



Maharshi Karve Stree Shikshan Samstha's
**Cummins College of Engineering
for Women**

Sharpening Engineering Acumen with a difference
NAAC Accredited

Approved by AICTE, New Delhi & DTE, Mumbai
Affiliated to Rashtrasant Tukadoji Maharaj Nagpur University



1.3.1 Institution integrates crosscutting issues relevant to Professional Ethics, Gender, Human Values, Environment and Sustainability into the Curriculum

The college is affiliated to RTM Nagpur University and has adopted outcome-based education approach, with the mission “To develop technically and academically sound women professionals, having strong work-ethics and good human-being characteristics”. The college integrates crosscutting issues relevant to Professional Ethics, Gender, Human Values, Environment and Sustainability into the curriculum through courses and by organizing the activities of various professional student chapters, various student clubs and active NSS cell. The courses like Industrial Engineering, Industrial Management, Professional ethics, Universal Human Values, Ethical Science and Environmental studies, Industrial Economics and Entrepreneurship Development, Functional English, IPR, Audit, Electronic Workshop, Internship, Technical Report Writing and Seminar are included in the curriculum.

The CO-PO/PSO attainment is being completed to judge whether the issues are imparted or not and are followed by students and suitable actions have taken to address the gaps. Ethical science course mostly concerned towards inculcating human values, professional ethics, whereas environmental science developed a concern towards environment and sustainability. Courses like Energy Conversion, Advanced Production Process, Control Systems, and Engineering Chemistry also covered topics related to energy and its impact on environment and sustainability. Students have undertaken various projects related to solid waste, green energy, safety, cyber security leading to address cross cutting issues.

To achieve the stated outcomes, along with the curriculum, college conducts various activities through professional student chapters (IEEE, MA, CSI, GDC, NSS, IETE, ISTE) and student clubs. College addresses professional ethics and human values issues through several activities like team building, yoga meditation, mind mapping, personality development, arts, and human values in student induction program.



■ Tel. No. : 9657667030 ■ E-mail : office@cumminscollege.edu.in,
■ website : www.cumminscollege.edu.in

Mouje Sukli (Gupchup), Hingna, Nagpur-441110



Kavind
Dr. Milind Khanapurkar
Principal
Maharshi Karve Stree Shikshan Samstha's
Cummins College of Engineering for Women
Hingna, Nagpur-441110.





Maharshi Karve Stree Shikshan Samstha's
**Cummins College of Engineering
for Women**

Sharpening Engineering Acumen with a difference
NAAC Accredited



Approved by AICTE, New Delhi & DTE, Mumbai
Affiliated to Rashtrasant Tukadoji Maharaj Nagpur University

Eminent personalities from social background, industry and academics are called to talk on gender specific issues like women centric issue, health hygiene, cybercrime and security, food nutrition, skill development, communication skills. The college has also taken several green initiatives in terms of infrastructure to protect and nurture the environment.

The activities of NSS unit, professional student bodies and clubs give firsthand professional experience through its planning till execution. Participation in various activities helps students to enhance their understanding and sensitivity towards cross-cutting issues. The college has adopted a few adjoining villages for undertaking social activities toward social awareness amongst students. The NSS activities like teaching fundamental concepts of mathematics and science, crafting and Yoga to village students created the sense of social responsibility amongst students. Activities like Street Play on Environment, Each one Plant one, Vaccination Drive, Blood Donation, Tree Plantation, Donation of used items for the needy of the society, Awareness programs on social issues like cleanliness, digital payments, education, traffic safety, e-waste collection helped students to develop positive attitude towards cross-cutting issues. To inculcate human values in students and make them a responsible citizen of the nation, the college celebrates the Women's Day, Independence Day, Republic Day, National Youth Day, World Students Day, etc and encourage students to participate in various activities under Unnat Bharat Abhiyan such as cleanliness drive. The college makes all sorts of efforts for the integration of issues relevant to Professional Ethics, Gender, Human Values, Environment and Sustainability.



Kindred
Dr. Milind Khanapurkar
Principal
Maharshi Karve Stree Shikshan Samstha's
Cummins College of Engineering for Women
Hingna, Nagpur-441110.

■ Tel. No. : 9657667030 ■ E-mail : office@cumminscollege.edu.in,
■ website : www.cumminscollege.edu.in

Mouje Sukli (Gupchup), Hingna, Nagpur-441110





Maharshi Karve Stree Shikshan Samstha's
**Cummins College of Engineering
for Women**

Sharpening Engineering Acumen with a difference
NAAC Accredited

Approved by AICTE, New Delhi & DTE, Mumbai
Affiliated to Rashtrasant Tukadoji Maharaj Nagpur University



1.3.1 Institution integrates crosscutting issues relevant to Professional Ethics, Gender, Human Values, Environment and Sustainability in transacting the Curriculum.

College integrates crosscutting issues into curriculum by following ways.

- **Teaching courses relevant to Professional Ethics, Gender, Human Values, Environment and Sustainability**
- **CO-PO/PSO attainment and evaluation**
- **Undertaking projects addressing crosscutting issues**
- **Activities of different student chapter and student clubs addressing crosscutting issues**
- **Celebrating nationally important days of the calendar**



Kindred
Dr. Milind Khanapurkar
Principal
Maharshi Karve Stree Shikshan Samstha's
Cummins College of Engineering for Women
Hingna, Nagpur-441110.

■ Tel. No. : 9657667030 ■ E-mail : office@cumminscollege.edu.in,
■ website : www.cumminscollege.edu.in

Mouje Sukli (Gupchup), Hingna, Nagpur-441110





Maharshi Karve Stree Shikshan Samstha's
**Cummins College of Engineering
for Women**

Sharpening Engineering Acumen with a difference
NAAC Accredited



Approved by AICTE, New Delhi & DTE, Mumbai
Affiliated to Rashtrasant Tukadoji Maharaj Nagpur University

Summary showing the number of courses and number of activities addressing the crosscutting issues

Crosscutting issue	Number of Courses taught relevant to crosscutting issues as per RTM Nagpur University Scheme				Number of activities conducted by students chapters and student club to address cross cutting issues in last 5 Years
	Allied Science	Computer Engineering	Electronics & Tele-communication Engineering	Mechanical Engineering	
Professional Ethics	7	38	44	38	6
Gender	3	1	2	4	8
Human Values	2	3	6	3	15
Environment and Sustainability	3	7	10	11	21

■ Tel. No. : 9657667030 ■ E-mail : office@cumminscollege.edu.in,
■ website : www.cumminscollege.edu.in

Mouje Sukli (Gupchup), Hingna, Nagpur-441110





Maharshi Karve Stree Shikshan Samstha's
**Cummins College of Engineering
for Women**

Sharpening Engineering Acumen with a difference
NAAC Accredited

Approved by AICTE, New Delhi & DTE, Mumbai
Affiliated to Rashtrasant Tukadoji Maharaj Nagpur University



➤ **Scheme of the program showing courses relevant to crosscutting issues offered by the department**

1. Allied Science
2. Computer Engineering
3. Electronics & Telecommunication Engineering
4. Mechanical Engineering

Professiona Ethics Gender Human Values Enviornment and Sustainability

➤ **Course list addressing crosscutting issues**

■ Tel. No. : 9657667030 ■ E-mail : office@cumminscollege.edu.in,
■ website : www.cumminscollege.edu.in

Mouje Sukli (Gupchup), Hingna, Nagpur-441110



R.T. M. Nagpur University Scheme

showing courses relevant for Professional Ethics, Human Values, Gender, Environment and Sustainability into the Curriculum

 Professional Ethics	 Gender	 Human Values	 Environment and Sustainability
---	---	--	---

Allied Science: Sem I

Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur
Four Years B.E. Course
 Scheme of Examination B.E. First year (All Branches of Engineering)

First Semester

Sub Code	Subjects	Workload in hrs			Credits	Marks					Minimum Passing Marks	
		L	T/A	P		Theory		Practical		Total	Theory	Practical
						Internal	Uni	Internal	Uni			
BSE1-1T	Mathematics-I	3	1	-	4	30	70	-	-	100	45	-
BSE1-2T	Applied Physics	3	2	-	4	30	70	-	-	100	45	-
BSE1-3T	Energy and Environment	2	2	-	3	30	70	-	-	100	45	-
BSE1-4T	Communication Skills	2	-	-	2	15	35	-	-	50	23	-
BSE1-5T	Engineering Graphics	1	-	-	1	15	35	-	-	50	23	-
BSE1-6T	Basics of Civil & Mechanical Engineering	4			Audit	50	-	-		Audit	-	-
BSE1-2P	Applied Physics Lab	-	-	3	1.5			25	25	50	-	25
BSE1-3P	Energy and Environment Lab	-	-	2	1			25	25	50	-	25
BSE1-4P	Communication Skills Lab	-	-	2	1			25	25	50	-	25
BSE1-5P	Engineering Graphics Lab	-	-	4	2			25	25	50	-	25
Three weeks Induction Program												
Total		15	11		19.5	120*	280	100	100	600		

- L- Lecture , P-Practical, T- Tutorial , A- Activity (Half Credit per Hour)



Kamling
Dr. Milind Khanapurkar
 Principal
 Maharshi Karve Stree Shikshan Sanatha's
 Cummins College of Engineering for Women
 Hingna, Nagpur-441118.

R.T. M. Nagpur University Scheme showing courses relevant for Professional Ethics, Human Values, Gender, Environment and Sustainability into the Curriculum

Allied Science: Sem II

Scheme of Examination B.E. First year (All Branches of Engineering)

Second Semester

Sub Code	Subjects	Workload in hrs			Credits	Marks					Minimum Passing Marks	
		L	T/A	P		Theory		Practical		Total	Theory	Practical
						Internal	Uni	Internal	Uni			
BSE2-1T	Mathematics-II	3	1	-	4	30	70	-	-	100	45	-
BSE2-2T	Advanced Engineering Materials	2	2	-	3	30	70	-	-	100	45	-
BSE2-3T	Applied Chemistry	3	2	-	4	30	70	-	-	100	45	-
BSE2-4T	Computational Skills	2	-	-	2	15	35	-	-	50	23	-
BSE2-6T	Basics of Electrical Engineering	2	-	-	2	15	35	-	-	50	23	-
BSE2-7T	Engineering Mechanics	2	-	-	2	15	35	-	-	50	23	-
BSE2-8T	Indian Culture & Constitution	2	-	-	Audit	50	-	-	-	Audit	-	-
BSE1-5P	Workshop Practices	-	-	4	2	-	-	50	50	100	-	50
BSE2-2P	Advanced Engineering Materials	-	-	2	1	-	-	25	25	50	-	25
BSE2-3P	Applied Chemistry	-	-	3	1.5	-	-	25	25	50	-	25
BSE2-4P	Computational Skills	-	-	2	1	-	-	25	25	50	-	25
Three weeks Induction Program												
Total		16	5	11	22.5	135*	315	125	125	700		

- L- Lecture , P-Practical, T- Tutorial, A- Activity (Half Credit per Hour)
- * Audit course marks are not counted in total marks

Guidelines

- Energy and Environment shall be taught by faculty of Chemistry and will come under board of Applied Science and Humanities (only by Chemistry Dept)
- Advance Engineering Materials shall be taught by faculty of Physics and will come under board of Applied Science and Humanities (only by Physics Dept)



Kamling
Dr. Milind Khanapurkar
Principal
Maharshi Karve Stree Shikshan Sanatha's
Cummins College of Engineering for Women
Hingna, Nagpur-441118.

R.T. M. Nagpur University Scheme showing courses relevant for Professional Ethics, Human Values, Gender, Environment and Sustainability into the Curriculum

Computer Engineering: Sem III

RASHTRASANT TUKADOJI MAHARAJ NAGPUR UNIVERSITY, NAGPUR

FOUR YEAR BACHELOR OF TECHNOLOGY (B.Tech.) DEGREE COURSE

SEMESTER: 3rd (C.B.C.S.)

BRANCH: COMPUTER ENGINEERING

Third Semester:-

S N	Subject Code	Subject	Teaching Scheme			Evaluation Scheme			Credits	Minimum Passing
			L	T	P	CA	UE	Total		
1	BTCME301T	Mathematics – III	4	-	-	30	70	100	4	45
2	BTCME302T	Digital Circuits and Fundamentals of Microprocessor	3	1	-	30	70	100	4	45
3	BTCME303T	Object Oriented Programming	3	1	-	30	70	100	4	45
4	BTCME304T	Theory of Computation	3	-	-	30	70	100	3	45
5	BTCME305T	Introduction to Computer Networks	3	-	-	30	70	100	3	45
6	BTCME306T	Universal Human Values	2	-	-	15	35	50	2	23
7	BTCME302P	Digital Circuits and Fundamentals of Microprocessor Lab	-	-	2	25	25	50	1	25
8	BTCME303P	Object Oriented Programming (Lab)	-	-	2	25	25	50	1	25
9	BTCME307P	Computer Workshop- I(Lab)	-	-	2	25	25	50	1	25
10	BTCME308T	Environmental Science	2	-	-	-	-	-	Audit	
		Total	20	02	06	240	460	700	23	

L: Lectures T: Tutorials P: Practical

Dated
Dr. Dilesh Malik
Adhoc Chairman STC

R.T. M. Nagpur University Scheme showing courses relevant for Professional Ethics, Human Values, Gender, Environment and Sustainability into the Curriculum

Computer Engineering: Sem IV

RASHTRASANT TUKADOJI MAHARAJ NAGPUR UNIVERSITY, NAGPUR
FOUR YEAR BACHELOR OF TECHNOLOGY (B.Tech.) DEGREE COURSE

SEMESTER: 4th (C.B.C.S.)

BRANCH: COMPUTER ENGINEERING

Fourth Semester:-

S N	Subject Code	Subject	Teaching Scheme			Evaluation Scheme			Credits	Min Passing Marks
			L	T	P	CA	UE	Total		
1	BTCME401T	Discrete Mathematics and Graph Theory	3	1	-	30	70	100	4	45
2	BTCME402T	Web Technology	3	-	-	30	70	100	3	45
3	BTCME403T	Operating System	3	-	-	30	70	100	3	45
4	BTCME404T	Data Structures	3	1	-	30	70	100	4	45
5	BTCME405T	Computer Architecture and Organization	3	-	-	30	70	100	3	45
6	BTCME406T	System Programming	3	-	-	30	70	100	3	45
7	BTCME402P	Web Technology-Lab	-	-	2	25	25	50	1	25
8	BTCME403P	Operating System-Lab	-	-	2	25	25	50	1	25
9	BTCME404P	Data Structure-Lab	-	-	2	25	25	50	1	25
10	BTCME407T	Consumer Affairs	2	-	-	-	-	-	Audit	
11	BTCME408P	Internship (Min. 4 Weeks)	-	-	2	50		50	1	25
		Total	20	02	08	305	495	800	24	

L: Lectures T: Tutorial P: Practical



Dr. Milind Khanapurkar
Dr. Milind Khanapurkar
Principal
Maharshi Karve Stree Shikshan Sanatha's
Cummins College of Engineering for Women
Hingna, Nagpur-441118.

R.T. M. Nagpur University Scheme showing courses relevant for Professional Ethics, Human Values, Gender, Environment and Sustainability into the Curriculum

Computer Engineering: Sem V

**RASHTRASANT TUKADOJI MAHARAJ NAGPUR UNIVERSITY, NAGPUR
FOUR YEAR BACHELOR OF TECHNOLOGY (B.Tech.) DEGREE COURSE**

SEMESTER: 5th (C.B.C.S.)

BRANCH: COMPUTER ENGINEERING

Fifth Semester:-

S. N.	Subject Code	Subject	Teaching Scheme			Evaluation Scheme			Credits	Min Passing
			L	T	P	CA	UE	Total		
1	BTCME501T	Database Management System	3	1	-	30	70	100	4	45
2	BTCME502T	Computer Graphics	3	-	-	30	70	100	3	45
3	BTCME503T	Java Programming	3	-	-	30	70	100	3	45
4	BTCME504T	Elective-I	3	-	-	30	70	100	3	45
5	BTCME501P	Database Management System - Lab	-	-	2	25	25	50	1	25
6	BTCME502P	Computer Graphics – Lab	-	-	2	25	25	50	1	25
7	BTCME503P	Java Programming - Lab	-	-	2	25	25	50	1	25
8	BTCME505T	Humanities - II Effective Technical Communication	2	1	-	15	35	50	3	23
9	BTCME506T	Yoga & Meditation	-	-	2	-	-	-	Audit	
10		Total	14	02	08			600	19	

Elective-I:

1. Microcontrollers & Applications,
2. Artificial Intelligence,
3. Software Engineering

Deleish



Kamla
Dr. Milind Khanapurkar
Principal
Maharshi Karve Stree Shikshan Sanatha's
Cummins College of Engineering for Women
Hingna, Nagpur-441118.

