



M.Tech.

COMPUTING SYSTEMS & INFRASTRUCTURE



The global cloud computing market is expected to reach USD 832.1 billion by 2025, growing at a CAGR of 17.5%, creating high demand for tech professionals skilled in DevOps, SaaS, IaaS, Automation, Agile, and software-defined networks.

M.Tech. Computing Systems & Infrastructure, a four-semester Work Integrated Learning Programme, equips tech professionals for rapid career progression in IT Infrastructure Operations & Management. This BITS Pilani WILP program is UGC approved.

WHO SHOULD APPLY?

- ▶ Driven engineers and managers in Infrastructure, Data Centers, Cloud Deployment, and Networked Embedded Systems.
- ▶ IT professionals in roles like DevOps Engineer, Systems Engineer, Network Administrators, Cloud Services Engineer, or techno-managerial positions like Infrastructure Lead/Manager.



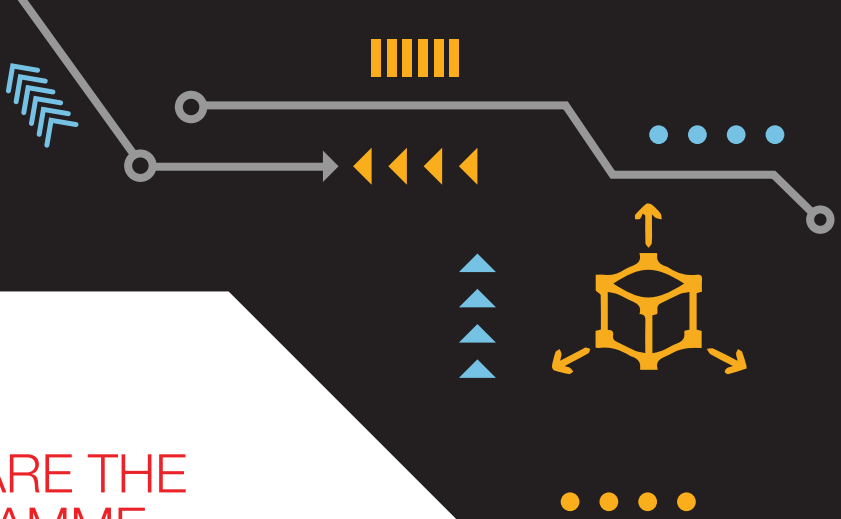
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WHAT ARE THE MAIN HIGHLIGHTS OF THE PROGRAMME?

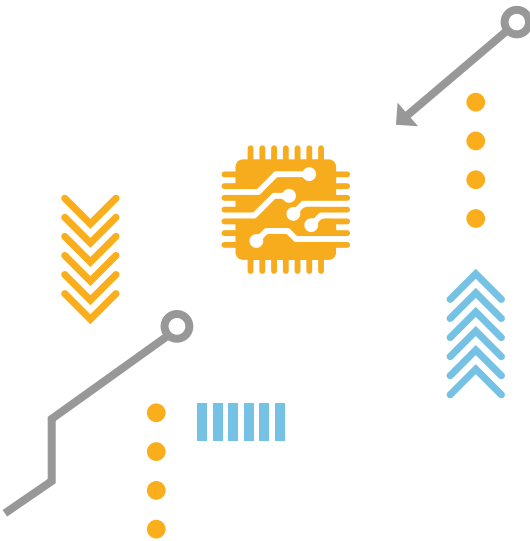
- ▶ 4 Semester M.Tech. Computing Systems & Infrastructure programme.
- ▶ Online classes conducted mostly on weekends.
- ▶ Gain expertise in hardware, software, storage, networking, and Infrastructure Services management.
- ▶ Simulator, Amazon's Compute and Storage platforms, Apache cloud suite, and open-source tools/frameworks.
- ▶ Employs Continuous Evaluation to provide ongoing feedback and support.
- ▶ Become a part of Elite and Global BITS Pilani Alumni community.
- ▶ UGC approved programme for Working professionals.
- ▶ Pursue the programme without any career break.
- ▶ Utilize Simulation Software and Deployment Environments like NS2, Net-SNMP, CPU-OS.
- ▶ The final semester includes a practical Dissertation (Project Work) for real-world application.
- ▶ Blend of classroom and experiential learning.
- ▶ Fee submission option using easy - EMI with 0% interest and 0 down payment.

