

**IE 4303: Production and Inventory Control**  
Fall 2012

**Instructor(s):** Dr. Bonnie Boardman

**Office Number:** 420N

**Office Telephone Number:** 817-272-3220

**Email Address:** boardman@uta.edu

**Office Hours:** Monday: 1:00--3:30; Tuesday: 1:00-1:50; Wednesday: 9:30-12:00

**Section Information:** IE 4303-001

**Time and Place of Class Meetings:** TR 2:00-3:20; 402 Woolf Hall

**Description of Course Content:** Fundamental theory and design of systems for the control of production, inventories and their economic interaction, particularly in cases involving uncertainty of demand, of supply availability, and of production rates.

**Student Learning Outcomes:**

- Identify and solve appropriate inventory control model problems given demand characteristics.
- Use MRP to devise a manufacturing schedule.
- Identify the basic metrics of a factory and describe their relationships.
- Measure and explain the effects of variability on a manufacturing system.
- Compare and contrast push versus pull systems.
- Compute a schedule of jobs and evaluate the schedule effectiveness.

**Required Textbooks and Other Course Materials:** Factory Physics, 3<sup>rd</sup> edition, Wallace J. Hopp and Mark L. Spearman

**Course Topics:**

Manufacturing in America (Chapter 1)  
Factory Physics? (Chapter 0)  
Inventory Control: From EOQ to ROP (Chapter 2)  
The MRP Crusade (Chapter 3)  
Test 1  
From the JIT Revolution to Lean Manufacturing (Chapter 4)  
Basic Factory Dynamics (Chapter 7)  
Variability Basics (Chapter 8)  
The Corrupting Influence of Variability (Chapter 9)  
Test 2  
Push and Pull Production Systems (Chapter 10)  
A Pull Planning Framework (Chapter 13)  
Production Scheduling (Chapter 15)  
Final Exam – Tuesday, 12/11/12, 2:00-4:20

## Course Requirements:

**Assignments** – There will be many in class and out of class assignments throughout the semester. Homework must be turned in at the beginning of the class on the day they are due, no late assignments will be accepted. You must be in class in order to do the in class assignments. No makeup assignments will be given. Class assignments will count towards 35% of your final grade.

**Key Assignments** - During the semester one or more assignments will be designated as key assignments. To pass this class you must successfully complete all key assignment requirements. A detailed explanation of this project and its guidelines will be given later in the semester. This project will count for 10% of your final grade.

**Examinations** – There will be two regular tests and a final given during this course. You must take all tests at their scheduled times. If you miss a test with either a certified medical excuse or prior instructor approval, you will take a makeup test at a designated time during the last week of the semester. The makeup exam will be fair but comprehensive (covering all the course material) and challenging. Tests missed without certified medical excuses or prior instructor approval will result in a score of zero. Only one missed test can be made up with the comprehensive final. Examinations will count for 55% of your final grade. The final exam is scheduled for **Tuesday, December 11<sup>th</sup>, 2:00-4:20.**

**Attendance:** Participation in classroom exercises will be part of your assignments grade.

**Grading:** Grades in this course will be earned based on the following criteria:

- A = 90% and above
- B = 80% - 89%
- C = 70% - 79%
- D = 60% - 69%
- F = 0% - 59%

Students are expected to keep track of their performance throughout the semester and seek guidance from available sources (including the instructor) if their performance drops below satisfactory levels.

**Drop Policy:** Students may drop or swap (adding and dropping a class concurrently) classes through self-service in MyMav from the beginning of the registration period through the late registration period. After the late registration period, students must see their academic advisor to drop a class or withdraw. Undeclared students must see an advisor in the University Advising Center. Drops can continue through a point two-thirds of the way through the term or session. It is the student's responsibility to officially withdraw if they do not plan to attend after registering.

**Students will not be automatically dropped for non-attendance.** Repayment of certain types of financial aid administered through the University may be required as the result of dropping classes or withdrawing. For more information, contact the Office of Financial Aid and Scholarships (<http://www.uta.edu/ses/fao>).

