Introduction to Analytics Modeling

We strongly recommend participants commit to the following weekly schedule. Learners who follow this suggested pace are much more likely to earn the verified certificate than those who take a more leisurely approach. For more specifics on your grade, please login to your course and click on the "Progress" tab.

Participants must earn a minimum score of 60% to receive a Verified Certificate.

Course Pace Chart

Week	Weekly Overview	Assessment(s)	Points
1	Introduction, Classification, Validation	Week 1 Homework	16%
2	Clustering, Basic Data Preparation, Change Detection	Week 2 Homework	
3	Time Series Models, Basic Regression	Week 3 Homework	
4	Advanced Data Preparation, Advanced Regression, Treebased Models	Week 4 Homework	
5	Variable Selection, Design of Experiments, Probability-based Models	Week 5 Homework	
6	Probability-based Models, Missing Data, Optimization	Week 6 Homework	
7	Optimization, Advanced Models	Week 7 Homework	
8	Discussion Cases – Case Format, Power Company Case	Week 8 Homework	
9	Discussion Cases – Retailer Case	Week 9 Homework	
10	Discussion Cases – Monetization Case	Week 10 Homework	
11	Course Summary	Course Project – 9% Midterm Quiz 1 – 25% Midterm Quiz 2 – 25%	9% 50%
12	Final Quiz	Final Quiz	25%

Pearson makes every effort to ensure the accuracy of this document although there are cases when a course team may change the grading policy so participants should always make sure to double-check the course grading policy.

Grading Policy

1. There will be two midterm quizzes and one final quiz that will be graded by faculty. Each will be worth 25% of the course grade.
2. There will be homework assignments most weeks of the semester. Your two lowest homework grades will be dropped, and the remaining ones will add up to 16% of the course grade. These will be peer-graded (based on the median score assigned by your peer graders). You will also need to peer-grade others' homeworks; you will not receive a final grade for your homework submission if you do not complete your peer assessments.

NOTE: I know that everyone has other obligations – family, work, etc. – that sometimes make it hard or impossible to meet weekly homework deadlines. That is why you are allowed to drop your lowest two homework grades: the drops allow you to not turn in the homework in whatever two week(s) the other obligations in your life might be too time-consuming. (Of course, I hope that you do the homework later to make sure you learn what you're supposed to know that week, but you can do it on your own time without the pressure of a deadline.) There are only two drops, so please use them judiciously.

3. There will be one course project worth 9% of the course grade. The project will be peer graded (based on the median score assigned by your peer graders). You will also need to peer-grade others' projects; you will not receive a final grade for your project submission if you do not complete your peer assessments.

4. Audit and Verified/MicroMasters learners must achieve an overall weighted average of 60% to pass the course. For OMS Analytics degree students, quizzes will be scaled to letter grades based on their difficulty, and combined with the homeworks and project to determine an overall letter grade scale at the end of the semester.

Course Goals

The most important thing you can learn from this course is not the memorization of any specific bit of material. Instead, I would like you to learn these skills:

- Given a business (or other) question, select an appropriate analytics model to answer it, specify the data you will need to solve it, and understand what the model's solution will and will not provide as an answer.
- Given someone else's use of analytics to address a specific business (or other) question, evaluate whether they have used an appropriate model (and appropriate data) and whether their conclusion is reasonable.

Another goal of this course is for you to learn how to think though descriptions and usage of new models, so you can continue to learn throughout your career; new techniques will certainly be developed after you graduate, and we want you to be able to pick them up quickly.

We will not cover the mathematics and algorithms under the hood, or deeper mastery of the modeling needed to set up the use of the technique. You can acquire those deeper levels of knowledge in elective courses. (In fact, we could spend an entire semester on many of the topics you'll see in the course.)