MANDATORY DISCLOSURE 2020-2021

Updated on: 01.03.2021

BASIC INFORMATION

AICTE File No	South-West/1- 2016521630/2014/EOA
Date and period of last approval	15.06.2020
Name of the Institution	Mar Baselios College of Engineering and Technology
Address of the Institution	Mar Ivanios Vidhyanagar, Nalanchira,
City & Pin Code	Thiruvananthapuram - 695 015.
State /UT	Kerala
Longitude and Latitude	76^0-54' 00" E Longitude, 8^0-30' 00" N Latitude
Phone number with STD code	471-2545868,2545870
FAX number with STD code	471-2545869
Office Hours at the Institution	9.00 am to 5.00 pm
Academic hours at the Institution	8.30 am to 1.30 pm (online mode)
Email	mbcet@mbcet.org, principal@mbcet.ac.in
Website	www.mbcet.ac.in
Nearest Railway Station (dist. In Km)	Trivandrum Central, 8 kms
Nearest Airport (dist. In Km)	Thiruvananthapuram International Airport, 16 kms
Type of Institution	Private-Self Financed
Category (I) of the Institution	Minority, Religious Minority
Name of the Organization running the Institution	Malankara Catholic Educational Society of the Archdiocese of Trivandurm
Type of the Organization	Charitable Society
Address of the Organization	Major Archbishop's House, Pattom, Thiruvananthapuram - 695 004
Registered with	Travancore-Cochin, Literary, Scientific and Charitable Societies Act XII of 1955.
Registration Date	20.11.1996, Reg No. T - 1133.
Website of the Organization	www.malankaracatholicchurch.net
Name of the Affiliating University	APJ Abdul Kalam Technological University
Address	CET Campus, Thiruvananthapuram
Website	www.ktu.edu.in
Autonomous Status	Autonomous

Name of the Principal	Dr. Abraham T Mathew
Exact Designation	Principal
Phone Number with STD Code	471-2545868,2545869
Fax Number with STD Code	471-2545869
Email	atm@mbcet.ac.in, principal@mbcet.ac.in
Highest Degree	Ph.D (IIT-D)
Field of Specialization	Electrical Engineering

Governing Body	His Beatitude Moran Mor Baselios Cardinal Cleemis Catholicos	Chairman
	Rt Rev Msgr Dr Mathew Manakarakavil	Member
	Rev. Fr Thomas Kayyalackal	Member
	Rev.Fr John Vilayil	Member
	Shri Jacob Punnoose IPS(Retd)	Member
	Prof. S. Viswanatha Rao, Vice Principal, MBCET	Member
	Dr Neethu Roy, Asst. Dean & Prof CED, MBCET	Member
	Mr Tony Thomas, CIO, Boston Consulting Group	Member
	Prof. Arun Kumar Agrawal, Retd Professor and Head, Department of CSE, IITBHU, Varanasi. Ex Director, NCL Board, Coal India	Member
	Sri Vijayakumar R, Additional Secretary to Government, Higher Education Department, Government of Kerala	Member
	University Nominee (Nomination awaited)	Member
	Dr Abraham T Mathew, Principal, MBCET	Member Secretary

College Council	Rev. Fr. John Vilayil	Bursar
	Dr. Abraham T Mathew	Principal
	Prof. S Viswanatha Rao	Vice Principal & Dean (Academic-UG)
	Dr. Paul Thomas	Dean (PGS&R)
	Dr. Neethu Roy	Dean(R&C)
	Dr. George Zachariah	Dean (SA)& NAAC Coordinator
	Dr. Muraleedharan K	Dean (Admin)
	Mr. Pradeep M.	Controller of Examinations
	Prof. Joseph Cherian	HOD S&H
	Dr. M J Jayashree	HOD ECE & IQAC Co-ordinator
	Dr. Tessy Mathew	HOD CSE
	Dr. Jayasree S	HOD CE
	Dr. Rajesh T N	HOD ME
	Dr. Nisha G K	HOD EEE & (KTU Valuation)
	Ms. Christi Francis	HOD PE
	Prof Raju K Gopal	Head, ITMS
	Ms. Elizabeth Varghese	Admission in Charge
	Ms. Asha S	KTU and Exams
	Dr. Archana P Das	S&H, First Year Coordinator
	Ms. Lakshmy S.	ECE, Coordinator Statutory
	Ms. Jomole Joseph P	EED, Member Secretary
Frequency of meetings	Once in a month/as and when required.	

Academic Council	Dr. Abraham T Mathew - The Principal, Chairman (ExOfficio)	Member
	Dr. Jayasree S, Associate Professor & Head, Dept. of Civil Engg	Member
	Dr. Tessy Mathew, Associate Professor & Head, Dept. of Computer Science & Engg	Member
	Dr. Jayashree M J, Professor & Head, Dept. of Electronics & Communication Engg	Member
	Dr. Nisha G K, Professor & Head, Dept. of Electrical & Electronics Engg	Member
	Dr. Rajesh T N, Associate Professor & Head, Dept. of Mechanical Engineering	Member
	Prof. Joseph Cherian, Professor & Head, Dept. of Science & Humanities	Member
	Dr. K Muraleedharan Nair, Professor, Dept. of ME	Member
	Dr. Jisha John, Associate Professor, Dept. of CSE	Member
	Ms. Swapna P S, Asst. Professor, Dept. of ECE	Member
	Mr. Akhil Raj S R, Asst. Professor, Dept. of CE	Member
	Rev.Dr Gigi Thomas, Head, Department of Mathematics & Dean, Mar Ivanios College, Thiruvananthapuram.	Member
	Dr Ayyappan M. Former Managing Director, HLL Lifecare Ltd, Chairman, A S Group of Companies, Thiruvananthapuram.	Member
	Prof Kurien Issac, Senior Professor & Dean IPRCE, Department of Aerospace Engineering, Indian Institute of Space Science and Technology, Thiruvananthapuram	Member
	Dr Ashok S. Professor(HAG), Department of Electrical Engineering & Dean(R&C), National Institute of Technology Calicut	Member
	University Nominee (Nomination awaited)	Member
	University Nominee (Nomination awaited)	Member
	University Nominee (Nomination awaited)	Member
	Ms. Jomole Joseph P, Asst. Professor, Dept. of EEE, MBCET	Member Secretary

