
NPTEL Online Courses & Certification

A project of NPTEL
Funded by NMEICT, MHRD

In association with **NASSCOM**[®]

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NPTEL: nptel.ac.in

- ❖ National Program on Technology Enabled Learning
 - ❖ Joint initiative of Indian Institute of Technologies and Indian Institute of Science
- ❖ Online web and video courses
 - ❖ Engineering, Sciences, Management and Humanities
- ❖ Started in 2001
 - ❖ Phase I – 261 courses
 - ❖ Phase II – More than 600 courses being added
- ❖ Static courses
 - ❖ Videos: recordings of regular classes
- ❖ Funded by Ministry of Human Resource Development, Govt of India
 - ❖ Under the National Mission on Education through ICT (NMEICT)
 - ❖ <http://www.sakshat.ac.in/>

NPTEL National Programme on Technology Enhanced Learning

Funded by Ministry of HRD Government of India

FAQ | Contact us | Sakshat | Institutes using NPTEL | About NPTEL

NPTEL provides E-learning through online Web and Video courses in Engineering, Science and humanities streams. The mission of NPTEL is to enhance the quality of Engineering education in the country by providing free online courseware.

Give Feedback on NPTEL Courses

IIT BOMBAY IIT DELHI IIT GUWAHATI IIT KANPUR IIT KHARAGPUR IIT MADRAS IIT ROORKEE IISc BANGALORE

A Joint Initiative of the IITs and IISc

Invitation for Subject Matter Experts for Contributing to NPTEL

New Courses

- Robotics: A Advanced Concepts and Analysis - Web (10 Jan 2012)
- Ground Improvement Techniques - Web (09 Jan 2012)
- Flight dynamics I - Airplane performance - Web (06 Jan 2012)
- Advanced Optical Communication - Video (04 Jan 2012)
- Advanced Structural Analysis - Video (04 Jan 2012)
- Quantum Mechanics I - Web (04 Jan 2012)
- Six Sigma - Video (04 Jan 2012)

Aerospace Engineering (58)	Atmospheric Science (6)	Automobile Engineering (2)	Basic courses(Sem 1 and 2) (36)
Biotechnology (34)	Chemical Engineering (101)	Chemistry and Biochemistry (63)	Civil Engineering (124)
Computer Science and Engineering (97)	Electrical Engineering (77)	Electronics & Communication Engineering (94)	Engineering Design (11)
Environmental Science (5)	General (1)	Humanities and Social Sciences (64)	Management (49)
Mathematics (66)	Mechanical Engineering (148)	Metallurgy and Material Science (59)	Mining Engineering (2)
Nanotechnology (19)	Ocean Engineering (30)	Physics (75)	Textile Engineering (31)

Semester wise suggested reading

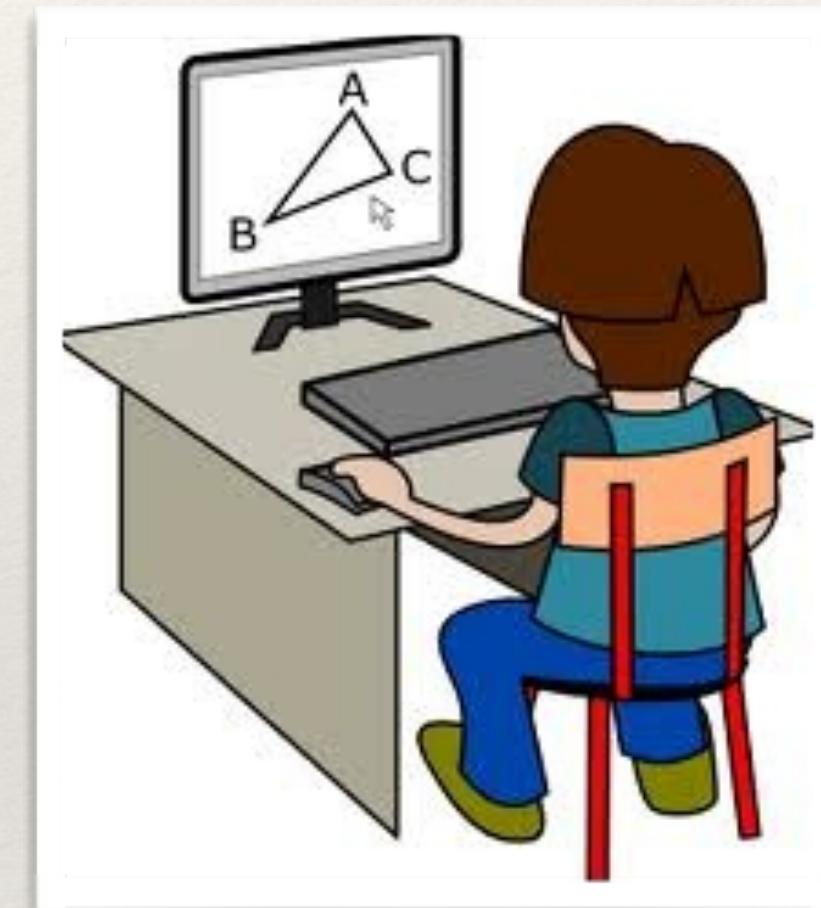
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NPTEL Official Partners

