Statistics for Business - I

Course Syllabus

Welcome to **QM101.1x**

This multi-part course series focuses on Business Statistics, and is ideally targeted at learners who wish to enroll in business programs. Given the nature of the subject, the first two parts cover topics in Descriptive Statistics, whereas the next two parts focus on Inferential Statistics.

Spreadsheets containing real data from diverse areas such as economics, finance and HR drive much of our discussions. In Part 1 of the series, we shall explore multiple ways to describe these datasets, numerically as well as visually. We will also study the framework of probability so that we can make quantitative sense of uncertain business situations. Throughout, we shall embrace a problem-based approach to understanding the material: the primary reason to pick up a tool or a technique would be to solve a problem.

Our treatment makes judicious use of software tools. In Part 1, we shall take up small-sized datasets, which can be manipulated with a spreadsheet package. In Part 2, we shall take up datasets of over a million rows, for which we shall employ the R statistical platform. We incorporate tutorials for participants to get acquainted with both mechanisms.

Parts 3 and 4 are dedicated to Inferential Statistics. In Part 3, we shall study the benefits of random sampling, and arrive at confidence interval estimates for important population parameters. We also learn how to formulate hypotheses and resolve them with a testing framework. Part 4 is dedicated to regression and forecasting. These techniques are heavily applied in the world of business to understand trends in the data.

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COURSE AGENDA

Week	Section Name	Topics Covered	Start Date	Recommended Completion Date
0	INTRODUCTION TO QM101.1X	INTRODUCTION SPREADSHEET TUTORIAL	01/07/2015	07/07/2015
1	DESCRIPTIVE STATISTICS	DOWNLOADING DATA FROM INTERNET DATA PREPARATION:VLOOKUP DATA PREPARATION: FILTER SUMMARY STATISTICS DISPERSION IN DATASETS	07/07/2015	14/07/2015
2	SUMMARISING VARIABLES DEMOGRAPHICS DEMO RETAIL ANALYTICS DEMO	VARIABLES AND SCALES SUMMARISING TWO CATEGORICAL VARIABLES AGGREGATING A NUMERICAL VARIABLE BY CATEGORY HISTOGRAMS CORRELATION	14/07/2015	2107/2015

3	NUMERICAL DATA	SUMMARISING GROUPED DATA	21/07/2015	28/07/2015
		SKEW AND KURTOSIS		
		PERCENTILES		
		BOX PLOTS		
4	PROBABILITY	DATA DOWNLOAD	28/07/2015	04/08/2015
		THE FRAMEWORK OF PROBABILITY		
		JOINT AND MARGINAL PROBABILITIES		
		CONDITIONAL PROBABILITY		
		BAYES RULE		
	APPLICATION:DECISION TREES			
			28/07/2015	07/08/2015
	FINAL EXAM			

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TIME COMMITMENT

Course Length

- 5 Weeks
- Each week is released across the globe on *Tuesday at 00:00 h UTC.*

Weekly Commitment

5-7 hours per week. This includes the time spent in going through the course materials, taking up the assessments, exercises, caselets and participating in the discussion forums.

GRADING & CERTIFICATION

Grading Scheme

Besides racking up a score each time you correctly answer an MCQ, there shall be exercises and caselets for you to go through. There will be a final exam after the course is done. This is a broad breakup of the marks.

Continuous learning (MCQs)	*40*
Exercises	*20*
Caselets	*10*
Final exam	*30*

You will be deemed pass in the course, if you obtain 50 % overall.

Click the ***Statistics for Business - I*** course enrolment page to pursue a verified certificate.

ASSESSMENTS

Graded Assessments Instructions

Sub-sections that include graded assessments will have a **Timer** icon ⏰ along with the assessment due date.

Please ensure the following:

- Click the **Save** button to save your answer. These answers will not be graded at this stage.
- Click the **Check** button at the end of every question to record your choice and get your answer graded.

Note:

- You need to score **50%** to pass the assessment and mark the week as "Complete".
- Please check the number of attempts specified for each assessment.

DISCUSSION

All registered participants of a MOOC on edX will have access to a course-specific online discussion forum. Participation in such forums is encouraged because it contributes significantly in the form of peer learning. Discussion forums are commonly used in online courses to provide learners an opportunity to reflect on, discuss and share knowledge gained from the online content. Participation in these forums is strongly encouraged by the course staff.

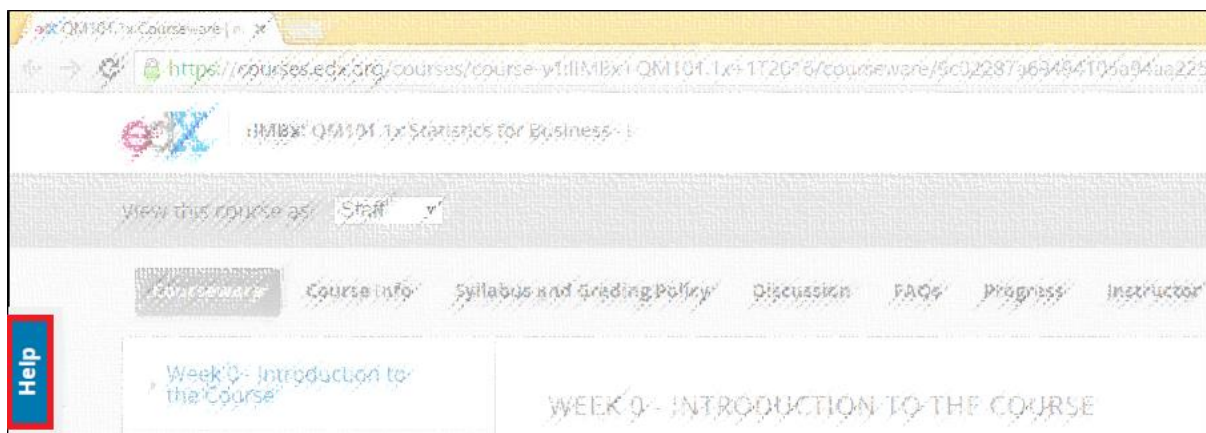Download the *IIMBx Discussion Forum Guidelines* PDF for more information.

GETTING HELP

For course-related questions, use the discussion forums.

For general edX-related queries, visit Student FAQs on the edX website.

For any technical issues, use the **Help** button on edX course page (screenshot attached below).

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