

CRITERION 6	FACILITIES AND TECHNICAL SUPPORT	80
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6.1 Adequate and Well Equipped Laboratories and Technical Support

SI. No.	Name of the Laboratory	No. of students per setup (Batch Size)	Name of the Important Equipment	Weekly utilization status (all the courses for which the lab is utilized)	Technical Manpower support		
					Name of the technical staff	Designation	Qualification
1	I Semester: GE3171- Problem solving python laboratory	60(30)	HW: Standalone PC with 500GB HDD & 8 GB RAM SW: Python	56	V.Isac Devaraj	Technical Assistant	D.M.E
2	II Semester: CS3271- C Programming laboratory	60(30)	HW: Standalone PC with 500GB HDD & 8 GB RAM SW: Turbo C	24	D.Rex	Technical Assistant	B.E
3	III Semester: CS3361- Data Science Laboratory	60(30)	HW: Standalone PC with 500GB HDD & 8 GB RAM SW: Python	8	I.Renuka Eswari	Technical Assistant	M.C.A
4	III Semester: CS3311- Data Structures Laboratory	60(30)	HW: Standalone PC with 500GB HDD & 8 GB RAM SW: C++	8	E.Prakash	Technical Assistant	B.E
5	III Semester: CS3381- Object Oriented Programming Laboratory	60(30)	HW: Standalone PC with 500GB HDD & 8 GB RAM SW: Java	6	E.Prakash	Technical Assistant	B.E

6	IV Semester: CS3461 Operating Systems Laboratory	60(30)	HW: Standalone PC with 500GB HDD & 8 GB RAM SW: Ubuntu, C	6	E.Prakash	Technical Assistant	B.Sc
7	IV Semester: CS3401- Algorithms Laboratory	60(30)	HW: Standalone PC with 500GB HDD & 8 GB RAM SW: C	4	G. Vanitha	Technical Assistant	B.Sc
8	IV Semester: CS3461- Database Management Systems Laboratory	60(30)	HW: Standalone PC with 500GB HDD & 8 GB RAM SW: MySQL	4	S.Ramvignesh	Technical Assistant	D.C.E
9	IV Semester: CS3491- Artificial Intelligence and Machine Learning	60(30)	HW: Standalone PC with 500GB HDD & 8 GB RAM SW: Python	4	R. Jeevitha	Technical Assistant	BSc
10	V Semester: CS3501- Compiler Design Laboratory	65(33)	HW: Standalone PC with 500GB HDD & 8 GB RAM SW: C++	4	E.Prakash	Technical Assistant	B.E
11	V Semester: CS3591- Computer Networks Laboratory	65(33)	HW: Standalone PC with 500GB HDD & 8 GB RAM SW: Java	2	T.Naveen Kumar	Technical Assistant	M.Sc
12.	V Semester: CCS332- App Development Laboratory	65(33)	HW: Standalone PC with 500GB HDD & 8 GB RAM SW: Android studio,	4	S.Ramvignesh	Technical Assistant	D.C.E

			Cordova				
13.	V Semester: CCS370- UI & UX Design Laboratory	65(33)	HW: Standalone PC with 500GB HDD & 8 GB RAM SW: Figma	4	I.Renuka Eswari	Technical Assistant	M.C.A
14.	VI Semester: CCS356- Object Oriented Software Engineering Laboratory	60(30)	HW: Standalone PC with 500GB HDD & 8 GB RAM SW: ArgoUml	4	E.prakash	Technical Assistant	B.E
15.	VI Semester : CCS336 Cloud Services Management Laboratory	60(30)	HW: Standalone PC with 500GB HDD & 8 GB RAM SW: Virtual Box	8	S.RamVignesh	Technical Assistant	D.C.E
16.	VI Semester: CCS339- Cryptocurrency and Block chain Technologies Laboratory	60(30)	HW: Standalone PC with 500GB HDD & 8 GB RAM SW:	8	P.Rajesh	Technical Assistant	D.C.E
17.	VI Semester : CCS345 Ethics and AI Laboratory	60(30)	HW: Standalone PC with 500GB HDD & 8 GB RAM SW:	8	R. Jeevitha	Technical Assistant	B.Sc
18.	VIII Semester: CS3811 Project Work	60(30)	HW: Standalone PC with 500GB HDD & 8 GB RAM	6	D.Rex	Technical Assistant	B.E