Board of Studies (Please see Department websites for details)	BoS Department of Civil Engineering
	BoS Department of Computer Science and Engineering
	BoS Department of Electrical Engineering
	BoS Department of Electronics and Communication Engineering
	BoS Department of Mechanical Engineering
	BoS Department of Science and Humanities
Frequency of Meetings	Twice in a year/as and when required

ABOUT THE INSTITUTION

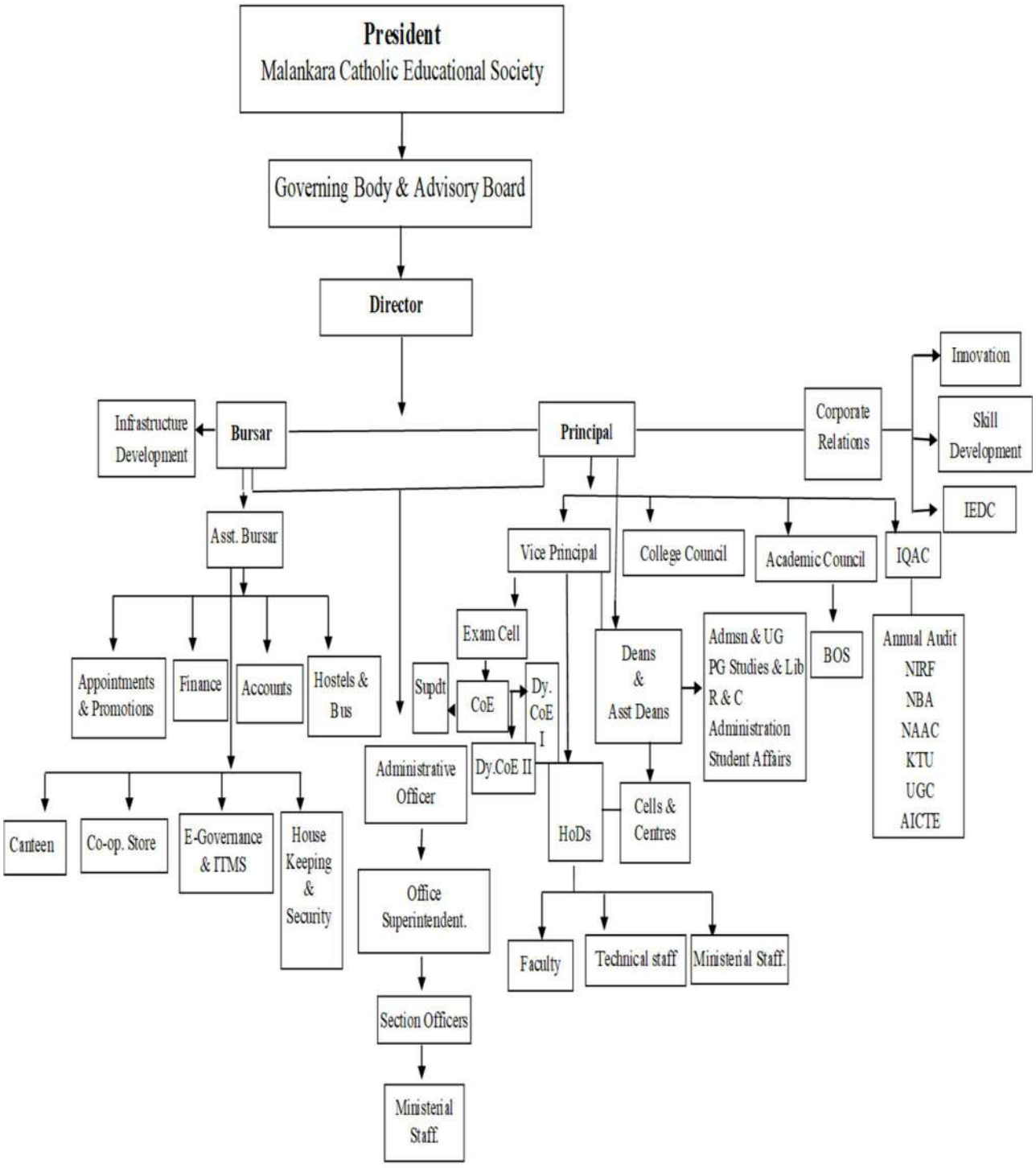
Mar Baselios College of Engineering and Technology is situated amidst 18 Educational Institutions in the fortified campus namely Mar Ivanios Vidyanagar, just 5 kms away from the heart of the historic city of Thiruvananthapuram, *aka* Trivandrum, State capital of Kerala. MBCET stands tall as a symbol of the quest for Professional and Technological Studies set against the backdrop of the serene and panoramic campus away from the hustle and bustle of the city life. As a proud part of the Mar Ivanios Vidyanagar on the blessed Bethany Hills, deriving the inner strength of truth and goodness from the visionary Patrons, Mar Baselios College of Engineering and Technology (MBCET) kindles the aspirations of the generations of knowledge-seekers.

The Mar Ivanios Vidyanagar campus is located at Nalanchira, on the side of the State Highway 1 with a sprawling landscape covering about 130 acres of land. Sister institution, Mar Ivanios College, has a history of more than 70 years in the field of education. The other institutions cater to the education in various domains like Law, Physiotherapy, Tear Education, Theology, Schooling, and so on.

The aesthetically designed buildings in nine blocks spread over the campus have a total built-up area of over 33130 sq. m. An eco-friendly infrastructure concept has retained the natural landscape, enabling harvesting of the rainwater to the full extent. Rainwater harvesting has been implemented right from the beginning of the College. There are 9 block of academic buildings span over around the 10 acre land. Block Chaitanya - The Administrative block, Thejus - The Academic Block, Nalanda - The Library, Yantra - The Mechanical Engineering Block and Nirmithi - The Civil Engineering Block, along with the Labs. Olympia, the Amenity Centre, Auditorium, Food Court, Indoor Courts, Gymnasium, Placement Rooms provide for the recreation, canteen, campus placement, etc.

