



## NPTEL Online Course Overview and Schedules

### MATLAB Programming for Numerical Computation

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#### Course Objective

The objective of this course is to introduce undergraduate students to computational methods using MATLAB. At the end of this course, a student would:

- Learn basics of MATLAB programming
- Get introduced to numerical methods for engineering problems
- Will be able to use MATLAB to solve computational problems

#### Course Layout

**Course start date is 18<sup>th</sup> January 2016.**

The course will be covered in the following eight modules: One module per week. Video lectures will usually be of 15 to 20 minutes in duration. (Except Module-1, where introductory lectures may be longer). The table below gives information about the modules and the schedule followed in this online course:

Module	Video upload	Module Schedule	Assignment due	
1	Intro to MATLAB Programming	21-Dec	18 <sup>th</sup> to 24 <sup>nd</sup> Jan	–
2	Approximations and Errors	18-Jan	25 <sup>th</sup> to 31 <sup>st</sup> Jan	31 <sup>st</sup> Jan
3	Differentiation and Integration	25-Jan	1 <sup>st</sup> to 7 <sup>th</sup> Feb	7 <sup>th</sup> Feb
4	Linear Equations	01-Feb	8 <sup>th</sup> to 14 <sup>th</sup> Feb	14 <sup>th</sup> Feb
5	Nonlinear Equations	08-Feb	15 <sup>th</sup> to 21 <sup>st</sup> Feb	21 <sup>st</sup> Feb
6	Regression and Interpolation	15-Feb	22 <sup>nd</sup> to 28 <sup>th</sup> Feb	28 <sup>th</sup> Feb
7	ODE in single variables	22-Feb	29 <sup>th</sup> Feb to 6 <sup>th</sup> Mar	6 <sup>th</sup> Mar
8	ODE – Practical Problems	29-Feb	7 <sup>th</sup> to 13 <sup>th</sup> Mar	13 <sup>th</sup> Mar

To help students start at their own pace, Module-1 will be uploaded 4 weeks before the course start date. Likewise, we will make all attempts to upload videos one week before the start of each module. Some changes from above schedules may happen due to unforeseen reasons.



## Course Enrolment

If you are able to browse the course material, download this PDF file and view the discussion forums, you have already enrolled in this course!

Simply watch the videos, do the practice problems and submit your assignments.

## NPTEL Certification

This is an NPTEL certification course. Certification is optional.

If you wish to get certification, please register for certification as described on NPTEL website.

FAQ for NPTEL Certification is given at the following link:

<http://nptel.ac.in/noc/pdf/NOC%20-%20FREQUENTLY%20ASKED%20QUESTIONS.pdf>

## Overall Grading Policy for Certification

**Final Exam (60%):** There will be a final exam held on 20<sup>th</sup> and 27<sup>th</sup> March 2016. This will count for 60% of the final grade in this course.

**Assignments (40%):** Assignments from Modules 2–8 will be graded. Best five out of these seven assignments will count towards 40% of the course grade. Each week's assignment carries equal weight towards the final grade.

### *Assignment Submission*

Assignment needs to be submitted in MATLAB using MATLAB coursework website. This document will be updated with the link for assignment submission portal by December 31<sup>st</sup>.

The first week's assignment will not be graded. This assignment is for “trial purposes”... to familiarize ourselves with the course and assignment submission. The remaining seven weekly assignments will be graded. You may submit assignment multiple times before the deadline.

However, only your last attempt in each problem will be counted.

### *Assignment Deadlines*

Assignments will be due by 11 pm on each Sunday, for the entire run of the course.

The assignments need to be submitted strictly by the deadline. Since we are unable to allow late submissions, we recommend you submit assignments 24–48 hours before the deadline to avoid any issues with accessing our servers.