

# OP121.C1 – Production Planning & Inventory Control



## **Celeste Ayers**

Adjunct Professor  
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## **Contact Information**

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**First Day of class: Sunday, October 23, 2011**

**Last Day of class: Saturday, December 17, 2011**

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## **1. Course Description**

Surveys the design, development, implementation and management of production planning systems, including master production scheduling, aggregate planning, material requirements planning, capacity and inventory planning and production activity control. Students will be exposed to contemporary approaches such as just-in-time, theory of constraints and the relationship of enterprise-level planning and control systems to the overall materials flow.

You will receive 3 units of credit if you successfully complete this class. This means that you can expect to spend 2 hours 40 minutes in class and/or online in class each week plus an additional 8-12 hours each week completing homework and preparing for the next class. You can expect to spend more time studying some weeks and less time other weeks, but overall you should expect to average between 11 and 15 hours each week on this class for the entire term.

## **2. Course Objectives**

Students should be able to articulate and apply the following tools and practices of production planning and inventory control:

- The elements, processes, and technologies comprising the field of Manufacturing Planning and Control (MPC)
- Demand management theories and techniques – forecasting, CPFR
- Sales and Operations Planning process in the firm
- Enterprise Resource Planning (ERP) – How MPS decisions are supported by ERP
- Supply chain inventory management – independent demand items
- Using a Material Requirement Planning system

- Distribution Requirements Planning in the Supply Chain – Using DRP technologies
- Inventory flow and planning models – JIT, MRP, etc.
- Capacity planning and utilization in the MPC
- Production Activity Control Techniques – Theory of Constraints (TOC)
- Implementation issues in MPC systems – supply chain optimization, integration, transformation, and benchmarking

### 3. Required Materials

#### Textbook

- Manufacturing Planning and Control for Supply Chain Management, 6<sup>th</sup> ed., Jacobs, F. Robert, William L. Berry, D. Clay Whybank and Thomas E. Vollmann (McGraw-Hill, 2011. ISBN: 978-0-07-337782-7)

#### Required Software

- Microsoft Word, Power Point and Excel.

#### Bookstore

- To purchase course books and materials from eFollett, GGU's official [online bookstore](#), please see the “**Important Info**” section of this course.

#### University Library



There are several databases available through the Golden Gate University Library for students to conduct research on various topics. Remote (off campus) access to the databases **requires your last name and student ID#** (located on the front of your ID card). Be sure to type in ALL 7 digits, including the starting 0. Example: 0123456. You may access the library from GGU's homepage at <http://www.ggu.edu>.

### 4. Contacting the instructor

The best way to reach the instructor is the “Questions for the Instructor” in the Course Home section of the cyber course. Send emails with personal messages (ie. Grading) to [celliemarie@gmail.com](mailto:celliemarie@gmail.com).

### 5. Course Requirements, Student Responsibilities, Evaluations

#### Course Requirements

1. **Required Reading** - It is assumed that the student will have read the assigned readings before each class meeting. Please make the appropriate time allowances for preparing for each session. Being adequately prepared for each meeting is a key part of your responsibility in this course. The class format is one of active learning, rather than memorization.
2. **Session Lectures** – Students are expected to review any posted audio, visual or combination lecture materials in addition to any required reading.

3. **Course Participation** – Students are expected to participate in class discussion and debates by challenging content and fostering new ideas, and may be requested in forum discussions at times to do so. This also includes presenting Topic Discussion memos to the class by posting for the class to review and discussion of other student's work. Grading is subjective and is not solely based on giving correct answers. Attendance in the Discussion forums is important and can impact the final grade.
4. **Study Questions/Problems** – Each session students will be required to complete study questions or problems based on the session's lecture and reading. These assignments are designed to test for understanding, explore new depths of the material presented during the course.
5. **Exams** – There will be two graded exams during the semester. A proctored midterm exam will be given in Session 5, which will cover the first five sessions. The exam is open book and the student can use any materials he or she wants to bring. The format is multiple choice and true/false questions.