From the humble beginning of 4 B.Tech programmes in 2002, MBCET has become an outstanding Engineering College in Kerala with autonomous status in 2020-2021. B.Tech intake of 630 in 5 branches of CE, CS, EC, EE, and ME, besides 5 M.Tech specializations.

Organizational Chart



Organogram

MBCET Highlights

- Autonomous College
- NBA Accreditation for all B Tech programmes
- NAAC Accreditation with **A** grade
- B Tech and M Tech results in the top tier among Colleges under the University of Kerala
- One among the 11 colleges offering B.Tech (Hons) under KTU
- Good Placement (including Microsoft)
- Effective Advisory System
- Scholarships/Awards to students
- Directorate of Corporate Relations
- Innovation and Entrepreneurship Development
- Student chapters of Professional Societies of CSI, IET, ISTE, IEEE, ASCE, ASME
- Winners/Runner-up in the KU Youth Festival in five consecutive years
- Runner-up in University Basketball Championship
- First APJ AKTU All Kerala Inter Collegiate Athletic Champions
- Clean and Green Campus – Rooftop Solar PV Plant, Water harvesting, Waste management
- Herbal Garden, Chapel, Nursing station
- Indoor Stadium/Transportation/Hostel/Canteen/Wi-fi enabled campus
- Social Service: NSS, Thanal

Courses offered

B. Tech Courses	**Sanctioned Intake**
1. Civil Engineering	120
2. Computer Science and Engineering	120
3. Electrical and Electronics Engineering	120
4. Electronics and Communication Engineering	120
5. Mechanical Engineering	120
Total	**600**

M Tech Courses	**Sanctioned Intake**
1. Computer Science and Engineering	18
2. Machine Design	18
3. Power Control and Drives	18
4. Structural Engineering	18
5. Telecommunication Engineering	18
Total	**90**

Sl. No	Programme	Branch/ Specialization	First Year of Approval by the Council	2018-2019		2019-2020		2020-2021	
				A#	B#	A#	B#	A#	B#
1	B.Tech	Civil Engineering	2005	120+6	120	120+6	126	120+6	112
2	B.Tech	Computer Science & Engineering	2002	120+6	118	120+6	120	120+6	120
3	B.Tech	Electrical & Electronics Engineering	2002	120+6	71	120+6	88	120+6	75
4	B.Tech	Electronics & Communication Engineering	2002	120+6	84	120+6	115	120+6	106
5	B.Tech	Mechanical Engineering	2005	120+6	122	120+6	100	120+6	84
6	M.Tech	Computer Science & Engineering	2011	30	6	18	4	18	2
7	M.Tech	Machine Design	2012	18	4	18	3	18	6
8	M.Tech	Power Control & Drives	2010	18	6	18	4	18	3
9	M.Tech	Structural Engineering	2012	18	18	18	17	18	17
10	M.Tech	Telecommunication Engineering	2010	18	7	18	3	18	4

A# ------- Sanctioned Intake **B# ------- Actual Intake**

Eligibility (B.Tech)- 50% marks for Mathematics separately and 50% aggregate marks for Physics, Chemistry and Mathematics at the +2 or equivalent exams approved by the University and should be Entrance Test qualified.

Eligibility (M.Tech)- Minimum of 60 % aggregate marks in the Engineering degree Examination in the relevant subject

FACULTY

Refer College Website for the Profile of Faculty.

Department of Civil Engineering	https://mbcet.ac.in/departments/civil-engineering/the-people/
Department of Computer Science and Engineering	https://mbcet.ac.in/departments/computer-science-engineering/the-people/
Department of Electrical Engineering	https://mbcet.ac.in/departments/electrical-electronics-engineering/the-people/
Department of Electronics and Communication Engineering	https://mbcet.ac.in/departments/electronics-communication-engineering/the-people/
Department of Mechanical Engineering	https://mbcet.ac.in/departments/mechanical-engineering/the-people/
Department of Science and Humanities	https://mbcet.ac.in/departments/science-humanities/the-people/
Department of Physical Education	https://mbcet.ac.in/departments/physical-education/the-people/

UNIVERSITY RESULT ANALYSIS

B.Tech		Number of students appeared	Number of students passed	Pass Percentage (%)
2016-2020	CE	115	96	83.50%
	CS	115	90	78.26%
	EC	114	77	67.54%
	EE	106	82	77.36%
	ME	119	93	78.15%
2015-2019	CE	117	108	92.31%
	CS	94	84	89.33%
	EC	105	87	82.85%
	EE	93	75	80.65%
	ME	117	109	93.16%
2014-2018	CE	116	97	83.62%
	CS	114	99	86.84%
	EC	116	96	82.75%
	EE	52	48	92.3%
	ME	128	102	79.68%

ADMISSIONS

Entrance test/Admission criteria	**B.Tech:** Weightage is given to the rank secured in the Common Entrance Test conducted by the Commissioner for Entrance Examination added with the marks at the qualifying examination. 50% weightage to entrance examinations and 50% weightage to qualifying examinations. **M.Tech:** 50% of the seats for each stream (9 seats) will be filled according to the rank order of the applicant in the DTE list (Government seats). Among these seats, one seat in each is reserved for SC / ST. Remaining 50% management seats for each stream will be filled by the educational agency.
Qualifying Examination	**B.Tech:** Candidates who have passed Higher Secondary Examination, Kerala or examinations recognized as equivalent thereto, with 50 % marks in Mathematics separately, and 50 % marks in Mathematics, Physics and Chemistry/Bio-

	technology/Computer Science/Biology put together are eligible for admission. **M.Tech:** 60% marks in related branch in B.Tech. For SEBC applicants a minimum of 55% marks and for SC / ST applicants a pass in the Engineering degree examination in the relevant subject is sufficient.
Fees (in Rupees)	**B.Tech: Annual Tuition Fee : Rs. 75,000/-** **Interest Free Refundable Deposit : Rs. 1,00,000/-** **M.Tech: Rs 75,000/- per semester**.
Number of Fee Waivers offered for the current academic year	**30**
NRI Quota	**Yes**
PIO Quota	**No**

DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

LABORATORY DETAILS		
#	**Name of Lab**	**List of major equipment/facilities**
1.	**CIRCUITS AND MEASUREMENTS LAB**	• Industrial Kelvin Double Bridge • Portable Wheatstone Bridge • Vernier Potentiometer • Slide Wire Potentiometer • B-H Curve Module • Thermocouple Characteristics Module • Thermistor Characteristics Module • Single Phase Energy meter:Electro-Mechanical240V,10A • Electronic Energy meter 1P240V,20A • Three Phase Energy meter Electro-Mechanical415V,20A • Electronic Energy meter 415V,10A • Single Phase Transformer 3kVA, 240/120V • Three Phase Transformer 5kVA, 415/120V • Ballistic Galvanometer • Volt-Ratio Box • Thermo-Hygrometer • Lux meter • Sound Level Meter • Digital Anemometer • Digital LCR Meter • Electro-Magnetic Field Radiation Tester

		• True RMS Power Meter • Mains Distortion Meter • Earth Resistance Tester • Analog Soldering Station • Mechanical Stop watch • Analog Soldering Station • Dual Power Supply ±15V, 1A • Function Generator 10 MHz • Universal Shunt • DC Regulated Power Supply • Electronic Cell 1.018V • Standard Resistance 0.01Ω • Standard Resistance 0.1Ω • Standard Resistance 1Ω • Lead Acid Cell 12V 60Ah • RTD Trainer Module • Function Generator3MHz • Load cell Trainer module • LVDT Trainer module • Potentioal transformer • Current Transformer • DC regulated Power supply 15V,1A • Digital Storage Oscilloscope 50MHz 2ch Colour LCD display • Phase Shifting transformer
2.	**ELECTRONIC CIRCUITS LAB**	• DC regulated Power supply 15V,1A • Digital Storage Oscilloscope 50MHz 2ch Colour LCD display • Function Generator 3MHz • Dual Power Supply ±15V, 1A • DC Regulated Power Supply
3.	**POWER ELECTRONICS AND DRIVES LAB**	• Device Module • MOSFET Characteristic Module • IGBT Characteristic Module • TRIAC Characteristic Module • SCR Characteristic Module • DIAC Characteristic Module • R, R-C, UJT Firing Module • 1Φ Bridge Converter with R, RL Load • Thyristor Forced Commutation Trainer • 1Φ SCR Half Controlled Converter • SCR Based DC Chopper • Microprocessor Based SCR Firing Module • 1Φ SCR Full Bridge Inverter • Chopper Control Circuitry Module • 1Φ Inverter Control Circuitry • 1Φ IGBT Based PWM Inverter • Inductive Load • 1 KVA Isolation Transformer • 1Φ PWM Inverter control Module • Ramp & Pedestal Trigger circuit AC load • MOSFET gate drive circuit • DC - DC BUCK converter

		• DC-DC Boost Converter • Temperature control circuit using 555 and thermistor • photo relay using LDR • Power BJT Drive CIRCUIT • DC-DC push pull inverter trainer • Universal Motor • Dual Power Supply • 2 MHz Signal Generator (ST4042) • Digital Storage Oscilloscope 50MHz 2ch Colour LCD display • 4 O/P rack adaptable power supply AP lab
4.	**SYSTEMS & CONTROL LAB**	• Lead – Lag network simulator (VLLN – 01) • DC motor / generator transfer function study trainer (PEC – 14 HV1) • 2 phase AC servomotor speed control and transfer function study trainer (PEC – 00A) • Synchro transmitter and receiver trainer (PEC – 3) • Process control simulator (ITBPCS 01) • LVDT characteristics module (ITB 012 CE) • Simulation of transfer function using OP-AMP (VSTF 01) • Analog computer trainer (VCET 05) • DC servomotor control system (ITB PEC 00S1) • Level control trainer (VLCT 1001) • Printer Epson LX300 • Flow control trainer (VFCT 2001) • Temperature control trainer (VTCT 3001) • Stepper motor control trainer (VSMT 02) • Power Supply (0 – 30) V / (0 -1) A & 5V / 1A • Magnetic Amplifier (model – 2012) • Signal Generator 3Hz JS803 • Digital Storage Oscilloscope 25MHz 2ch Colour LCD display • PLC trainer with demonstrator • PLC real time application trainer Lift control • Digital Storage Oscilloscope 50MHz 2ch Colour LCD display • 3MHz DDS Function Generator • ROBOSOFT Quad rotor DIY kit • ARDUPILOT APM 2.6/2.8
5.	**PROJECT LAB**	• Power supply 0-5V &30V ,2A • Digital Storage Oscilloscope Gwinstek GDS-1052u 50MHz,2-ch • PLC Microcontroller Kit • UNO Microcontroller Kit • Function Generator 3MHz • Dc Regulated Multi O/P Power Supply

6.	**ELECTRICAL MACHINES LAB**	• Single phase transformer 5 kVA,240/120V • Single phase transformer 3 kVA,240/120V • 3 phase transformer5kVA,415/120V • 3 phase resistive load 5kw • 3 phase squirrel cage induction motor2.2kW,415V,1440 RPM • 3 phase squirrel cage induction motor3.7 kW,415V,1440 RPM, (3.7kW,415V,2880 RPM) • 3 phase slip ring induction motor3.7kW,415V,1000 RPM • Static rectifier(i/p:415V 3 phase, o/p:200/250V 200A) • DC series motor3.5kW,220V • DC shunt motor3.7kw,220V,1500 RPM), (5.2kW,220V,3000 RPM • DC motor coupled with DC compound motor • DC motor coupled with Induction Generator • DC motor coupled with Alternator 5KVA • DC compound Generator coupled with 3 phase AC squirrel cage IM • 3 phase squirrel cage IM coupled with Eddy dynamo • 3 phase AC Synchronous motor • Pole changing motor3.7/2.2 kw,415V,1440/720RPM • Single phase IM(750W,240V), (350W,240V • VFD Control • DC power supply(12V,25A), (12V,20A) • Dimmer stat(15A,Single phase), (28A,Single phase) • Dimmer stat(15A,3 phase), (28A,3 phase) • Dimmer stat(3 phase oil cooled) • V cut Motor Series • V cut Compound • V cut Squirrel Cage • V cut Slip Ring • Loading Rheostat 415V,5kW • Variable inductive load 5kVA,415V,3P,50Hz,10A • Star delta stater ML2,L&T • CRO 30MHz • Knife switch • Power factor meter 3P UPF 2 ELEMENT 250/500V,10/20A
7.	**POWER SYSTEM LAB**	• capacitor 3ø,415V • udey insulating oil tester0-75kV • clip on power meter • 3ø auto transformer0-470V • 1ø auto transformer0-270V • test secondary for testing solid di –electric material(25kV) • over current relay(electromagnetic) • earth fault relay(electromagnetic) • idmt over current relay testing kit(static) • under voltage relay testing kit(static) 1)70kV ac,100kv dc test kit 2)0-60kV oil test kit 3)rod gap 4)100mm sphere gap 5)grounding rod • electrolytic tank