R.T. M. Nagpur University Scheme showing courses relevant for Professional Ethics, Human Values, Gender, Environment and Sustainability into the Curriculum

Computer Engineering: Sem VI

RASHTRASANT TUKADOJI MAHARAJ NAGPUR UNIVERSITY, NAGPUR
FOUR YEAR BACHELOR OF TECHNOLOGY (B.Tech.) DEGREE COURSE

SEMESTER: 6th (C.B.C.S.)

BRANCH: COMPUTER ENGINEERING

Sixth Semester:-

S. N.	Subject Code	Subject	Teaching Scheme			Evaluation Scheme			Credits	Min Passing
			L	T	P	CA	UE	Total		
1	BTCME601T	Design and Analysis of Algorithms	3	-	-	30	70	100	3	45
2	BTCME602T	TCP/IP	3	-	-	30	70	100	3	45
3	BTCME603T	Elective-II	3	-	-	30	70	100	3	45
4	BTCME604T	Elective-III	3	-	-	30	70	100	3	45
5	BTCME605T	Open Elective-I	3			30	70	100	3	45
6	BTCME601P	Design and Analysis of Algorithms- Lab	-	-	2	25	25	50	1	25
7	BTCME602P	TCP/IP -Lab	-	-	2	25	25	50	1	25
8	BTCME606P	Emerging Technology Lab - II	-	-	2	25	25	50	1	25
9	BTCME607P	Mini Project & Internship	-	-	6	25	25	50	3	25
10	BTCME608P	Seminar / Presentations on Current trends	-	-	2	50	-	50	Audit	
Total			15	00	14	300	450	750	21	

Elective-II: -

1. Human Computer Interaction
2. Internet of Things
3. Robotics

Elective-III: -

1. Distributed Computing
2. Machine Learning
3. Data Warehousing & Mining

Open Elective-I -

1. Digital Image Processing
2. Mobile Computing

Handwritten signature



Handwritten signature
Dr. Milind Khanapurkar
Principal
Maharshi Karve Stree Shikshan Sanatha's
Cummins College of Engineering for Women
Hingna, Nagpur-441118.

R.T. M. Nagpur University Scheme showing courses relevant for Professional Ethics, Human Values, Gender, Environment and Sustainability into the Curriculum

Computer Engineering: Sem VII

Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur
FOUR YEAR B. TECH. COURSE
 (Revised Curriculum as per AICTE Model Curriculum)
B.Tech VII Semester (Computer Engineering) Scheme & Syllabus

Seventh Semester:-

S. N.	Subject Code	Subject	Teaching Scheme			Evaluation Scheme			Credits	Minimum Passing Marks
			L	T	P	CA	UE	Total		
1	BTCME701T	Cryptography & Network Security	3	1	-	30	70	100	4	45
2	BTCME701P	Cryptography & Network Security-Lab	-	-	2	25	25	50	1	25
3	BTCME702T	Elective – IV	3	-	-	30	70	100	3	45
4	BTCME703T	Elective – V	3	-	-	30	70	100	3	45
5	BTCME704T	Open Elective-II	3	-	-	30	70	100	3	45
6	BTCME705P	Project Work Phase -I	-	-	6	50	50	100	3	50
7	BTCME706P	Report Writing Activity	-	-	2	-	-	-	Audit	Grade
total			12	01	10	195	355	550	17	

Elective IV: -

1. Deep Learning
2. Block chain Technology
3. Augmented & Virtual Reality
4. Salesforce Technology

Elective V: -

1. Compiler Design
2. Natural Language Processing
3. Introduction to Software Testing

Open Electives:

1. Joy of Computing using Python
2. Data Base Management System
3. Data Visualization

V. P. Mahatma
 (Dr. V.P. Mahatma)

A. M. Kuthe
 A.M. Kuthe

Ashresh
 (Ashresh Sharma)

Dr. S. R. Bhargava
 Dr. S. R. Bhargava

Dr. D. Malik
 Dr. D. Malik



Milind
 Dr. Milind Khanapurkar
 Principal
 Maharshi Karve Stree Shikshan Sanstha's
 Cummins College of Engineering for Women
 Hingna, Nagpur-441118.

R.T. M. Nagpur University Scheme showing courses relevant for Professional Ethics, Human Values, Gender, Environment and Sustainability into the Curriculum

Computer Engineering: Sem VIII

Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur
FOUR YEAR B. TECH. COURSE (CBCS)
 (Revised Curriculum as per AICTE Model Curriculum)
 B.Tech VIII Semester (Computer Engineering) Scheme & Syllabus

Eighth Semester:-

S. N.	Subject Code	Subject	Teaching Scheme			Evaluation Scheme			Credits	Minimum Passing Marks
			L	T/A	P	CA	UE	Total		
1	BTCME801T	Electives – VI */ MOOCS/NPTEL Course	3	-	-	30	70	100	3	45
2	BTCME802T	Electives – VII */ MOOCS/NPTEL Course	3	-	-	30	70	100	3	45
3	BTCME803P	Project Work**/ Industry Project (Phase- II)	-	-	12	100	100	200	8	100
Total			06	00	12	160	240	400	14	

*Program Electives VI & VII can be opted from NPTEL/MOOCS. Final examination will be conducted by RTMNU.

** Industry Project/Project: Students are encouraged to complete this project in industry and one co guide should be assigned from institute. Rigorous monitoring and mid semester at least two progress to be monitored.

Program Elective-VI

1. Social Networks
2. Reinforcement Learning
3. GPU Architectures And Programming

Program Elective-VII

1. Predictive Analytics - Regression and Classification
2. Data Analytics using Python
3. Cloud Computing

Prasad
(P.S. Prasad)

Ashesh
(Ashesh Shastry)

(A. M. Kuthe)

SABHUR

Dr. M. L. K.

Dr. An. Thakare



Kind
 Dr. Milind Khanapurkar
 Principal
 Maheshi Karve Stree Shikshan Sanatha's
 Cummins College of Engineering for Women
 Hingna, Nagpur-441110.

R.T. M. Nagpur University Scheme

Electronics Telecommunication Engineering : Sem III

R.T.M. Nagpur University, Nagpur

SCHEME OF EXAMINATION

B.Tech. ELECTRONICS & TELECOMMUNICATION / ELECTRONICS & COMMUNICATION ENGINEERING/ ELECTRONICS ENGINEERING
(SEMESTER – III)

Code	Subject	Teaching Scheme				Credit				MARKS				Total Marks
		L	Practical	Tutorial/Activity	Total	L	P	T/A	Total	Theory		Practical		
										Internal	Univ.	Internal	Univ.	
BEETC-301	Applied Maths-III	3	-	-	3	3	-	-	3	30	70	-	-	100
BEETC-302T	Components for Electronic circuit design	3	-	-	3	3	-	-	3	30	70	-	-	100
BEETC-302P	Components for Electronic circuit design Lab	-	2	-	2	-	1	-	1	-	-	25	25	50
BEETC-303T	Digital System Design	3	-	1T	4	3	-	1	4	30	70	-	-	100
BEETC-303P	Digital System Design Lab	-	2	-	2	-	1	-	1	-	-	25	25	50
BEETC-304P	Network Theory	3	-	-	3	3	-	-	3	30	70	-	-	100
BEETC-305T	Signal & System	3	-	-	3	3	-	-	3	30	70	-	-	100
BEETC-306T	Measurement and Instrumentation	3	-	-	3	3	-	-	3	30	70	-	-	100
BEETC-307P	Electronics Workshop I Lab	-	2	-	2	-	1	-	1	-	-	25	25	50
BEETC-308T	Consumer affairs	2	-	-	2	-	-	-	-	-	-	-	-	Audit
Total		20	6	1T	27	18	3	1	22	180	420	75	75	750



Kaivalya
Dr. Milind Khanapurkar
Principal
Maheshi Karve Stree Shikshan Sanatha's
Cummins College of Engineering for Women
Hingna, Nagpur-441110.

R.T. M. Nagpur University Scheme

Electronics & Telecommunication Engineering : Sem IV

**SCHEME OF EXAMINATION FOR
B.Tech. ELECTRONICS & TELECOMMUNICATION / ELECTRONICS & COMMUNICATION ENGINEERING/ ELECTRONICS
ENGINEERING
(SEMESTER – IV)**

Code	Subject	Teaching Scheme				Credit				MARKS				
		L	Practical	Tutorial / Activity	Total	L	P	T/A	Total	Theory		Practical		Total Marks
										Internal	University	Internal	Univ.	
BEETC-401T	Microcontrollers & Applications	3	-	1T	4	3	-	1	4	30	70	-	-	100
BEETC-401P	Microcontrollers & Applications Lab	-	2	-	2	-	1	-	1	-	-	25	25	50
BEETC-402T	Analog & Digital Communications	3	-	1T	4	3	-	1	4	30	70	-	-	100
BEETC-403P	Analog and Digital Electronics Lab	-	2	-	2	-	1	-	1	-	-	25	25	50
BEETC-404T	Analog System Design	3	-	1T	4	3	-	1	4	30	70	-	-	100
BEETC-405T	Data structure & Algorithm	3	-	-	3	3	-	-	3	30	70	-	-	100
BEETC-406T	HSC: Numerical Mathematics and Probability Using MATLAB	3	-	-	3	3	-	-	3	30	70	-	-	100
BEETC-407T	Programming for problem solving	2	-	-	2	2	-	-	2	15	35	-	-	50
BEETC-407P	Programming for problem solving	-	4	-	4	-	2	-	2			25	25	50
BEETC-408I	Internship								1			50	-	50
BEETC-409A	Universal human values	3			3	3			3	30	70			100
	Total	20	8	3T	31	20	4	3	28	195	455	125	75	850

- L- Lecture , P-Practical, T- Tutorial , A- Activity
- Audit course marks are not counted in total marks



Kinlind
Dr. Milind Khanapurkar
Principal
Maharshi Karve Street Shikshan Sanatha's
Cummins College of Engineering for Women
Hingna, Nagpur-441110.

R.T. M. Nagpur University Scheme

Electronics & Telecommunication Engineering : Sem V

SCHEME OF EXAMINATION FOR B.Tech. ELECTRONICS & TELECOMMUNICATION / ELECTRONICS & COMMUNICATION ENGINEERING (SEMESTER – V)

Code	Subject	Teaching Scheme				Credits				MARKS				Total Marks
		L	P	T/A	Total	L	P	T/A	Total	Theory		Practical		
										Internal	Univ.	Internal	Univ.	
BEETC-501T	Embedded System Design	2	-	1T	3	2	-	1	3	30	70	-	-	100
BEETC-501P	Embedded System Design Lab	2	-	-	2	-	1	-	1	-	-	25	25	50
BEETC-502T	Electromagnetic Waves	-	-	1T	4	3	-	1	4	30	70	-	-	100
BEETC-503T	Digital Signal Processing	-	-	-	3	3	-	-	3	30	70	-	-	100
BEETC-503P	Digital Signal Processing Lab	-	2	-	2	-	1	-	1	-	-	25	25	50
BEETC-504OT	HSC: IEED(Economics)	-	-	1A	3	2	-	1	3	30	70	-	-	100
BEETC-505PE	PEC-I	2	-	1T	3	2	-	1	3	30	70	-	-	100
BEETC-506P	Electronic Workshop II	-	2	-	2	-	1	-	1	-	-	25	25	50
BEETC-507A	Audit Course	-	-	-	-	-	-	-	-	-	-	-	-	AUDIT
Total		12	6	3T+1A	22	12	3	4	19	150	350	75	75	650



Kinlind
Dr. Milind Khanapurkar
Principal
Maheshi Karve Strree Shikshan Sanatha's
Cummins College of Engineering for Women
Hingna, Nagpur-441110.

R.T. M. Nagpur University Scheme

Electronics & Telecommunication Engineering : Sem VI

**SCHEME OF EXAMINATION FOR
B.Tech. ELECTRONICS & TELECOMMUNICATION / ELECTRONICS & COMMUNICATION ENGINEERING
(SEMESTER – VI)**

Code	Subject	Teaching Scheme				Credit				MARKS				Total Marks
		L	P	T/A	Total	L	P	T/A	Total	Theory		Practical		
										Internal	Univ.	Internal	Univ.	
BEETC-601T	Computer Communication Network	2	-	-	2	2	-	-	2	30	70	-	-	100
BEETC-601P	Computer Communication Network Lab	-	2	-	2	-	1	-	1	-	-	25	25	50
BEETC-602T	Internet of Things (IOT)	2	-	-	2	2	-	-	2	30	70	-	-	100
BEETC-602P	IOT Lab	-	2	-	2	-	1	-	1	-	-	25	25	50
BEETC-603T	Wireless Sensor Network	2	-	-	2	2	-	-	2	30	70	-	-	100
BEETC-603P	Wireless Sensor Network Lab	-	2	-	2	-	1	-	1	-	-	25	25	50
BEETC-604PE	PEC-II	2	-	1T	3	2	-	1	3	30	70	-	-	100
BEETC-605OE	OE-I	2	-	1A	3	2	-	1	3	30	70	-	-	100
BEETC-606T	HSC: Effective Technical Communication	-	-	-	2	-	-	2	2	15	35	-	-	50
BEETC-607I	Mini Project(Internship)	-	-	3A	3	-	-	3	3	-	-	25	25	50
BEETC-608A	Audit Course	-	-	-	-	-	-	-	-	-	-	-	-	AUDIT
Total		12	6	1T+4A	23	10	3	7	20	165	385	100	100	750



Kinlind
Dr. Milind Khanapurkar
Principal
Maharshi Karve Stree Shikshan Sanatha's
Cummins College of Engineering for Women
Hingna, Nagpur-441110.

R.T. M. Nagpur University Scheme

Electronics & Telecommunication Engineering : Sem VII

SCHEME OF EXAMINATION FOR
B.Tech. ELECTRONICS & TELECOMMUNICATION / ELECTRONICS & COMMUNICATION ENGINEERING
(SEMESTER – VII)

Code	Subject	Teaching Scheme				Credit				MARKS				
		L	P	T/A	Total	L	P	T/A	Total	Theory		Practical		Total Marks
										Internal	Univ.	Internal	Univ.	
BEETC-701PE	PEC-III	3	2	1T	6	3	1	1	5	30	70	25	25	150
BEETC-702PE	PEC-IV	3	2	1T	6	3	1	1	5	30	70	25	25	150
BEETC-703PE	PEC-V	3	-		3	3	-		3	30	70	-	-	100
BEETC-704PE	OE-II	2	-	1T	3	2	-	1	3	30	70	-	-	100
BEETC-705I	Seminar/Internship	-	2	-	2	-	1	-	1	-	-	50	-	50
BEETC-706A	IPR	1		1A	2	-	-	-	-	-	-	-	-	AUDIT
Total		12	6	3T+1A	22	11	3	3	17	120	280	100	50	550



Kinind
Dr. Milind Khanapurkar
Principal
Maheshi Karve Stree Shikshan Sanatha's
Cummins College of Engineering for Women
Hingna, Nagpur-441110.

R.T. M. Nagpur University Scheme

Electronics & Telecommunication Engineering : Sem VIII

SCHEME OF EXAMINATION FOR B.Tech. ELECTRONICS & TELECOMMUNICATION / ELECTRONICS & COMMUNICATION ENGINEERING (SEMESTER – VIII)

Code	Subject	Teaching Scheme				Credit				MARKS				
		L	P	T/ A	Total	L	P	T/ A	Total	Theory		Practical		Total Marks
										Internal	Univ.	Internal	Univ.	
BEETC - 801PE	Program Elective –VI MOOC/NPTEL Course	-	-	-	3	3	-	-	3	30	70	-	-	100
BEETC - 802PE	Program Elective -VII MOOC/NPTEL Course	-	-	-	3	3	-	-	3	30	70	-	-	100
BEETC -803P	Project	-	12	-	12	-	6	-	6	-	-	50	50	100
	Seminar	-	-	2A	2	-	-	2	2	-	-	50	-	50
Total		6	12	2A	20	6	6	2	14	60	140	100	50	350



Kaivalya
Dr. Milind Khanapurkar
Principal
Maharshi Karve Stree Shikshan Sanstha's
Cummins College of Engineering for Women
Hingna, Nagpur-441110.

