



JERUSALEM COLLEGE OF ENGINEERING

AN AUTONOMOUS INSTITUTION

Approved by AICTE, New Delhi, Affiliated to Anna University Chennai,
Accredited by NBA, New Delhi and Accredited by NAAC with "A" Grade.
Velachery Main Road, Narayanapuram, Pallikaranai, Chennai, Tamil Nadu - 6001

DEPARTMENT OF INFORMATION TECH

LIST OF LABORATORY AND TECHNICAL SUPPORTING STAFF DETAILS

Sr. No	Name of the Laboratory	Number of students per set up (Batch Size)	Name of the Important Equipment	Weekly utilization status (all the courses for which the lab is utilized)	Picture
1	Software Development Laboratory 1. JCS1412 Operating Systems Laboratory 2. JCS1711 - Big Data Analytics Laboratory 3. JIT1831 Comprehension and Technical skills lab 4. JIT1832 - Project work – Phase II	30	Hardware: Computer Systems: 30 • Intel Core i5-5Gen , 4GB RAM, 500 GB HDD • Monitor • HP LaserJet 1020 Plus Printer. Software: Telnet, GCC compiler, Net Beans, JDK 1.8, Python 3.6, Ubuntu 18.4, Windows 10.	16 Hours/week	
2	Advanced Data Structure Laboratory 1. JCS1311 Data Structures Laboratory 2. JCS1502 Object Oriented Analysis and Design Laboratory 3. JIT1731	30	Hardware: Computer Systems: 30 • Intel Core i5-3Gen ,8GB RAM, 500 GB HDD • HP LaserJet 1020 Plus Printer. Monitor. Software: Telnet, GCC compiler, Net Beans, Turbo C, JDK 1.8, Python 3.6, Ubuntu 18.4, Windows 10, Argo UML.	20 Hours/week	

	<p>Project work – Phase I</p> <p>4. JIT1831 Comprehension and Technical skills lab</p> <p>5. JIT1832 - Project work – Phase II</p>				
3	<p>Cloud Computing Laboratory</p> <p>1. JCS1511 Internet Programming Laboratory</p> <p>2. JIT1612 Artificial Intelligence Laboratory</p> <p>3. JCS1702 Cloud Computing Laboratory</p>	30	<p>Hardware: Computer Systems: 30 • Intel Core i5,4GB RAM, 500 GB HDD • Monitor• HP LaserJet 1020 Plus Printer.</p> <p>Software: Tomcat server, Net Beans, Turbo C, JDK 1.8, Python 3.6, Windows 10, Virtual box, Googleapp engine, Open stack, Open nebula.</p>	12 Hours/week	
4	<p>Network Laboratory</p> <p>1. JCS1312 Database Management Systems Laboratory</p> <p>2. JCS1411 Networks Laboratory</p> <p>3. JIT1514 Mobile Application Development Laboratory</p>	30	<p>Hardware: Computer Systems: 30 • Intel Core i5,8GB RAM, 500 GB HDD • Monitor• HP LaserJet M005 Printer.</p> <p>Software: MySQL, Android Studio, Net Beans, Turbo C, JDK 1.8, Python 3.6, Windows 10.</p>	12 Hours/week	
5	<p>Research Laboratory</p> <p>1. JIT1621 Mini Project</p> <p>2. JIT1731 Project work – Phase I</p>	30	<p>Hardware: Computer Systems: 30 • Intel Core i2,16GB RAM, 500 GB HDD • Monitor• HP Laser MFP1136-1139 1188 Printer.</p> <p>Software: Android Studio, Python 3.6, JDK 1.8, Globus Toolkit, MySQL, Net Beans, Visual Studio 2017,</p>	20 Hours/week	

			Anaconda python, Jupyter notebook, OpenCV, Tensorflow, XAMPP, MongoDB, Eclipse IDE, Hadoop Framework, Apache Spark, R Studio, weka, WordNet, Tonido Cloud Server, OpenMP, Open nebula, Cloud Sim, Audacity, Festival, Wave Surfer, MPI Compilers, Ubuntu 18.4, Windows 10.	
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6.1 Laboratories maintenance and overall ambience (10)

Overall Ambience

- All laboratories are equipped with state of art equipments to meet the requirements of UG courses as per the Curriculum.
- Laboratory manuals are prepared and are available in soft and hard copy.
- All laboratories are well furnished.
- Department has experienced faculty to educate them in all the fields of engineering
- All laboratories have sufficient natural light, good ventilation with tubes and A/C or fan arrangement.
- Conditions of chairs/benches are in good condition.
- Project lab has been provided for the students to carry out their mini and major project work
- Students are not allowed to enter into the Lab without black shoes.