The Final Exam will be given in Session 8, which will cover materials from all eight session. The exam will be a combination of multiple choice and short answer/essay questions. The exam will not be proctored but will have a time limit.

6. **Term Paper** – Refer to OP121 Term Paper Requirements document for further details.

NOTE: Additional guidelines will be provided for each report and the term paper.

## **Student Responsibilities**

It is expected that students will act in a professional manner and respect other students, guest speakers and the instructor.

## **Course Evaluations**

Students will receive an opportunity to evaluate the course and instructor at least once this term.

## **8. Grading Evaluation, Scale & Academic Integrity Policy**

### **Course Evaluations**

Quality and timelines are the only factors used to evaluate student work. Each session will offer graded and required assignments. Graded assignments count directly in the course grade. Required assignments are not graded, but must be completed since they further the student's understanding of the material.

Due dates for assignments are given in each Session "Overview & Assignments List", usually the end of the session unless noted otherwise; **there are no exceptions** to these deadlines unless there was an error in the assignment. Submissions must be posted in the proper content item prior to the due date to be on-time. A significant

penalty will be assessed for late assignments. The quality grade will be reduced by 20% (an 'A' becomes a 'C') for missing the session deadline and 10% (one letter grade) for each additional session deadline the submission is late.

Students can review their score on assignments in the cyber grade book after the due dates, but the summary is not the official score as content weights are not applied. The official course grade record is created by the professor. Students will get a grade report at the completion of the course to verify their performance. Instructions will be given in the course for students to calculate their course score and grade. Any student who is passing the course after the midterm, but is unable to complete the second half of the course due to a personal emergency, may apply for a grant of incomplete (i) status from the professor. This request will be evaluated in accordance with current University policy and, if granted, the student will be given extra time to complete work.

### Grading Weights, Evaluation Criteria & Scale

Requirement	Weight
Course Participation	15%
Study Questions/Problems	15%
Mid-Term Exam	20%
Term Paper	30%
Final Exam	20%
<b>Total</b>	<b>100%</b>

Grade	Skills
A	Contributions are prompt, timely, relevant, self-initiated, cover the relevant points and demonstrate a deep understanding of the content. Remarks show insight and assimilation.
B	Keeps up with the assignments, covering the basic content in a sufficient amount of detail. Needs some correction for full comprehension.
C	Submission timeliness and quality are variable with some very good and some not. Demonstrates thin comprehension of major points.
D	Submissions are often late and quality is poor, generally reflecting a lack of commitment of time to complete the work sufficiently.
F	Did not contribute a sufficient quality or quantity of work.

Grade	Percentage	Grade	Percentage
A+	97.00%-100.0%	C	73.00%-76.99%
A	93.00%-96.99%	C-	70.00%-72.00%
A-	90.00%-92.99%	D+	67.00%-69.99%
B+	87.00%-89.99%	D	63.00%-66.99%
B	83.00%-86.99%	D-	60.00%-62.99%
B-	80.00%-82.99%	F	< 60%
C+	77.00%-79.99%	I	incomplete

## Academic Integrity Policy

Golden Gate University's Policy on Student Academic Integrity is in effect at all GGU teaching locations, including regional classroom sites, corporate sites, and distance courses delivered in any medium. This policy applies to all business, taxation, and technology at Golden Gate University.

Academic integrity means doing academic work in a manner that strives to achieve the learning objectives courses have set out for the student. It means that students follow the rules and procedures prescribed by instructors so that students acquire the skills and knowledge courses are designed to give the students. It means that students engage in ethical practices in taking tests and doing assignments and that students respect intellectual property rights by fully disclosing sources of information that appear in their papers and presentations.

## 9. Instructor Bio

Celeste Ayers is currently the Division Sourcing and Procurement Manager for Parker Hannifin Corporation, Racor Division based in Modesto, California. Mrs. Ayers is responsible for the successful creation and proactive import/export and supply chain compliance programs. Her experience in supply chain, materials, procurement and customer relationship management along with extensive expertise in United States import, export and International Traffic in Arms (ITAR) regulations has radically transformed supply chain operations within the Racor Division. Mrs. Ayers credits her professional growth to her strong formal education from Golden Gate University and certifications from APICS.