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WHAT ARE THE PROGRAMME OBJECTIVES?

- ▶ Designing and managing digital systems' hardware and software.
- ▶ Formal techniques for data center network analysis, design, and operation.
- ▶ Network security, including Storage Area Networks, Virtualization, and Cloud Computing Concepts.



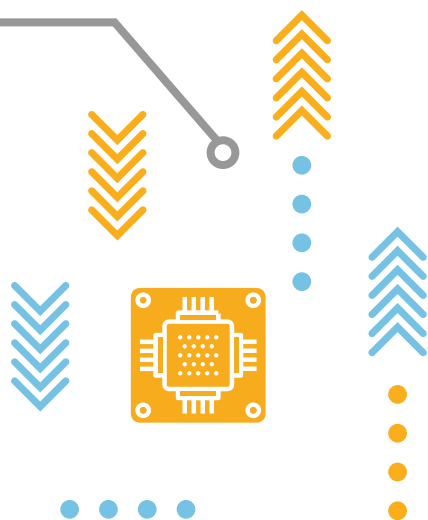
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WHAT ARE THE STUDENT LEARNING OUTCOMES?

Upon programme completion, learners will be able to:

- ▶ Understand systems & infrastructure (hardware, software, networking).
- ▶ Apply industry best practices effectively.
- ▶ Monitor and manage IT system performance.
- ▶ Design and optimize data centers and operations



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LEARNING METHODOLOGY



ATTEND ONLINE LECTURES OVER WEEKENDS

Lectures are conducted live via online classes. These lectures can be attended via the internet using a computer from any location. These online classrooms offer similar levels of interactivity as regular classrooms at the BITS Pilani campus.

The class schedule is announced within 1 week of completion of the admission process.

The online lectures are conducted usually over weekends for a total of 7-8 hours per week. If you miss a lecture, you can also access the recorded lecture on the internet.



DIGITAL LEARNING

Learners can access engaging learning material at their own pace which includes recorded lectures from BITS Pilani faculty members, course handouts and recorded lab content where applicable.



PROJECT WORK

During the final semester participants carryout a semester-long intensive project work applying the various concepts learnt throughout the program guided by the organisation mentor and supervisor.

Participants are provided access to virtual labs where applicable, and faculty expertise to support the project work.



EXPERIENTIAL LEARNING

The program prioritizes experiential learning, enabling learners to apply classroom concepts in simulated and real work scenarios through remote and virtual lab exercises

Simulation Tools, Platforms & Environments: Some or all of the following would be utilized across the programme.

CPU-OS
Deployment Environments including Amazon's Compute and Storage platforms, Apache cloud suite, and other open-source tools/frameworks Simulator.



CONTINUOUS ASSESSMENT

Continuous Assessment includes graded Assignments/ Quizzes, Mid-semester exam, and Comprehensive Exam.



WHAT IS THE ELIGIBILITY CRITERIA?

- ▶ Minimum eligibility to apply: Employed professionals holding B.Tech./ BE/ M.Sc./ MCA or equivalent in relevant disciplines with at least 60% aggregate marks and minimum 18 months of relevant work experience within HCL are eligible to apply.
- ▶ The above are only the minimum criteria to apply. The final decision to offer admission to an applicant rests with BITS Pilani which will be made based on an overall review of your application information.

