



Statistics for Business - II

Course Syllabus

Welcome to QM101.2x

In Part 1 of our QM101 series, we explored multiple ways to describe these datasets, numerically as well as visually. We also studied the framework of probability so we could make quantitative sense of uncertain business situations. Throughout, we embraced a problem-based approach to understanding the material: the primary reason to pick up a tool or a technique was to solve a problem. Our treatment made judicious use of spreadsheet software to explore statistical concepts.

In Part 2 of our QM101 series, we characterise real-world phenomena with constructs known as random variables. These variables capture the uncertainty in the assumed values by attaching probabilities to them. On the discrete end, we shall take up the Uniform, Bernoulli, Binomial and Poisson random variables. For continuous variables, we take up the Exponential and Normal. We will also learn how to simulate these variables.

Because we shall be examining datasets with over a million rows, we shall employ the R statistical platform. A detailed tutorial spanning two weeks will get beginners started on this powerful software. Wherever possible, we shall continue to use Excel as our spreadsheet tool to demonstrate various phenomena.



COURSE AGENDA

| Week | Section Name | Topics Covered | Start Date | Recommended Completion Date |
|------|--------------------------|---|------------|-----------------------------|
| 0 | INTRODUCTION TO QM101.2x | INTRODUCTION RECAP ENTREPRENEURSHIP DEMO | 29/09/2015 | 05/10/2015 |
| 1 | R TUTORIAL -I | INSTALLING R AND RSTUDIO BASICS OF RSTUDIO | 06/10/2015 | 12/10/2015 |
| 2 | R TUTORIAL -II | WRITING PROGRAMS IN RSTUDIO HR DEMO | 13/10/2015 | 19/10/2015 |
| 3 | RANDOM VARIABLES | EXPECTATION AND VARIANCE OF RANDOM VARIABLES BENFORD'S LAW | 20/10/2015 | 26/10/2015 |
| 4 | STANDARD VARIABLES –I | UNIFORM, BINOMIAL AND POISSON DISTRIBUTIONS | 27/10/2015 | 02/11/2015 |
| 5 | STANDARD VARIABLES –II | EXPONENTIAL DISTRIBUTION SIMULATION | 03/11/2015 | 09/11/2015 |
| 6 | NORMAL DISTRIBUTION | PROPERTIES AND BASIC APPLICATION | 10/11/2015 | 16/11/2015 |



TIME COMMITMENT

Course Length

- The course will be running for 7 Weeks, starting 29th September, 2015 with Week 0
- Each week's material will be released across the globe on Tuesday, 03:30 UTC, you are advised to set aside 5 to 7 hours per week to complete the weekly content



GRADING

Grading Scheme

Assessments

Each week has **3 types** of assessments - **Continuous Learning, Exercises and Caselets**. The final exam will be **after Week 6**. There are 16 graded assessments in this course. The score from each assessment shall contribute to the final score.

Note: Some ungraded assessments are interspersed throughout the course, to help you recall what you have learned. These **do not** count for the final grade.

This is a broad breakup of the marks.

| | |
|----------------------------|----|
| Continuous learning (MCQs) | 40 |
| Exercises | 20 |
| Caselets | 10 |

Final exam

30

Certification

You will need to get a total mark of **55%** or higher to earn a completion certificate. Please remember that the **Final** exam is **mandatory**.

Click on the **QM101.2x** course enrollment page before **1st November 2015 (00:00 UTC)** to pursue a Verified certificate.

To know more about the types of certificates offered in edX, visit [Student FAQs](#) (CERTIFICATES & CREDITS section) on the edX website.



ASSESSMENTS

All our courses include both graded and un-graded assessments. The un-graded assessments contain practice questions that will test your understanding of the concepts presented in the course.

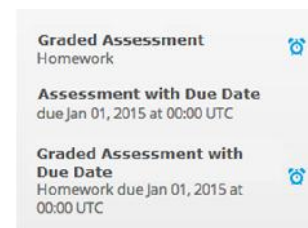
The score that you receive in the weekly-graded assessments count towards your final course grade.

Graded Assessments Instructions

Graded assessments may also have due dates, or the last possible time you can submit an assessment. Once the due date has passed, you cannot receive credit for any incomplete problems in the assessment.

Some graded assessments do not have due dates, and some assessments with due dates are not graded. If an assessment has a due date, the due date appears under the learning sequence name in the course accordion. If an assessment is graded, the name of the assessment appears under the name of the learning sequence, and a blue alarm clock appears next to the learning sequence name in the course accordion.

The image on the right shows an example of three different assessments. In this example, both first and last assessments are graded, but only the last assessment has a 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 **55%** (overall) to pass the assessment.
- 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.

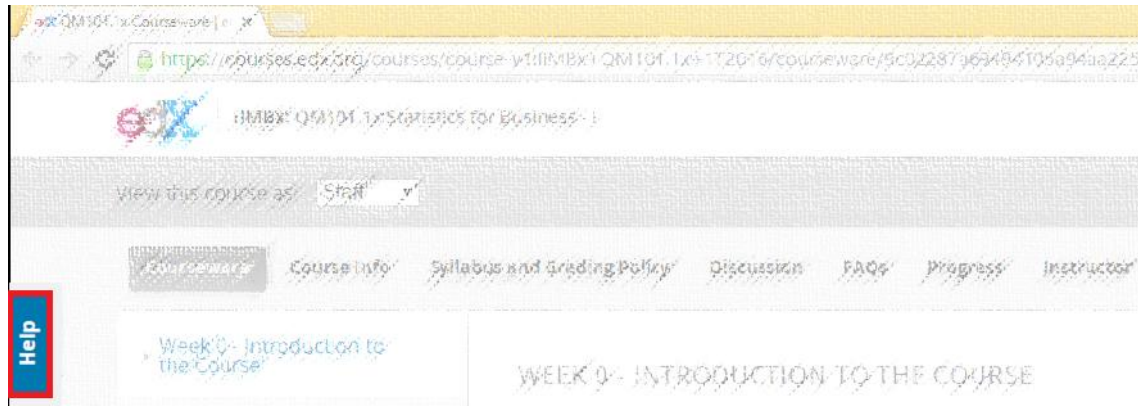


GETTING HELP

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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