6.2 Additional Facilities created for Improving the Quality of Learning Experience in Laboratories -25

Sr. No .	Facility Name	Details	Reason(s) for creating facility	Utilization	Areas in which students are expected to have enhanced learning	Relevance to POs/PS Os
1	AI&ML	<ul style="list-style-type: none"> Anaconda, Spyder, Jupyter Notebook, OpenCV, Tensorflow 	<ul style="list-style-type: none"> To make the students to carry out mini project and main project To enhance the practical knowledge in recent trends & technology 	<ul style="list-style-type: none"> Online Courses Value Added Course Project Work Mini project work 	<ul style="list-style-type: none"> Students are expected to have developed the AI and ML models. Acquire skill in using modern tools 	PO1, PO2, PO3, PO4, PO5, PO9, PO11, PO12, PSO1, PSO2, PSO3
2	Deep Learning Studio Manager and its libraries	<ul style="list-style-type: none"> Anaconda, Spyder, Jupyter Notebook, OpenCV, Tensorflow 	<ul style="list-style-type: none"> To develop the prediction-based application using machine learning and deep learning libraries. To develop a computer vision application 	<ul style="list-style-type: none"> Conducting Workshop on Artificial Intelligence, Deep Learning and Machine Learning. Project work Value added courses Developing a project to participate Hackathon 	<ul style="list-style-type: none"> Students are expected to have developed the ML and deep learning models. Students are expected to do project in the area of object detection, Image processing and computer vision 	PO1, PO2, PO3, PO4, PO5, PO6, PO9, PO12, PSO1, PSO3
3	Green foot	<ul style="list-style-type: none"> Greenfoot-3.8.2 	<ul style="list-style-type: none"> To access animated graphics, sound and interaction 	<ul style="list-style-type: none"> Utilized for conducting workshop on game development. 	<ul style="list-style-type: none"> Students are expected to develop two-dimensional graphical applications such as simulations and interactive games 	PO1, PO2, PO3, PO5, PO6, PO9, PO12, PSO1, PSO3

4	Open MP	<ul style="list-style-type: none"> OpenMp-5.0 	<ul style="list-style-type: none"> To provide basic knowledge of parallel programming To provide the knowledge to implement multithreading and parallel processing. 	<ul style="list-style-type: none"> Utilized for conducting hands on session for Multi-Core Architectures and Programming course 	<ul style="list-style-type: none"> Students are expected to develop the shared memory parallel applications. 	PO1, PO2, PO3, PO9, PO12, PSO1, PSO2
5	Open nebula, Cloud Sim	<ul style="list-style-type: none"> Open nebula-4.14.2, Cloud Sim:4.0 Open nebula-4.14.2, Cloud Sim:4.0 	<ul style="list-style-type: none"> To create virtualization for data centres, private clouds, public clouds and hybrid clouds. To simulate visualize, analyse the power consumption for data centres. 	<ul style="list-style-type: none"> Guest Lecture on Cloud Computing Platform using Open nebula Utilized for Cloud Computing Laboratory (Content Beyond Syllabus). 	<ul style="list-style-type: none"> Students are expected to develop and implement Cloud based application Students are expected to analyse the performance the data centre 	PO1, PO2, PO3, PO5, PO12, PSO1, PSO2, PSO3
6	Mongo DB	<ul style="list-style-type: none"> Mongo DB 	<ul style="list-style-type: none"> To store and manage large volumes of structured and unstructured data. To acquire the skills in the field of NoSQL database To store and manage large volumes of structured and Unstructured data. To acquire the skills in the field of NoSQL database 	<ul style="list-style-type: none"> Value Added Course on Mongo DB Project work 	<ul style="list-style-type: none"> Students are expected to develop column wise database and manage the large dataset for an application 	PO1, PO2, PO3, PO5, PO9, PO12, PSO1, PSO2, PSO3
7	Weka, R tool (Project Laboratory)	<ul style="list-style-type: none"> Weka: 3.8.3, R studio 	<ul style="list-style-type: none"> To provide collection of machine learning algorithms for data mining tasks To provide practical knowledge in Data Analysis 	<ul style="list-style-type: none"> Project work and mini project 	<ul style="list-style-type: none"> Students are expected to develop data mining application using machine learning algorithm such as data pre-processing, classification, regression, clustering, and association rules. Students are 	PO1, PO2, PO3, PO5, PO9, PO12, PSO1, PSO2, PSO3

