



## 1.3.1.

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

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# Dept. of Civil Engineering

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**MAHARAJ VIJAYARAM GAPATHI RAJ COLLEGE OF ENGINEERING(AUTONOMOUS)**

Vijayaram Nagar Campus, Chintalavalasa, Vizianagaram-535005, Andhra Pradesh

Accredited by NAAC with 'A' Grade & Listed u/s 2(f) & 12(B) of UGC

(Approved by AICTE, New Delhi and Permanently Affiliated by JNTUK-Kakinada)

NBA Accredited UG Courses: B.Tech(MEC), B.Tech(CIV), B.Tech(EEE), B.Tech(ECE), B.Tech(CSE), B.Tech(IT),  
B.Tech(MEC) & B.Tech(CHE) and PG Course: MBA

**List and description of the courses which address the Gender, Environment and Sustainability, Human Values and Professional Ethics into the Curriculum in Civil Engineering.**

**A1 Regulation**

Sl.No.	Course Code	Course Name	Semester	Description
1	A1CHT001	Environmental Studies	I	Environment studies is a 3 credits course offered in 1st year of all UG programmes to sensitize students regarding the importance of environment and sustainability.
2	A1CET209	Water Resources Engineering	V	This course deals with the various sources of water, their measurement and management.
3	A1CET213	Environmental Engineering I	V	This course introduces the most important components of environment i.e., Water quality measurement, water treatment and management.
4	A1CET217	Environmental Engineering II	VI	In this course, the various methods available to segregation, treatment, and management of waste and wastewater are discussed.
5	A1CEL210	Environmental Engineering Laboratory	VII	The various laboratory tests available for measuring environmental parameters are performed in this course.
6	A1CET321	Remote Sensing and GIS	VII	Remote Sensing and GIS are powerful tools that are used to map environment, perform analysis and can give valuable inputs in fields like Water Resources Management, Environment and Sustainability, Highway Planning, etc.,
7	A1CET323	Solid Waste Management	VII	This course deals with the origin, collection, transport, treatment, and management of solid waste.
8	A1CET402	Air Pollution and control	Open Elective	Air pollution and control deals with the various techniques available for better management of air pollution and its effects.
9	A1CET405	Disaster management	Open Elective	This course deals with the various aspects of disaster management cycle.
10	A1CET406	Applications of RS & GIS	Open Elective	Remote Sensing and GIS are powerful tools that are used to

				map environment, perform analysis and can give valuable inputs in fields like Water Resources Management, Environment and Sustainability, Highway Planning, etc.,
11	A1EHA501	NSS	Audit Course	NSS provides a platform for various hands-on experiences related to gender sensitivity which enable students to interface with real life situations such as field work, community outreach, and gender sensitization activities.
12	A1ACA509	Professional Ethics & IPR	Audit Course	This course offers knowledge of Human Values and Engineering Ethics, have the knowledge of Engineering as Social Experimentation and Engineers' responsibility for safety and risks, explain about responsibilities and rights of an Engineer and Global issues and IPR and understand the relevance of Engineer to society and be responsible to maintain safety at work place.

**List and description of the courses which address the Gender, Environment and Sustainability, Human Values and Professional Ethics into the Curriculum in Civil Engineering.**

**A2 Regulation**

Sl.No.	Course Code	Course Name	Semester	Description
1	A2EHA701	Constitution of India	I	This course discusses the importance of constitution of India and stresses the importance of knowledge of the same.
2	A2CHA703	Environmental Science	III	Environment science course is offered in 1st year of all UG programmes to sensitize students regarding the importance of environment and sustainability
3	A2CET307	Water Resources Engineering	VI	This course deals with the various sources of water, their measurement and management
4	A2CET407	Remote Sensing and GIS	VI	Remote Sensing and GIS are powerful tools that are used to map environment, perform analysis and can give valuable inputs in fields like Water Resources Management, Environment and Sustainability, Highway Planning, etc.,
5	A2CEI306	Environmental Engineering	VI	The most important components of environment i.e., Water quality measurement, water treatment and management and the various methods available to segregation, treatment, and management of waste and wastewater are discussed.
6	A2CET414	Environmental Impact Assessment	VI	This course deals with the general practices of environmental impact assessment for projects undertaken in ecologically

				sensitive areas. An EIA clearance report is mandatory for every major govt. or private project.
7	A2CET417	Water Resources System Planning and Management	VII	The various methods and techniques used in planning and management of water resources systems.
8	A2CET419	Advanced Environmental Engineering	VII	In this course, advanced topics of environmental management such as advanced filtration and disinfection.
9	A2CET422	Environmental Economics	VII	This course deals with the various economic aspects such as introduction to market for environmental resources, natural resources management, valuation of environmental features and sustainable development.
10	A2CET428	Air Pollution Engineering	VII	Air pollution and control deals with the various techniques available for better management of air pollution and its effects.
11	A2CEP601	Socially Relevant Project	VII	Students have to select a social issue, perform a detailed analysis and suggest a solution for the same.
12	A2CET502	Industrial Waste Treatment	Open Elective	This course deals with characterization, segregation, treatment, and management of various types of industrial wastes such as Paper, Breweries, Wineries, Distilleries, Tannery, Textile, and Sugar industries.
13	A2CET507	Integrated Solid Waste Management	Open Elective	This course deals with the origin, collection, transport, treatment, and management of solid waste.
14	A2CET515	Solid Waste Management	Open Elective	This course deals with the origin, collection, transport, treatment, and management of solid

				waste.
15	A2CET516	Technology in Rural Development	Open Elective	The key aspects and advantages of introduction of technology in rural area development is discussed in this course.