R.T. M. Nagpur University Scheme

Mechanical Engineering : Sem III

Rashtrasant Tukdoji Maharaj Nagpur University, Nagpur

Faculty of Science & Technology

Course and Examination Scheme of Bachelor of Engineering (Mechanical Engineering)

III Semester B. Tech (Mechanical Engineering)

Sr No	Course Code	Category	Course Title	Teaching Scheme (Hours/Week)			Credits	Examination Scheme									
				L	T	P		Theory					Practical				
								Duration of Exam (Hrs)	Max. Marks College Assessment	Max. Marks University Assessment	Total Marks	Min. Passing Marks	Max. Marks College Assessment	Max. Marks University Assessment	Total Marks	Min. Passing Marks	
1	BEME301T	Basic Science course	Applied Mathematics – III	3	1	-	4	3	30	70	100	45	-	-	-	-	
2	BEME302T	Professional core courses	Manufacturing Processes	3	-	-	3	3	30	70	100	45	-	-	-	-	
3	BEME302P	Professional	Manufacturing Processes Lab	-	-	2	1	-	-	-	-	-	25	25	50	25	
4	BEME303T	Professional core courses	Engineering Thermodynamics	3	1	-	4	3	30	70	100	45	-	-	-	-	
5	BEME304T	Professional core courses	Kinematics of Machines	3	1	-	4	3	30	70	100	45	-	-	-	-	
6	BEME305P	Professional core courses	Machine Drawing & Solid Modelling	-	1	2	2	-	-	-	-	-	50	50	100	50	
7	BEME306P	Professional	Computer Programming	-	1	2	2	-	-	-	-	-	50	50	100	50	
8	BEME307P	Mandatory Course	Sports / Yoga / NSS/NCC	-	-	3	Audit (0)	College Assessment in Grades O, A, B, C (Evaluation guidelines mentioned in the syllabus of concerned course)									
Total				12	5	9	-	-	120	280	400	-	125	125	250	-	
Semester Total				26			20	Marks 650									

Sd/-
Dr. S. R. Chaudhary
Chairman
B.O.S.
Mechanical Engg.



Kinlind
Dr. Milind Khanapurkar
Principal
Maharshi Karve Stree Shikshan Sanatha's
Cummins College of Engineering for Women
Hingna, Nagpur-441110.

R.T. M. Nagpur University Scheme

Mechanical Engineering : Sem IV

Rashtrasant Tukdoji Maharaj Nagpur University, Nagpur

Faculty of Science & Technology

Course and Examination Scheme of Bachelor of Engineering (Mechanical Engineering)

IV Semester B. Tech (Mechanical Engineering)

Sr No	Course Code	Category	Course Title	Teaching Scheme (Hours/Week)			Credits	Examination Scheme								
				L	T	P		Theory				Practical				
								Duration of Exam (Hrs)	Max. Marks College Assessment	Max. Marks University Assessment	Total Marks	Min. Passing Marks	Max. Marks College Assessment	Max. Marks University Assessment	Total Marks	Min. Passing Marks
1	BEME401T	Professional core courses	Machining Processes	3	-	-	3	3	30	70	100	45	-	-	-	-
2	BEME401P	Professional core courses	Machining Processes Lab	-	-	2	1	-	-	-	-	-	25	25	50	25
3	BEME402T	Professional core courses	Fluid Mechanics & Hydraulic Machines	3	1	-	4	3	30	70	100	45	-	-	-	-
4	BEME402P	Professional core courses	Fluid Mechanics & Hydraulic Machines Lab	-	-	2	1	-	-	-	-	-	25	25	50	25
5	BEME403T	Professional core courses	Material Science & Engineering	3	-	-	3	3	30	70	100	45	-	-	-	-
6	BEME404T	Professional core courses	Mechanics of Materials	3	1	-	4	3	30	70	100	45	-	-	-	-
7	BEME404P	Professional core courses	Materials Testing Lab	-	-	2	1	-	-	-	-	-	25	25	50	25
8	BEME405T	Humanities & Social Science	Professional Ethics	3	-	-	3	2	30	70	100	45	-	-	-	-
9	BEME406P	Mandatory Course	Sports /Yoga / NSS/NCC	-	-	3	Audit (0)	College Assessment in Grades O, A, B, C (Evaluation guidelines mentioned in the syllabus of concerned course)								
TOTAL				15	2	9	-	-	150	350	500	-	75	75	150	-
Semester Total				26			20	Marks 650								

Dr. S. K. Chavhan
B.D.S.
Mechanical Engg



Kindred
Dr. Milind Khanapurkar
Principal
Maharshi Karve Street Shikshan Sanatha's
Cummins College of Engineering for Women
Hingna, Nagpur-441110.

R.T. M. Nagpur University Scheme

Mechanical Engineering : Sem V

Rashtrasant Tukdoji Maharaj Nagpur University, Nagpur
Faculty of Science & Technology
Course and Examination Scheme of Bachelor of Engineering (Mechanical Engineering)
V Semester B. Tech (Mechanical Engineering)

Sr No	Course Code	Category	Course Title	Teaching Scheme (Hours/Week)			Credits	Examination Scheme								
				L	T	P		Theory				Practical				
								Duration of Exam (Hrs)	Max. Marks College Assessment	Max. Marks University Assessment	Total Marks	Min. Passing Marks	Max. Marks College Assessment	Max. Marks University Assessment	Total Marks	Min. Passing Marks
1	BEME501T	Professional core courses	Heat Transfer	3	1	-	4	3	30	70	100	45				
2	BEME501P	Professional core courses	Heat Transfer Lab	-	-	2	1		-	-	-	-	25	25	50	25
3	BEME502T	Professional core courses	Energy Conversion-I	3	1	-	4	3	30	70	100	45	-	-	-	-
4	BEME503T	Professional core courses	Design of Machine Elements	3	1	-	4	3	30	70	100	45	-	-	-	-
5	BEME503P	Professional core courses	Design of Machine Elements Lab	-	-	2	1		-	-	-	-	25	25	50	25
6	BEME504T	Humanities, Social Sciences & Management courses	Industrial Economics and Management	3	-	-	3	3	30	70	100	45	-	-	-	-
7	BEME505T	Open Elective Course	Open Elective - I	3	-	-	3	3	30	70	100	45	-	-	-	-
8	BEME506P	Project work, seminar and internship in industry or elsewhere	Industrial Visit*	-	-	2	1		-	-	-	-	50	-	50	25
9	BEME507P	Mandatory Course	Performing Art	-	-	3	Audit (0)	College Assessment in Grades O, A, B, C (Evaluation guidelines mentioned in the syllabus of concerned course)								
TOTAL				15	3	9	-	-	150	350	500	-	100	50	150	-
Semester Total				27			21	Marks 650								

Dr. S. H. Chaudhary
Chairman
B.O.S.
Mech-Engg



Kindred
Dr. Milind Khanapurkar
Principal
Maharshi Karve Stree Shikshan Sanatha's
Cummins College of Engineering for Women
Hingna, Nagpur-441110.

R.T. M. Nagpur University Scheme

Mechanical Engineering : Sem VI

Rashtrasant Tukdoji Maharaj Nagpur University, Nagpur
Faculty of Science & Technology
Course and Examination Scheme of Bachelor of Engineering (Mechanical Engineering)
VI Semester B. Tech. (Mechanical Engineering)

Sr No	Course Code	Category	Course Title	Teaching Scheme (Hours/Week)		Credits	Examination Scheme										
				L	T		P	Theory					Practical				
								Duration of Exam (Hrs)	Max. Marks College Assessment	Max. Marks University Assessment	Total Marks	Min. Passing Marks	Max. Marks College Assessment	Max. Marks University Assessment	Total Marks	Min. Passing Marks	
1	BEME601T	Professional core courses	Automation in Production	3	1	-	4	3	30	70	100	45	-	-	-	-	
2	BEME601P	Professional core courses	Automation in Production Lab	-	-	2	1	-	-	-	-	-	25	25	50	25	
3	BEME602T	Professional core courses	Energy Conversion-II	3	1	-	4	3	30	70	100	45	-	-	-	-	
4	BEME602P	Professional core courses	Energy Conversion Lab	-	-	2	1	-	-	-	-	-	25	25	50	25	
5	BEME603T	Professional core courses	Dynamics of Machines	3	1	-	4	3	30	70	100	45	-	-	-	-	
6	BEME603P	Professional core courses	Dynamics of Machines Lab	-	-	2	1	-	-	-	-	-	25	25	50	25	
7	BEME604T	Professional Elective courses	Elective - I	3	-	-	3	3	30	70	100	45	-	-	-	-	
8	BEME605T	Professional Elective courses	Elective - II	3	-	-	3	3	30	70	100	45	-	-	-	-	
* 9	BEME606P	Project work, seminar and internship in industry or elsewhere	Skill Development*	-	-	4	2	-	-	-	-	-	50	-	50	25	
10	BEME607P	Project work, seminar and internship in industry or elsewhere	Summer Internship**	During Summer Vacation			Audit (0)	-	-	-	-	-	-	-	-	-	
11	BEME608P	Mandatory Course	Environment Science	-	-	2	Audit (0)	College Assessment in Grades O, A, B, C (Evaluation guidelines mentioned in the syllabus of concerned course)									
TOTAL				15	3	13	-	-	150	350	500	-	125	75	200	-	
Semester Total				31			23	Marks 700									

Dr. S.K. Choudhary
Chairman
B.O.S.
Mechanical Engg



Dr. Milind Khanapurkar
Principal
Maharshi Karve Stree Shikshan Sanatha's
Cummins College of Engineering for Women
Hingna, Nagpur-441110.

R.T. M. Nagpur University Scheme

Mechanical Engineering : Sem VII

Rashtrasant Tukdoji Maharaj Nagpur University, Nagpur
 Faculty of Science & Technology
 Course and Examination Scheme of Bachelor of Engineering (Mechanical Engineering)
 VII Semester B. Tech (Mechanical Engineering)-(2023 onwards)

Sr No	Course Code	Category	Course Title	Teaching Scheme (Hours/Week)			Credits	Examination Scheme								
				L	T	P		Theory				Practical				
								Duration of Exam (Hrs)	Max. Marks College Assessment	Max. Marks University Assessment	Total Marks	Min. Passing Marks	Max. Marks College Assessment	Max. Marks University Assessment	Total Marks	Min. Passing Marks
1	BEME701T	Professional Elective courses	Elective - III	3	-	-	3	3	30	70	100	45	-	-	-	-
2	BEME702T	Professional Elective courses	Elective - IV	3	-	-	3	3	30	70	100	45	-	-	-	-
3	BEME702P	Professional Elective courses	Elective - IV Lab	-	-	2	1	-	-	-	-	-	25	25	50	25
4	BEME703T	Open Elective Course	Open Elective - II	3	-	-	3	3	30	70	100	45	-	-	-	-
5	BEME704T	Open Elective Course	Open Elective - III	3	-	-	3	3	30	70	100	45	-	-	-	-
6	BEME705P	Project work, seminar and internship in industry or elsewhere	Project - I	-	-	12	6	-	-	-	-	-	50	-	50	25
7	BEME706P	Mandatory Course	Self Development	-	-	2	Audit (0)	College Assessment in Grades O, A, B, C (Evaluation guidelines mentioned in the syllabus of concerned course)								
TOTAL				12	0	16	-	-	120	280	400	-	75	25	100	-
Semester Total				28			19	Marks 500								

Dr. S.K. Choudhary
 Chairman
 B-D-S.
 Mech. Engg.



Kailind
 Dr. Milind Khanapurkar
 Principal
 Mahatma Jyotiba Phule Mahila's College of Engineering for Women
 Hingna, Nagpur-441110.

R.T. M. Nagpur University Scheme

Mechanical Engineering : Sem VIII

Rashtrasant Tukdoji Maharaj Nagpur University, Nagpur
 Faculty of Science & Technology
 Course and Examination Scheme of Bachelor of Engineering (Mechanical Engineering)
 VIII Semester B. Tech(Mechanical Engineering)-(2023 onwards)

Sr No	Course Code	Category	Course Title	Teaching Scheme (Hours/Week)			Credits	Examination Scheme									
				L	T	P		Theory					Practical				
								Duration of Exam (Hrs)	Max. Marks College Assessment	Max. Marks University Assessment	Total Marks	Min. Passing Marks	Max. Marks College Assessment	Max. Marks University Assessment	Total Marks	Min. Passing Marks	
1	BEME801T	Professional Elective courses	Elective - V	3	-	-	3	3	30	70	100	45	-	-	-	-	
2	BEME801P	Professional Elective courses	Elective - V Lab	-	-	2	1	-	-	-	-	-	25	25	50	25	
3	BEME802T	Professional Elective courses	Elective - VI	3	-	-	3	3	30	70	100	45	-	-	-	-	
4	BEME803T	Open Elective Course	Open Elective -IV	3	-	-	3	3	30	70	100	45	-	-	-	-	
5	BEME804P	Project work, seminar and internship in industry or elsewhere	Project - II	-	-	12	6	-	-	-	-	-	100	100	200	100	
6	BEME805P	Mandatory Course	Self Development	-	-	2	Audit (0)	College Assessment in Grades O, A, B, C (Evaluation guidelines mentioned in the syllabus of concerned course)									
TOTAL				9	0	16	-	-	90	210	300	-	125	125	250	-	
Semester Total				25			16	Marks 550									

(Dr. S. K. Choudhary)
 Chairman
 B.D.S.
 Mechanical Engg.



Kailind
 Dr. Milind Khanapurkar
 Principal
 Mahatma Jyotiba Phule Mahila's
 College of Engineering for Women
 Hingna, Nagpur-441110.



Maharshi Karve Stree Shikshan Samstha's
**Cummins College of Engineering
for Women**

Sharpening Engineering Acumen with a difference
NAAC Accredited



Approved by AICTE, New Delhi & DTE, Mumbai
Affiliated to Rashtrasant Tukadoji Maharaj Nagpur University

➤ Course List addressing crosscutting issues

1. Allied Science
2. Computer Engineering
3. Electronics & Telecommunication Engineering
4. Mechanical Engineering

■ Tel. No. : 9657667030 ■ E-mail : office@cumminscollege.edu.in,
■ website : www.cumminscollege.edu.in

Mouje Sukli (Gupchup), Hingna, Nagpur-441110



Courses addressing crosscutting issues

Allied Science Department : Sem I and Sem II

Allied Science Department

Sr. No	Professional Ethics	Gender	Human Values	Environment and Sustainability
1	Mathematics I	Basics of Civil and Mechanical Engineering	Indian Culture and Constitution	Energy and Environment
2	Applied Physics	Indian Culture and Constitution	Communication Skills	Advanced Engineering Materials
3	Engineering Graphics	Workshop Practices		Applied Chemistry
4	Mathematics II			
5	Communication Skills			
6	Basics of Electrical Engineering			
7	Engineering Mechanics			



Kinind
Dr. Milind Khanapurkar
Principal
Maharshi Karve Stree Shiksha Sanatha's
Cummins College of Engineering for Women
Hingna, Nagpur-441118.