YouTube Classle videoUp

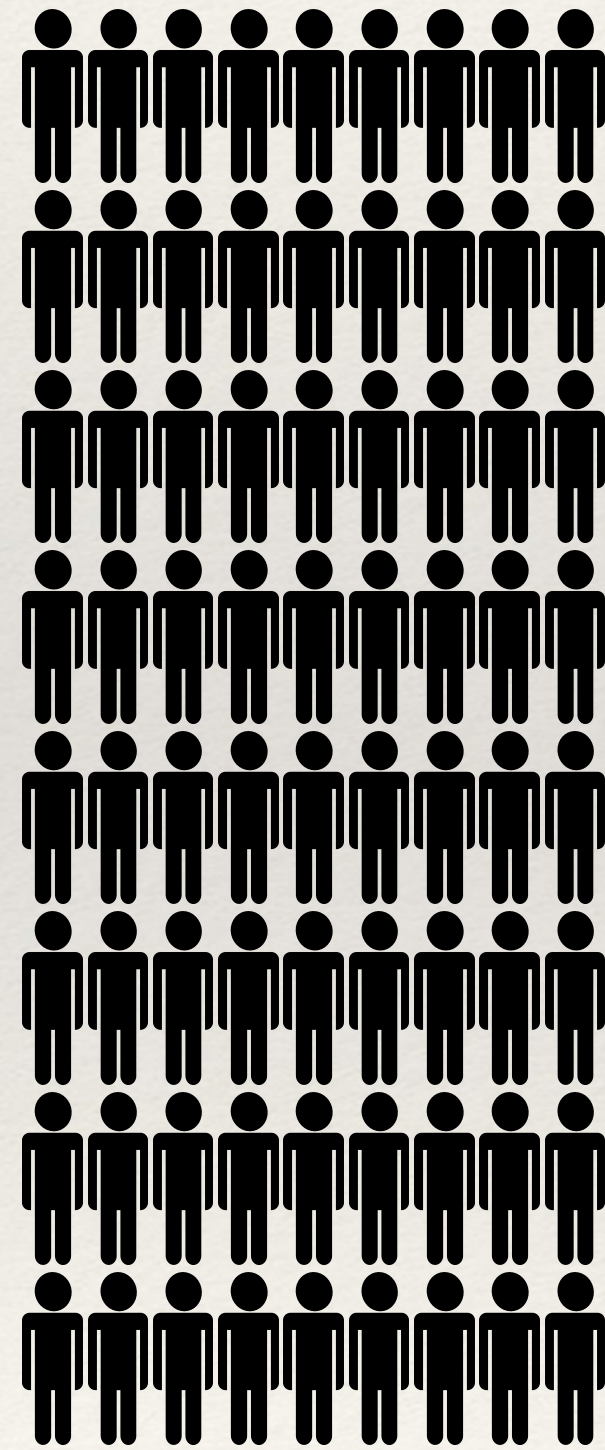
Skilled employees needed in large scale

- ❖ Engineering and IT services:
one of the main drivers of
Indian economy
- ❖ 200000 or more hires every year
- ❖ Skills required:
Problem solving
Analytical thinking
Programming