# Dept. of EEE

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Vijayaram Nagar Campus, Chintalavalasa, Vizianagaram-535005, Andhra Pradesh

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B.Tech(MEC) & B.Tech(CHE) and PG Course: MBA



**Courses addressing the  
Gender, Environment and  
Sustainability, Human values  
and Professional Ethics  
(2015-16 to 2019-20)**

**No. of Courses addressing the Gender, Environment and Sustainability, Human values and Professional Ethics during the last five years**

Academic year	Year of study	No. of Courses addressing the Gender, Environment and Sustainability, Human values and Professional Ethics			
		Under A2 Regulation		Under A1 Regulation	
		UG (B.Tech.-EEE)	PG (M.Tech.-Power Systems)	UG (B.Tech.-EEE)	PG (M.Tech.-Power Systems)
2019-20	I	1	---	---	---
	II	---	---	4	2
	III	---	---	4	---
	IV	---	---	5	---
2018-19	I	---	---	1	---
	II	---	---	4	2
	III	---	---	4	---
	IV	---	---	5	---
2017-18	I	---	---	1	---
	II	---	---	4	2
	III	---	---	4	---
	IV	---	---	---	---
2016-17	I	---	---	1	---
	II	---	---	4	2
	III	---	---	---	---
	IV	---	---	---	---
2015-16	I	---	---	1	---
	II	---	---	---	---
	III	---	---	---	---
	IV	---	---	---	---

**Courses addressing the  
Gender, Environment and  
Sustainability, Human values  
and Professional Ethics  
(2019-20)  
(B.Tech.-EEE)**

**Courses addressing the Gender, Environment and Sustainability, Human values and Professional Ethics during the academic year 2019-20**

Sl. No.	Course code	Course Name	Year of study	Description/Objectives
1	A2EHA701	Constitution of India	I (Under A2 Regulation)	<ul style="list-style-type: none"> <li>To understand the importance and evolution of Indian constitution.</li> <li>To understand the political scenario in India.</li> </ul>
2	A1ACA501	NSS	II (Under A1 Regulation)	<ul style="list-style-type: none"> <li>To create social responsibility among the students.</li> <li>To serve the society through educational and health awareness programmes.</li> </ul>
3	A1ACA502	NCC		<ul style="list-style-type: none"> <li>To develop secular values and patriotism among the cadets.</li> <li>To inspire the cadets to contribute for the nation.</li> </ul>
4	A1ACA504	Cultural		<ul style="list-style-type: none"> <li>To help the students in improving leadership skills, presentation skills and organizational skills.</li> <li>To help the students to develop self-confidence.</li> </ul>
5	A1ACA509	Professional Ethics & IPR		<ul style="list-style-type: none"> <li>To understand the core principles of [research] ethics.</li> <li>To understand the copyright, patents and industrial design.</li> </ul>
6	A1ACA501	NSS		III (Under A1 Regulation)
7	A1ACA502	NCC	<ul style="list-style-type: none"> <li>To develop secular values and patriotism among the cadets.</li> <li>To inspire the cadets to contribute for the nation.</li> </ul>	
8	A1ACA504	Cultural	<ul style="list-style-type: none"> <li>To help the students in improving leadership skills, presentation skills and organizational skills.</li> <li>To help the students to develop self-confidence.</li> </ul>	
9	A1ACA509	Professional Ethics & IPR	<ul style="list-style-type: none"> <li>To understand the core principles of [research] ethics.</li> <li>To understand the copyright, patents and industrial design.</li> </ul>	
10	A1EEP602	Project	IV (Under A1 Regulation)	
11	A1ACA501	NSS		<ul style="list-style-type: none"> <li>To create social responsibility among the students.</li> <li>To serve the society through educational and health awareness programmes.</li> </ul>
12	A1ACA502	NCC		<ul style="list-style-type: none"> <li>To develop secular values and patriotism among the cadets.</li> <li>To inspire the cadets to contribute for the nation.</li> </ul>
13	A1ACA504	Cultural		<ul style="list-style-type: none"> <li>To help the students in improving leadership skills, presentation skills and organizational skills.</li> </ul>

				<ul style="list-style-type: none"> <li>• To help the students to develop self-confidence.</li> </ul>
14	A1ACA509	Professional Ethics & IPR		<ul style="list-style-type: none"> <li>• To understand the core principles of [research] ethics.</li> <li>• To understand the copyright, patents and industrial design.</li> </ul>

**Courses addressing the  
Gender, Environment and  
Sustainability, Human values  
and Professional Ethics  
(2019-20)  
(M.Tech.-Power Systems)**

**Courses addressing the Gender, Environment and Sustainability, Human values and Professional Ethics during the academic year 2019-20**

<b>Sl. No.</b>	<b>Course code</b>	<b>Course Name</b>	<b>Year of study</b>	<b>Description</b>
1	A1PSP501	Project Phase - I	II (Under A1 Regulation)	<ul style="list-style-type: none"><li>• To learn and experience the processes involved in solving the real-life engineering problems.</li><li>• To function in teams.</li></ul>
2	A1PSP502	Project Phase - II		

**Courses addressing the  
Gender, Environment and  
Sustainability, Human values  
and Professional Ethics  
(2018-19)  
(B.Tech.-EEE)**