		• secondary injection test kit • earth hi tester • over voltage relay with box (electro mechanical)vdg 11 • over voltage relay with box (static)vdg 11 • earth fault relay test kit (static)cdg 11 • fluke 3ø power quality analyzer • 210kV,100ma cascaded transformer with control pannel • 150kV,225j 5 stage impulse generator • mi power (software) • under voltage test kit(electromagnetic)
8.	**POWER ELECTRONIC AND DRIVES (PG)**	• Single phase SCR parallel Inverter module • Jones Chopper Trainer module • 3 Phase control converter • Chopper fed DC motor Drive • IGBT based 3 phase PWM Inverter • 3 Phase parallel Inverter • 3 Phase AC induction motor and speed control unit • Digital PID controller • Micro 2407 DSP Trainer • IPM based power module • 3 phase IM • Single phase IM • 3 phase 1HP BLDC motor • 3 phase IGBT based inverter stack (3 phdbr + 3hp ibi+c) • FPGA athium nano board • DS PIC board PWM controller • Analog mixed signal peripheral card
9.	**ADVANCED CONTROL SYSTEM LAB(PG)**	• 8085 Micro Processor trainer • Stepper motor controller with motor • Relay control system • Digital control system • Lego robo, Lego mindstorm education base set-9797 • Quanser equipment *rotary servo plant setup* rotary servo plant *q8-usb-8 channel usb data* acquisition Voltpaq-x1 • AC servo motor controller with controller • DC servo motor PID controller • DC motor position controller pec-01 • MYDAQ data acquisition platform • NI MYRIO-1900 for student purchase only • Digital Storage Oscilloscope Gwinstek GDS-1052u 50MHz,2-ch, • ARM based stepper motor robot controller
10.	**DIGITAL CIRCUITS AND EMBEDDED SYSTEMS LAB**	• Digital IC trainer kit • Digital IC tester • 8085 and 8086 Micro processor kit • 8251 and 8253 Interface board • 8259 Interface board • Stepper motor controller with motor • Dc motor speed measurement and control module • ADC and DAC interface • ADC interface board

		• keyboard and display interface board • 2- channel DAC • 8- channel ADC
11.	**ELECTRICAL WORKSHOP**	• Digital Storage Oscilloscope Gwinstek GDS-1052u 50MHz,2-ch • Earth resistance tester • Insulation tester • Wire gauge • Digital Multimeter • Energy meter 1Φ Electronic • Energy meter 3Φ Electronic • Energy meter 1Φ Mech • Energy meter 3Φ Mech • Power supply 0-5V &30V ,1A • Function Generator 3MHz • UNO Microcontroller Kit • PLC Microcontroller Kit • Power supply 0-5V &30V ,2A • Kirloskar Pump 0.5HP • Mixer Grinder • Iron Box • Inverter 700VA • Battery100Ah • LCR meter
12.	**SOFTWARE LAB**	● Computer No.2 DELL OPTIPLEX 780 CANADA CLASS-B INTEL®CORE™2DUO CPU E8400@3.00GHZ2.99GHZ ,1.94GB OF RAM LCD MONITOR, KEYBOARD AND MOUSE ● Dot matrix printer ● HP LASER JET PRINTER HP LASER JET P1007SL ● SOFTWARE ANSYS ACADEMICTEACHING –EM 5 Tasks Software license. Maxwell 2D/3D -5 users Simlorer -5 users P Expet -2 users RMxpet -2 users Optimetrics -5 users Parallel (multi processing) -5 users ● Computer34 DELL OPTIPLEX 7010 INTEL®CORE™i5 3476 CPU @3.20GHZ3.19GHZ ,7.89GB,OF RAM,500GB HARD DISC with DVD drive. LCD MONITOR,KEYBOARD AND MOUSE ● DVD RW DBDOAPO563679280 ●1TB USBHDD-USB Model SRDOOF1 PN.1D6AP6-500TB SN:NA44KSRV

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

LABORATORY DETAILS		
Sl. No	**Name of lab**	**List of major equipment/facilities**
1.	**COMMUNICATION ENGG LAB**	Spectrum analyzer, DSO, Function Generator (3MHz), Power Supply, Audio power meter
2.	**ADVANCED COMMUNICATION LAB**	Klystron Power Supply, Klystron tube, Gunn Oscillator, Slotted Section, VSWR meter, Matched Termination
3.	**BASIC ELECTRONICS LAB**	DSO, Power Supply, Function Generator
4.	**DEPARTMENT COMPUTING FACILITY (DCF)**	Computers, Computer with GPU-1 No., DSO,TMS 320C50 based DSP Kit (MICRO 50 EB PF), DSP2181, Advanced trainer kit, TMS 320C6713 DSO
5.	**DIGITAL ELECTRONICS LAB**	DSO, Function Generator (3MHz), Power Supply, Digital IC tester, TRAINER KIT
6.	**IEDC LAB**	Computers, DSO, Power Supply, Function Generator, Rework Station
7.	**INTEGRATED CIRCUIT LAB**	DSO, Function Generator (3MHz), Multi Output Power Supply, Linear IC Tester, Multimeter
8.	**PCB LAB**	PCB Fabrication Setup
9.	**PG LAB**	Computers, DSO , Power Supply, Function Generator
10.	**PROJECT LAB I**	Computers, Logic Analyzer, DSO, Power Supply, Function generator, Digital/Analog to Optical Converter Kit
11.	**PROJECT LAB II**	Computers, DSO, Function Generator (3MHz), Power Supply, 8051 Microcontroller Project card, Digital trainer kit, Digital IC tester
12.	**ADVANCED COMMUNICATION LAB**	Klystron Power Supply, Klystron tube, Gunn Oscillator, Slotted Section, VSWR meter, Matched Termination

