Appendix

Supply Chain Analytics

Course Description

The course examines the analytical modeling of operational aspects of a supply chain, particularly forecasting and aggregate planning. Students will learn how to create models for forecasting and then optimize the aggregate plan using linear programming.

Pre-requisite

Operations and Supply Chain Management

Text and References

Supply Chain Management Strategy, Planning and Operations by Sunil Chopra and Peter Meindl.

The textbook is optional. It is your choice whether you buy it or not. However, you are responsible for the material in the textbook.

Excel

You must be comfortable with Excel. If you are not, I strongly recommend that you review this course online before the semester begins. Complete the training exercises on Excel

https://support.microsoft.com/en-us/office/excel-video-training-9bc05390-e94c-46af-a5b3-d7c22f6990bb?wt.mc_id=otc_home

Estimated Time Needed Per Week

Students are at different levels of expertise. All of you will need a minimum of (1) 3 hours a week to come to class, take notes and see what needs to be done, (2) 3 hours a week to work on problems in Excel, (3) 3 hours a week for project work and preparation for presentations. Be prepared to put in **a minimum of 9 hours a week or more**. The minimum hours per week is calculated for people who have some level of undergraduate training in this material. Most of you will require **more than 9 hours a week** for this course. I would strongly suggest you plan this semester and set aside the time commitment needed.

Course Participation Requirements

Weekly Project Meetings: You will set up appointment times to see me every week. These meetings may take 30 minutes to an hour depending on how much we need to discuss. All members of the project team are expected to show up for the appointment. You can have the appointment face to face or online. If you cannot make it to the appointment, I expect you to inform me.

Attendance: Attendance of class meetings and project meetings is compulsory.

Reviewing the Material: You must practice what you learn in class on a computer at home or in the lab. If you do not work on Excel regularly you will not do well in this class. The best method is to attend class, go home or to the lab and repeat what you did in class with a computer and Excel.

Evaluation

Exams: All exams will be open-book, open-notes and will be in the School of Business lab**.** Study and come prepared for your exams. Do not assume that you do not need to study or prepare for an open book exam. They tend to be harder. All your exams will be in Excel, and you will submit them to Blackboard. You are not allowed to use cell phones in the exam room.

Consulting Project: Each one of you will be in a team of 2 or 3 people to work on a project for a client. Each team will choose one division from the client. Project work will be done regularly with regular submissions to me and your client. I will be the project manager. Submissions for your project involve all Excel worksheets, a project presentation and a project report. We will have weekly meetings on your progress, and I will make suggestions and guide you on your project.

Homework: Homework can be done alone or as a group. The purpose of homework is to get you prepared for your exams and projects. **If you don't do your homework, you will probably fail this class.**

Each exam is 20% of your grade, class assignments and project performance are 10% and your project report and final presentation is 30% of your grade. Team members will be evaluated according to their performance. It is possible for different team members from the same project to get different grades based on professor and peer evaluation of their participation and the amount of work they have done.

Evaluation	**Percentage**
Exam 1	20%
Exam 2	20%
Exam 3	20%
Class Assignments and Project Participation	10%
Project Report and Final Presentation	30%

Final Grade

Score	*Grade*
90 and above	= 4.0 (A)
85 – 89.9	= 3.5 (B^+)
80 – 84.9	= 3.0 (B)
75 – 79.9	= 2.5 (C^+)
70 – 74.9	= 2.0 (C)
65 – 69.9	= 1.5 (D^+)
60 – 64.9	= 1.0 (D)
Less than 60	= NC (F)

Course Schedule (Subject to modification)

- Week 1: Introduction and Client presentation
- Week 2: Supply Chain Strategy
- Week 3 - 7: Forecasting (Ends with Exam on Forecasting, First Presentation on client's Product, Product Strategy, Supply Chain Strategy and Strategic Fit)
- Week 8 – 12: Aggregate Planning and Sales and Operations Planning (Ends with Exam on Aggregate Planning, Second Presentation which includes First Presentation and the Forecast for the product selected)
- Week 12 – 15: Network Modeling (End with Exam on Network Modeling, Third Presentation which includes First two presentations and the aggregate plan for the forecast of the product selected and multiple what-if analysis on the aggregate plan.
- Final Presentation: to the client (Submit Project Report, All Excel Files and the Presentation to the faculty member who will then submit it to the client after grading)

Project Peer Evaluation

Team:	
Name of the Student:	

Please evaluate your performance and your team members based on the five-point scale given below with 1 – No contribution and 5 – contributed a great deal. Select or circle the score and write a brief description of the contribution below.

Interaction with Client

Your contribution	1	2	3	4	5
Team Member 1: (Name)	1	2	3	4	5
Team Member 2: (Name)	1	2	3	4	5
Description of the contribution:					

Interaction with Project Manager

Your contribution	1	2	3	4	5
Team Member 1	1	2	3	4	5
Team Member 2	1	2	3	4	5
Description of the contribution:					

Excel

Module 2: Forecasting

Your contribution	1	2	3	4	5
Team Member 1	1	2	3	4	5
Team Member 2	1	2	3	4	5
Description of the contribution:					

Module 3: Aggregate Planning

Your contribution	1	2	3	4	5
Team Member 1	1	2	3	4	5
Team Member 2	1	2	3	4	5
Description of the contribution:					

Power Point

Your contribution	1	2	3	4	5
Team Member 1	1	2	3	4	5
Team Member 2	1	2	3	4	5
Description of the contribution:					

Report

Your contribution	1	2	3	4	5
Team Member 1	1	2	3	4	5
Team Member 2	1	2	3	4	5
Description of the contribution:					

Feedback on the overall class and your experience with the project

Client Feedback

Team:	
Name of the Student:	

Please evaluate the performance of the project team and your interaction with the students and give feedback on the project. The feedback is qualitative and will feed into my overall evaluation of the students and think about ways to improve the project.

Feedback on each student and your experience with the project