**Courses addressing the Gender, Environment and Sustainability, Human values and Professional Ethics during the academic year 2018-19**

Sl. No.	Course code	Course Name	Year of study	Description
1	A1CHT001	Environmental Studies	I (Under A1 Regulation)	<ul style="list-style-type: none"> <li>To impart overall understanding of natural resources and awareness social issues, environmental legislation and global treaties.</li> </ul>
2	A1ACA501	NSS	II (Under A1 Regulation)	<ul style="list-style-type: none"> <li>To create social responsibility among the students.</li> <li>To serve the society through educational and health awareness programmes.</li> </ul>
3	A1ACA502	NCC		<ul style="list-style-type: none"> <li>To develop secular values and patriotism among the cadets.</li> <li>To inspire the cadets to contribute for the nation.</li> </ul>
4	A1ACA504	Cultural		<ul style="list-style-type: none"> <li>To help the students in improving leadership skills, presentation skills and organizational skills.</li> <li>To help the students to develop self-confidence.</li> </ul>
5	A1ACA509	Professional Ethics & IPR		<ul style="list-style-type: none"> <li>To understand the core principles of [research] ethics.</li> <li>To understand the copyright, patents and industrial design.</li> </ul>
6	A1ACA501	NSS	III (Under A1 Regulation)	<ul style="list-style-type: none"> <li>To create social responsibility among the students.</li> <li>To serve the society through educational and health awareness programmes.</li> </ul>
7	A1ACA502	NCC		<ul style="list-style-type: none"> <li>To develop secular values and patriotism among the cadets.</li> <li>To inspire the cadets to contribute for the nation.</li> </ul>
8	A1ACA504	Cultural		<ul style="list-style-type: none"> <li>To help the students in improving leadership skills, presentation skills and organizational skills.</li> <li>To help the students to develop self-confidence.</li> </ul>
9	A1ACA509	Professional Ethics & IPR		<ul style="list-style-type: none"> <li>To understand the core principles of [research] ethics.</li> <li>To understand the copyright, patents and industrial design.</li> </ul>
10	A1EEP602	Project	IV (Under A1 Regulation)	<ul style="list-style-type: none"> <li>To learn and experience the processes involved in solving the real-life engineering problems.</li> <li>To function in teams.</li> </ul>
11	A1ACA501	NSS		<ul style="list-style-type: none"> <li>To create social responsibility among the students.</li> <li>To serve the society through educational and health awareness programmes.</li> </ul>
12	A1ACA502	NCC		<ul style="list-style-type: none"> <li>To develop secular values and patriotism among the cadets.</li> <li>To inspire the cadets to contribute for the nation.</li> </ul>
13	A1ACA504	Cultural		<ul style="list-style-type: none"> <li>To help the students in improving leadership skills, presentation skills and organizational skills.</li> </ul>

				<ul style="list-style-type: none"> <li>• To help the students to develop self-confidence.</li> </ul>
14	A1ACA509	Professional Ethics & IPR		<ul style="list-style-type: none"> <li>• To understand the core principles of [research] ethics.</li> <li>• To understand the copyright, patents and industrial design.</li> </ul>

**Courses addressing the  
Gender, Environment and  
Sustainability, Human values  
and Professional Ethics  
(2018-19)  
(M.Tech.-Power Systems)**

**Courses addressing the Gender, Environment and Sustainability, Human values and Professional Ethics during the academic year 2018-19**

<b>Sl. No.</b>	<b>Course code</b>	<b>Course Name</b>	<b>Year of study</b>	<b>Description</b>
1	A1PSP501	Project Phase - I	II (Under A1 Regulation)	<ul style="list-style-type: none"><li>• To learn and experience the processes involved in solving the real-life engineering problems.</li><li>• To function in teams.</li></ul>
2	A1PSP502	Project Phase - II		

**Courses addressing the  
Gender, Environment and  
Sustainability, Human values  
and Professional Ethics  
(2017-18)  
(B.Tech.-EEE)**

**Courses addressing the Gender, Environment and Sustainability, Human values and Professional Ethics during the academic year 2017-18**

Sl. No.	Course code	Course Name	Year of study	Description
1	A1CHT001	Environmental Studies	I (Under A1 Regulation)	<ul style="list-style-type: none"> <li>To impart overall understanding of natural resources and awareness social issues, environmental legislation and global treaties.</li> </ul>
2	A1ACA501	NSS	II (Under A1 Regulation)	<ul style="list-style-type: none"> <li>To create social responsibility among the students.</li> <li>To serve the society through educational and health awareness programmes.</li> </ul>
3	A1ACA502	NCC		<ul style="list-style-type: none"> <li>To develop secular values and patriotism among the cadets.</li> <li>To inspire the cadets to contribute for the nation.</li> </ul>
4	A1ACA504	Cultural		<ul style="list-style-type: none"> <li>To help the students in improving leadership skills, presentation skills and organizational skills.</li> <li>To help the students to develop self-confidence.</li> </ul>
5	A1ACA509	Professional Ethics & IPR		<ul style="list-style-type: none"> <li>To understand the core principles of [research] ethics.</li> <li>To understand the copyright, patents and industrial design.</li> </ul>
6	A1ACA501	NSS		III (Under A1 Regulation)
7	A1ACA502	NCC	<ul style="list-style-type: none"> <li>To develop secular values and patriotism among the cadets.</li> <li>To inspire the cadets to contribute for the nation.</li> </ul>	
8	A1ACA504	Cultural	<ul style="list-style-type: none"> <li>To help the students in improving leadership skills, presentation skills and organizational skills.</li> <li>To help the students to develop self-confidence.</li> </ul>	
9	A1ACA509	Professional Ethics & IPR	<ul style="list-style-type: none"> <li>To understand the core principles of [research] ethics.</li> <li>To understand the copyright, patents and industrial design.</li> </ul>	