DEPARTMENT OF CIVIL ENGINEERING

LABORATORY DETAILS		
Sl. No	**Name of laboratory**	**List of major equipment/facilities**
Undergraduate Program		
1.	**Surveying Laboratory**	Theodolite, Levelling Instruments, Plane Table and accessories, Prismatic Compass, GNSS and Total Station
2.	**Material Testing Laboratory -I**	Universal Testing Machine (400 kN, 200kN), Impact testing machine, Hardness Testing machine, Torsion Testing Machine, Spring Testing Machine (500 N), Flywheel
3.	**Material Testing Laboratory -II**	Compression Testing Machine-2000 kN, Flexure Testing Machine (100 kN), Tile Testing machine (200kg), Crushing Value Apparatus, Vibrating Table, Riffle Sample Divider
4.	**Computer Aided Design and Drafting Laboratory**	ANSYS 11, Auto Desk Inventor, Auto Cad 2019, STAAD SS6, ETABS, PRIMAVERA, ORIGIN LAB, FEAST SMT.
5.	**Transportation Engineering Laboratory**	Hot Air Oven, Los Angeles Abrasion Testing Machine, Compression Testing Machine, Impact Test Apparatus, Ductility Test Apparatus, CBR Test Apparatus, Brookfield Viscometer, Marshall Apparatus, Modified Roughness Indicating Machine
6.	**Geotechnical Engineering Laboratory**	Direct shear Apparatus, Consolidation test Apparatus, UCS Testing Apparatus, CBR Test Apparatus, Permeability Testing Apparatus, Compaction Testing Apparatus, Hydrometer, Liquid Limit and Shrinkage Limit Apparatus, Sieve Shaker
7.	**Environmental Engineering Laboratory**	Spectro Photometer, BOD Incubator, Hot Air Oven, Muffle Furnace, pH meter, Water analyzer
8.	**Geology Lab**	Models and Specimens
Post Graduate Program		
9.	**Structural Engineering Laboratory**	Universal Testing Machine (1000 kN), Loading Frame, Accelerated Curing Tank, electrically operated prestressing unit
10.	**Structural Dynamics Laboratory**	Accelerometer, Shake Tables

DEPARTMENT OF MECHANICAL ENGINEERING

LABORATORY DETAILS		
Sl No	**Name of lab**	**List of major equipment/facilities**
1.	**FLUID MECHANICS AND MACHINES LAB**	Pipe Friction Apparatus Test Rig, Venturimeter & Orificemeter Test Rig, Notch Apparatus Test Rig, Bernoulli's Apparatus Test Rig, Orifice & Mouthpiece Apparatus Test Rig, Metacentric Height Apparatus Test Rig, (Centrifugal Pump (Constant Speed) Test Rig, Centrifugal Pump (Variable Speed) Test Rig, Centrifugal Pump(Variable [Continuously] Speed) Test Rig, Reciprocating Pump Test Rig, Jet Pump Test Rig, Gear Pump Test Rig, Francis Turbine Test Rig, Pelton Turbine Test Rig With Generator Coupled Kaplan Turbine Test Rig.
2.	**HEAT ENGINES LAB**	2 stage reciprocating air compressor test rig, Rotary Air compressor test rig, Air blower test rig, 2 stroke petrol engine(Single Cylinder) test rig, Slow speed diesel engine test rig, Twin cylinder diesel engine test rig, Multi cylinder petrol engine test rig, 4 – Cylinder 4 – stroke diesel engine test rig Pensky Martin flash point apparatus, Redwood viscometer, Saybolt viscometer, Cleavland flash & fire point apparatus, Bomb calorie meter, Junker's gas calorie meter with all accessories. EXHAUST GAS ANALYZER DIGITAL ULTRASONIC CLEANER
3.	**THERMAL ENGINEERING LAB**	Composite Wall, Lagged pipe Apparatus, Natural Convection, Forced Convection, Parallel and counter flow Heat Exchanger, Emissivity Measurement Apparatus, Air Conditioner (Duct type with Anemometer),

		Refrigeration Unit, Pitot tube, HEAT PIPE APPARATUS
4.	**METROLOGY LAB**	Profile Projector, Microscope, Tool Maker Microscope, Lathe tool Dynamometer, Auto Collimator, Polishing Machine, Surface Roughness Tester, Vernier Caliper 0-150 mm 3 nos. Digital Micrometer -0-25mm 1 No. Micrometer 0-25mm 1 No. Pan Micrometer-0-25mm 1 No Inside Micrometer25-30 mm 1 No. Gear Tooth Vernier caliper 1-25mm 1 No. Slip guage Blocks 83slips Digital Dial indicator 0.001-10mm 1No Dial indicator 0.01-10mm 1No. Dial indicator 0.01-30mm 1No. Dial indicator 0.01-10mm 1 No. Dial Stand (milttard) 1No. Magnetic Dial Stand 1 No. Tool Angle guage 1No. Third Pitch guage(Metric & whitworth) 1No. Feeler guage 0.03-0.5mm 1No. Sprit level 1No. Sim Bar 200mm 1 No. Steel Rool 300mm 1 No. 'V' Block with 'u' clamp 1½ " x 1 ½ " x 3" 1 pair
5.	**MECHANICAL MACHINE SHOP**	Lathe Machine L=1370 mm 24 nos. All geared head Lathe Machine L=1000mm 1 no. Shaping Machine 14" 6 nos. Power Hack Saw Machine 200 mm 1 no. Drilling Machine (Bench type) 1/2" 1 no. Bench Grinder (Double ended) 0.75 HP 1 no. & 0.5 HP 1 no. Radial Drilling Machine 38x220 mm (8speed) 1 no. Surface Grinding Machine 150x450 mm 1 no. Slotting Machine PMS – 150 6" stroke 1 no Cylindrical External Grinding Machine UE 120 /300 mm 1 no. Universal milling machine 1" x 400 mm 1 no. R-2M(AU)G 1 no.