Courses addressing crosscutting issues Computer Engineering : Sem III to VIII

Sr. No	Professional Ethics	Gender	Human Values	Environment and Sustainability
1	Applied Mathematics-III	Universal Human Values	Universal Human Values	Environmental science
2	Introduction to Computer Network		Consumer Affairs	Mini project and Internship
3	Theory of computation		Effective Technical Communication	Seminar and presentation on current trends
4	Software Engineering			Yoga Meditation
5	Introduction to software testing			Internship
6	Blockchain Technology			Project Phase I
7	Computer Networks and security			Project Phase II
8	Computer Graphics			
9	Database and management system			
10	Digital circuits and fundamental s of Microprocessor			
11	Object Oriented Programming			
12	Web Technology			
13	Data Structure			
14	Operating System			
15	Computer Architecture And Organization			
16	System Programming			
17	Java Programming			
18	Design And Analysis Of Algorithm			
19	Transmission Control Protocol And Internet Protocol			
20	Internet Of Thing			
21	Human Computer Interaction			
22	Soft Computing			
23	Distributed Computing			
24	Machine Learning			
25	Data Warehousing And Mining			
26	Digital Image Processing			
27	Mobile Computing			
28	Deep Learning			
29	Augmented And Virtual Reality			
30	Compiler Design			



**Courses addressing crosscutting issues
Computer Engineering**

Sr. No	Professional Ethics	Gender	Human Values	Environment and Sustainability
31	Natural Language Processing			
32	Introduction To Software Testing			
33	Joy Of Computing			
34	Social Networks			
35	Reinforce Learning			
36	Gpu Architecture And Programming			
37	Data Analytics Using Python			
38	Cloud Computing			

**Courses addressing crosscutting issues
Electronic & Telecommunication Engineering : Sem III to VIII**

Sr. No	Professional Ethics	Gender	Human Values	Environment and Sustainability
1	Network Theory	Universal human values	Communication Skills	Communication Skills
2	Components for Electronic circuit design	Industrial Economics and Entrepreneurship Development	Universal human values	IEED (Economics)
3	Signal & System		Industrial Economics and Entrepreneurship Development (Economics)	Effective Technical Communication
4	Digital System Design		Internship	AUDIT COURSE
5	Measurement and Instrumentation		Effective Technical Communication	Internship
6	Applied Maths-III		Consumer Affairs	Electronics Workshop I Lab
7	Electronics Workshop I Lab			Electronic Workshop II
8	Consumer affairs			Bioengineering
9	Analog System Design			Mini Project
10	Analog & Digital Communications			Project



11	Microcontrollers & Applications			
12	Programming for problem solving			
13	Data structure & Algorithm			
14	Internship			
15	Numerical Mathematics and Probability Using MATLAB			
16	Electromagnetic Waves			
17	Digital Signal Processing			
18	Embedded System Design			
19	Sensors and Systems			
20	Information Theory and Error Correcting Codes			
22	Computer Communication Network			
23	Control System Engineering			
24	Database Management Systems			
25	Wireless Sensor Network			
26	Industrial Electronics			
27	Internet Of Things (Iot)			
28	Optical Communication			
29	Vlsi Signal Processing			
30	Data Compression And Encryption			
31	Advanced Digital System Design			
32	Dsp Processor And Architecture			
33	Television And Video Engineering			
34	Microwave And Radar Engineering			
35	Wireless Mobile Communication			
36	Satellite Communication			
37	. Web Technologies			
38	Audio And Video Engineering			
39	Data Science/ Cloud Computing			
40	Radar and Satellite Communication			
41	Fundamentals of Machine Learning			
42	Mechatronics			
43	Bioengineering			
44	CMOS VLSI Design			



Courses addressing crosscutting issues
Mechanical Engineering : Sem III to VIII

Sr. No	Professional Ethics	Gender	Human Values	Environment and Sustainability
1	Professional Ethics	Professional Ethics	Professional Ethics	Energy Conversion III
2	Functional English	Industrial Economics and Entrepreneurship Development	Industrial Economics and Entrepreneurship Development	Environmental Science
3	Manufacturing Process I	Sports/Yoga/NSS/NCC	Yoga and Mediation	Mini Project
4	Industrial Management	Performing Art		Industrial Visit
5	Kinematic of Machine			Energy Conversion- I
6	Engineering Metallurgy			Energy Conversion- II
7	Applied Mathematics- III			Project Seminar
8	Fluid Mechanics			Refrigeration & Air-Conditioning
9	Machine Drawing			Project
10	Technical Report and Seminar			Engineering Thermodynamics
11	Engineering Thermodynamics			Hydraulic Machines
12	Applied Mathematics- IV			
13	Hydraulic Machines			
14	Machining Processes			
15	Mechanics of Material			
16	Mini Project			
17	Industrial Economics and Entrepreneurship Development			
18	Design of Machine Elements			
19	Advanced Production Processes			
20	Heat Transfer			
21	Mechanical Measurement & Metrology			
22	Computer Applications – I			
23	Industrial Visit			
24	Energy Conversion- I			
25	Control Systems Engineering			
26	Operations Research			
27	Mechatronics			
28	Dynamics of Machines			
29	Computer Applications - II			
30	Industrial Case Study			



K. K. K.
Dr. Milind Khanapurkar
Principal
Maharshi Karve Stree Shikshan Sanatha's
Cummins College of Engineering for Women
Hingna, Nagpur-441110.

Sr. No	Professional Ethics	Gender	Human Values	Environment and Sustainability
31	Industrial Engineering			
32	Automobile Engineering			
33	Computer Aided Design			
34	Design of Mechanical Drives			
35	Project Seminar			
36	Advanced Manufacturing Techniques			
37	Automation in Production			
38	Project			





Maharshi Karve Stree Shikshan Samstha's
**Cummins College of Engineering
for Women**

Sharpening Engineering Acumen with a difference
NAAC Accredited



Approved by AICTE, New Delhi & DTE, Mumbai
Affiliated to Rashtrasant Tukadoji Maharaj Nagpur University

- **Sample copy of syllabus relevant to cross cutting issues**
- **Sample copy of CO-PO/PSO attainment and evaluation of subjects addressing crosscutting issues**
- **Sample copy of projects undertaken by students addressing the crosscutting issue**

■ Tel. No. : 9657667030 ■ E-mail : office@cumminscollege.edu.in,
■ website : www.cumminscollege.edu.in

Mouje Sukli (Gupchup), Hingna, Nagpur-441110





Maharshi Karve Stree Shikshan Samstha's
**Cummins College of Engineering
for Women**

Sharpening Engineering Acumen with a difference

NAAC Accredited

Approved by AICTE, New Delhi & DTE, Mumbai
Affiliated to Rashtrasant Tukadoji Maharaj Nagpur University



Crosscutting Issue: Professional Ethics



■ Tel. No. : 9657667030 ■ E-mail : office@cumminscollege.edu.in,
■ website : www.cumminscollege.edu.in

Mouje Sukli (Gupchup), Hingna, Nagpur-441110



Crosscutting Issue : Professional Ethics

Course Outcome and Syllabus Mechanical Engineering: Sem IV Course : Professional Ethics

RTM Nagpur University Mechanical Engineering Professional Ethics Syllabus (Theory) BEME405T
--

Semester	Course Title (Subject)	Hours / Week			Credits	Maximum Marks			Exam Duration (Hrs.)
		L	T	P		Continual Assessment	University Examination	Total	
IV	Professional Ethics	3	-	-	3	30	70	100	03

Sr. No.	Course Objective
1	The objective of this course is to inculcate the sense of social responsibility among learners and to make them realize the significance of ethics in professional environment so as to make them a global citizen

Course Outcomes

After successful completion of this course the student will be able to:

CO1	Understand basic purpose of profession, professional ethics and various moral and social issues
CO2	Analyze various moral issues and theories of moral development
CO3	Realize their roles of applying ethical principles at various professional levels
CO4	Identify their responsibilities for safety and risk benefit analysis.
CO5	Understand their roles in dealing various global issues



Kamind
Dr. Milind Khanapurkar
Principal
Maharshi Karve Stree Shikshan Sanatha's
Cummins College of Engineering for Women
Hingna, Nagpur-441118.

Crosscutting Issue : Professional Ethics

Syllabus

Mechanical Engineering: Sem IV

Course : Professional Ethics

Professional Ethics SYLLABUS (Theory)	
Contents	No of hours
Unit I Human Values, Morals, values and Ethics, Integrity, Work ethics, Service learning, Civic virtue, Respect for others, Living peacefully, Caring, Sharing, Honesty, Courage	08
Unit II Engineering Ethics, Senses of 'Engineering Ethics', Variety of moral issues, Moral dilemmas, Moral Autonomy, Kohlberg's theory, Gilligan's theory	07
Unit III Engineering as Social Experimentation, Engineering as Experimentation, Engineers as responsible Experimenters, Codes of Ethics, A Balanced Outlook on Law	07
Unit IV Safety, Responsibilities and rights, Safety and Risk, Assessment of Safety and Risk, Risk Benefit Analysis and Reducing Risk, Collective Bargaining, Professional Rights, Employee Rights	07
Unit V Global issues, Multinational Corporations, Computer Ethics, Weapons Development, Engineers as Managers, Consulting Engineers, Engineers as Expert Witnesses and Advisors, Corporate Social Responsibility	07

References:

Text Books Recommended:

1. Professional Ethics by R. Subramaniam – Oxford Publications, New Delhi.
2. Human Values And Professional Ethics by Jayshree Suresh and B. S. Raghavan, S. Chand Publications
3. Ethics in Engineering by Mike W. Martin and Roland Schinzinger – Tata McGraw-Hill – 2003.
4. Human Values & Professional Ethics by S. B. Gogate, Vikas Publishing House Pvt. Ltd., Noida.
5. Professional Ethics and Human Values by A. Alavudeen, R.Kalil Rahman, and M. Jayakumaran – University Science Press.
6. Engineering Ethics & Human Values by M.Govindarajan, S.Natarajan, and V.S.SenthilKumar-PHI Learning Pvt. Ltd – 2009.
7. Professional Ethics and Human Values by Prof.D.R.Kiran-Tata McGraw-Hill – 2013



Kinind
Dr. Milind Khanapurkar
Principal
Maharshi Karve Stree Shikshan Sanatha's
Cummins College of Engineering for Women
Hingna, Nagpur-441118.

Crosscutting Issue: Professional Ethics and Human Values
Syllabus
Allied Science: Sem I
Course : Communication Skills

Syllabus of Communication Skills (Theory)

Unit 1:A. Introduction to Communication, Importance of Communication, Process of Communication, Types of communication- Verbal and Non Verbal

B. Oral and Written Communication, Barriers to Communication and methods to overcome them. (6 hours)

Unit 2: A. Listening Skills, Importance of Listening, Types of Listening, Listening Barriers and methods to overcome them .

B. Effective Speaking Skills, Components of Public Speaking, Overcoming stage fear in public speaking, Group Discussion-Process and techniques (6 hours)

Unit 3:A. Reading Skills, Importance of Reading, Sources of Reading, Skimming, Scanning, Comprehending passage

B. Writing Skills, Process and Techniques of Composition-Précis, Paragraph, Essay (6 hours)

Unit 4:A. Basic Grammar: Tenses and its types, Sentences and its types

B. Transformation of Sentences- Assertive-Imperative-Interrogative-Exclamatory, Reported Speech.(6 hours)

Books Recommended:

1. Technical Communication by Meenakshi Raman and Sangeeta Sharma, OUP
2. Public Speaking and Influencing Men in Business by Dale Carnegie
3. Essentials of English Grammar by Micheal Swan
4. Professional Communication Skills by Bhatia and Sheikh
5. Business Communication by K.K. Sinha
6. Communication Skills by Dr. P. Prasad
7. Communication Skills by Sanjeev Kumar and Pushpalata, OUP

B. Aggarwal
(Dr. Bhureeka Agrawal)

Dorall
(Dr. Dora Thompson)

Nawaz
(Dr. Nawaz Khan)

Abhinav
(Dr. Sajid Anwar)

BR
(B-R-Chide)

Girija
Dr. M.N. Girija

Abhinav
ArBhroadi



Kummins
Dr. Milind Khanapurkar
Principal
Maharshi Karve Stree Shikshan Sanatha's
Kummins College of Engineering for Women
Hingna, Nagpur-441118.

Crosscutting Issue : Professional Ethics

Sample copy of CO-PO/PSO attainment of subjects
addressing crosscutting issues

Mechanical Engineering : Sem IV
Course : Professional Ethics

BEME405T Professional Ethics

CO Code	PO Mapped	PSO Mapped	Program Outcomes (POs)														
			PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO 1	PSO 2	PSO 3
BEME405T.1	6,8,9,12	PSO3						2.875		2.875	2.875			2.875			2.875
BEME405T.2	6,8,9	PSO3						2.875		2.875	2.875						2.875
BEME405T.3	6,8,9	PSO3						2.763		2.763	2.763						2.763
BEME405T.4	6,7,8	PSO3						2.763	2.763	2.763							2.763
BEME405T.5	6,7,12	PSO3						2.875	2.875							2.875	2.875
0	0	0															
CO-PO-PSO mapping			0	0	0	0	0	2.83	2.819	2.819	2.8377	0	0	2.875			

Ramteke

Name & Signature of Course Teacher
Dr. Priyadarshini Ramteke



Kamland
Dr. Milind Khanapurkar
Principal
Maharshi Karve Stree Shikshan Sanatha's
Cummins College of Engineering for Women
Hingna, Nagpur-441118.

**Sample copy of Project undertaken by students
Project addressing Professional Ethics Issue**

Department: Computer Engineering

CERTIFICATE

This is to certify that the Project Report on "TRACKIUM" is a bonafide work and it is submitted to Department of Computer Engineering of *Cummins College of Engineering for Women, Nagpur.*

Janvi Patil

Sonal Singh

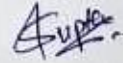
Riddhi Patankar

Swarali Dharmadhikari

For partial fulfillment of the Bachelor of Engineering in Computer Engineering academic year 2022-2023 under the guidance of


Guide

Prof. Sakshi Khamankar



Project Co-ordinator

Prof. Supriya Bani



Head of the Department


Prof. Sharayu Deote
Head
Department of Computer Engineering
Cummins College of Engg. For Women
Tal.: Hingna Dist.: Nagpur-441110



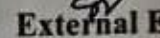
Principal

Dr. Sanjivani Shastri

OFFICIATING PRINCIPAL
MAHARSHI KARVE STREE SHIKSHAN SAMSTHA'S
CUMMINS COLLEGE OF ENGINEERING FOR WOMEN
HINGNA, NAGPUR-441110



Internal Examiner


External Examiner




Dr. Milind Khanapurkar
Principal
Maharshi Karve Stree Shikshan Sanatha's
Cummins College of Engineering for Women
Hingna, Nagpur-441110.



Maharshi Karve Stree Shikshan Samstha's
**Cummins College of Engineering
for Women**

Sharpening Engineering Acumen with a difference

NAAC Accredited

Approved by AICTE, New Delhi & DTE, Mumbai
Affiliated to Rashtrasant Tukadoji Maharaj Nagpur University



Crosscutting Issue: Gender

■ Tel. No. : 9657667030 ■ E-mail : office@cumminscollege.edu.in,
■ website : www.cumminscollege.edu.in

Mouje Sukli (Gupchup), Hingna, Nagpur-441110



Crosscutting Issue : Gender

Syllabus and Course Outcomes Allied Science: Sem II Course : Indian Culture and Consitution

Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur

Subject: Indian Culture and Constitution (ICC) BSE 2-8T

Semester: II

Course: Audit (Non-credit), Total Marks: 50 (Internal)

Credit: Nil, Teaching Load: 2(Theory)/week

Course Objective:

1. To create an understanding of Indian Constitution and develop respect for the same.
2. To create awareness of India as a State Indian culture and Tradition.

Course Outcomes:

1. Students will become aware of Indian culture and civilization and their role in development of society.
2. Students will understand Industrial work-culture.
3. Students will be sensitized towards professional ethics.
4. Students will understand Indian Constitution and governance of the country.
5. Students will be able to understand the structure and system of work organizations.

Dr. Sajid Amine

AVB hande

grijya

R.R. Chide



Kamind
Dr. Milind Khanapurkar
Principal
Maharshi Karve Stree Shikshan Sanatha's
Cummins College of Engineering for Women
Hingna, Nagpur-441118.

Crosscutting Issue : Gender

Syllabus and Course Outcomes Allied Science: Sem II Course : Indian Culture and Consitution

SYLLABUS:

Unit-I

1. Concept of Culture and Civilization
2. Vedic Civilization and Indus Valley Civilization
3. Introduction to Vedas, Ashram system, Varna System
4. Concept of Social Engineering (5 Hours)

Unit-II

1. Meaning and Scope of Industrial Psychology and Industrial Sociology
2. Recruitment, Selection and Training of Workers,
3. Fatigue in industry.
4. Motives for work in industry (5 Hours)

Unit-III

1. Sustainable Development
2. Social change .
3. Professional Ethics
4. Concept and styles of Leadership in Industry. (4 Hours)

Unit-IV

1. Indian Constitution and Federal System
2. Fundamental Rights and Directive Principles of State Policy
3. Role of Bureaucracy in Modern Society
4. Socio-Legal Awareness: Right to Information(RIL), Public Interest Litigation(PIL) (5 Hours)

Abhishek

Abhishek

Girija
Dr. M. V. Girija

RR
(R. R. Chide)



Kamlesh
Dr. Milind Khanapurkar
Principal
Maharshi Karve Stree Shikshan Sanatha's
Cummins College of Engineering for Women
Hingna, Nagpur-441118.