**Courses addressing the  
Gender, Environment and  
Sustainability, Human values  
and Professional Ethics  
(2017-18)  
(M.Tech.-Power Systems)**

**Courses addressing the Gender, Environment and Sustainability, Human values and Professional Ethics during the academic year 2017-18**

<b>Sl. No.</b>	<b>Course code</b>	<b>Course Name</b>	<b>Year of study</b>	<b>Description</b>
1	A1PSP501	Project Phase - I	II (Under A1 Regulation)	<ul style="list-style-type: none"><li>• To learn and experience the processes involved in solving the real-life engineering problems.</li><li>• To function in teams.</li></ul>
2	A1PSP502	Project Phase - II		



**Courses addressing the  
Gender, Environment and  
Sustainability, Human values  
and Professional Ethics  
(2016-17)  
(B.Tech.-EEE)**

**Courses addressing the Gender, Environment and Sustainability, Human values and Professional Ethics during the academic year 2016-17**

Sl. No.	Course code	Course Name	Year of study	Description
1	A1CHT001	Environmental Studies	I (Under A1 Regulation)	<ul style="list-style-type: none"> <li>To impart overall understanding of natural resources and awareness social issues, environmental legislation and global treaties.</li> </ul>
2	A1ACA501	NSS	II (Under A1 Regulation)	<ul style="list-style-type: none"> <li>To create social responsibility among the students.</li> <li>To serve the society through educational and health awareness programmes.</li> </ul>
3	A1ACA502	NCC		<ul style="list-style-type: none"> <li>To develop secular values and patriotism among the cadets.</li> <li>To inspire the cadets to contribute for the nation.</li> </ul>
4	A1ACA504	Cultural		<ul style="list-style-type: none"> <li>To help the students in improving leadership skills, presentation skills and organizational skills.</li> <li>To help the students to develop self-confidence.</li> </ul>
5	A1ACA509	Professional Ethics & IPR		<ul style="list-style-type: none"> <li>To understand the core principles of [research] ethics.</li> <li>To understand the copyright, patents and industrial design.</li> </ul>

**Courses addressing the  
Gender, Environment and  
Sustainability, Human values  
and Professional Ethics  
(2016-17)  
(M.Tech.-Power Systems)**

**Courses addressing the Gender, Environment and Sustainability, Human values and Professional Ethics during the academic year 2016-17**

<b>Sl. No.</b>	<b>Course code</b>	<b>Course Name</b>	<b>Year of study</b>	<b>Description</b>
1	A1PSP501	Project Phase - I	II (Under A1 Regulation)	<ul style="list-style-type: none"><li>• To learn and experience the processes involved in solving the real-life engineering problems.</li><li>• To function in teams.</li></ul>
2	A1PSP502	Project Phase - II		

**Courses addressing the  
Gender, Environment and  
Sustainability, Human values  
and Professional Ethics  
(2015-16)  
(B.Tech.-EEE)**

**Courses addressing the Gender, Environment and Sustainability, Human values and Professional Ethics during the academic year 2015-16**

<b>Sl. No.</b>	<b>Course code</b>	<b>Course Name</b>	<b>Year of study</b>	<b>Description</b>
1	A1CHT001	Environmental Studies	I (Under A1 Regulation)	<ul style="list-style-type: none"><li>• To impart overall understanding of natural resources and awareness social issues, environmental legislation and global treaties.</li></ul>

**Courses addressing the  
Gender, Environment and  
Sustainability, Human values  
and Professional Ethics  
(2015-16)  
(M.Tech.-Power Systems)**

**Courses addressing the Gender, Environment and Sustainability, Human values and Professional Ethics during the academic year 2015-16**

<b>Sl. No.</b>	<b>Course code</b>	<b>Course Name</b>	<b>Year of study</b>	<b>Description</b>
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# Dept. of Mechanical Engg

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**MAHARAJ VIJAYARAM GAPATHI RAJ COLLEGE OF ENGINEERING(AUTONOMOUS)**

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B.Tech(MEC) & B.Tech(CHE) and PG Course: MBA

**Department of Mechanical Engineering**

In order to integrate the cross cutting issues relevant to gender, environment and sustainability, human values and professional ethics the institution introduced several courses like Environmental studies, Professional ethics and human values, Alternate sources of energy, Alternate Fuels and emissions etc..some courses will enhance professional competencies while others aim to inculcate general competencies like social & ethical values, human values, environment sensitivity etc., thereby leading to the holistic development of students. The courses on professional Ethics and human values, Environmental Studies are there in the curriculum of all UG programs.

