Class Room: Ryland Hall 215 Class Meeting Time:

- Tuesdays/Thursdays 9am 10:15am Section #05
- Tuesdays/Thursdays 10:30am 11:45am Section #03
- **Professor: Ginny Youngblood**

E-mail: gyoungbl@richmond.edu Phone: 804-338-4624 between 9am and 9pm; texts are best Office: TBD Office Hours: TBD

Please read this syllabus carefully.

## **Course Overview**

Firms create value by using operations to transform inputs (materials, labor, capital) into outputs (products and services). This course will cover operational processes within the firm, with suppliers and with customers. We will study the analysis, design, control and improvement of business processes. We will use quantitative metrics and models to plan capacity, manage bottlenecks, improve process flow rates, match supply with demand and improve financial performance. Consider this class a math class.

## **Course Objectives**

The "operations" function of an organization performs the key business processes that supply goods or services to match demand from customers. Such business processes cross functional boundaries, into product design, marketing and sales, finance and accounting, and human resources, creating an integrated system. The course learning objectives are:

- 1. Learn to analyze, design, control, and improve business processes.
- 2. Use reasoning to understand relationships between process performance variables and the financial health of an organization (making a profit, or just making budget).
- 3. Analyze and design assembly/continuous, batch, job shop/queuing, and project management processes for providing products or services to customers.
- 4. Understand process diagrams, capacity, constraints, and the relationship between flow rate, flow time, and inventory.
- 5. Use analytical tools to improve processes, such as line balancing, batch capacity and inventory models, queuing models, statistical process control techniques, and project management models.
- 6. Study the impact of variability on processes and profitability.
- 7. Understand the interactions between supply and demand.

## Book

The course textbook will be <u>Operations Management</u> by Krajewski, Malhotra and Ritzman, 11th Edition ISBN-13: 978-0133872132/ISBN-10: 1323334750. No access code is required. Electronic formats are acceptable, if they have the same problem questions as the soft cover or hard cover formats. Do not purchase the global edition. We use problems from the text for homework and the problems in the global edition are different.

### Blackboard

Each week a folder will be released containing notes and assignments. Please review these materials before each class meetings.

## **Textbook Reading**

To be successful in this course you should devote 10 - 14 hours (inside and outside of class) per week, reading and studying the material, and preparing assignments. Please **block off at least an hour per day outside of class** to put attention on this course. This keeps you from going cold on the material, and makes the reading a little more manageable!

Skim a chapter first, then go back for closer reading and to work the example problems and solved problems at the end of the chapter. Toward the end of the semester you will have a new working vocabulary, and find yourself reading independently on the advanced topics! Be patient, read deeply and critically, and you will be rewarded with extra understanding.

Much of this class will be math problems. The remainder will be concepts, definitions, and critical thinking about current events using the concepts and definitions. Study for this class as you would for a math class.

## Attendance

Attendance at each class meeting is expected. We will use class time for problems and projectbased work. Outside of class, you will use Blackboard and the Blog for assignments and learning with classmates.

*Religious Observance Policy*: Students needing to miss class because of religious observance should contact me within the first two weeks of the semester to discuss the absence. The University's full religious observance policy may be found here (http://registrar.richmond.edu/planning/religious-observance.html).

## **In Class Participation**

Each week problem-solving activities will be held during class, so come prepared, rested (or caffeinated), and ready to think! You will work with classmates to reason out analytical approaches and answers. Solutions will be provided on Blackboard. The problems involve logic and reasoning, not formulas—getting you away from rote problem solving into messier, real-life process problems. It just takes experience and practice to work these problems. Be sure to ask questions. Some concepts take time, clarification, and repetition!

### **Homework and Blogs**

There will be graded homework in Blackboard roughly once per week. There will be a Wordpress Blog assignment roughly once per week. See the grid below for due dates for homework and blogs. The nature of learning in this course is cumulative, so homework and blogs may have problems, definitions and concepts from previous chapters. The purpose of the homework and the blog is to get practice with the problems and concepts. **The homework and blogs are open book, open notes, but pledged as your own work.** The homework allows you to identify areas of misunderstanding before the tests. Solutions will be provided. Makeup for missed homework and blog posts/responses may or may not be allowed, with or without a lower score, at the discretion of the instructor. The homework maybe computationally intensive. Microsoft Excel skills will helpful for these homework problems. If you do not have Microsoft Excel skills, there are a number of excellent course on Lynda.com or see someone at the CTLT for a short skill improvement session.

Observe business processes and productive capacity in daily life and in the daily news: health providers, grocery stores, airports and airlines, toll booths, call centers, campus dining hall and grill, mergers, layoffs, outsourcing, etc. Read business magazines and newspapers to see the outcomes of these business processes.