					expected to develop the Data Analytics application	
8	Apache Hadoop	<ul style="list-style-type: none"> Hadoop 2.9.2 	<ul style="list-style-type: none"> To process large volume of structure and unstructured data To store huge data files across multiple machines To acquire knowledge in HDFS. 	<ul style="list-style-type: none"> Project work and mini project 	<ul style="list-style-type: none"> Students are expected to develop the projects on big data analytics Students are expected to create clusters for parallel processing to handle bigdata in datacentre 	PO1, PO2, PO3, PO5, PO6, PO9, PO12, PSO1, PSO2, PSO3
9	WordNet, Audacity, Festival, Wave Surfer	<ul style="list-style-type: none"> Word net- 3.1, Audacity- 2.3.2 Festival-2.5 Wave Surfer [1]1.8.8 	<ul style="list-style-type: none"> To know about Natural Language Processing To perform audio editing and recording To perform text to speech conversion 	<ul style="list-style-type: none"> To know about Natural Language Processing To perform audio editing and recording To perform text to speech conversion 	<ul style="list-style-type: none"> Students are expected to develop the application using Natural Language Processing and Speech Synthesis Students are expected to design animated presentation using audio and video editing operations 	PO1, PO2, PO3, PO5, PO6, PO9, PO10, PO12, PSO1, PSO2, PSO3
10	Video conference facility	<ul style="list-style-type: none"> Web Camera- Logitech C170 	<ul style="list-style-type: none"> To make a live visual connection between two or more people 	<ul style="list-style-type: none"> Teleconference Record video lecture Skype Interview Placement drive 	<ul style="list-style-type: none"> Students are expected to participate in webinar and video conferencing with eminent and industrial experts. 	PO1, PO2, PO10, PSO1, PSO3
11	Raspberry Pi 3	<ul style="list-style-type: none"> Raspberry Pi 3 Model B Raspberry Pi Model B+ and Raspberry Pi 2 Model B 	<ul style="list-style-type: none"> To provide the knowledge on communication in IOT To provide the knowledge on communication in IOT 	<ul style="list-style-type: none"> Developing project work 	<ul style="list-style-type: none"> Students are expected to develop IOT based applications. 	PO1, PO2, PO3, PO5, PO6, PO9, PO12, PSO1, PSO2, PSO3

6.3 Laboratories Maintenance and Overall Ambience:

Maintenance of the Laboratory:10

1. Periodically, the stock book is updated upon the acquisition of new hardware and software.
2. Every laboratory has a dedicated lab technician who keeps it maintained.
3. At the end of each semester, a routine assessment of the computers and equipment is conducted.
4. When necessary, instrument maintenance is performed.
5. Every laboratory maintains a maintenance register as well as a student login register.
6. In the event of a problem, the computers are fixed right away with the assistance of technicians or outside service providers.
7. Each and every computer lab has adequate ventilation, lighting, and power support to guarantee that every lab time is used efficiently.
8. The labs are furnished with fans and air conditioners and it is periodically maintained.

Overall Ambience of the Laboratory:

1. Vision, Mission, PEOs, PSOs and POs are all prominently displayed in each laboratory.
2. Students are encouraged to work on their projects by having the SSMIET Model on display.
3. The course syllabus and experiment list for the relevant laboratory course were displayed on the display board.
4. In every laboratory, there are safety precautions as well as dos and don'ts posted.
5. Enough hardware and licensed/open-source software are available in the labs to run the designated curriculum.
6. The labs have enough hardware and licensed/open-source software installed to run a particular curriculum.
7. LCD projectors are provided in the laboratories for ICT.
8. Conditions of system tables are good in condition. Chairs are provided for individual students in Labs.
9. Along with the natural light that fills every nook and cranny of the rooms, the lighting system is incredibly effective.
10. Each laboratory is equipped with First Aid Box and Fire Extinguisher.
11. Awareness labels about conserve energy are pasted in all the laboratories.
12. Each laboratory is equipped with a whiteboard, computer, the Internet, and such other amenities.
13. Every semester, students are asked for their opinions on the laboratory facilities, and necessary actions are then taken in response to their input.
14. Two-way doors are provided to facilitate emergency exit.
15. Housekeeping regularly maintains the laboratory's cleanliness