S. No	Courses Code	Course Name	Semeste	Description
1	A1CHT001	Environment Studies	I	Environment studies is a 3 credits course offered in 1st year of all UG programmes. In order to sensitize students about the environment and sustainability issues, a number of activities such as seminars, workshops, guest lectures, industry visits and field excursions are organized for students of all programmes. Environment Day, Earth Day, Water Day are celebrated every year, where students actively participate. Workshops and seminars on various aspects of environment sustainability are organized periodically by
2	A1ACA501	NSS	III	Gender sensitivity and gender sensitisation is accomplished through amalgamation of theory and practice. Through these audit courses students are apprised understanding about gender as a social construction and various approaches to work towards gender equity with in India and from a cross-cultural perspective. There are many platforms for hands-on experiences related to gender sensitivity which enable students to interface with real life situations such as field work, community outreach, gender sensitization activities like seminars, conferences and guest lectures.
3	A1 ACA506	Health & Nutrition		
4	A2EHT001	Professional Ethics and Human Values	III	Profession ethics and Human values is a 3 credit course offered in 2nd year for all UG programs to know the students about the knowledge of Human Values and Engineering Ethics, have the knowledge of Engineering as Social Experimentation and Engineers' responsibility for safety and risks, explain about responsibilities and rights of an Engineer and Global issues and IPR and understand the relevance of Engineering to society and be responsible to maintain safety at work place.
5	A1MET305	Alternate Sources of Energy	VI	The courses Alternate sources of energy and alternate fuels and emissions will help the students understanding the need of renewable energy sources and various methods of conversion of energy into electric power. The courses will help in understanding the problems of global warming and effect of fossil fuels on climate pollution etc..
6	A1MET402	Alternative Fuels and Emissions	III	

# Dept. of ECE

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**MAHARAJ VIJAYARAM GAPATHI RAJ COLLEGE OF ENGINEERING(AUTONOMOUS)**

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B.Tech(MEC) & B.Tech(CHE) and PG Course: MBA

**2019-2020**

**List and description of the courses which address the Gender, Environment and Sustainability, Human Values and Professional Ethics in A1 Regulation**

**B.Tech**

S.No	Course Code	Course Name	Semester	Description
1.	A1ACA509	Professional Ethics & IPR	VI	This course will make the students understand human values and ethics to be followed at work place. Also make them understand when IPR would take such important place in growth of individuals & nation and how IPR protection provides an incentive to inventors for further research work and investment in R & D, which leads to creation of new and better products, and in turn brings about, economic growth and social benefits.

**List and description of the courses which address the Gender, Environment and Sustainability, Human Values and Professional Ethics in A2 Regulation**

**B.Tech**

S.No	Course Code	Course Name	Semester	Description
1.	A2CHA701	Environmental Science	III	This course will make students able to understand Scope and Importance of Multidisciplinary nature of Environmental Studies, natural resources and their importance for the sustenance of the life and recognize the need to conserve the natural resources. Also makes the students to understand ecosystem and its function in the environment. Able to understand biodiversity of India and the threats to biodiversity, and conservation practices to protect the biodiversity..
2.	A2EHT001	Professional Ethics and Human Values	VII	This course will make the students to have the knowledge of Human Values and Engineering Ethics. Have the

				knowledge of Engineers' responsibilities and rights and Global Issues and IPR and makes students to understand and utilize the professional competence for augmenting universal human order. Make the students to use the knowledge for utilizing in day to day life for personal and at work place.
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### M.Tech

S.No	Course Code	Course Name	Semester	Description
1.	A2VLT105	Research Methodology and IPR	I	This course will make the students to understand research problem formulation. Analyze research related information and follow research ethics and also makes to understand that today's world is controlled by Computer, Information Technology, but tomorrow world will be ruled by ideas, concept, and creativity. Makes to understand the need of information about Intellectual Property Right to be promoted in general & engineering in particular. Makes the students to understand that IPR protection provides an incentive to inventors for further research work and investment in R & D, which leads to creation of new and better products, and in turn brings about, economic growth and social benefits.
2.	A2ACA508	Value Education		This course will make the students to get knowledge of self-development, learn the importance of Human values and also develop overall personality.

**2018-2019**



**List and description of the courses which address the Gender, Environment and Sustainability, Human Values and Professional Ethics in A1**

**B.Tech**

<b>S.No</b>	<b>Course Code</b>	<b>Course Name</b>	<b>Semester</b>	<b>Description</b>
1.	A1CHT001	Environmental Studies	I	This course will impart overall understanding of natural resources, ecosystem and its diversity. And acquaintance on various environmental challenges induces due to unplanned anthropogenic activities. This course will give an understanding of the environmental impact of developmental activities and awareness on the social issues, environmental legislation and global treaties.
2.	A1ACA509	Professional Ethics & IPR	VI	This course will make the students understand human values and ethics to be followed at work place. Also make them understand when IPR would take such important place in growth of individuals & nation and how IPR protection provides an incentive to inventors for further research work and investment in R & D, which leads to creation of new and better products, and in turn brings about, economic growth and social benefits.

**2017-2018**

**List and description of the courses which address the Gender, Environment and Sustainability, Human Values and Professional Ethics in A1**

**B.Tech**

S.No	Course Code	Course Name	Semester	Description
2.	A1CHT001	Environmental Studies	I	This course will impart overall understanding of natural resources, ecosystem and its diversity. And acquaintance on various environmental challenges induces due to unplanned anthropogenic activities. This course will give an understanding of the environmental impact of developmental activities and awareness on the social issues, environmental legislation and global treaties.
3.	A1ACA509	Professional Ethics & IPR	VI	This course will make the students understand human values and ethics to be followed at work place. Also make them understand when IPR would take such important place in growth of individuals & nation and how IPR protection provides an incentive to inventors for further research work and investment in R & D, which leads to creation of new and better products, and in turn brings about, economic growth and social benefits.