Crosscutting Issue : Gender

Sample copy of evaluation of subjects addressing crosscutting issues

Allied Science : Sem I

Course : Indian Culture and Constitution

CLASS ASSESSMENT RECORD						
SECOND SEMESTER (2021-22)						
SUBJECT: INDIAN CULTURE & CONSTITUTION						
Name of Students	Assign ment 1	Assign ment 2	Assign ment 3	Attend ance	Overall Performa nce	Total Internal Marks
	10	10	10	10	10	50
AADNEYA GAJANAN KADAV	8	8	8	8	8	40
ADITI SACHIDANAND GAUTAM	8	8	8	8	10	42
ADITI SOMKUWAR	8	8	8	9	10	43
AKANKSHA DIWAKAR UPARE	8	8	8	9	10	43
AKANSHA KAMLESH HAJARE	10	10	8	8	9	45
ANJALI KUMARI	8	8	8	9	10	43
ANUSHKA KISHOR CHALPE	8	8	8	8	8	40
ANUSHKA ANILRAO CHIMOTE	8	8	8	8	10	42
ANUSHKA SANJAY KAHATE	8	8	8	8	8	40
APURVA DEVENDRA BAHADE	8	8	8	7	7	38
APURVA AJAY KULKARNI	8	8	8	9	9	42
ARATI JADHAO	8	8	8	9	9	42
ASAWARI SUHAS UMALE	8	8	8	7	7	38
BAIJZA PANKAJ KHADE	8	8	8	7	7	38
BHAVIKA ATUL SHAH	8	8	8	9	10	43
CHAITALI GURUDAS JIBHKATE	8	8	8	7	7	38
CHANCHAL UPENDRA INCHULKAR	7	7	7	7	7	35
DEVIKA DEVENDRA UGLE	8	8	8	7	7	38
DOSHAL PRAVIN CHIDE	7	7	7	7	7	35
GAYATRI MOHAN PANDE	8	8	8	8	8	40
GUNASHREE KHEMRAJ BAWANKULE	8	8	8	9	9	42
HITESHWARI KOKAMWAR	8	8	8	7	7	38
IRA RAJESH DESHPANDE	8	8	8	8	8	40
ISHA MADHUKAR YELANE	8	8	8	7	7	38
KHUSHI AMIT SHINDE	7	7	7	7	7	35
KSHIPRA DHANANJAY DESHPANDE	7	7	7	7	7	35
NIDHI UMESH JAISWAL	9	9	9	9	9	45
POOJA RANVEER RATHORE	8	8	8	9	9	42
PRACHI DNYANESHWAR PARATE	8	8	8	9	9	42
PRADNAYA SHANKARRAO TALKHANDE	8	8	8	8	8	40
PRAJKTA GHOTEKAR	8	8	8	7	7	38
PRAJKTA RAVINDRA WAGHMARE	8	8	8	8	8	40
RASHMI VINOD LOKHANDE	8	8	8	8	8	40
RENUKA SANJAY BALLAL	8	8	8	9	10	43
RENUKA VISHWAS DESHPANDE	8	8	8	8	8	40
RENUKA GAJANAN MOHARIR	8	8	8	9	10	43
RUCHALI SUNIL BABULKAR	7	7	7	7	7	35
RUCHITA GAJANAN CHAKOLE	7	7	7	7	7	35
SAGARIKA GUNWANT KEMEKAR	7	7	7	8	8	37

D. Ambele

Sample copy of evaluation of subjects addressing crosscutting issues

Allied Science : Sem I Course : Indian Culture and Constitution

Name of Students	Assign ment 1	Assign ment 2	Assign ment 3	Attend ance	Overall Performa nce	Total Internal Marks
	10	10	10	10	10	50
SALONI BISEN	8	8	8	8	8	40
SALONI PRASHANT KALE	8	8	8	8	8	40
SALONI PRASHANT SHRAWANE	7	7	7	7	7	35
SANJANA KISHOR DORKHANDE	7	7	7	7	7	35
SANSKRUTI BABAN MORE	7	7	7	7	7	35
SEJAL KOSE	7	7	7	7	7	35
SHEJAL MORESHWAR NIKUDE	7	7	7	7	7	35
SHRADDHA TULSHIDAS PATLE	7	7	7	7	7	35
SHRAVANI RAVINDRA HORE	8	8	8	8	8	40
SHRUTI CHANDRA	8	8	8	7	7	38
SHRUTI SHANKAR DORNAL	8	8	8	7	7	38
SHRUTI ANIL KHAIRE	8	8	8	7	7	38
SRUSHTI RAVINDRA KHIRATKAR	7	7	7	7	7	35
SRUSHTI GAJANAN TANTARPALE	7	7	7	7	7	35
SUHANI ABHAY KELAPURE	7	7	7	7	7	35
TANAYA VIVEK GAVHALE	7	7	7	7	7	35
TANISHA RAJIV MOHTA	7	7	7	7	7	35
TANISHKA AJINKYA RAJPUT	8	8	8	7	7	38
URVASHI SHAH	8	8	8	8	8	40
VAIBHAVI ASHOK NIWANT	8	8	8	8	8	40
VAISHNAVI NAMDEORAO BUDHE	7	7	7	7	7	35
VAISHNAVI MURALI GUJJALWAR	8	8	8	8	8	40
VAISHNAVI RAMESHWAR KANDE	7	7	7	7	7	35
VAISHNAVI NAMDEO PAWAR	8	8	8	7	7	38
VAISHNAVI ANANTA SHADANGULE	8	8	8	7	7	38
VAISHNAVI DILIPJI VARMA	8	8	8	7	7	38
VIBHU KUMARI PRINCI	6	7	6	6	7	32
YESHASWINI ARVIND PANDILWAR	8	8	8	7	7	38
AARYA SHUKLA	7	7	7	7	7	35
ADITI ANIRUDDHA JOSHI	8	8	8	9	9	42
ADITI MAHENDRA SATHE	8	8	8	9	9	42
ADITI TAPESHKUMAR TEMBHARE	8	8	8	7	7	38
ANUSHKA SATISH DEWAJWAR	7	7	7	7	7	35
ANUSHREE SANJAY BADHE	8	8	8	7	7	38
ANUSHREE ARUN NIMKAR	8	8	8	7	7	38
APURVA RAMESH TOTAWAR	8	8	8	7	7	38
ASTHA SANJAY PATRANGE	8	8	8	7	7	38
AVANI SANDIP KADAM	8	8	8	7	7	35
BHAVIKA SATISH GANDAIT	8	8	8	7	7	38
DIPTI CHITRASEN TEMBHARE	7	7	7	7	7	35
DISHA YOGIRAJ NAGMOTE	7	7	7	7	7	35
DISHA WANJARI	7	7	7	7	7	35
DNYANSHREE ANIL ZADE	7	7	7	7	7	35



Kamlesh
Dr. Milind Khanapurkar
Principal
Maharshi Karve Stree Shikshan Sanatha's
Cummins College of Engineering for Women
Hingna, Nagpur-441118.

Sample copy of evaluation of subjects addressing crosscutting issues

Allied Science : Sem I Course : Indian Culture and Constitution

Name of Students	Assign ment 1	Assign ment 2	Assign ment 3	Attend ance	Overall Performa nce	Total Internal Marks
	10	10	10	10	10	50
GAURI RAJESH GAJPURE	8	8	8	7	7	38
GUNJAN SANJAY RANE	8	8	8	7	7	38
HARSHITA SHIRINIVAS LIMAYE	8	8	8	8	8	40
HEEYA CHAWHAN	7	7	7	7	7	35
JANHAVI PRASHANT TICHKULE	8	8	8	8	8	40
JUHIKUMARI RAVINDRA SINGH	8	8	8	7	7	38
KAJAL SANJAY TIWARI	7	7	7	7	7	35
KIRTI RAJESH SAMATKAR	8	8	8	9	9	42
KOMAL PRAKASH AGARKAR	7	7	7	7	7	35
KOMAL KESHAVRAO BISANE	8	8	8	7	7	38
MAHESHWARI DANGORE	7	7	7	7	7	35
MANSI MANISH KULKARNI	7	7	7	7	7	35
MONALI ANIL KOICHE	8	8	8	7	7	38
MRUNMAI VIRAG JOSHI	7	7	7	7	7	35
OJASVI SHASHANK SHINGNAPURE	6	6	6	6	6	30
PAYAL RAMESHWAR JIBHKATE	7	7	7	7	7	35
PRACHI KISHOR GOUR	8	8	8	7	7	38
PRERNA RAJU JOSHI	8	8	8	8	8	40
RAJASI VAIBHAV MORATKAR	7	7	7	7	7	35
RASHI AKASH BHAVIK	7	7	7	7	7	35
RIDDHI ANANTA TEKADE	8	8	8	7	7	38
RITIKA MANOJ JUNGARE	8	8	8	7	7	38
RIYA RAVINDRA KIRNAPURE	6	6	6	6	6	30
SAI NINAD JOSHI	6	6	6	6	6	30
SAKSHI SANJAY DEKATE	6	6	6	6	6	30
SAKSHI NISHCHALSINGH GOUR	8	8	8	7	7	38
SAKSHI RAMDAS KAMDJI	7	7	7	7	7	35
SAKSHI KASHINATH PACHKATE	6	6	6	6	6	30
SAKSHI NARESH RAUT	6	6	6	6	6	30
SAMIKSHA NARESHRAO KHAPRE	8	8	8	7	7	38
SAMRUDDHI SUJIT INGOLE	7	7	7	7	7	35
SANIKA RAJENDRA THAKARE	7	7	7	7	7	35
SANIKA SANDEEP WARNEKAR	8	8	8	7	7	38
SEJAL PRAMOD ANJANKAR	7	7	7	7	7	35
SEJAL CHANDRAKANT GOMASE	6	6	6	6	6	30
SHRADDHA SANJAY KOSARE	8	8	8	8	8	40
SHREYA SHAILESH THAKRE	8	8	8	7	7	38
SHRUTI PUNDLIK KUKDE	8	8	8	7	7	38
SHRUTI AMBADAS VAIDYA	7	7	7	7	7	35
SHRUTI ARVIND VAIDYA	7	7	7	7	7	35
SONAL WAMANRAO FULZELE	7	7	7	7	7	35
SRUSHTI ANILRAO MANDAOKAR	7	7	7	7	8	36
SUBODINI PRAMOD GOTE	8	8	8	9	9	38

J. Amale



K. J. Somaiya
Dr. Milind Khanapurkar
Principal
Maharshi Karve Stree Shikshan Sanatha's
Cummins College of Engineering for Women
Hingna, Nagpur-441118.

Sample copy of evaluation of subjects addressing crosscutting issues

Allied Science : Sem I Course : Indian Culture and Constitution

Name of Students	Assignment 1	Assignment 2	Assignment 3	Attendance	Overall Performance	Total Internal Marks
	10	10	10	10	10	50
TANUSHRI SUNIL AOTE	7	7	7	7	8	36
VAISHNAVI GAJANAN GIRADKAR	7	7	7	7	8	36
VAISHNAVI RAJU WAGH	7	7	7	7	7	35
YANISHKA NITIN CHIWHANE	6	6	6	7	7	32
YEEYAKSHU MANOJ DEO	8	8	8	9	9	38
YOGESHWARI KISANRAO GHATE	8	8	8	9	9	38
ADITI NARAYAN RAGIT	8	8	8	8	8	40
ANNU PRAMOD SHUKLA	8	8	8	7	7	38
APURVA UDAY MALODE	7	7	7	7	7	35
GUNJAN DILIP SAHSTRABUDDHE	7	7	7	7	8	36
KALPANA AMARSING RATHOD	6	6	6	6	6	30
KAMNA RAHUL TAPASE	7	7	7	7	7	35
POONAM NARENDRA MISHRA	8	8	8	7	7	38
PRASANNA KUMARI KANTIPUDI	8	8	8	7	7	38
VAIBHAVI SANJAYRAO NAIK	8	8	8	7	7	38
VAISHNAVI DILIP BIBEKAR	8	8	8	7	7	38
VAISHNAVI VIKAS DONADKAR	7	7	0	5	6	25
VISHAKHA VIJAY INGOLE	7	7	7	7	7	35

Ramteke

Dr. Priyadarshini Ramteke



Kamind
Dr. Milind Khanapurkar
Principal
Maharshi Karve Stree Shikshan Sanatha's
Cummins College of Engineering for Women
Hingna, Nagpur-441118.

Crosscutting Issue: Gender

Syllabus

Computer Engineering : Sem V

Course : Industrial Economics and Entrepreneurship Development

R.T.M.N.U Nagpur
Syllabus of B. E 5th Semester Computer Engineering

BECME505T

Industrial Economics and Entrepreneurship Development

Sr. No.	Subject Code	Subject	Workload				Credit				Marks				
			Lecture	Practical	Tutorial	Total Hrs/Week	Lecture	Practical	Tutorial	Total	Theory		Practical		Total Marks
											Sessional	University	Sessional	University	
1	BECME505T	Industrial Economics and Entrepreneurship Development	4	-	-	4	4	-	-	4	20	80	-	-	100

Syllabus:

Unit I :

Industrial economics, Types of Business structures, top and bottom line of the organization, economic analysis of business, economics of operations, economic prudence in business.

Unit II:

Market structures- Monopoly, Oligopoly, and Monopolistic competition. Pricing strategies, business integration- forward backward integration, economies of scale, diseconomies of scale, liberalization, privatization and globalization. Business cycles, optimum size of firm.

Unit III:

The functions of central bank and commercial banks, Foreign Direct Investment, Free trade vs. Protectionism, Capital formation, Inflation, Recession and stagnation, Inclusive growth, Public-Private partnership for development, Multiplier effect, Accelerator effect.

Unit IV:

Entrepreneurship meaning, Major Motives Influencing an Entrepreneur, Factors Affecting Entrepreneurial Growth. Project Formulation, Product development, Market Survey and Research, Demand forecasting techniques, Techno Economic Feasibility Assessment – Preparation of Preliminary Project Reports – Project Appraisal – Sources of Information – Classification of Needs and Agencies.

Unit V:

Need – Sources of Finance, Term Loans, Capital Structure, venture capital. Angel funding, Financial Institution, management of working Capital, Costing, Break Even Analysis, Network Analysis Techniques of PERT/CPM – Taxation – Direct, Indirect Taxes.

Unit VI:

Sickness in small business, Major problems faced by SSIs, Foreign Direct Investments and threat to SSI, Technical consultancy organizations, safeguard measures against variation in currency value, Government Policy for Small Scale Enterprises, tax holidays, and incentives to SSIs.

TEXT BOOKS

1. Industrial Economics. By, Ranjana Seth, Ane Book Pvt Ltd.



Crosscutting Issue : Gender

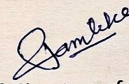
Sample copy of CO-PO/PSO attainment of subjects addressing crosscutting issues

Computer Engineering : Sem V

Course : Industrial Economics and Entrepreneurship Development

BECME505T Industrial Economics & Entrepreneurship Development

CO Code	PO Mapped	PSO Mapped	Program Outcomes (POs)												PSO 1	PSO 2	PSO 3	PSO 4
			PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12				
BECME505T.1	PO11	PSO3												0.681			0.681	
BECME505T.2	PO 6,11	PSO3						0.738						0.738			0.738	
BECME505T.3	PO 6,11	PSO3						0.766						0.766			0.766	
BECME505T.4	PO 9,10,11	PSO3									0.738	0.74	0.738				0.738	
BECME505T.5	PO 6,11	PSO3						0.85						0.85			0.85	
BECME505T.6	PO 6,7,11	PSO3						0.85	0.85					0.85			0.85	
CO-PO-PSO mapping			0	0	0	0	0	0.785	0	0	0.738	0.74	0.7546	0				


Name & Signature of Course Teacher
Prof. Priyadarshini Ramteke




Dr. Milind Khanapurkar
Principal
Maharshi Karve Stree Shikshan Sanatha's
Cummins College of Engineering for Women
Hingna, Nagpur-441118.

Crosscutting Issue : Gender

Sample copy of Project undertaken by students

Final Year Project Topic addressing "Gender" Issue

CERTIFICATE

This is to certify that the Project Report on 'Artikart' 'is a bonafide work and it is submitted to Department of Computer Engineering of *Cummins college of Engineering for Women, Nagpur.*

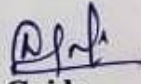
Miss. Ruchika Dehankar

Miss. Bhagyashree Ghodke


Miss. Pooja Dewlekar

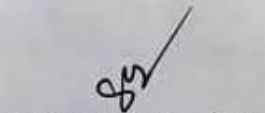
Miss. Vaishnavi Bhujade


For partial fulfilment of the Bachelor of Engineering in Computer Engineering
academic year 2022-2023 under the guidance of



Guide

Prof. Harshwardhan Kharpathe


Head of the Department
Prof. Sharayu Deote


External Examiner


Project Co-ordinator
Prof. Supriya Bani


Principal

Dr. Sanjivni Shastri

OFFICIATING PRINCIPAL
MAHARSHI KARVE STREE SHIKSHAN SAMSTHA'S
CUMMINS COLLEGE OF ENGINEERING FOR WOMEN
HINGNA, NAGPUR-441110


Internal Examiner




Dr. Milind Khanapurkar
Principal
Maharshi Karve Stree Shikshan Samstha's
Cummins College of Engineering for Women
Hingna, Nagpur-441110.



Maharshi Karve Stree Shikshan Samstha's
**Cummins College of Engineering
for Women**

Sharpening Engineering Acumen with a difference

NAAC Accredited

Approved by AICTE, New Delhi & DTE, Mumbai
Affiliated to Rashtrasant Tukadoji Maharaj Nagpur University



Crosscutting Issue: Human Values



■ Tel. No. : 9657667030 ■ E-mail : office@cumminscollege.edu.in,
■ website : www.cumminscollege.edu.in

Mouje Sukli (Gupchup), Hingna, Nagpur-441110



Crosscutting Issue: Human Values

Syllabus and Course Outcomes Computer Engineering : Sem III Course : Universal Human Values

RASHTRASANT TUKADOJI MAHARAJ NAGPUR UNIVERSITY, NAGPUR
FOUR YEAR BACHELOR OF ENGINEERING (B.E.) DEGREE COURSE
SEMESTER: 3rd (C.B.C.S.)
BRANCH: COMPUTER ENGINEERING

Subject : *Universal Human Values*

Subject Code : **BECME306T**

Load	Credits	College Assessment Marks	University Evaluation	Total Marks
2 Hrs	2	15	35	50

Aim: To inculcate sensitivity among students towards themselves and their surrounding including family, society and nature

Prerequisite(s): Values education from school.