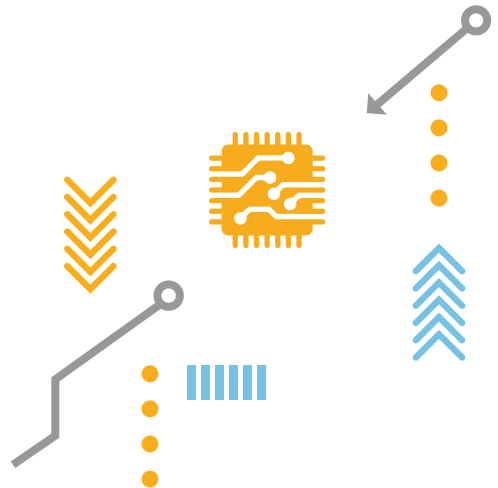
FEE STRUCTURE

The following fees schedule is applicable for candidates seeking new admission during the academic year 2023-24:

Application Fees
(one time) :INR **1500**

Admission Fees
(one time) :INR **16,500**

Semester Fees
(per semester) :INR **63,500**



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PROGRAMME CURRICULUM

First Semester

- Network Security
- Cloud Computing
- Elective 1
- Elective 2

Third Semester

- Middleware Technologies
- Infrastructure Management
- Elective 5
- Elective 6

General Pool of Electives

- Cryptography
- Cyber-Physical Systems
- Data Warehousing
- Introduction to DevOps
- Network Programming
- Networked Embedded Applications
- Service-Oriented Computing
- Software Development for Portable Devices

Second Semester

- Design and Operation of Data Centers
- Advanced Computer Networks
- Elective 3
- Elective 4

Fourth Semester

- Dissertation

- Telecom Network Management
- Web Technologies
- Wireless & Mobile Communication
- Data Storage Technologies & Networks
- IT Infrastructure Projects & Process
- Introduction to Data science
- Database Design and Applications

Choice of Electives is made available to enrolled students at the beginning of each semester. A limited selection of Electives will be offered at the discretion of the Institute.

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HOW TO APPLY

- ▶ [Click here](#) to visit the Online Application Center. Create your login at the Online Application Center by entering your official HCL Email ID only and create a password of your choice. Once your login has been created, you can anytime access the Online Application Center using your official email ID and password.
 - ▶ Begin by clicking on Step 1 - 'Fill/ Edit and Submit Application Form'. This will enable you to select the programme of your choice. After you have chosen your programme, you will be asked to fill your details in an online form. You must fill all details and press 'Submit' button given at the bottom of the form.
 - ▶ Now, click on 'Pay Application Fee' to pay INR 1,500/- using Netbanking/ Debit Card/ Credit Card.
 - ▶ Finally, click on 'Upload & Submit All Required Documents'. This will allow you to upload one-by-one all the mandatory supporting documents such academic certificates and transcripts, photograph, etc. and complete the application process.
- Acceptable file formats for uploading these documents are .DOC, .DOCX, .PDF, .ZIP and .JPEG
- ▶ Upon receipt of your Application Form and all other enclosures, the Admissions Cell will scrutinise them for completeness, accuracy and eligibility.
 - ▶ Admission Cell will intimate selected candidates by email within two weeks of submission of application with all supporting documents. The selection status can also be checked by logging in to the Online Application Centre.

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DISCLAIMER

Ever since it was declared as a Deemed to be University in 1964, BITS Pilani has been offering higher education programmes in science and technology, and has earned an enviable reputation for its innovations in this sphere. The Work Integrated Learning Programmes (WILP) of BITS Pilani constitutes a unique set of educational offerings for working professionals. These programmes, which BITS began to offer in 1979, have, over the years, evolved along the lines envisaged in the National Policy on Education, 1986.

The WILP are rigorous higher education programmes in technology areas, designed keeping the evolving needs of industry in view, and meant for working professionals in their respective domains. The very intent is to deliver the education at the workplace, in order that the greatest degree

of work integration of the education is achieved, and thus the WILP are very distinct in philosophy and pedagogy from open, distance learning programmes. Though it is incorrect and improper, at times the WILP are compared to ODL programmes. Accordingly, it has been our constant endeavor to engage with the regulator, and provide all necessary information about these programmes.

The WILP have been well received, and accepted by industry, because of the high quality of the programmes in terms of the curriculum and the instruction, and also because of the high degree of work integration, which results not only in up gradation of knowledge, but also in up skilling, and productivity increase.

HCL_07/12/2023