**2016-2017**

**List and description of the courses which address the Gender, Environment and Sustainability, Human Values and Professional Ethics in A1**

**B.Tech**

<b>S.No</b>	<b>Course Code</b>	<b>Course Name</b>	<b>Semester</b>	<b>Description</b>
3.	A1CHT001	Environmental Studies	I	This course will impart overall understanding of natural resources, ecosystem and its diversity. And acquaintance on various environmental challenges induces due to unplanned anthropogenic activities. This course will give an understanding of the environmental impact of developmental activities and awareness on the social issues, environmental legislation and global treaties.
4.	A1ACA509	Professional Ethics & IPR	VI	This course will make the students understand human values and ethics to be followed at work place. Also make them understand when IPR would take such important place in growth of individuals & nation and how IPR protection provides an incentive to inventors for further research work and investment in R & D, which leads to creation of new and better products, and in turn brings about, economic growth and social benefits.

**2015-2016**

**List and description of the courses which address the Gender, Environment and Sustainability, Human Values and Professional Ethics in A1**

**B.Tech**

<b>S.No</b>	<b>Course Code</b>	<b>Course Name</b>	<b>Semester</b>	<b>Description</b>
4.	A1CHT001	Environmental Studies	I	This course will impart overall understanding of natural resources, ecosystem and its diversity. And acquaintance on various environmental challenges induces due to unplanned anthropogenic activities. This course will give an understanding of the environmental impact of developmental activities and awareness on the social issues, environmental legislation and global treaties.
5.	A1ACA509	Professional Ethics & IPR	VI	This course will make the students understand human values and ethics to be followed at work place. Also make them understand when IPR would take such important place in growth of individuals & nation and how IPR protection provides an incentive to inventors for further research work and investment in R & D, which leads to creation of new and better products, and in turn brings about, economic growth and social benefits.

# Dept. of CSE

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**MAHARAJ VIJAYARAM GAPATHI RAJ COLLEGE OF ENGINEERING(AUTONOMOUS)**

Vijayaram Nagar Campus, Chintalavalasa, Vizianagaram-535005, Andhra Pradesh

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B.Tech(MEC) & B.Tech(CHE) and PG Course: MBA



Department: CSE

Criteria: 1.3.1

A2 Regulation (2019-20)

List and description of the courses which address the Gender, Environment and Sustainability, Human Values and Professional Ethics into the Curriculum

S. No	Course Code	Course Title	Sem	Context	Description
1	A2MED201	Computer Aided Engineering Graphics	I	Sustainability	Students acquire the essential design skills required to work globally in an interdisciplinary environment
2	A2EHA701	Constitution of India	I	Human values and professional ethics	Students study the constitution of the Nation more in detail to act within boundaries as responsible Engineers who contribute to the social, political and economic system of the Nation
3	A2CIW201	Basic IT Tools Workshop	II	Sustainability	Students acquire skills globally required for essential knowledge of computer hardware/software and tools for designing and editing
4	A2CIT202	Design Thinking and Product Innovation	III	Human values and professional ethics	Students acquire the skills required to identify Socially relevant problems and think about potential solutions using technical skills they develop in later years
5	A2MST001	Managerial Economics & Financial Analysis	III	Sustainability	Students are taught Managerial and Financial skills particular to specific regions
6	A2EHA702	Indian Traditional Knowledge	III	Human values and professional ethics	Students study the tradition and cultural heritage of the Nation that allow them to think of solutions to preserve the same for the future generations
7	A2XXT1XX	Biology for Engineers	IV	Environment and Sustainability	Students are taught the essential Biological aspects required to Understand the connection of nature with science and Engineering that could apply to tackle complex problems

8	A2CHA701	Environmental Science	IV	Environment and Sustainability	Students are taught the essential environmental aspects required to Understand the connection of environment with science and Engineering that could apply to tackle complex problems
9	A2CII202	AI Tools, Techniques & Applications	V	Sustainability	Students are imparted the technical knowledge to work across multiple disciplines to develop intelligent applications
10	A2CIP601	Socially Relevant Project	V	Sustainability	Students are encouraged to work on projects that address local community needs
11	A2EHL002	English-II (Technical English)	VI	Sustainability	Students acquire skills globally required for advanced communication in a professional context particularly in their workplace
12	A2CIP602	Mini Project	VI	Sustainability	Students are encouraged to work on projects that allow them to acquire basic technical knowledge to make them globally acceptable
13	A2CIT201	Internet of Things (IOT)	VII	Sustainability	Students are imparted the technical knowledge to work across multiple disciplines to develop intelligent applications
14	A2EHT001	Professional Ethics and Human Values	VII	Human values and professional ethics	Students are taught ethical practices in implementation in several regions across the globe
15	A2CIP603	Project Phase-I	VII	Environment and Sustainability	Students are encouraged to work on projects that address global challenges using advanced technologies
16	A2CIP604	Project Phase - II	VIII	Environment and Sustainability	Students are encouraged to work on projects that address global challenges using advanced technologies

## A1 Regulation (2015-16)

### List and description of the courses which address the Gender, Environment and Sustainability, Human Values and Professional Ethics into the Curriculum