S.No	Name of the Laboratory	Quality of instruments	Over all ambience	Photo
1	Software Development Laboratory	As per University requirements all equipments in the lab are in good working condition	Good	 <p>Chennai, Tamil Nadu, India OLD BLOCK, JERUSALEM COLLEGE OF ENGINEERING, Narayanasapuram, Pallikarai Tamil Nadu 600129, India Lat 12.945036° Long 80.207765° 04/07/24 03:09 PM GMT +05:30</p>

2	Advanced Data Structure Laboratory	As per University requirements all equipments in the lab are in good working condition	Good	 <p>Chennai, Tamil Nadu, India OLD BLOCK, JERUSALEM COLLEGE OF ENGINEERING, Narayanasapuram, Pallikaranai Tamil Nadu 600129, India Lat 12.94503° Long 80.207781° 04/01/24 03:10 PM GMT +05:30</p>
3	Cloud Computing Laboratory	As per University requirements all equipments in the lab are in good working condition	Good	 <p>Chennai, Tamil Nadu, India Main Block, JERUSALEM COLLEGE OF ENGINEERING, Narayanasapuram, Pallikaranai Tamil Nadu 600129, India Lat 12.94541° Long 80.207688° 04/01/24 02:48 PM GMT +05:30</p>
4	Network Laboratory	As per University requirements all equipments in the lab are in good working condition	Good	 <p>Chennai, Tamil Nadu, India Main Block, JERUSALEM COLLEGE OF ENGINEERING, Narayanasapuram, Pallikaranai Tamil Nadu 600129, India Lat 12.94525° Long 80.207658° 04/01/24 02:47 PM GMT +05:30</p>
5	Research Laboratory	As per University requirements all equipments in the lab are in good working condition	Good	 <p>Chennai, Tamil Nadu, India Terrapace-Sakthi Apartments, VGP Rajesh Nagar, 5th Main road, VGP Rajesh Nag Chennai, Tamil Nadu 600129, India Lat 12.946386° Long 80.207593° 04/01/24 02:48 PM GMT +05:30</p>

1. Vision, Mission, PEO's, PSO's, PO's are displayed in all the laboratories.
2. All laboratories are equipped with essential equipment to meet the requirements of the curriculum.
3. Safety measures and Do's and Don'ts are displayed in each laboratory.
4. Adequate consumables are maintained in laboratories.
5. The student login register is maintained in each laboratory.
6. The computers are repaired immediately with the support of technicians or external service providers in case of any issues.
7. All necessary system updates like Operating system, Microsoft Office, Antivirus update and respective laboratory software are updated every semester and maintained based on requirement.
8. Based on the requirements of the student project, FDP, workshop, value-added courses, training program, etc. software are installed, updated and the same is maintained in the system maintenance register.
9. The display board provided for displaying the course syllabus and list of experiments for the appropriate laboratory course.
10. The laboratories are equipped with Air conditioners and fans for good ventilation and ambiance.
11. Proper ventilation and lighting effect are ensured in the laboratories
12. The air conditioners in laboratories are serviced and maintained periodically by the powerhouse department.
13. The laboratories are also provided with LED lights for better luminance and power saving.
14. The laboratories have an adequate number of Furniture, Ergonomics Benches/Chairs to accommodate the students with comfort.
15. The laboratories are equipped with the rolling chairs and smooth finish floor tiles for better appearance.
16. LCD projectors are provided in the laboratories for ICT.
17. Proper routings are provided for internet access and separate domain to the students.
18. Movable sliding keyboard draws are provided for easy access of computer table.
19. Each laboratory is equipped with a whiteboard, computer, the Internet, and such other amenities.
20. Each laboratory is equipped with First Aid Box and Fire Extinguisher.
21. Awareness labels about conserve energy are pasted in laboratories.
22. Charts showing the description of basic concepts are displayed in all the laboratories.
23. UPS facility is available for all computer systems.
24. Wi-Fi with well-equipped high-speed systems within the campus for effective contribution in projects and research.
25. Drinking water facilities are available within the laboratories.
26. Dustbins for easy disposal of wastes/electronic wastes are made available in all laboratories.
27. Laboratory manuals are prepared and are made available in soft and hard copy.
28. Laboratories are operated beyond college hours for the convenience of the students.

6.2 Safety measures in Laboratories (10)

S.no	Laboratory Name	Safety Measure
1	Software Development Laboratory	<ul style="list-style-type: none"> ● Specific Safety Rules in the form of Do's and Don'ts are displayed in the Laboratory. Well-trained technical supporting staff is available to monitor the labs at all times. ● First aid box, Fire extinguishers are kept in the laboratory. Periodical