**Americans with Disabilities Act:** The University of Texas at Arlington is on record as being committed to both the spirit and letter of all federal equal opportunity legislation, including the *Americans with Disabilities Act (ADA)*. All instructors at UT Arlington are required by law to provide "reasonable accommodations" to students with disabilities, so as not to discriminate on the basis of that disability. Any student requiring an accommodation for this course must provide the instructor with official documentation in the form of a letter certified by the staff in the Office for Students with Disabilities, University Hall 102. Only those students who have officially documented a need for an accommodation will have their request honored. Information regarding diagnostic criteria and policies for obtaining disability-based academic accommodations can be found at [www.uta.edu/disability](http://www.uta.edu/disability) or by calling the Office for Students with Disabilities at (817) 272-3364.

**Academic Integrity:** All students enrolled in this course are expected to adhere to the UT Arlington Honor Code:

*I pledge, on my honor, to uphold UT Arlington's tradition of academic integrity, a tradition that values hard work and honest effort in the pursuit of academic excellence.*

*I promise that I will submit only work that I personally create or contribute to group collaborations, and I will appropriately reference any work from other sources. I will follow the highest standards of integrity and uphold the spirit of the Honor Code.*

Instructors may employ the Honor Code as they see fit in their courses, including (but not limited to) having students acknowledge the honor code as part of an examination or requiring students to incorporate the honor code into any work submitted. Per UT System *Regents' Rule* 50101, §2.2, suspected violations of university's standards for academic integrity (including the Honor Code) will be referred to the Office of Student Conduct. Violators will be disciplined in accordance with University policy, which may result in the student's suspension or expulsion from the University.

**Student Support Services:** UT Arlington provides a variety of resources and programs designed to help students develop academic skills, deal with personal situations, and better understand concepts and information related to their courses. Resources include tutoring, major-based learning centers, developmental education, advising and mentoring, personal counseling, and federally funded programs. For individualized referrals, students may visit the reception desk at University College (Ransom Hall), call the Maverick Resource Hotline at 817-272-6107, send a message to [resources@uta.edu](mailto:resources@uta.edu), or view the information at [www.uta.edu/resources](http://www.uta.edu/resources).

**Electronic Communication:** UT Arlington has adopted MavMail as its official means to communicate with students about important deadlines and events, as well as to transact university-related business regarding financial aid, tuition, grades, graduation, etc. All students are assigned a MavMail account and are responsible for checking the inbox regularly. There is no additional charge to students for using this account, which remains active even after graduation. Information about activating and using MavMail is available at <http://www.uta.edu/oit/cs/email/mavmail.php>.

**Student Feedback Survey:** At the end of each term, students enrolled in classes categorized as lecture, seminar, or laboratory shall be directed to complete a Student Feedback Survey (SFS). Instructions on how to access the SFS for this course will be sent directly to each student through MavMail approximately 10 days before the end of the term. Each student's feedback enters the SFS database anonymously and is aggregated with that of other students enrolled in the course. UT Arlington's effort to solicit, gather, tabulate, and publish student feedback is required by state law; students are strongly urged to participate. For more information, visit <http://www.uta.edu/sfs>.

**Final Review Week:** A period of five class days prior to the first day of final examinations in the long sessions shall be designated as Final Review Week. The purpose of this week is to allow students sufficient time to prepare for final examinations. During this week, there shall be no scheduled activities such as required field trips or performances; and no instructor shall assign any themes, research problems or exercises of similar scope that have a completion date during or following this week *unless specified in the class syllabus*. During Final Review Week, an instructor shall not give any examinations constituting 10% or more of the final grade, except makeup tests and laboratory examinations. In addition, no instructor shall give any portion of the final examination during Final Review Week. During this week, classes are held as scheduled. In addition, instructors are not required to limit content to topics that have been previously covered; they may introduce new concepts as appropriate.

**Inclement Weather Policy:** In the event that weather or other conditions are such that normal campus operations could be impeded the following policy will apply for this class. If the University is closed, this class will not meet. Any assignments due or examinations scheduled will be due or rescheduled to the very next class period that the class meets. Local media should announce any closings. You can also get information by dialing (972) 601-2049.