S.No	Subject Code	Subject	Sem	Context	Description
1	A1MEW001	Basic Engineering Workshop	I	Sustainability	Students acquire skills globally required for essential knowledge of computer hardware/software and the fundamental hands-on knowledge of other disciplines
2	A1EHT101	Professional Communication	II	Sustainability	Students acquire skills globally required for advanced communication in a professional context particularly in their workplace
3	A1EHT102	Business English	II	Sustainability	Students acquire skills globally required for advanced communication in a professional context particularly for Business administration
4	A1EHL002	English Language Practice - II	II	Sustainability	Students acquire practical skills globally required for advanced communication in a professional context particularly in their workplace
5	A1MST001	Managerial Economics & Financial Analysis	III	Sustainability	Students are taught managerial and financial skills necessary for Business administration
6	A1EHA501	Health & Nutrition/Entrepreneurship/Foreign Language/MOOC	III/IV	Gender	In Health & Nutrition, some gender specific challenges related to nutrition are addressed
7	A1EHA502	Professional Ethics & IPR	III/IV	Human values & professional ethics	Students are taught ethical practices in implementation in various regions across the globe
8	A1EHA503	NSS/NCC/Sports/Cultural/Yoga	III/IV	Human values & professional ethics, Gender	Students are encouraged to participate mostly in local competitions in sports yoga etc., NCC and NSS allows them community service at local and subsequently at National level, Also gender specific sports and cultural events are conducted and women are encouraged to participate
9	A1EHA504	Soft Skills - I	III/IV	Sustainability	Students acquire softskills globally required for communication in a professional context particularly in their workplace
10	A1EHA505	Soft Skills - II	III/IV	Sustainability	Students acquire softskills globally required for communication in a professional context particularly in their workplace

11	A1EHA506	General Aptitude	III/IV	Sustainability	Students are provided opportunity to strengthen their logical skills required in a professional context particularly in their workplace
12	A1CIT322	Routing & Switching Concepts	V	Sustainability	Students acquire Industry skills and certifications required to work globally
13	A1CIT326	Penetration Testing	VII	Professional ethics	Students acquire Industry skills with certification and the ethics required to safeguard networks against attacks
14	A1CIL208	Software Engineering Lab (Project Oriented)	VII	Sustainability	Students are encouraged to work on projects that address local community needs
15	A1CIP602	Project Phase I	VIII	Environment and sustainability	Students are encouraged to work on projects that address global challenges using advanced technologies
16	A2CIP604	Project Phase - II	VIII	Environment and Sustainability	Students are encouraged to work on projects that address global challenges using advanced technologies

# Dept. of Chemical Engg

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**MAHARAJ VIJAYARAM GAPATHI RAJ COLLEGE OF ENGINEERING(AUTONOMOUS)**

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B.Tech(MEC) & B.Tech(CHE) and PG Course: MBA

1.3.1 List of Courses having Gender, Environment & Sustainability, Human Values and Professional Ethics

S.No	Name of Course	Course Code	Year of Introduction
<b>2019-20</b>			
1	Industrial pollution Control & Engineering	A1CHT306	V Sem
2	Professional Ethics & IPR	A1EHA502	V Sem
3	Air Pollution Control Engineering	A1CET402	VII Sem
4	Industrial Safety & Hazard Management	A1CHT321	VII Sem
<b>2018-19</b>			
1	Environmental Studies	A1CHT001	I Sem
2	Industrial pollution Control & Engineering	A1CHT306	V Sem
3	Air Pollution Control Engineering	A1CET402	VII Sem
4	Industrial Safety & Hazard Management	A1CHT321	VII Sem
5	Professional Ethics & IPR	A1EHA502	VII Sem
<b>2017-18</b>			
1	Environmental Studies	A1CHT001	I Sem
2	Industrial pollution Control & Engineering	A1CHT306	V Sem
3	Professional Ethics & IPR	A1EHA502	VII Sem
<b>2016-17</b>			
1	Environmental Studies	A1CHT001	I Sem
2	IPR and Patents-I	Audit Course	V Sem
3	IPR and Patents-II	Audit Course	VI Sem
<b>2015-16</b>			
1	Environmental Studies	A1CHT001	I Sem
2	IPR and Patents-I	Audit Course	V Sem
3	IPR and Patents-II	Audit Course	VI Sem

1.3.1 1. Upload the list and description of the courses which address the Gender, Environment and Sustainability, Human Values and Professional Ethics into the Curriculum of A1&A2

<b>S.No</b>	<b>Name of Course</b>	<b>Course Code</b>	<b>Year of Introduction</b>	<b>Curriculum Regulation</b>
1	Environmental Studies	A1CHT001	I Sem	A1
2	Professional Ethics & IPR	A1EHA502	VII Sem	A1
3	Environmental Science	A2CIA703	IV Sem	A2
4	Humanities-II (PE & HV)	A2CIT004	VII Sem	A2

1.3.1- List of Courses that have relevance to the local, national, regional and global development mental needs in A1 & A2

<b>2019-20</b>		
<b>Name of the Course</b>	<b>Course Code</b>	<b>Year of introduction</b>
A2MED201	Computer Aided Engineering Graphics	2019
A2EHL001	English-I	2019
A1CHT302	Petroleum Refining	2015
A1CHT306	Industrial Pollution Control & Engineering	2015
A1CHT309	Nano Technology	2015
A1CHT310	Food Technology	2015
A1MET402	Alternative Fuels & Emmisions	2015
A1ACA507	Entrepreneurship Development	2015
A1MST001	Managerial Economics & Financial Analysis	2015
A1CHT313	Bio Chemical Engineering	2015
A1CHT317	Corrosion & Control	2015
A1CHT321	Industrial Safety & Hazard Management	2015
A1CET402	Air Pollution & Control	2015
A1CHT323	Organic Solar Cells	2015