#### Tests

The nature of learning in this course is cumulative, so all tests are cumulative. Each test will cover content from the beginning of the semester to the current point in the semester. The exams will include mathematical problem-solving questions, operations analysis questions and short answer questions. The tests emphasize the application of course concepts to solve problems. The tests are not computationally intensive. They involve reasoning and understanding of the relationship between variables. You will be provided a calculator from the Dean's Office for all tests, per school policy. Cell phone usage is not allowed during the tests. This course has significant mathematical content and a **relatively high workload**. Study for the tests as you would for a math test.

No final examinations will be given outside the examination period without the permission of the Dean. All final examinations are scheduled by the University Registrar.

## **Process Analysis Group Project**

In the group project, your team of students will apply the concepts you have learned, and polish analytical and communication skills. This process analysis of some organization on- or off-campus will have several deliverables, as we go from beginning analysis through a complete management report. Details will be distributed in class and on Blackboard.

Grading: Components of the course grade are in the table below.

	Percentage of Grade	
Homework	10%	
Blogs	10%	
Tests (3)	45%	10%, 15%, 20%
Process Analysis Group Project	20%	Due at Exam
Participation/Classroom Discussion	15%	

Scores will be posted on Blackboard. A grade of Incomplete (I or Y) will not be given unless requested by a university dean. Your final grade will be determined based on all work completed by the registrar's deadline for submitting grades.

## **Grading Ranges**

98 - 100 = A +92 - 97.99 = A90 - 91.99 = A -88 - 89.99 = B +82 - 87.99 = B80 - 81.99 = B -78 - 79.99 = C +72 - 77.99 = C70 - 71.99 = C -68 - 69.99 = D +62 - 67.99 = DLess than 60 = F

## **Honor System**

This course is governed by the University Honor Code. All assignments will be pledged as your own work, unless they are specified as group assignments. Use of text from other printed sources or Internet sources without proper attribution is prohibited in your Process Analysis Group Project. *Any student who cheats on <u>any</u> assignment (including problem, test, and/or exam) will be reported to the University Honor Council. I explicitly reserve the right to assign a course grade of F regardless of Honor Council findings.* As a reminder, the University of Richmond Code of Honor and Honor Council can be found at this weblink: <a href="http://studentdevelopment.richmond.edu/student-handbook/honor/the-honor-code.html">http://studentdevelopment.richmond.edu/student-handbook/honor/the-honor-code.html</a>.

# **Course Outline and Schedule**

	Class		Textbook Chapter			Homework or
Module	Number	Торіс	(Ed 11)	Day	Date	Blog
Intro to Operations	1	Competing with Operations	Chapter 1	Т		NONE
Management	2	Making Decisions	Supplement A	R	18-Jan	Blog
	3	Defining Process Strategy	Chapter 2	Т	23-Jan	Homework
	4	Analyzing Processes I	Chapter 2	R	25-Jan	Blog
	5	Analyzing Processes II	Chapter 2	Т	30-Jan	Homework
	6	Managing Projects	Chapter 7	R	1-Feb	Blog
		Test 1		Т	6-Feb	Study for Test
Managing Operations	7	Managing Quality	Chapter 3	R	8-Feb	Blog
and SC Processes	8	Managing Quality	Chapter 3	Т	13-Feb	Homework
	9	Planning Capacity	Chapter 4	R	15-Feb	Blog
	10	Managing Waiting Lines	Supplement B	Т	20-Feb	Homework
	11	Managing Constaints	Chapter 5	R	22-Feb	Blog
	12	Implementing Lean Systems/JIT	Chapter 6	т	27-Feb	Homework
	13	Implementing Lean Systems/JIT	Chapter 6	R	1-Mar	Blog
		Test 2		Т	6-Mar	Study for Test
Enabling Operations	14					
Processes		Forecasting	Chapter 8	R	8-Mar	Blog
		Spring Break			Mar 13-15	NONE
	15	Managing SC Inventory	Chapter 9	Т	20-Mar	Homework
	16	Managing SC Inventory	Chapter 9	R	22-Mar	Blog
	17	Planning Sales & Operations (S&OP)	Chapter 10	Т	27-Mar	Homework
	18	Planning Resources	Chapter 11	R	29-Mar	Blog
	19	Planning Resources	Chapter 11	Т	3-Apr	Homework
	20	Supply Chain Lab		R	5-Apr	Blog
	21	Designing Supply Chains	Chapter 12	т	10-Apr	Homework
	22	Planning SC Locations	Chapter 13	R	12-Apr	Blog
	23	Integrating Supply Chains	Chapter 14	Т	17-Apr	Homework
	24	Managing SC Ethics & Sustainability	Chapter 15	R	19-Apr	Blog
		Final Review		Т	24-Apr	Homework
		Test 3		R	26-Apr	Study for Test
Final Exam/Group						
Project Due		Exam/Group Presentations	Section 03	т	1-May	2pm-5pm
		Exam/Group Presentations	Section 05	F	4-May	2pm-5pm