6.4 Project Laboratory -5

	Hardware	Software	Outcome:
Project Laboratory	<p>Intel Core i7-12700, 2100 MHz, 8GB RAM, 500 GB HDD, Web Camera , Canon LaserJet 2900 Printer</p>	<p>Android Studio, Python 3.12, JDK 1.8, MySQL, Net Beans, Visual Studio 2017, Anaconda, Jupyter notebook, OpenCV, XAMPP, MongoDB, Eclipse IDE, Hadoop Framework, Apache, R Studio, OpenMP, Open nebula, Cloud Sim, Audacity, Ubuntu 18.4,</p>	<ul style="list-style-type: none"> • Motivating and encouraging students to work on internal projects is the goal of this lab. • Students can create and put together their capstone projects in this lab while working in groups. • Junior students can explore ideas for their upcoming final year projects by participating in in-house projects that help to stimulate their thinking. • Management developed the VINCULO Incubation Centre after taking the initiative.

6.5 SAFETY MEASURES IN LABORATORIE-10

Sr. No	Laboratory Name	Safety Measures
1	CSE Lab 1	1. Stock Book 2. Maintenance Log 3. Safety Rules (Do's and Don'ts) 4. First Aid Box 5. Fire Extinguisher 6. Earthing 7. UPS Maintenance 8. Emergency Exit 9. Proper Ventilation 10. Lab Instructions 11. Gateway of Anti-Virus in firewall 12. Additional MCB Box in Each Laboratory 13. Air Conditioner Maintenance Log 14. Electrical Wires are Properly insulation 15. Avoid Food and Beverage notifications
2	CSE Lab 2A	1. Stock Book 2. Maintenance Log 3. Safety Rules (Do's and Don'ts) 4. First Aid Box 5. Fire Extinguisher 6. Earthing 7. UPS Maintenance 8. Emergency Exit 9. Proper Ventilation 10. Lab Instructions 11. Gateway of Anti-Virus in firewall 12. Additional MCB Box in Each Laboratory 13. Air Conditioner Maintenance Log 14. Electrical Wires are Properly insulation 15. Avoid Food and Beverage notifications
3	CSE Lab 2B	1. Stock Book 2. Maintenance Log 3. Safety Rules (Do's and Don'ts) 4. First Aid Box 5. Fire Extinguisher 6. Earthing 7. UPS Maintenance 8. Emergency Exit 9. Proper Ventilation 10. Lab Instructions 11. Gateway of Anti-Virus in firewall 12. Additional MCB Box in Each Laboratory 13. Air Conditioner Maintenance Log 14. Electrical Wires are Properly insulation 15. Avoid Food and Beverage notifications
4	CSE Lab 3	1. Stock Book 2. Maintenance Log 3. Safety Rules (Do's and Don'ts) 4. First Aid Box 5. Fire Extinguisher 6. Earthing 7. UPS Maintenance 8. Emergency Exit 9. Proper Ventilation 10. Lab Instructions 11. Gateway of Anti-Virus in firewall 12. Additional MCB Box in Each Laboratory 13. Air Conditioner Maintenance Log 14. Electrical Wires are Properly insulation 15. Avoid Food and Beverage notifications
5	CSE lab 4	1. Stock Book 2. Maintenance Log 3. Safety Rules (Do's and Don'ts) 4. First Aid Box 5. Fire Extinguisher 6. Earthing 7. UPS Maintenance 8. Emergency Exit 9. Proper Ventilation 10. Lab Instructions 11. Gateway of Anti-Virus in firewall 12. Additional MCB Box in Each Laboratory 13. Air Conditioner Maintenance Log 14. Electrical Wires are Properly insulation 15. Avoid Food and Beverage notifications