**2018-19**

<b>Name of the Course</b>	<b>Course Code</b>	<b>Year of introduction</b>
A1CHT302	Petroleum Refining	2015
A1CHT306	Industrial Pollution Control & Engineering	2015
A1CHT309	Nano Technology	2015
A1CHT310	Food Technology	2015
A1MET402	Alternative Fuels & Emmisions	2015
A1ACA507	Entrepreneurship Development	2015
A1MST001	Managerial Economics & Financial Analysis	2015
A1CHT313	Bio Chemical Engineering	2015
A1CHT317	Corrosion & Control	2015
A1CHT321	Industrial Safety & Hazard Management	2015
A1CET402	Air Pollution & Control	2015



**2017-18**

<b>Name of the Course</b>	<b>Course Code</b>	<b>Year of introduction</b>
A1EHL001	English Language Practice –I	2015
A1CHT302	Petroleum Refining	2015
A1CHT306	Industrial Pollution Control & Engineering	2015
A1CHT309	Nano Technology	2015
A1CHT310	Food Technology	2015
A1MET402	Alternative Fuels & Emmisions	2015
A1ACA507	Entrepreneurship Development	2015
A1MST001	Managerial Economics & Financial Analysis	2015
RT41026	NON CONVENTIONAL SOURCES OF ENERGY	2013
RT41084	BIOCHEMICAL ENGINEERING	2013
RT41089	NANO TECHNOLOGY	2013
RT42081	INDUSTRIAL SAFETY & HAZARD MANAGEMENT	2013
RT42082C	CORROSION & ITS CONTROL	2013
RT42083B	OPTIMIZATION OF CHEMICAL PROCESSES	2013
RT42084A	CATALYSIS	2013

**2016-17**

<b>Name of the Course</b>	<b>Course Code</b>	<b>Year of introduction</b>
A1CHT302	Petroleum Refining	2015
RT32025	MANAGEMENT SCIENCE	2013
RT32056	IPR AND PATENTS	2013
RT32089	MASS TRANSFER OPERATIONS LAB II	2013
RT31087	PROCESS HEAT TRANSFER LAB	2013
RT31088	MASS TRANSFER OPERATIONS LAB-I	2013
RT41026	NON CONVENTIONAL SOURCES OF ENERGY	2013
RT41084	BIOCHEMICAL ENGINEERING	2013
RT41089	NANO TECHNOLOGY	2013
RT42081	INDUSTRIAL SAFETY & HAZARD MANAGEMENT	2013
RT42082C	CORROSION & ITS CONTROL	2013
RT42083B	OPTIMIZATION OF CHEMICAL PROCESSES	2013
RT42084A	CATALYSIS	2013

**2015-16**

<b>Name of the Course</b>	<b>Course Code</b>	<b>Year of introduction</b>
RT32025	MANAGEMENT SCIENCE	2013

RT32056	IPR AND PATENTS	2013
R42081	INDUSTRIAL SAFETY & HAZARD MANAGEMENT	2010
R42084	CORROSION AND ITS CONTROL	2010
R42087	NUCLEAR REACTOR ENGINEERING	2010
R4208A	ENERGY ENGINEERING	2010

# Dept. of IT

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1.3.1 1. Upload the list and description of the courses which address the Gender, Environment and Sustainability, Human Values and Professional Ethics into the Curriculum of A1&A2

<b>S.No</b>	<b>Name of Course</b>	<b>Course Code</b>	<b>Year of Introduction</b>	<b>Curriculum Regulation</b>
1	Environmental Studies	A1CHT001	I Sem	A1
2	Professional Ethics & IPR	A1EHA502	VII Sem	A1
3	Environmental Science	A2CIA703	IV Sem	A2
4	Humanities-II (PE & HV)	A2CIT004	VII Sem	A2

# Dept. of MBA

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### 1.3.1

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

List and description of the courses which address the Gender, Environment and Sustainability, Human Values and Professional Ethics into the Curriculum of A1&A2

S.No	Course Code	Course Name	Semester	Description
1	A1MBT105	Corporate Social Responsibility and Governance	2	To make the students understand ethical management practices and the role of corporate governance in corporate social responsibility.
2	A1MBT107	Entrepreneurship & MSMEs	3	To make the student understand the entrepreneurial process and challenges in functional decisions preparing him / her for entrepreneurial career at any level.
3	A1MBT219	Management of Industrial Relations	4	To familiarize industrial relations in Indian scenario and to identify the causes of industrial disputes
4	A1MBT227	Management of Training & Development	4	To learn, assess and design various training and development programs and methods
5	A1MBT222	Labor Laws	3	To provide knowledge of labor laws in Indian and global context
6	A1MBT204	Consumer Behaviour & Market Research	4	To provide students with an understanding of the wide range of social, cultural and economic and environmental factors which influence consumer behavior.
7	A1MBT220	Global Human Resources Management	4	To make the student able to differentiate HRM and Global HRM and the role of gender in HRM
8	A2MBT301	Indian Ethos & Corporate Governance	1	To identify the role of ethos for smooth functioning of Business and To outline the ethics of Business functional areas to protect against frauds.
9	A2MBT307	Entrepreneurship	2	To give the basic understanding of the various concepts and factors of entrepreneurship

10	A2MBT420	Employee Relations	4	To focus on various laws relating to working conditions and to learn the various acts relating to social security and its importance
11	A2MBT427	Learning & Development	4	To help students develop their skills and knowledge of learning and Knowledge Management.