		<p>servicing of the lab equipment.</p> <ul style="list-style-type: none"> ● Proper earthing has been done for all Electrical Equipment. ● Maintain a clean and organized laboratory. ● Avoiding the use of cell phones. ● Appropriate storage areas Permission denied for pen drives. ● Sign the log-in register before leaving the lab. ● Computers should be turned off properly before leaving the lab. ● Students must remove their footwear before entering to the lab. ● The student must immediately inform the instructor if there's any defect, error, or damage observed at the computer (Hardware/software)
2	Advanced Data Structure Laboratory	<ul style="list-style-type: none"> ● Specific Safety Rules in the form of Do's and Don'ts are displayed in the Laboratory. Well-trained technical supporting staff is available to monitor the labs at all times. ● First aid box, Fire extinguishers are kept in the laboratory. Periodical servicing of the lab equipment. ● Proper earthing has been done for all Electrical Equipment. ● Maintain a clean and organized laboratory. ● Avoiding the use of cell phones. ● Appropriate storage areas Permission denied for pen drives. ● Sign the log-in register before leaving the lab. ● Computers should be turned off properly before leaving the lab. ● Students must remove their footwear before entering to the lab. ● The student must immediately inform the instructor if there's any defect, error, or damage observed at the computer (Hardware/software)
3	Cloud Computing Laboratory	<ul style="list-style-type: none"> ● Specific Safety Rules in the form of Do's and Don'ts are displayed in the Laboratory. Well-trained technical supporting staff is available to monitor the labs at all times. ● First aid box, Fire extinguishers are kept in the laboratory. Periodical servicing of the lab equipment. ● Proper earthing has been done for all Electrical Equipment. ● Maintain a clean and organized laboratory. ● Avoiding the use of cell phones. ● Appropriate storage areas Permission denied for pen drives. ● Sign the log-in register before leaving the lab. ● Computers should be turned off properly before leaving the lab. ● Students must remove their footwear before entering to the lab. ● The student must immediately inform the instructor if there's any defect, error, or damage observed at the computer (Hardware/software)

4	Network Laboratory	<ul style="list-style-type: none"> ● Specific Safety Rules in the form of Do's and Don'ts are displayed in the Laboratory. Well-trained technical supporting staff is available to monitor the labs at all times. ● First aid box, Fire extinguishers are kept in the laboratory. Periodical servicing of the lab equipment. ● Proper earthing has been done for all Electrical Equipment. ● Maintain a clean and organized laboratory. ● Avoiding the use of cell phones. ● Appropriate storage areas Permission denied for pen drives. ● Sign the log-in register before leaving the lab. ● Computers should be turned off properly before leaving the lab. ● Students must remove their footwear before entering to the lab. ● The student must immediately inform the instructor if there's any defect, error, or damage observed at the computer (Hardware/software)
5	Research Laboratory	<ul style="list-style-type: none"> ● Specific Safety Rules in the form of Do's and Don'ts are displayed in the Laboratory. Well-trained technical supporting staff is available to monitor the labs at all times. ● First aid box, Fire extinguishers are kept in the laboratory. Periodical servicing of the lab equipment. ● Proper earthing has been done for all Electrical Equipment. ● Maintain a clean and organized laboratory. ● Avoiding the use of cell phones. ● Appropriate storage areas Permission denied for pen drives. ● Sign the log-in register before leaving the lab. ● Computers should be turned off properly before leaving the lab. ● Students must remove their footwear before entering to the lab. ● The student must immediately inform the instructor if there's any defect, error, or damage observed at the computer (Hardware/software)

Table B.6.3

6.3 Project laboratory (20)

Project Laboratory

Project laboratory is to provide a practical and creative space for faculty and students with various software. This Laboratory offers the opportunity to gain valuable hands-on experience with state-of-the-art environment where the faculty members and students become proficient in both the physical and creative skills needed in the field of Information Technology.

- Students and faculty members are encouraged to utilize additional facilities available in the laboratories.
- Students are encouraged to do mini-projects with the facilities available in the laboratories.
- The department library is equipped with books, NPTEL videos and project reports to assist students in their research projects.
- Project laboratory can be utilized after working hours for the benefit of students, faculty members and research scholars.
- Students are motivated to access periodical magazines and e-journals related to electronics and communication available in the library to gain deep insights to help them in their areas of interest.
- Students are trained to incorporate transferable skills for redesigning the experiments.
- Video lectures are given to the students to demonstrate all experiments along with step-by-step explanations.
- Students are encouraged to do their experiments using the Virtual Labs platform provided by the

Indian Institute of Technology. The following table shows the available facilities in Project laboratory.

The following table B.6.4 shows the available facility and utilization for the project laboratory.

S.no	Laboratory Name	Name of the Facilities	Utilization
1	Project Laboratory	Hardware: Computer Systems: 30 • Intel Core i7,32GB RAM, 500 GB HDD • Monitor• HP Laser MFP1136-1139 1188 Printer – 1. Software: Android Studio, Python 3.6, JDK 1.8, Globus Toolkit, MySQL, Net Beans, Visual Studio 2017, Anaconda python, Jupyter notebook, OpenCV, Tensorflow, XAMPP, MongoDB, Eclipse IDE, Hadoop Framework, Apache Spark, R Studio, weka, WordNet, Tonido Cloud Server, OpenMP, Open nebula, Cloud Sim, Audacity, Festival, Wave Surfer, MPI Compilers, Ubuntu 18.4, Windows 10.	Utilized for <ul style="list-style-type: none"> ● Project work (VIII semester), mini projects (VI semester) ● Science day /hackathon projects ● Research activities for faculty members ● Conducting value added courses and workshops ● Conducting active learning activities ● Lab demonstration

Table B.6.4

