writing materials are allowed near the computer.
- Have your ID card ready for inspection at any point of time, and should comply with the request politely.
- Please log-off after you have completed your work. Locking the computer is not acceptable and will result in a ban from using the Lab resources for the remaining of the semester.
- Please keep your work saved in your Dropbox folder or Google Drive or so on. If you bring your own external storage devices, ensure that it is free of any malicious software. Any damage caused to lab machines due to your carelessness will result in appropriate disciplinary actions. Any data/file loss is your problem, not mine. Hence, backup frequently.