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Cloud computing

By Prof. Soumya Kanti Ghosh | IIT Kharagpur

Learners enrolled: 32096

Prof S K Ghosh



Cloud computing is a scalable services consumption and delivery platform that provides on-demand computing service for shared pool of resources namely servers, storage, networking, software, database, applications etc., over the Internet. It is a model for enabling ubiquitous, on-demand access to a shared pool of configurable computing resources, which can be rapidly provisioned and released with minimal management effort. This course will introduce various aspects of cloud computing, including fundamentals, management issues, security challenges and future research trends. This will help students (both UG and PG levels) and researchers to use and explore the cloud computing platforms.

INTENDED AUDIENCE : CSE,ECE,EE

PREREQUISITES : Basics of Computer Architecture and Organization, Networking

INDUSTRY SUPPORT : IT industries

Summary

Course Status : Completed

Course Type : Elective



Duration :



8 weeks

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Category :

◦ Computer Science and Engineering

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◦ Systems

◦ Programming

Credit Points :

2

Level :

Undergraduate

Start Date :

15 Feb 2021

End Date :

09 Apr 2021

Enrollment Ends :

15 Feb 2021

Exam Date :

25 Apr 2021 IST

Note: This exam date is subjected to change based on seat availability. You can check final exam date on your hall ticket

This is an AICTE approved FDP course

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Course layout

Week 1: Introduction to Cloud Computing

Week 2: Cloud Computing Architecture

Week 3: Service Management in Cloud Computing

Week 4: Data Management in Cloud Computing

Week 5: Resource Management in Cloud

Week 6: Cloud Security

Week 7: Open Source and Commercial Clouds, Cloud Simulator

Week 8: Research trend in Cloud Computing, Fog Computing

Books and references

1. Cloud Computing: Principles and Paradigms, Editors: Rajkumar Buyya, James Broberg, Andrzej M. Goscinski, Wiley, 2011
2. Enterprise Cloud Computing - Technology, Architecture, Applications, Gautam Shroff, Cambridge University Press, 2010
3. Cloud Computing Bible, Barrie Soslnsky, Wiley-India, 2010
4. Cloud Security: A Comprehensive Guide to Secure Cloud Computing, Ronald L. Krutz, Russell Dean Vines, Wiley-India, 2010

Instructor bio





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Prof. Soumya Kanti Ghosh

IIT Kharagpur

Prof. Soumya K. Ghosh received the Ph.D. and M.Tech. degrees from Department of Computer Science and Engineering, Indian Institute of Technology (IIT), Kharagpur, India. Presently, he is a Professor with Department of Computer Science and Engineering, IIT Kharagpur. Before joining IIT Kharagpur, he worked for the Indian Space Research Organization in the area of satellite remote sensing and geographic information systems. He has more than 200 research papers in reputed journals and conference proceedings. His research interests include spatial data science, spatial web services and cloud computing.

Course certificate

The course is free to enroll and learn from. But if you want a certificate, you have to register and write the proctored exam conducted by us in person at any of the designated exam centres.

The exam is optional for a fee of Rs 1000/- (Rupees one thousand only).

Date and Time of Exams: **25 April 2021** Morning session 9am to 12 noon; Afternoon Session 2pm to 5pm.

Registration url: Announcements will be made when the registration form is open for registrations.

The online registration form has to be filled and the certification exam fee needs to be paid. More details will be made available when the exam registration form is published. If there are any changes, it will be mentioned then.

Please check the form for more details on the cities where the exams will be held, the conditions you agree to when you fill the form etc.

CRITERIA TO GET A CERTIFICATE

Average assignment score = 25% of average of best 6 assignments out of the total 8 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 $\geq 10/25$ AND EXAM SCORE $\geq 30/75$. If one of the 2 criteria is not met, you will not get the certificate even if the Final score $\geq 40/100$.


Certificate will have your name, photograph and the score in the final exam with the breakup. It will have the logos of NPTEL and IIT Kharagpur. It will be e-verifiable at nptel.ac.in/noc (<http://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 team





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Shaikpet, Hyderabad – 500104

Department: Information Technology

2020-21

REPORT

NPTEL Course on “Cloud Computing”

Date of program: Feb - Apr 2021, 8 Weeks

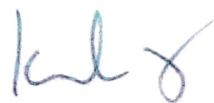
Resource person: Prof. Soumya Kanti Ghosh, IIT Kharagpur

About the Program:

This course contained various aspects of cloud computing, including fundamentals, management issues, security challenges and future research trends. Through a combination of lectures, case studies, and hands-on exercises, acquired the skills needed to design, implement, and manage cloud-based solutions. The course also covered popular cloud platforms and tools, enabling participants to develop proficiency in using services from providers like Amazon Web Services (AWS), Microsoft Azure, or Google Cloud Platform. This course has offered a robust comprehension of the revolutionary impact of cloud technologies, making it beneficial for the teaching and learning processes.



V.Usha
Assistant Professor, IT



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