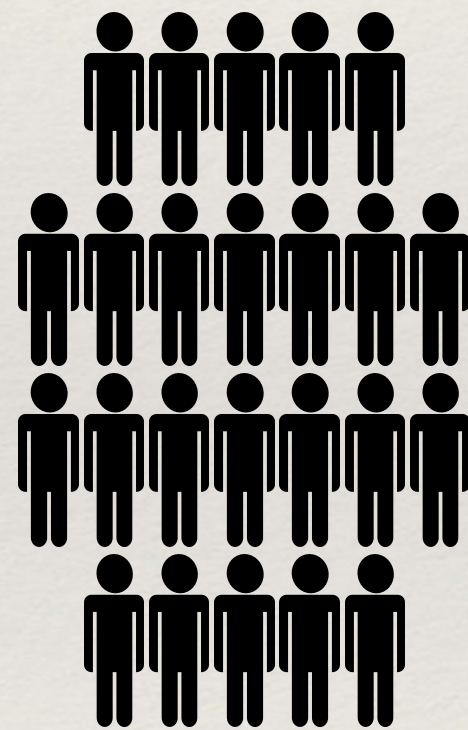


Current Scenario

Graduates from college



Graduates entering industry



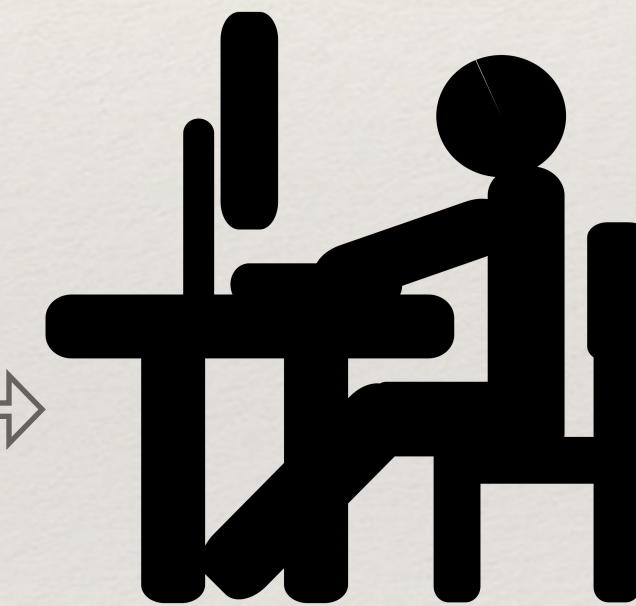
How to increase numbers?

Extensive in-house training (6-12 months)



How to decrease training time?

Start work in projects



NPTEL Online Courses & Certification

onlinecourses.nptel.ac.in

- ❖ Lectures, Discussion forum
- ❖ Online assessments
- ❖ Online programming assignments



Certification

- ❖ In-person, computer-based exam
- ❖ A competitive exam, like a programming contest for programming courses



Portal and Course Management

- ❖ Portal is similar to most MOOCs
 - ❖ Discussion forum, Video lectures, Multiple-choice questions
- ❖ Something new: Auto-graded programming assignments
 - ❖ Based on input-output test cases
 - ❖ Mooshak instance with online code edit/compile/run
- ❖ Course management
 - ❖ Faculty (from an NPTEL partner) and an army of TAs
 - ❖ Admin support for certification: NPTEL

NPTEL

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IIT ROORKEE



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NPTEL and NMEICT, Ministry of HRD, Government of India proudly announce the launch of
“Online Certification Courses”

Register at: onlinecourses.nptel.ac.in



Course Highlights

- * Course offered in Programming, Data Structures & Algorithms
- * Duration: 10 weeks
- * Aimed at college students 2nd year and above
- * Online assessment & programming assignments
- * In-person proctored exam with certificate
- * **Join and get JOB READY!**

Important Dates

- * Course sign-up: 10 Feb 2014
- * Course begins on: 3 Mar 2014
- * Registration for certification exam: 17 Mar 2014
- * Certification exam: ~~31 May & 1 June 2014~~
~~7 & 8 June 2014~~