Course Objectives:- The objective of the course is four fold:

1	Development of a holistic perspective based on self-exploration, about themselves (human being), family, society and nature/existence.
2	Understanding (or developing clarity) of the harmony in the human being, family, society and nature/existence
3	Strengthening of self-reflection.
4	Development of commitment and courage to act.

Course Outcomes:

By the end of the course students shall be able to

CO1	Expected to become more aware of themselves, and their surroundings (family, society, nature)
CO2	Become more responsible in life, and in handling problems with sustainable solutions, while keeping human relationships and human nature in mind.
CO3	Handle better critical ability.
CO4	Become sensitive to their commitment towards what they have understood (human values, human relationship and human society).



Kindred
Dr. Milind Khanapurkar
Principal
Maharshi Karve Stree Shikshan Sanatha's
Cummins College of Engineering for Women
Hingna, Nagpur-441118.

Crosscutting Issue: Human Values

Syllabus

Computer Engineering : Sem III Course : Universal Human Values

Unit 1

[06 Hours]

Value education, definition, need for value education. The content and the process of value education, basic guidelines for value education, self-exploration as a means of value education, happiness and prosperity as part of value education.

Unit 2

[06 Hours]

Harmony of self with body, coexistence of self and body, understanding the needs of self and the needs of body, understanding the activities in the self and the activities in the body.

Unit 3

[06 Hours]

Values in relationship, the five dimensions of human endeavour, the holistic perception of harmony in existence.

Unit 4

[06 Hours]

Basics for ethical human conduct, defects in ethical human conduct, human rights violations and social disparities, value based life.

Reference Books

1. *Human Values and Professional Ethics* by R R Gaur, R Sangal, G P Bagaria, ExcelBooks, New Delhi, 2010
2. *Jeevan Vidya: Ek Parichaya*, A Nagaraj, Jeevan Vidya Prakashan, Amarkantak, 1999.
3. *Human Values*, A.N. Tripathi, New Age Intl. Publishers, New Delhi, 2004.
4. *Indian Ethos and Modern Management: Amalgam of the best of the ideas from the East and the West*, B.L. Bajpai, New Royal Book Bo., Lucknow, 2004
5. *Human society in ethics and politics*, Bertrand Russel, Routledge Publications, 2009



Kamind
Dr. Milind Khanapurkar
Principal
Maharshi Karve Stree Shikshan Sanatha's
Cummins College of Engineering for Women
Hingna, Nagpur-441118.

Crosscutting Issue: Human Values

Sample copy of CO-PO/PSO attainment of subjects addressing
crosscutting issues

Computer Engineering : Sem III
Course : Universal Human Values

Course Outcomes:

By the end of the course students shall be able to

CO1	Expected to become more aware of themselves, and their surroundings (family, society, nature)
CO2	Become more responsible in life, and in handling problems with sustainable solutions, while keeping human relationships and human nature in mind.
CO3	Handle better critical ability.
CO4	Become sensitive to their commitment towards what they have understood (human values, human relationship and human society).

BECME306T Universal Human Values

CO Code	PO Mapped	PSO Mapped	Program Outcomes (POs)															
			PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO 1	PSO 2	PSO 3	
BECME306T.1	PO 6,7,8,9	PSO3						2.875	2.875	2.875	2.875							2.875
BECME306T.2	PO 6,7,8,9	PSO3						2.875	2.875	2.875	2.875							2.875
BECME306T.3	PO 6,7,8,9	PSO3						2.763	2.763	2.763	2.763							2.763
BECME306T.4	PO 6,7,8,9	PSO3						2.875	2.875	2.875	2.875							2.875
0	0	0																
0	0	0																
CO-PO-PSO mapping			0	0	0	0	0	2.847	2.847	2.847	2.847	0	0	0				

Ramteke

Name & Signature of Course Teacher
Dr. Priyadarshini Ramteke



Kamind
Dr. Milind Khanapurkar
Principal
Maharshi Karve Stree Shikshan Sanatha's
Cummins College of Engineering for Women
Hingna, Nagpur-441118.

Crosscutting Issue: Human Values

Sample copy of Project undertaken by students

Project addressing Human Values Issues

Department : Electronics & Telecommunication Engineering

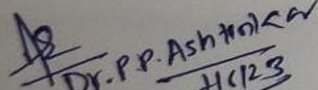


CERTIFICATE


This is to certify that the project work entitled "Smart Uniform for Coal Mine Workers" is a bonafide work carried out by Ms. Pooja Reshimwale (20201028118850), Ms. Sejal Dahake(20211028118609) and Ms. Vishakha Talmale(20201028118854) in partial fulfillment of the requirements for the award of degree of Bachelor of Engineering in Electronics & Telecommunication Engineering from MKSSS's Cummins College of Engineering for Women Nagpur, affiliated to RTM Nagpur University, during the academic year 2022-2023.

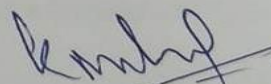

Project Guide:

Dr. Kanchan Wagh
Assistant Professor


Dr. P.P. Ashitokar
External Examiner


Internal examiner


Dr. Jitesh Shinde
Head of the Department


Dr. Milind Khanapurkar
Principal




Dr. Milind Khanapurkar
Principal
Maharshi Karve Stree Shikshan Sanatha's
Cummins College of Engineering for Women
Hingna, Nagpur-441110.

Sample copy of Project undertaken by students

Project addressing Human Values Issues

Department : Computer Engineering

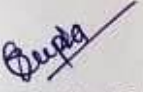
CERTIFICATE

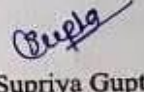
This is to certify that the following students of Computer Engineering Department

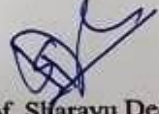
Aayushi Pandit
Bhargavi Chendke
Divya Wandhare
Harshal Jodangade


Have completed the Project Titled "Voice Assistant Application for Visually Impaired People"


Satisfactorily towards the Partial Fulfilment of the requirement of The Bachelor's Degree in Computer Engineering of RTM Nagpur University during Academic Year 2022 – 2023



Prof. Supriya Gupta
Guide


Prof. Supriya Gupta
Project Coordinator


Prof. Sharayu Deote
Head of the Department
Head
Department of Computer Engineering
Cummins College of Engg. For Women
Tal.: Hingna Dist.: Nagpur-441110


Dr. Sanjivani Shastri
Principal
OFFICE OF THE PRINCIPAL
MAHARSHI KARVE STREET SHIKSHAN SAMSTHA'S
CUMMINS COLLEGE OF ENGINEERING FOR WOMEN
HINGNA, NAGPUR-441110


Internal Examiner


External Examiner




Dr. Milind Khanapurkar
Principal
Maharshi Karve Street Shikshan Sanstha's
Cummins College of Engineering for Women
Hingna, Nagpur-441110.



Maharshi Karve Stree Shikshan Samstha's
**Cummins College of Engineering
for Women**

Sharpening Engineering Acumen with a difference

NAAC Accredited

Approved by AICTE, New Delhi & DTE, Mumbai
Affiliated to Rashtrasant Tukadoji Maharaj Nagpur University



Crosscutting Issue:

Environment and Sustainability

■ Tel. No. : 9657667030 ■ E-mail : office@cumminscollege.edu.in,
■ website : www.cumminscollege.edu.in

Mouje Sukli (Gupchup), Hingna, Nagpur-441110



Crosscutting Issue: Environment and Sustainability

Syllabus and Course Outcomes Allied Science : Sem I Course : Energy and Environment

RTMNU, Nagpur

SYLLABUS FOR FIRST YEAR (SEMESTER I & II) BACHELOR OF TECHNOLOGY
(For All Branches)

Course Code	BESI-3T			
Course Title	Energy and Environment			
Scheme & Credits	L	T/A	Credits	Semester I
	2	2	3	

Examination Scheme	
T (U) : 70 Marks T (I) : 30 Marks	Duration of University Exam. : 03 Hours

Course objectives

1. To impart knowledge in the domain of renewable and non-renewable energy sources.
2. To bring out Impact of Energy Technologies on Environment
3. To inculcate knowledge and skills about assessing the energy efficiency of different energy sources and use of advanced materials for sustainable development.

Course outcomes

After studying the course it is expected that the students will have/be able to:

- CO-1 Obtain the knowledge of solid and gaseous fuels and their Calorific Value determination.
- CO-2 Recognize the type of liquid fuels and their uses in IC engines.
- CO-3 Apply the knowledge about the use of alternative sources of energy & utilize solid waste as energy source
- CO-4 Analyze the impacts of Industrial pollution and its control.
- CO-5 Develop innovative ideas for use of advanced materials in sustainable development.

UNIT 1:- Basics of Energy and Solid Fuels

(8 Hours) (Marks 14)

- Basics of Energy - Introduction, sources and types of energy, Units of energy, Thermal Basics of energy -fuels, thermal energy contents of fuel, heat capacity, sensible and latent heat, evaporation, condensation, steam, moist air and humidity & heat transfer.
- Classification of fuels, Calorific Value (HCV & LCV). Determination of Calorific value by Bomb and Boy's Calorimeter.
- Solid Fuels:- Significance of Proximate and Ultimate Analysis of coal,
- Numerical based on Dulong's formula.
- Numerical on Goutal's Formula for Gross Calorific Value based on Proximate Analysis
- Numerical on Calorific Value determination.
- Numerical on GCV & NCV by using relation formula (convert answer in joules or one of the CV given in joules)

UNIT 2: Liquid and Gaseous Fuels

(8 Hours) (Marks 14)

- Liquid Fuel:-Fractional distillation of crude oil, Catalytic cracking and its advantages
- Knocking in internal combustion petrol and diesel engine, Octane and Cetane number, Knocking and its relationship with structure of fuel, Doping agents,
- Power alcohol, Gasohol, Diesohol, Aviation fuel, Bio-diesel.
- Gaseous Fuel:-CNG, H₂ as specialised fuel
- Combustion Calculations.



Kinlind
Dr. Milind Khanapurkar
Principal
Maharshi Karve Street Shikshan Sanatha's
Cummins College of Engineering for Women
Hingna, Nagpur-441110.

Crosscutting Issue: Environment and Sustainability

Syllabus

Allied Science : Sem I

Course : Energy and Environment

UNIT 3:- Alternate Sources of Energy & Waste to Energy Conversion (8 hours) (Marks 14)

- Bio-energy, Photolysis of water- Chemical Conversion of Solar Energy.
- Nuclear fuels: Numerical on Binding Energy & Average Binding Energy per Nucleon
- Fuel cells- working, advantages and disadvantages of alkaline, methanol fuel cells.
- Classification of waste on the basis of segregation at source, hazardous solid waste management technology: Physical method, chemical method, biological treatment, Eco-friendly Incineration, Depolymerization, landfill techniques.
- Utilization of Biogas and Landfill Gas for Biofuels and High Value Chemicals, gasification and Utilization of Syngas, Thermochemical Conversion of Syngas

UNIT 4:- Environmental impacts of Energy Technologies (8 Hours) (14 Marks)

- Industrial pollution due to non-renewable energy sources: General Introduction of Industrial pollution and its types. Principle, processes, source of pollution.
- Environmental impact and its control with reference to specific industries; like Nitrogen containing fertilizers- ammonia synthesis, Cement manufacturing Industry; Sulfuric acid manufacturing industry and petroleum Industry

UNIT 5:- Advanced materials for sustainable development (8 Hours) (14 Marks)

- Introduction of Advance materials, properties and applications:- composites, liquid Crystal polymers, conducting polymers, insulating materials, adhesives, biodegradable polymers.
- Nanomaterials in energy- Photochemical devices like lithium ion batteries, Nanomaterials for Energy Storage, nanomaterials in solar cells.

Books Recommended:

1. Text Book of Engineering Chemistry: S.S. Dara, S. Chand and Company Ltd. New Delhi.
2. Textbook of Engineering Chemistry: P.C. Jain and Monica Jain, Dhanpat Rai and Sons, New Delhi.
3. Materials Chemistry: A.V. Bharati and Walekar, Tech Max Publications, Pune.
4. Energy and Environment: Archana R Chaudhari and Aditi Pandet, S. Chand Publication

Reference Books:

1. A Text book of Engineering Chemistry: Shashi Chawla; Dhanpat Rai & Sons, New Delhi.
2. Applied Chemistry by N. Krishnamurthy: P. Vallinavagam. And K. Jeysubramanian TMH
3. Applied Chemistry for Engineers: T.S. Gyngell.
4. Fuels and Combustion: Amir Circar, Orient Longmans
5. Fundamentals of Engineering Chemistry (Theory and Practice) :S. K. Singh (New Age Materials)
6. Environmental Chemistry: B. K. Sharma
7. Industrial Energy Management and Utilization: L.C. Witte, P.S. Schmidt and D.R. Brown (Hemisphere Publishing Corporation, Washington, 1998)
8. Energy and Environment- NPTEL lecture notes



Crosscutting Issue: Environment and Sustainability

Syllabus of Lab

Allied Science : Sem I

Course : Energy and Environment Lab

ENERGY AND ENVIRONMENT LABORATORY (BESI-3P)

Course Code	BESI-3P				
Course Title	Energy and Environment Lab				
Scheme & Credits	L	T	P	Credits	Semester I
	0	0	2	1	

Examination Scheme	
P (U) : 25 Marks P (I) : 25 Marks	Duration of University Exam. : 03 Hours

Laboratory outcomes

After completion of this course, the student will develop competencies in

1. The practical knowledge of handling chemicals.
2. Analysing a broad foundation in energy and environment that stresses scientific reasoning and analytical problem solving with a molecular perspective.
3. Experimental techniques using modern instrumentation.

Students should-

- **Perform any six experiments.**
- **Study of any one experiment in virtual lab topics based on the syllabus.**
- **Study of any one demonstration experiment.**

- 1) Determination of Flash Point of the given sample by Cleveland's open cup apparatus.
- 2) Determination of Flash Point of the given sample by Abels/ Pensky Martens close cup apparatus.
- 3) Determination of Neutralisation number (Acid value) of oil.
- 4) Determination of Viscosity by Redwood Viscometer and specific gravity of Biodiesel at different temperatures.
- 5) To determine Sulphate Concentration in a given water sample.
- 6) Determination of amount of Chloride (in Cl⁻ form) by Mohr's method.
- 7) Determination of COD of water sample.
- 8) To determine the Total Solids, Suspended Solids and Total Dissolved Solids of a given water sample.
- 9) Determination of turbidity of given water sample by Nephelometry
- 10) Proximate analysis of coal -Determination of % of Moisture and % of Volatile Matter in coal sample
- 11) Proximate analysis of coal -Determination of % of ash in coal sample
- 12) Demonstration of determination of % carbon by Carbon residue conradson apparatus.
- 13) Demonstration of determination of Consistency of grease by Penetrometer.
- 14) Demonstration (Virtual) of determination of Calorific value of solid/liquid fuels.
- 15) Demonstration (Virtual) of estimation of flue gas by Orsat's apparatus.

Activities

1. Preparation of Audit Report for Industry waste generation.
2. Survey of greener synthesis of common drugs (in the form of chart and/or model)
3. Nearby industrial chemicals safety measures
4. Study of Chemical processes involved in nearby industries (Cement, Paper, Electroplating, Water purification industry etc.)
5. Study of separation and recycling techniques of polymers and E-waste.
6. Study of Biogas plant.
7. Study of the production process of biofuels.
8. Study of the biomass briquetting machine.



Kinlind
Dr. Milind Khanapurkar
 Principal
 Maharshi Karve Stree Shikshan Sanatha's
 Cummins College of Engineering for Women
 Hingna, Nagpur-441110.

Crosscutting Issue: Environment and Sustainability

Sample copy of CO-PO/PSO attainment of subjects addressing crosscutting issues

Allied Science: Sem I
Course : Energy and Environment

Course outcomes

After studying the course it is expected that the students will have/be able to:

- CO-1 Obtain the knowledge of solid and gaseous fuels and their Calorific Value determination.
- CO-2 Recognize the type of liquid fuels and their uses in IC engines.
- CO-3 Apply the knowledge about the use of alternative sources of energy& utilize solid waste as energy source
- CO-4 Analyze the impacts of Industrial pollution and its control.
- CO-5 Develop innovative ideas for use of advanced materials in sustainable development.

BESI-3T Energy & Environment

CO Code	PO Mapped	PSO Mapped	Program Outcomes (POs)											
			PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	0	0	2.1	2.1										
CO2	0	0	2.2	2.2										
CO3	0	0	2.4						2.4					
CO4	0	0	2.1	2.1					2.1					
CO5	0	0	2.5		2.5									
0	0	0												
CO-PO-PSO mapping			2.26	2.13333	2.5	0	0	0	2.25	0	0	0	0	0

Name & Signature of Course Teacher
Dr.Snehal Chavan



Kinlind
Dr. Milind Khanapurkar
Principal
Maharshi Karve Stree Shikshan Sanatha's
Cummins College of Engineering for Women
Hingna, Nagpur-441118.