		Planing Machine (light duty) 1 m 1 no.
6.	**ENGINEERING WORKSHOP**	CAST IRON RECYCLING UNIT (CIRU)
(a)	**SMITHY**	Anvil 50 kg 12 nos. Hand Blower 8" 03 nos. Swage Block (12" x 12") 02 nos. Heavy Duty Blower with 7.5 HP Motor and Pipe fittings 01 no Hearth with all fittings 05 nos.
(b)	**SHEET METAL & PLUMBING**	Anvil 1 no. Benchvice 6" 13 nos. Blow Lamp 1 no. Pipe Die Set 1 set Beak Iron stake 1no. Pipe vice 1 no. Groover 4 nos. Work Bench 2 nos
(c)	**CARPENTRY**	Carpentry vice 18 nos. Bosh Hand Drill 1 no. Heavy Duty Work Bench 3 nos.
(d)	**FITTING**	Anvil – 50kg 1 no. Heavy Duty Bench vice 6" 13 nos. V' Block with clamp 1 set Surface plate 2' x 2' 1 set Hand Shear machine with Cutter set 1set Impala gear type heavy duty drilling Machine with starter, motor, round table, vice etc. 1 set Bench grinder with 0 .75 HP, motor and grinding wheels 1 set Work bench 2 nos. Heavy duty hack- saw machine with 1HP Kirloskar motor 1 no
(e)	**FOUNDRY**	Step pulley pattern 15 nos. Gear wheel pattern 21 nos. Round block with hole pattern 21 nos. Side bolting oval flange pattern 21 nos. Chain pulley pattern 3 nos. Valve pattern 3 nos. Well pulley pattern 3 nos. Valve core box pattern 3 nos. Moulding boxes 35 set

(f)	**WELDING**	Welding transformer 250A
(g)	**LATHE MACHINES**	Citizen Light duty lathe machine 8 Nos., Length of bed 1370 mm Height of center 168 mm Admit between centers 725 mm Anil branded (Model 2 super) lathe machine 8 Nos. Length of bed 1370 mm Height of center 155 mm Admit between centers 730 mm Nagmati Branded (Model 175) all geared lathe machine 1 No. Admit between centers 1000 mm Height of the center 175mm Shaping Machine run up ,All geared (14") 6 No.
7.	**CAD LAB**	Dell Power Edge R410 Server 2003 Computers Qty 36 Smart Ups Qty 1Spec- 3 Kva (1 Hour Backup) Networking Switch Qty 1Spec- 24 Port 10/100 Switch
8.	**CNC LAB**	CNC lathe trainer CNC Mill trainer
9.	**DYNAMICS LAB**	Whirling of Shaft Apparatus Motorised Gyroscope Static & Dynamic Balancing Apparatus Data Acqusition System Impulse Hammer Accelerometer
10.	**RESEARCH LAB**	TRIBOMETER LIQUID SLOSH TESTING APPARATUS
11.	**COMPUTATIONAL RESEARCH LAB**	WORKSTATION (FUJITSU , Intel xeon 2.3GHz,NVIDIA Quadro P4000)

DEPARTMENT OF COMPUTER SCIENCE ENGINEERING

LABORATORY DETAILS		
Sl No	**Name of lab**	**List of major equipment/facilities**
1.	**OPERATING SYSTEMS**	**Name of Software** Windows 8, Windows 7 Professional, Windows 2012 Server Standard Edition, Windows 2012 Advanced Server, nal, Windows 2012 Server Standard Edition, Windows 2012 Server Enterprise Edition, Ubuntu Linux COMPILERS Turbo C++ Academic, Pascal Academic, Cobol Academic, JAVA Development Kit (JDK), FORTRAN
2.	**APPLICATION SOFTWARES**	Microsoft Open Value Subscription Education Solutions [Microsoft Campus agreement] ORCAD MATLAB & SIMULINK Oracle 10g std. Edition Autodesk Revit Architecture Autodesk Revit Structure AutoCAD Revit MEP Suite Autodesk Mudbox Autodesk Showcase Autodesk Ecotect Analysis Autodesk Algor Simulation Professional AutoCAD Raster Design AutoCAD Autodesk Maya Autodesk 3ds Max Autodesk Navis works Manage Autodesk 3ds Max Design Autodesk Mold flow Insight Advanced Autodesk Vault Professional AutoCAD Architecture AutoCAD Civil 3D AutoCAD Electrical AutoCAD Map 3D AutoCAD MEP Autodesk Alias Automotive Autodesk Inventor Professional Autodesk Motion Builder Autodesk Robot Structural Analysis Professional Autodesk Sketch Book Pro

3.	**SOFTWARE LAB – I**	No. of Computer Systems: 33 Hardware Specification: (Intel Core i3, 8GB RAM) Operating System: Windows 10 Professional, Ubuntu 20.04 Software's installed: NetBeans IDE, Open Office, Java, MS Office 2016 etc. Printer 1. Laser (Shared) – SAMSUNG ML 1710 1 2. Dot Matrix – EPSON LX 300+II 1 UPS 6KVa Online UPS (Tata Liebert)
4.	**SOFTWARE LAB – II**	No. of Computer Systems: 32 Hardware Specification: Intel Core i3, 8GB RAM Operating System: Ubuntu 20.04, Windows 10 Professional Software's installed :NetBeans IDE, Microsoft Office Professional 2016, Java, Acrobat Reader, WinZip etc. Printers : 1. Laser (Shared) – SAMSUNG ML 1710 - 1 2. Dot Matrix – EPSON LX 300+ - 1 UPS : 6KVA ON-LINE UPS (Emersion Liebert)
5.	**SOFTWARE LAB – III**	No. of Computer Systems: 36 Hardware Specification Intel Core i3, 8GB RAM Operating system Ubuntu 12.04, Windows 7 Professional Software installed NetBeans IDE, Microsoft Office 2007, Java, Acrobat reader, win zip etc Printers 1. Laser (shared)- SAMSUNG ML 1710 – 1 2. TVS MSP 250 CHAMPION -1 UPS UPS- 6KVA On line UPS Emersion Liebert