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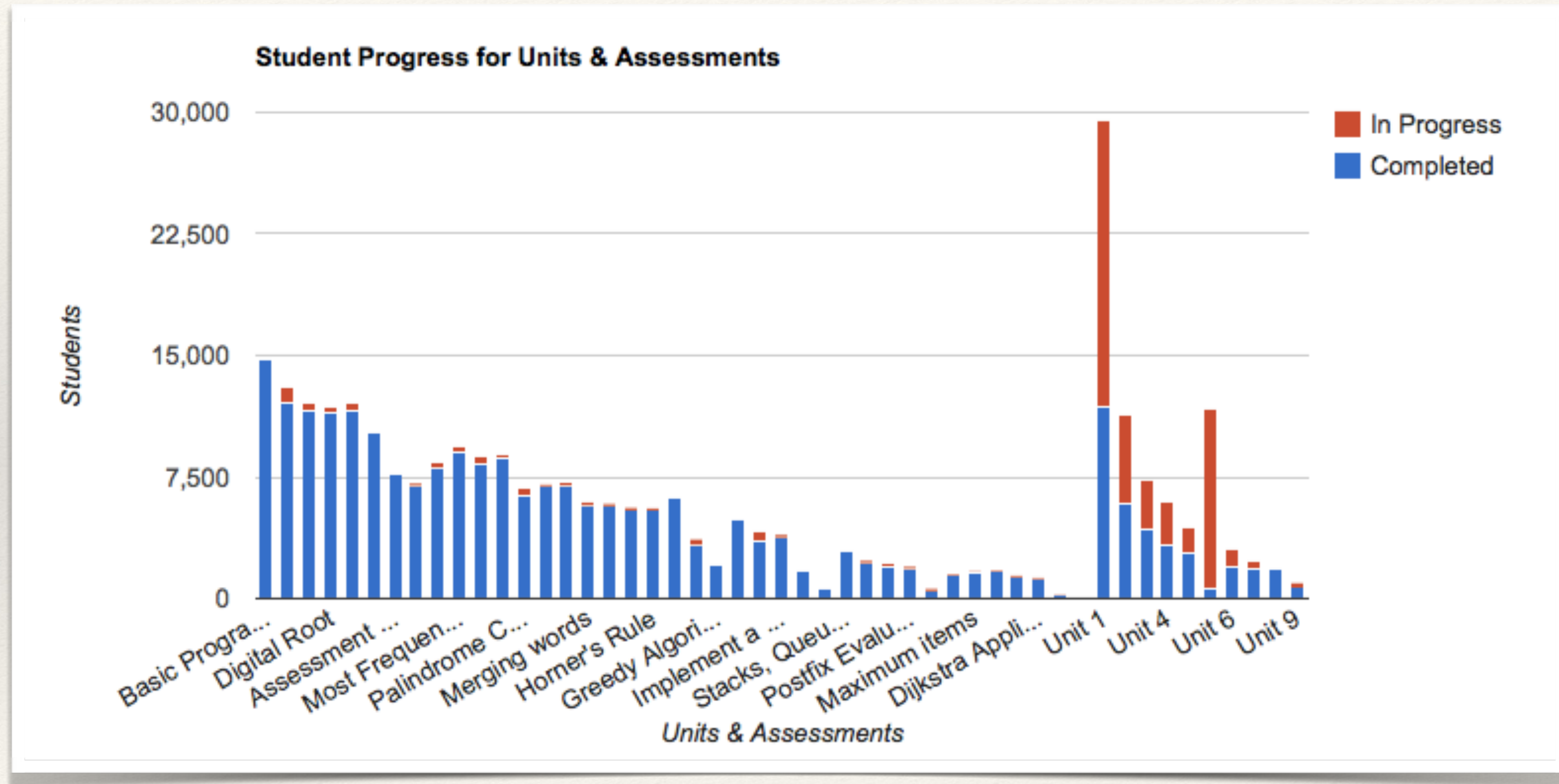


Ministry of HRD
Govt. of India

Topics



- ❖ Syllabus designed with NASSCOM and IT industry participation
- ❖ Programming: Variables, Operators, Input/Output Statements, Conditionals, Loops, Arrays, Pointers, Functions
- ❖ Data Structures: Abstract Data Types, Lists, Stacks, Queues, Trees, Heaps, Graphs
- ❖ Algorithms: Search, Sort, Greedy algorithms, Dynamic programming, Dijkstra's Algorithm, Boyer-Moore String Matching Algorithm

Analytics from Coursebuilder




Summary and Future


- ❖ About 1150 students to receive certificates after a proctored exam
- ❖ Sep - Dec 2014
 - ❖ Programming in C (IITK), Electrical Circuits (IITM)
- ❖ Jan-Apr 2015
 - ❖ About 5 courses lined up




Centre for Continuing Education
Indian Institute of Technology Madras

This is to certify that**LAKSHMI S**.....
has successfully completed the Online Certification Course on “Programming,
Data Structures and Algorithms” conducted by IIT Madras in July 2014.


Prof. Andrew Thangaraj
NPTEL Coordinator, IIT Madras


Prof. A. Ramesh
Chairman, CCE

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Roll No: NPTEL140300003505 Score card available on NPTEL website <http://nptel.ac.in/noc>