Crosscutting Issue: Environment and Sustainability

Syllabus and Course Outcomes Mechanical Engineering : Sem VIII Course : Energy Conversion III

BEME805T: ENERGY CONVERSION - III (Theory)

CREDITS: 04

Teaching Scheme

Lectures: 3 Hours/Week

Tutorial: 1 Hour/Week

Examination Scheme

Duration of Paper: 03 Hours

University Assessment: 80 Marks

College Assessment: 20 Marks

Course Objectives and Expected Outcomes : This course includes the current energy scenario, various energy conservation techniques, energy auditing, study of various non conventional energy sources and their significance in present energy crises.. This subject also helps the students in understanding various Hydraulics and Pneumatic techniques used in various applications & industries.

UNIT – I

[8 Hrs.]

Gas Turbines:-Ideal cycles isentropic and small stage efficiency, application of gas turbine pressure losses, effect of intercooling, reheat & regeneration, fuel-air ratio, combustion efficiency, performance calculation, open cycle & closed cycle gas turbine plants cogenerations & combined power cycles.

UNIT – II

[8 Hrs.]

Principles & working of turbojet, turbo-prop, Ramjet & pulse jet, simple turbojet cycle, thrust power, propulsive power. Thermal efficiency, propulsive efficiency, overall efficiency.

Nuclear Power Plant: Introduction, nuclear reactor, classification, general components, operation, problems of reactor operation, site selection, comparison of nuclear plants with thermal plants. (analytical treatment is not expected)

UNIT – III

[8 Hrs.]

Principle of solar energy collection, solar energy and sources of power generation, solar constant, solar geometry, flat plate & concentrating collectors for water and air heating, solar energy storage, solar pond, application of solar energy for cooking, drying, solar photovoltaic system & its applications. Introduction to fuel cell. Working of wind generators & MHD generator (theoretical treatment is expected)

UNIT – IV

[8 Hrs.]

Energy Auditing: Introduction, global and Indian energy scenario, need of importance of energy conversion. importance of energy audit, uses of energy audit, basic terms of energy audit, types of energy audit, procedure for carrying energy audit, instruments used for energy audit such as power analyzer, multipoint heat flow meter, Lux meter, portable infrared radiation thermometer, thermocouple based temperature indicator. Payback period, Return on Investment (ROI), life cycle costs, Sankey diagram specific energy consumption.

UNIT – V

[8 Hrs.]

Hydraulic systems: Introduction, essential elements of a hydraulic system: Flow actuators, directional control valves, pressure control valves, accumulators, basic hydraulic circuit, meter in & meter out circuits. Use of single, double actuator, crane, jacks. Grinding machine.



Crosscutting Issue: Environment and Sustainability

Syllabus and Course Outcomes Mechanical Engineering : Sem VIII Course : Energy Conversion III

UNIT – VI

[8 Hrs.]

Pneumatic Systems : Principle of pneumatics, comparison with hydraulic power transmission. Study of various Compressors used in pneumatic system, air preparatory unit, pneumatic valve. Various Pneumatic circuits.

LIST OF TUTORIALS: Tutorials based on above syllabus.

TEXT BOOKS:

1. Non-Conventional Energy Storage, Rai G.D., Khanna Ppublication.
2. Solar Energy Principles of Thermal Collection and Storage, Sukhatme, S.P., Tata McGraw Hill.
3. Industrial Hydraulics, John J. Pippenger, Tata McGraw Hill.
4. Pneumatic Systems, S. R. Mujumdar, Tata McGraw Hill.
5. Energy Conservation - related booklets published by National Productivity Council (NPC) & Petroleum Conservation Research Association.(PCRA).
6. Efficient Use of Electricity in Industries, B.G. Desai, M.D. Parmar, R. Paraman and B.S. Vaidya, ECQ series Devki R & D. Engineers, Vadodara.
7. Thermal Engineering, P.L. Ballaney, Khanna publishers.
8. Gas Turbine& Jet Propulsion, Dubey & Khajuriya, Dhanpat Rai & Sons.

REFERENCE BOOKS:

1. Solar Energy Fundamentals and Applications, Garg, H.P., Prakash J., Tata McGraw Hill.
2. Gas Turbine Theory, Cohen and Rogers, Pearson.



Kinlind
Dr. Milind Khanapurkar
Principal
Maharshi Karve Street Shikshan Sanatha's
Cummins College of Engineering for Women
Hingna, Nagpur-441110.

Crosscutting Issue: Environment and Sustainability

Sample copy of CO-PO/PSO attainment of subjects addressing crosscutting issues

Mechanical Engineering: Sem VIII Course : Energy Conversion III

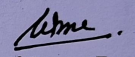
❖ Course Outcome:

After the completion of Course, Students will be able to.....

		Blooms Level	PO
ME805T.1	<i>Explain</i> the working of gas turbine and <i>Analyze</i> the performance of it	Level 2,4	PO 2
ME805T.2	<i>Explain</i> the working of jet propulsion system <i>Analyze</i> the performance of it	Level 2,4	PO 2
ME805T.3	<i>Define the</i> fundamentals of solar energy and <i>Explain</i> its conversion into thermal and electrical energy	Level 1, 2	PO 2,7
ME805T.4	<i>Explain</i> energy auditing and its importance in minimizing energy loss	Level 2	PO 2,5,7
ME805T.5	<i>Explain</i> hydraulic and pneumatic systems	Level 2	PO 2,3

BEME 805 EC III

CO Code	PO Mapped	PSO Mapped	Program Outcomes (POs)																
			PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO 1	PSO 2	PSO 3	PSO 4	
ME805T1	PO 2	PSO1,2		2.702												2.702	2.702		
ME805T2	PO 2	PSO1,2		2.635												2.635	2.635		
ME805T3	PO 2,7	PSO1,2		2.494						2.494						2.494	2.494		
ME805T4	PO 2,5,7	PSO1,2		2.925				2.925		2.925						2.925	2.925		
ME805T5	PO 2,3	PSO1,2		2.888	2.88											2.88	2.88		
0	0	0																	
CO-PO-PSO mapping			0	2.729	2.88	0	2.925	0	2.7095	0	0	0	0	0					

AS Getme 
Name & Signature of Course Teacher
Abhijit S.Getme




Dr. Milind Khanapurkar
Principal
Maharshi Karve Stree Shikshan Sanatha's
Cummins College of Engineering for Women
Hingna, Nagpur-441118.

Crosscutting Issue: Environment and Sustainability

Sample copy of evaluation of subjects addressing crosscutting issues

Environment and Sustainability

Department : Electronics & Tele-Communication Engineering

Sem IV

Course : Environmental Studies

Department of Electronics & Telecommunications							
Environmental Studies							
Final Grades							
Roll No	Student Name	Marks on attendance	Seminar	Project	Overall Performance	Total	GRADES
		40	20	20	20	100	
4ETC01	AARTI NAGPURE	30	18	0	20	68	A
4ETC02	ANJALI SURWADE	30	18	0	18	66	A
4ETC03	BHUVANA KUMBHARE	35	18	20	20	93	O
4ETC04	DIVYA JOSHI	30	18	0	20	68	A
4ETC05	GARIMA SINGH	25	18	0	18	61	A
4ETC06	HEMALATA PAONIKAR	30	18	0	15	63	A
4ETC07	HIMANI PADOLE	25	18	15	18	76	O
4ETC08	KRUTIKA CHAVAN	20	18	0	15	53	B
4ETC09	MANSI PHALSIKAR	35	18	15	20	88	O
4ETC10	NANDINI MENJOGE	35	18	0	20	73	A
4ETC11	NEHA YADAV	40	18	0	16	74	A
4ETC12	PALLAVI DAHAKE	40	18	0	18	76	O
4ETC13	PRANAJALI GUJAR	40	18	0	18	76	O
4ETC14	RAKSHA SINGHAL	25	18	0	18	61	A
4ETC15	RASHMI FATING	35	18	0	18	71	A
4ETC16	KIRTI DEGAWAR	20	18	0	15	53	B

Santake

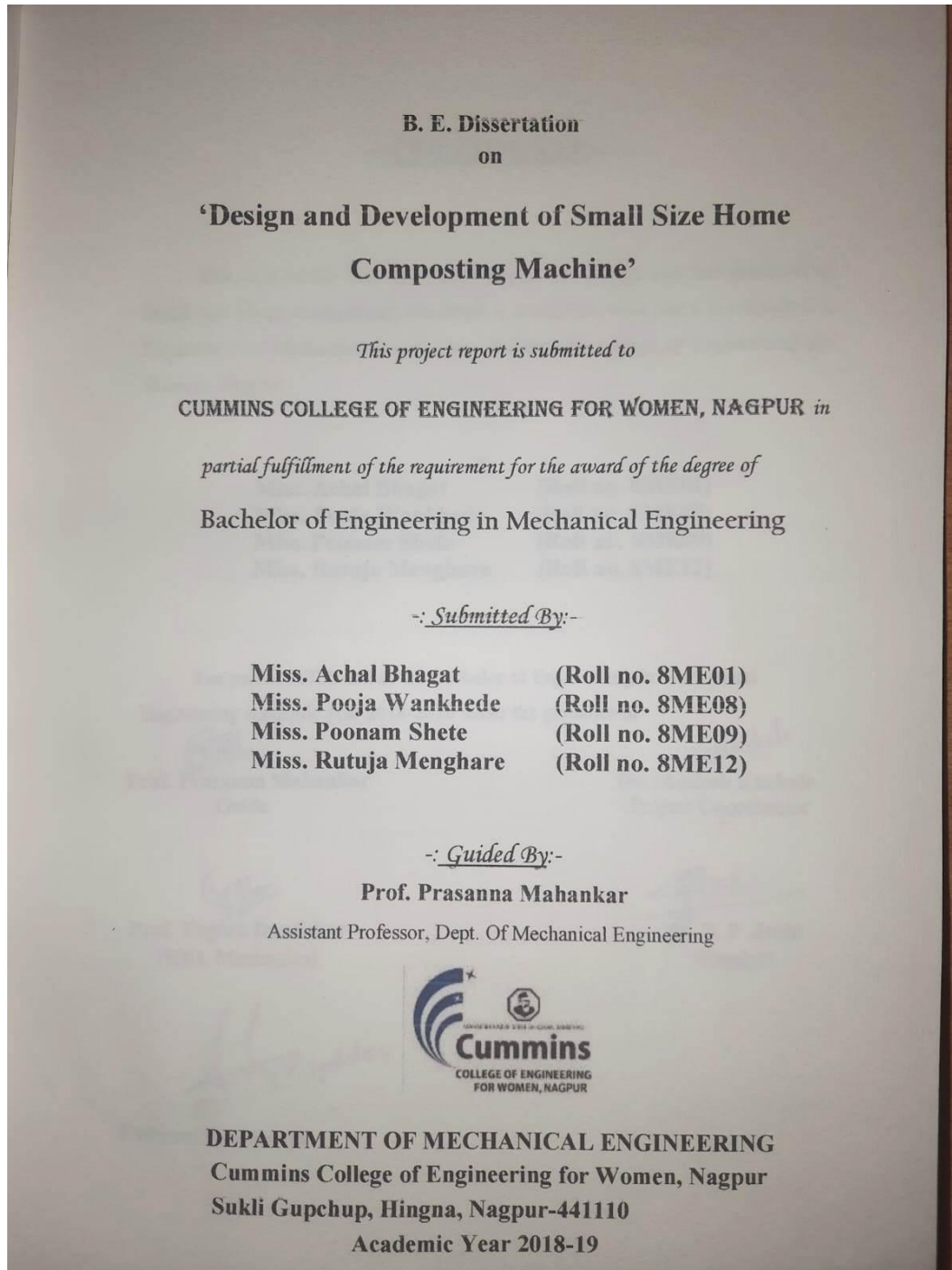


Kimind
Dr. Milind Khanapurkar
Principal
Maharshi Karve Stree Shikshan Sanatha's
Cummins College of Engineering for Women
Hingna, Nagpur-441118.

Crosscutting Issue: Environment and Sustainability

Sample copy of Project undertaken by students

Final Year Project Topic addressing the “Environment and Sustainability” Issue
Mechanical Engineering




Dr. Milind Khanapurkar
Principal
Maharshi Karve Stree Shikshan Sanatha's
Cummins College of Engineering for Women
Hingna, Nagpur-441110.

Crosscutting Issue: Environment and Sustainability

Sample copy of Project undertaken by students

Final Year Project Topic addressing the “Environment and Sustainability” Issue


-: CERTIFICATE:-

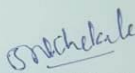
This is to certify that the Project Report on ‘Design and Development of Small Size Home Composting Machine’ is a bonafide work and it is submitted to Department of Mechanical Engineering of *Cummins college of Engineering for Women, Nagpur.*


By

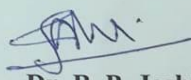
Miss. Achal Bhagat	(Roll no. 8ME01)
Miss. Pooja Wankhede	(Roll no. 8ME08)
Miss. Poonam Shete	(Roll no. 8ME09)
Miss. Rutuja Menghare	(Roll no. 8ME12)

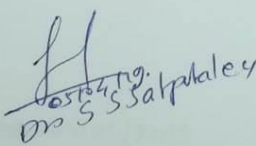
For partial fulfillment of the Bachelor of Engineering in Mechanical Engineering academic year 2018-2019 under the guidance of


Prof. Prasanna Mahankar
Guide


Dr. Shailesh Khakale
Project Coordinator


Prof. Yogesh Dandekar
HOD, Mechanical


Dr. B. P. Joshi
Principal


Dr. S. S. Salpale
External Examiners

ii




Dr. Milind Khanapurkar
Principal
Maharshi Karve Stree Shikshan Sanatha's
Cummins College of Engineering for Women
Hingna, Nagpur-441110.

Sample copy of Project undertaken by students

Final Year Project Topic addressing the “Environment and Sustainability” Issue

Mechanical Engineering

-: CERTIFICATE :-

This is to certify that the Project Report on ‘Design and Fabrication of Automatic Solar Operated Paper Cutting Machine’ is a bonafide work and it is submitted to Department of Mechanical Engineering of *Cummins college of Engineering for Women, Nagpur.*

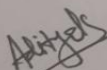
By

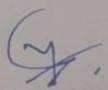
Miss. Bhavana Masurkar (8ME02)

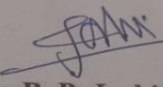
Miss. Pallavi Binzade (8ME15)

Miss. Priyanka Patil (8ME17)

For partial fulfillment of the Bachelor of Engineering in Mechanical Engineering academic year 2019-2020 under the guidance of


Prof. Aditya Kawadaskar
Project Guide


Prof. Yogesh Dandekar
Project Coordinator


Dr. B. P. Joshi
Principal

External Examiners

2




Dr. Milind Khanapurkar
Principal
Maharshi Karve Stree Shikshan Sanatha's
Cummins College of Engineering for Women
Hingna, Nagpur-441110.



Maharshi Karve Stree Shikshan Samstha's
**Cummins College of Engineering
for Women**

Sharpening Engineering Acumen with a difference
NAAC Accredited

Approved by AICTE, New Delhi & DTE, Mumbai
Affiliated to Rashtrasant Tukadoji Maharaj Nagpur University



Activities of different student chapter and student clubs addressing crosscutting issues

■ Tel. No. : 9657667030 ■ E-mail : office@cumminscollege.edu.in,
■ website : www.cumminscollege.edu.in

Mouje Sukli (Gupchup), Hingna, Nagpur-441110





Maharshi Karve Stree Shikshan Samstha's
**Cummins College of Engineering
for Women**

Sharpening Engineering Acumen with a difference

NAAC Accredited

Approved by AICTE, New Delhi & DTE, Mumbai
Affiliated to Rashtrasant Tukadoji Maharaj Nagpur University



ACADEMIC YEAR

2022-23

■ Tel. No. : 9657667030 ■ E-mail : office@cumminscollege.edu.in,
■ website : www.cumminscollege.edu.in

Mouje Sukli (Gupchup), Hingna, Nagpur-441110



**List of Activities addressing Cross Cutting Issues Professional Ethic,
Gender, Human Values, Environment and Sustainability
Year 2022-023**

Cross Cutting Issues	Date	Activity Name	Place	No. Of Participant	Conducted By
Profession Ethics	9/04/ 2022	Skill development activity in village (Communication skill)	Sukli Village	38	NSS Cell of CCOEW N
Profession Ethics, Human Values	23/04/2022	Skill development activity in village (Paper craft , Vedic Maths)	Sukli Village	22	NSS Cell of CCOEW N
Human Values (Dignity)	7/04/2022	Skill development activity in village (Self Defence)	Sukli Village	20	NSS Cell of CCOEW N
Environment and Sustainability	21/07/2022	Vaccination drive	CCOEW Nagpur	250	NSS Cell of CCOEW N
Human Values	10/08/2022	National flag distribution	CCOEW Nagpur	170	NSS Cell of CCOEW N
Human Values	5/ 10/ 2022	Cloth donation drive	Old Age home ASHOKV AN	32	NSS Cell of CCOEW N
Human Values, Professional Ethic	23/10/2022	Sewa Samwad	Visit to IIM Nagpur	28	NSS Cell of CCOEW N
Gender	3/11/2022	Guest lecture session on Adolescent nutrition, health, and Emotional aspects	CCOEW Nagpur	60	Allied Science Department
Professional Ethics	14/11/2022 to 16/11/2022	3 day workshop on Madhubani Art for beginners	CCOEW Nagpur	50	Allied Science Department
Gender	9/11/2022 to 16/11/2022	Workshop on Importance of Workout and yogasana in daily life with practical	CCOEW Nagpur	80	Allied Science Department




Dr. Milind Khanapurkar
 Principal
 Maharshi Karve Stree Shikshan Sanatha's
 Cummins College of Engineering for Women
 Hingna, Nagpur-441118.

