

## SCM 4365 Business Forecasting

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### **Course description**

The aim of this course is to develop the skills necessary to succeed as a corporate forecast analyst. The first half of the course consists of academic work, while the second half is an internship project in which you practice what you have learned.

The academic work starts with data analysis for forecasting. The most important data analysis tool is seasonal adjustment. Most business data are seasonal, and the seasonal pattern should be identified and removed before further analysis. We also study tools that determine how much of the variation in data is due to seasonality, trend, and noise (unpredictable randomness). Other tools help identify the type of trend and the stage of the business cycle, both in the industry and the economy. We will use the data analysis tools to answer this question: Should we have seen the recession coming?

After these preparatory steps for forecasting, we study three types of quantitative forecasting models: exponential smoothing, growth models, and regression models. There are a variety of exponential smoothing models, all based on the common-sense idea that recent data should get more weight in forecasting. We use smoothing to predict the level of the data in the near future, longer-term trends or growth patterns, and changes in seasonal patterns. Smoothing may not work with new products, where historical data is limited; for such cases, we discuss growth models that make reasonable assumptions about how markets will develop. Finally, we review the use of causal regression models in forecasting.

During the second half of the course, students work in teams (4 or 5 people each) on company forecasting projects. Team assignments, including appointments of team leaders, are made by the instructor. Each team will submit a project report and give an oral presentation. Each team member will receive the same grade.

### **Grading**

Three written case studies make up 40% of your grade. Another 40% is based on the forecasting project. There is one examination weighted at 20%.

## **Class attendance**

Attendance is important for both class and team meetings. If you must miss a class, notify me by email and arrange for someone to take notes for you. Students with more than one unexcused absence will be dropped.

Punctuality is also important. This course includes numerous in-class exercises and it is disruptive when students arrive in the middle of an exercise. I realize that late arrival is sometimes unavoidable. However, students who are repeatedly late will be dropped.

## **Materials**

The text is Hans Levenbach and James P. Cleary, Forecasting: Practice and Process for Demand Management, ISBN 0-534-26268-6 (Required). Note: This text comes with a CD, but you do not need it because all models and data are available on the web site below. Used copies are available from Amazon, Barnes and Noble, and other Internet booksellers.

William Strunk & E. B. White, The Elements of Style (4<sup>th</sup> edition), ISBN 0-205-30902-X (Recommended). This little book is a concise guide to writing. The book is not required, but most students find it invaluable. If you are concerned about writing, read this book. You can find an on-line version at [www.Bartleby.com](http://www.Bartleby.com), although the paperback cited above is cheap and contains several new chapters not available on-line.

All other course materials are available at <http://www.bauer.uh.edu/gardner/>. Click on the "Current students" link. The User ID and Password will be provided in class.

Subdirectories contain information as follows:

Cases	Case studies 1-3, including data
Examples	Forecasting examples (Excel worksheets)
Exercises	Forecasting exercises used in class
Forecast Manager	Forecast Manager text
Presentations	Copies of student presentations from prior years
Readings	Research articles that supplement the text
Syllabus	Latest syllabus and class schedule
Web links	Links to sources of economic data
Worksheets	Excel worksheets to accompany the Forecast Manager

Print the contents of the following subdirectories and bring them to class each day: Cases, Exercises, Forecast Manager, and Readings.

## **Writing case reports**

Writing and content are equally important in case reports. Any report that contains serious mistakes in spelling, grammar, punctuation, usage, or organization will receive a failing grade.

Preparation of a case report usually involves three sessions: analysis, first draft, and rewrite. You are encouraged to work in a study group to analyze cases, but the writing must be your own. When you finish the first draft, put it aside, then come back and clean it up in a separate session. Good writing always means rewriting, and a fresh look at your draft pays dividends.

Write from an outline. No one can write a coherent case report without some kind of top-down strategy. At least sketch out your major arguments and the points you want to make in support of each one.

Write with nouns and verbs, not with adjectives and adverbs. Although adjectives and adverbs are indispensable parts of speech, they are overused; make sure all adjectives and adverbs are necessary. Do not overstate arguments and conclusions. A single overstatement can make an entire report suspect because readers lose confidence in your judgment.

Write each case report from the viewpoint of a consultant to the company. That is, write to an audience, either the case protagonist or the company CEO, not to the world at large. You must arrive at unambiguous conclusions. State those conclusions in the first paragraph, then spend the rest of the report justifying and defending them. Any proposed solution to a business problem has advantages and disadvantages, so be sure to discuss both.

Write about the problems in the case, not about textbook ideas. Do not waste space by repeating obvious information. Do not speculate about what you might do with more information. You have all the information available to management at the time of the case – use it and make a firm decision.

Organize and format the report as follows. Page one is a cover sheet containing only your name, the name of the case, and the date. Place this information on three lines, left-justified, at the top of the page. Leave the rest of the page blank for grading comments. Following the cover sheet, attach the text or body of the report, which may not exceed three pages. Single-space the text using a 12-point font with one-inch margins. Use section headings in the text to make the report easier to follow.

After the text, attach as many exhibits as necessary (they do not count against the page limit) to give the details of quantitative analysis or any other research that would make for tedious reading in the body of the report. Refer to each exhibit in the text, and make sure that the reader can understand the report without having to stop and work through an exhibit in detail.

Cases are as follows (see .pdf files in the cases subdirectory):

- 1 ASP Auto Parts
- 2 Yogi Berra, CEO
- 3 Air Arkansas

### **Academic Honesty**

The University of Houston Academic Honesty Policy is strictly enforced by the C. T. Bauer College of Business. No violations of this policy will be tolerated. A discussion of the policy is included in the University of Houston Student Handbook, <http://www.uh.edu/dos/hdbk/acad/achonpol.html>.

### **Accommodations for Students with Disabilities**

The C. T. Bauer College of Business would like to help students who have disabilities achieve their highest potential. In order to receive academic accommodations, students must register with the Center for Students with Disabilities (CSD) (telephone 713-743-5400), and present approved accommodation documentation to their instructors in a timely manner.

### **Course schedule**

The course schedule is in the syllabus subdirectory. Updates will be posted as necessary.