6.	**PGLAB**	No. of Computer Systems: 61 Hardware Specification Intel Core i5 & Intel Core i3, 8 GB RAM Operating System Windows 10 Professional, Ubuntu 20.04 Software Installed Apache Netbeans 12.0, MS Office 2016,Java, Acrobat Reader, winzip,Visual Studio, Matlab 2020(a), Latex, Anaconda Navigator, Python 3.7, C,C++, etc. No. of Laptops : 4 Specification 1.Intel Core i3 Processor 2.Intel Core i7 Processor LG Smart TV Printers 1. Canon Laser Printer LBP2900 2. Epson LX-310
7.	**CENTRAL COMPUTING F ACILITY (CCF)**	No. of Systems 60 Hardware Specification : Intel i5 3.1 GHz, 4GB RAM Operating System :Ubuntu 12.04, Windows 7 Printers 1. Laser Canon - 1 Scanner 1. Epson - 1 UPS 20 KVA ON – LINE UPS GE Working hours of the CCF : 8.30 am to 6.00 pm
8.	**COMPUTER NETWORKS LAB**	No of Computer systems : 6 Hardware Specification Intel P4 2.66 GHz, Intel Original Motherboard, 256 MB DDR RAM, 512KB L2 Cache Memory 80 GB SATA HDD, 10/100 Mbps Ethernet, Onboard Audio & AGP, 52 x CD ROM Drive 15” LCD Monitor Operating System Windows XP/Linux Routers DAX Modular Access Router with 4 Wan slot (DX1721) : 6 Cisco Routers – CISCO 1841 8

		Cisco Routers – CISCO 2801 8 Switches Cisco 2950 Switch 24 10/100 port (C2950T – 24) : 1 Cisco Switch (C2960) 2 Dax Switch 5 Racks 12 u Open racks 2 UPS 2 KVA Online UPS 1-port High speed serial interface Module : 10
9.	**Knowledge Lab**	No. of Computer Systems: 9 No. of UPS(APC UPS 600VA): 8 **Hardware Specification** Intel Core i5 & 8 GB RAM Intel core i7 & 16 GB RAM Intel Core i9 & 32 GB RAM **Operating System** Windows 10 Professional, Ubuntu 20.04 **Software Installed** Apache Netbeans 12.0, MS Office 2016,Java, Acrobat Reader, winzip,Visual Studio, Anaconda Navigator, Python 3.7,Rstudio,Matlab 2020(a), Latex, C,C++ ,etc. **Printers** 1. HP LaserJet P1008 **Others** 1. Collar mic 2. Digital Notepad and Pen

OTHER FACILITIES			
1.	**LIBRARY FACILITIES**	Total Area of the Library Seating capacity of the library Reprographic facility Working hours of the library Library Net Working facility Digital Library Remote Access Facility e-Journal Subscription e-books Number of Titles	: 802 m^2 : 210 : Yes : 8.30 am to 6pm : Yes : DSpace : Knimbus e-Library : IEEE ASPP, ASME, ASCE, IEI, DELNET : EBSCO engineering e-books : 10,920

		Number of Volumes :28,666 Print Journals & Magazines : 76
2.	**CANTEEN**	Available with 250 seating capacity
3.	**CAFETERIA**	Available

HOSTELS

Boy's Hostel	Available, with a total capacity of 380 numbers
Girl's Hostel	Available, with a total capacity of 320 numbers
Medical and other Facilities at Hostel	Available

ACADEMIC SESSIONS

College Sessions	8.30AM - 01.30PM (online mode)
Examination system, Year/Sem	Semester System
Period of declaration of results	After finalization of results by the university for every Semester.

COUNSELLING

Counselling/Mentoring	Available
Career Counselling	Available
Medical facilities	Available
Student Insurance	Available

EXTRA CURRICULAR ACTIVITIES

Cultural activities	Available
Sports activities	Available
Literary activities	Available
Magazine /Newsletter	Available
Technical activities/Tech Fest	Available
Industrial Visits/Tours	Available
Alumni activities	Available

ANTI RAGGING ACT

"The most inhumane act is the offence of Ragging on a human being by an inhuman creature."

"Causing, inducing, compelling or forcing a student, whether by way of practical joke or otherwise, to do any act which detracts from human dignity or violates his/her person or exposes him/her to ridicule from doing any lawful act. By intimidating, wrongfully restraining, wrongfully confining, or injuring him or by using criminal force on him/her or by holding out to him/her any threat of intimidation, wrongful confinement, injury or the use of criminal force."

"Ragging in all its forms is totally banned in this institution including in its departments, constituent units, all its premises (academic, residential, sports, cafeteria, etc.) whether located within the campus or outside and in all means of transportation of students whether public or private. The institution shall take strict action including but not limited to criminal proceeding and/or cancellation of admission against those found guilty of ragging and/or of abetting ragging and the burden of proof shall hereby lie on the perpetrator of alleged ragging and not on the victim. An offence of Ragging may be charged either on a written complaint by the affected or on independent finding of the Anti Ragging Squad.

The Institution is bound by the UGC Regulations on Curbing the Menace of Ragging in Higher Educational Institutions 2009."

Ragging, in any form is prohibited by Law. The Govt. of Kerala has banned ragging in Educational Institutions/ Hostels vide the Kerala Prohibition of Ragging Act 1998 Section 3 which makes ragging punishable as follows:

a) **Imprisonment up to a term of 2 years**
b) **A fine up to Rs 10,000/-**
c) **Dismissal from the institution. The students so dismissed shall not be admitted to any other Educational Institution for three years.**

In order that no incidence of Ragging is ever reported at MBCET, MBCET has founded an Anti – Ragging Committee which governs the prevention of any means of Ragging either within or outside the college.