B.sc(CS/IT)DEPARTMENT

COMPUTER

- Modern Computer
- Advanced Computer Network

MATHEMATICS

- Advanced Probability Theory
- Set Theory And Mathematical Logic
- Graph Theory

PHYSICS

- A Brief Course On Superconductivity
- Physics Of Biological System
- Thermal Physics

Professor in Practice

Ass.Prof. Madhuri kumawat

- ASS.Prof. **Neha Jain**
- Ass.prof.**Shivani Tiwari**

CRITERIA TO GET A CERTIFICATE

Average assignment score = 25% of average of best 8 assignments out of the total 12 assignments given in the course.
Exam score = 75% of the proctored certification exam score out of 100

Final score = Average assignment score + Exam score

YOU WILL BE ELIGIBLE FOR A CERTIFICATE ONLY IF AVERAGE ASSIGNMENT SCORE >=10/25 AND EXAM SCORE >= 30/75. If one of the 2 criteria is not met, you will not get the certificate even if the Final score >= 40/100.

Certificate will have your name, photograph and the score in the final exam with the break up. It will have the logos of NPTEL and IIT Madras .It will be e-verifiable at nptel.ac.in/noc.

Only the e-certificate will be made available. Hard copies will not be dispatched.

Once again, thanks for your interest in our online courses and certification. Happy learning.

NPTEL Certification courses

The main benefits of participating in an online course under NPTEL are:

1. Students: credit transfer and better resume

2. Faculty: Refresher courses, AICTE recognized FDP courses

3. Working professionals: For upskilling and reskilling

INTERNSHIP

NPTEL provides toppers with the opportunity to gain rich research experiences with faculty from prestigious IITs and IISc.

From 2018 summer onwards, NPTEL has started offering internships to NOC exam toppers with the respective course instructors.

NPTEL is inviting learners from various colleges, universities, and institutes who have topped any of the NPTEL courses to pursue internships under the guidance of faculty from the IITs and IISc

Advanced Probability Theory (BSc)NPTEL

The course introduces the concept of probability through Kolmogorov's Axioms. It develops the concept of probability density function, cumulative distribution function, and introduces the concept of a random variable. Different theoretical probability distributions, both discrete and continuous are introduced, and their properties are studied

Course Type :	Core
Duration :	12 weeks
Category :	•Mathematics
Credit Points :	3
Level :	Undergraduate/Postgraduate
Start Date :	22 Jan 2024
End Date :	12 Apr 2024
Enrollment Ends :	29 Jan 2024
Exam Registration Ends :	16 Feb 2024
Exam Date :	27 Apr 2024 IST

Graph Theory
NPTEL(BSc)

Graph theory began in 1736 when the Swiss mathematician Euler solved Konigsberg seven-bridge problem. It has been two hundred and eighty years till now. Graph theory is the core content of Discrete Mathematics, and Discrete Mathematics is the theoretical basis of computer science and network information science.

Course Type :	Elective
Duration :	8 weeks
Category :	•Mathematics •Foundations of Computing
Credit Points :	2
Level :	Undergraduate/Postgraduate
Start Date :	22 Jan 2024
End Date :	15 Mar 2024
Enrollment Ends :	29 Jan 2024
Exam Registration Ends :	16 Feb 2024
Exam Date :	24 Mar 2024 IST

Set Theory and Mathematical Logic
NPTEL(BSc)

The course is an introduction to set theory and mathematical logic, giving the student an exposure to the foundations of mathematics, and indicating how various mathematical theories dealt with in other courses are examples of formal logical systems. Set theory will focus on differentiating between infinities and the axiom of choice

Course Type :	Core
Duration :	12 weeks
Category :	•Mathematics
Credit Points :	3
Level :	Undergraduate
Start Date :	22 Jan 2024
End Date :	12 Apr 2024
Enrollment Ends :	29 Jan 2024
Exam Registration Ends :	16 Feb 2024
Exam Date :	28 Apr 2024 IST

Advanced Machining Processes(NPTEL)(BSc)

This is graduate level course on advanced machining processes which delves into the non-conventional manufacturing practices carried across the industries. The course involves graduate level modeling, basic concepts related to these processes and general problem solving. So, students who can be in final year undergraduates interested to know about specialized learning or professionals from industry as well as graduate students.

Course Type :	Core
Duration :	12 weeks
Category :S	•Mechanical Engineering
Credit Points :	3
Level :	Undergraduate
Start Date :	22 Jan 2024
End Date :	12 Apr 2024
Enrollment Ends :	29 Jan 2024
Exam Registration Ends :	16 Feb 2024
Exam Date :	28 Apr 2024 IST

A Brief Course On Superconductivity (physics NPTEL BSc)

The course deals with the basics of superconductivity, including Meissner effect, electrodynamics response, -type-I and type-II superconductors etc. BCS theory, the only microscopic theory of superconductivity is discussed in details with a view to understand superconducting transition temperature and its relation to the pairing gap. Further Ginzburg Landau theory is introduced which is a phenomenological theory that is applicable in general to second order phase transitions

Course Type :	Elective
Duration :	4 weeks
Category :	•Physics
Credit Points :	1
Level :	Undergraduate/Postgraduate
Start Date :	22 Jan 2024
End Date :	16 Feb 2024
Enrollment Ends :	29 Jan 2024
Exam Registration Ends :	16 Feb 2024
Exam Date :	24 Mar 2024 IST

Modern Computer Vision
NPTEL(BSc)

This course explores both classical and deep learning-based approaches to computer vision. Starting from introduction to deep learning, it goes on to discuss traditional approaches as well as deep networks for a variety of vision tasks including low-level vision, 3D geometry, mid-level vision and high-level vision.

Course Type :	Elective
Duration :	12 weeks
Category :	•Electrical, Electronics and Communications Engineering
Credit Points :	3
Level :	Undergraduate/Postgraduate
Start Date :	22 Jan 2024
End Date :	12 Apr 2024
Enrollment Ends :	29 Jan 2024
Exam Registration Ends :	16 Feb 2024
Exam Date :	21 Apr 2024 IST

Physics of Biological Systems
NPTEL(BSc)

The application of physical principles to biological systems is an exciting and rapidly evolving feld of research. Methods of equilibrium and non-equilibrium statistical physics, stochastic processes, non-linear dynamics and polymer physics, among others have helped understand the guiding principles of a variety of biological processes.

Course Type :	Elective
Duration :	12 weeks
Category :	•Physics
Credit Points :	3
Level :	Undergraduate/Postgraduate
Start Date :	22 Jan 2024
End Date :	12 Apr 2024
Enrollment Ends :	29 Jan 2024
Exam Registration Ends :	16 Feb 2024
Exam Date :	21 Apr 2024 IST