Mrs. Ayers' educational background includes a Bachelor of Science degree in Management from California State University, Stanislaus in Turlock, CA and an MBA in Operations/Supply Chain Management from Golden Gate University. In addition to her formal education she maintains two APICS certifications in Certified Fellow in Production and Inventory Manager (CFPIM) and Certified Supply Chain Professional (CSCP). She also teaches certification preparation courses for the APICS Gold Rush Chapter and part time for Golden Gate University, Ageno School of Business.

## 10. Course Outline

Session	Session Dates	Topic	Assignments
Session 1	October 23 – October 29	Basics of Manufacturing Planning and Control & ERP	<ul style="list-style-type: none"><li>• Reading: Chapters 1 &amp; 1A</li><li>• Review Lecture Materials</li><li>• Discussion Participation</li><li>• Session 1 Study Questions/Problems</li></ul>
Session 2	October 30 – November 5	Demand Management	<ul style="list-style-type: none"><li>• Reading: Chapters 2 &amp; 3</li><li>• Review Lecture Materials</li><li>• Discussion Participation</li><li>• Session 2 Study Questions/Problems</li><li>• Term Paper Proposal Due</li></ul>

Session 3	November 6 – November 12	Sales & Operational Planning and Master Production Scheduling	<ul style="list-style-type: none"> <li>• Reading: Chapters 4 &amp; 5</li> <li>• Review Lecture Materials</li> <li>• Discussion Participation</li> <li>• Session 3 Study Questions/Problems</li> </ul>
Session 4	November 13 – November 19	Material Requirements Planning & Capacity	<ul style="list-style-type: none"> <li>• Reading: Chapters 6 &amp; 7</li> <li>• Review Lecture Materials</li> <li>• Discussion Participation</li> <li>• Session 4 Study Questions/Problems</li> </ul>
Session 5	November 20 – November 26	Production Activity Control	<ul style="list-style-type: none"> <li>• Reading: Chapters 8</li> <li>• Review Lecture Materials</li> <li>• Session 5 Study Questions/Problems</li> <li>• Term Paper Report #1</li> <li>• Mid-Term Exam</li> </ul>
Session 6	November 27 – December 3	Inventory Management	<ul style="list-style-type: none"> <li>• Reading: Chapters 9 &amp; 11</li> <li>• Review Lecture Materials</li> <li>• Discussion Participation</li> <li>• Session 6 Study Questions/Problems</li> </ul>
Session 7	December 4 – December 10	Distribution Planning & Logistics	<ul style="list-style-type: none"> <li>• Reading: Chapters 10 &amp; 10A</li> <li>• Review Lecture Materials</li> <li>• Discussion Participation</li> <li>• Session 7 Study Questions/Problems</li> </ul>
Session 8	December 10 - December 17	Strategy and MPC Design	<ul style="list-style-type: none"> <li>• Reading: Chapters 12</li> <li>• Review Lecture Materials</li> <li>• Discussion Participation</li> <li>• Term Paper Due</li> <li>• Final Exam</li> </ul>

## The Writing Center

The Writing Center can help you with your writing. Bring specific questions to the tutor. Make appointments early; don't wait until the last minute.

Tutors can't help you construct or edit a paper. They can't turn your ideas or rough drafts into a research paper. They are there to help you with specific writing problems.

GGU also provides an online writing lab (the OWL). The OWL offers online writing assistance to GGU students via email. While OWL tutors do not correct errors, they do provide feedback and point to specific problems in a student's work. It is the student's responsibility to make the actual corrections and revisions. Go to [http://cybercourses.ggu.edu/OWL\\_site/OWL.html](http://cybercourses.ggu.edu/OWL_site/OWL.html) for more information.