**List of Activities addressing Cross Cutting Issues Professional Ethic,
Gender, Human Values, Environment and Sustainability
Year 2022-023**

Cross Cutting Issues	Date	Activity Name	Place	No. Of Participant	Conducted By
Environment and Sustainability	12/12/2022	Workshop on Composting from Kitchen Waste	CCOEW Nagpur	150	Unnat Bharat Abhiyan
Environment and Sustainability	10/02/2023	Health Check-up Camp	CCOEW Nagpur	65	NSS Cell of CCOEW N
Environment and Sustainability	01/03/2023	Blood Donation Camp	CCOEW Nagpur	19	NSS Cell of CCOEW N
Environment and Sustainability	6/04/2023	Traffic Safety	CCOEW Nagpur	123	NSS Cell of CCOEW N
Environment and Sustainability	8/10/2023	Street Play on Environment issue	Zero Miles, Sadar, Nagpur	17	NSS Cell of CCOEW N
Gender	29/3/2023	Women Day Celebration on topic "Read, Think and Express"	ICCOEW Nagpur	250	IETE and Muktagan Student Club, CCOEW



Milind

Dr. Milind Khanapurkar
Principal

Maharshi Karve Stree Shikshan Sanatha's
Cummins College of Engineering for Women
Hingna, Nagpur-441118.



Maharshi Karve Stree Shikshan Samstha's
**Cummins College of Engineering
for Women**

Sharpening Engineering Acumen with a Difference
NAAC Accredited



Approved by AICTE, New Delhi & DTE, Mumbai
Affiliated to Rashtrasant Tukadoji Maharaj Nagpur University

Glimpses



Workshop on Composting from Kitchen Waste

Street Play on Water Pollution and Air Pollution



Cloth Donation Drive

■ Tel. No. : 9657667030 ■ E-mail : office@cumminscollege.edu.in,
■ website : www.cumminscollege.edu.in

Mouje Sukli (Gupchup), Hingna, Nagpur-441110





Maharshi Karve Stree Shikshan Samstha's
**Cummins College of Engineering
for Women**

Sharpening Engineering Acumen with a difference

NAAC Accredited

Approved by AICTE, New Delhi & DTE, Mumbai
Affiliated to Rashtrasant Tukadoji Maharaj Nagpur University



ACADEMIC YEAR

2021-22

■ Tel. No. : 9657667030 ■ E-mail : office@cumminscollege.edu.in,
■ website : www.cumminscollege.edu.in

Mouje Sukli (Gupchup), Hingna, Nagpur-441110



List of Activities Addressing Cross Cutting Issues Professional Ethic, Gender, Human Values, Environment and Sustainability

Year 2021-22

Cross Cutting Issues	Date	Activity Name	Place	No. of Participant	Conducted By
Gender	28/12/2021	Webinar on awareness of Menstrual Health and Hygiene training	Online, CCOEW Nagpur	100	Allied Science Department
Environment and Sustainability	28/10/2021	E-waste Collection Drive	CCOEW Nagpur	55	Unnat Bharat Abhiyan and NSSCell of CCOEWN
Human Values (Dignity)	08/ 12/ 2021	Mission Sahasi (Self Defence Workshop)	Sureh Bhatta sabhagrah	33	NSS cell of CCOEWN
Environment and Sustainability	21/10/2021	Webinar on “ FOOD-PLANET-HEALTH”	Online, CCOEW Nagpur	117	NSS cell of CCOEWN
Professional Ethics	20/12/2021 to 24/12/2021)	5-day workshop on Kalamkari Art for beginners	Online, CCOEW Nagpur	50	Allied Science Department
Human Values (Duty)	25/01/2022	National Voter Day	Online, CCOEW Nagpur	143	NSS cell of CCOEWN
Environment and Sustainability	21/05/2022	Shram Dan in Reconstruction and digging Dam in Summer	Mandava, Village	60 plus	Unnat Bharat Abhiyan, CCOEWN
Environment and Sustainability	11/05/2022	Guest Lecture on “Integrated Approach in Science and Technology for Sustainable Future”	CCOEW Nagpur	200 Plus	Technical Committee, CCOEW Nagpur
Environment and Sustainability	10/5/2022	Group Discussion on Hydrogen Green Fuel for Future Vehicle”	CCOEW Nagpur	30	Technical Committee, CCOEW Nagpur
Gender and Environment and Sustainability	26/03/2022	Street play on “Women Empowerment” and “environment awareness	Sukali Village	18	NSS cell of CCOEWN



List of Activities Addressing Cross Cutting Issues Professional Ethic, Gender, Human Values, Environment and Sustainability

Year 2021-22

Cross Cutting Issues	Date	Activity Name	Place	No. of Participant	Conducted By
Human Values	12/12/2021	Participation in “Golden Victory Day celebration”	Devnagar, Nagpur	35	NSS Cell of CCOWN
Gender	8/12/2021	Workshop on “Cybercrime, its effects and challenges”	Sureshbhat Sagbhagrah, Nagpur	31	RTMNU in collaboration with Nagpur police



Kind
Dr. Milind Khanapurkar
Principal
Maharshi Karve Stree Shikshan Sanatha's
Cummins College of Engineering for Women
Hingna, Nagpur-441118.



Maharshi Karve Stree Shikshan Samstha's
**Cummins College of Engineering
for Women**

Sharpening Engineering Acumen with a Difference
NAAC Accredited



Approved by AICTE, New Delhi & DTE, Mumbai
Affiliated to Rashtrasant Tukadoji Maharaj Nagpur University

Glimpses



E-Waste Collection Drive



Street play on Women Empowerment and Environment Awareness

Celebrating Golden Victory Day

Tel. No. : 9657667030 E-mail : office@cumminscollege.edu.in,
website : www.cumminscollege.edu.in

Mouje Sukli (Gupchup), Hingna, Nagpur-441110





Maharshi Karve Stree Shikshan Samstha's
**Cummins College of Engineering
for Women**

Sharpening Engineering Acumen with a difference

NAAC Accredited

Approved by AICTE, New Delhi & DTE, Mumbai
Affiliated to Rashtrasant Tukadoji Maharaj Nagpur University



ACADEMIC YEAR

2020-21

■ Tel. No. : 9657667030 ■ E-mail : office@cumminscollege.edu.in,
■ website : www.cumminscollege.edu.in

Mouje Sukli (Gupchup), Hingna, Nagpur-441110



List of Activities addressing Cross Cutting Issues Professional Ethic, Gender, Human Values, Environment and Sustainability

Year 2020-21

Cross Cutting Issues	Date	Activity Name	Place	No. of Participant	Conducted By
Environment and Sustainability	4/1/2021	Online Pledges programme “Majhi Vasundhara (My Earth)” of Environment and Climate Change Department Govt. of Maharashtra	Online, CCOEW Nagpur	75 Students and 30 Faculties	NSScell of CCOEWN
Environment and Sustainability		Online Pledges programme Jal Shapath of Rashtriya Jal Mission, GOI	Online, CCOEW Nagpur		NSScell of CCOEWN
Gender	11/03/2021	Online Panel Discussion on Social Issues faced by Today’s Women	Online, CCOEW Nagpur	230	NSS in association with IEEE, IETE of CCOEWN
Environment and Sustainability	12/07/2020	Green Initiative for Environmental Ecosystem	Online, CCOEW Nagpur	270	NSS cell of CCOEWN
Environment and Sustainability	22/07/2020	Each one Plant One	CCOEW Nagpur	20	NSS cell of CCOEWN
Human Values (Duty)	15/08/2022	Independence Day	CCOEW Nagpur	28	NSS cell of CCOEWN
Environment and Sustainability	15-21 May 2022	FDP on Renewable Energy Systems	Online, CCOEW Nagpur	100	Mechanical Department CCOEW Nagpur





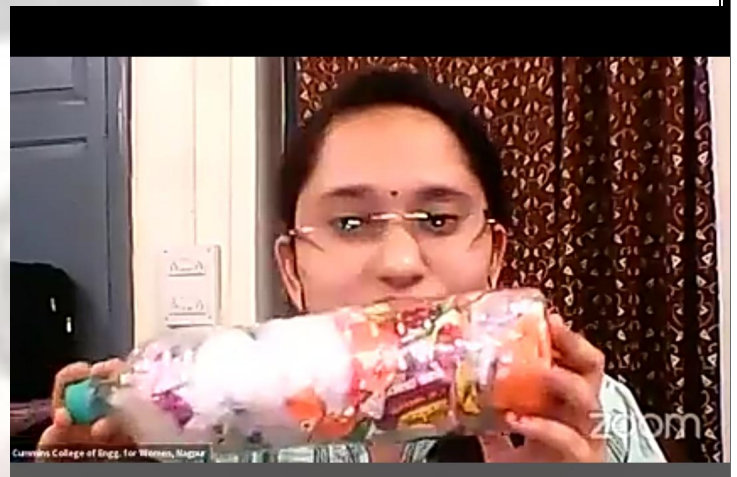
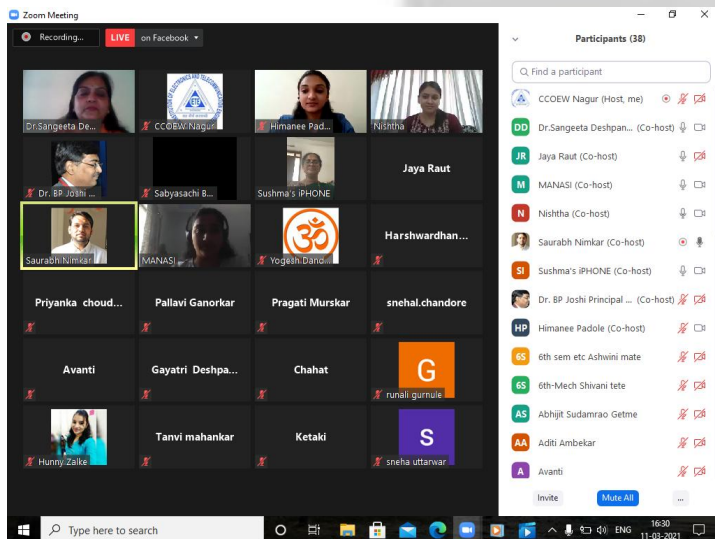
Maharshi Karve Stree Shikshan Samstha's
**Cummins College of Engineering
for Women**

Sharpening Engineering Acumen with a difference
NAAC Accredited



Approved by AICTE, New Delhi & DTE, Mumbai
Affiliated to Rashtrasant Tukadoji Maharaj Nagpur University

Glimpses



Panel Discussion on Social
Issues faced by Today's Women

Eco-friendly brick making
demonstration

■ Tel. No. : 9657667030 ■ E-mail : office@cumminscollege.edu.in,
■ website : www.cumminscollege.edu.in

Mouje Sukli (Gupchup), Hingna, Nagpur-441110





Maharshi Karve Stree Shikshan Samstha's
**Cummins College of Engineering
for Women**

Sharpening Engineering Acumen with a difference

NAAC Accredited

Approved by AICTE, New Delhi & DTE, Mumbai
Affiliated to Rashtrasant Tukadoji Maharaj Nagpur University



ACADEMIC YEAR

2019-20

■ Tel. No. : 9657667030 ■ E-mail : office@cumminscollege.edu.in,
■ website : www.cumminscollege.edu.in

Mouje Sukli (Gupchup), Hingna, Nagpur-441110



List of Activities addressing Cross Cutting Issues Professional Ethic, Gender, Human Values, Environment and Sustainability

Year 2019-20

Cross Cutting Issues	Date	Activity Name	Place	No. of Participant	Conducted By
Human Value (Donation and Seva)	18, 20, 22 April 2020	Blood Donation Camp	Devnagar Campus	20 Students and 10 Faculties	NSS cell of CCOEWN
Professional Ethics	4/2/2020	Road Safety Awareness Programme	CCOEW Nagpur	200 Students	NSS cell of CCOEWN
Human Value (Donation and Seva)	21/01/2020	Blood Donation Camp	CCOEW Nagpur	75 Students	NSS cell of CCOEWN
Environment and Sustainability	11/1/2020	No Plastic Campaign	Nagpur	30 Students	NSS cell of CCOEWN
Human Value (Donation and Seva)	8 - 15 January 2020	Daan Utsav	CCOEW Nagpur	200	NSS cell of CCOEWN




Dr. Milind Khanapurkar
 Principal
 Maharshi Karve Strree Shikshan Sanatha's
 Cummins College of Engineering for Women
 Hingna, Nagpur-441110.



Maharshi Karve Stree Shikshan Samstha's
**Cummins College of Engineering
for Women**

Sharpening Engineering Acumen with a difference
NAAC Accredited

Approved by AICTE, New Delhi & DTE, Mumbai
Affiliated to Rashtrasant Tukadoji Maharaj Nagpur University



Glimpses



**Blood Donation camp 18,
20 and 22 April 2020**

**Students participating in No
Plastic Campaign**



Road Safety Awareness Program

■ Tel. No. : 9657667030 ■ E-mail : office@cumminscollege.edu.in,
■ website : www.cumminscollege.edu.in

Mouje Sukli (Gupchup), Hingna, Nagpur-441110





Maharshi Karve Stree Shikshan Samstha's
**Cummins College of Engineering
for Women**

Sharpening Engineering Acumen with a difference

NAAC Accredited

Approved by AICTE, New Delhi & DTE, Mumbai
Affiliated to Rashtrasant Tukadoji Maharaj Nagpur University



ACADEMIC YEAR

2018-19

■ Tel. No. : 9657667030 ■ E-mail : office@cumminscollege.edu.in,
■ website : www.cumminscollege.edu.in

Mouje Sukli (Gupchup), Hingna, Nagpur-441110



List of Activities addressing Cross Cutting Issues Professional Ethic, Gender, Human Values, Environment and Sustainability

Year 2018-19

Cross Cutting Issues	Date	Activity Name	Place	No. Of Participant	Conducted By
Human Values (Duty)	5/07/2018	Blood Donation Camp	CCOEW Nagpur	25	NSS cell of CCOEWN
Environment and Sustainability	17/08/2018	Tree Plantation	CCOEW Nagpur	170	NSS cell of CCOEWN
Environment and Sustainability	04/10/2018	Swachha Bharat Abhiyan	Mandwa Villge	52	NSS cell of CCOEWN
Human Values (Dignity)	3/1/2019	Self defence training	CCOEW Nagpur	100	NSS cell of CCOEWN
Human Values (Dignity)	28/01/2019	Blood Donation Camp	CCOEW Nagpur	35	NSS cell of CCOEWN
Environment and Sustainability	15/02/2019	Jal Saksharta Samwad	CCOEW Nagpur	30	NSS cell of CCOEWN
Gender	8/3/2019	“Tech and Buisness” Session on Womens Day Celebration	CCOEW Nagpur	150	ED Cell of CCOEWN




Dr. Milind Khanapurkar
 Principal
 Maharshi Karve Strree Shikshan Sanatha's
 Cummins College of Engineering for Women
 Hingna, Nagpur-441118.



Maharshi Karve Stree Shikshan Samstha's
**Cummins College of Engineering
for Women**

Sharpening Engineering Acumen with a difference
NAAC Accredited

Approved by AICTE, New Delhi & DTE, Mumbai
Affiliated to Rashtrasant Tukadoji Maharaj Nagpur University



Glimpses



Jal Saksharata Samvad



Self Defence Training



**Swachhata Abhiyan by
NSS Cell**



**Tree Plantation by NSS
Cell**

■ Tel. No. : 9657667030 ■ E-mail : office@cumminscollege.edu.in,
■ website : www.cumminscollege.edu.in

Mouje Sukli (Gupchup), Hingna, Nagpur-441110

