CRITERIA-1

1.3.1

AMRITA SAI INSTITUTE OF SCIENCE & TECHNOLOGY
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Paritala, Kanchikacherla, Krishna Dist, Andhra Pradesh- 521180.
www.amritasai.org in, Phone: 0866 2428399.

DATE:03/01/2023

CIRCULAR

All the Teaching and Non-Teaching staff are hereby informed that, The Principal, Amrita Sai institute of science & technology is going to give a lecture on Code of Conduct and Professional Ethics on 09.01.2023 at 10.00 am in (Seminar Hall) to create an awareness among the staff members regarding staff responsibilities, duties and ethics to their profession.

In this connection, all the teaching and non-teaching staff are hereby requested to attend the above program without fail.

PRINCIPAL

PRINCIPAL
Amrita Sai Institute of Science and Technology
Amrita Sai Nagar, Paritala
Krishna Dist 521 180

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Guest lectures organized on Human Values and Ethics Academic Year 2022-2023

Title of the programme:

Name of the Speaker:

Objective: How live in society with confident

Venue: Seminar hall

Date:

No. of audience:

04.01.2022

Faculty: 15

Students: 535

Self-esteem is your opinion of yourself. Everyone lacks confidence occasionally but people with low self-esteem are unhappy or unsatisfied with themselves most of the time. It takes attention and daily practice to boost a low self-esteem. Self-esteem is your opinion of yourself. People with healthy self-esteem like themselves and value their achievements. While everyone lacks confidence occasionally, people with low self-esteem feel unhappy or unsatisfied with themselves most of the time. This can be remedied but it takes attention and daily practise to boost self-esteem. Self-esteem is strongly related to how you view and react to the things that happen in your life. Suggestions for building self-esteem include:

- Talk to yourself positively treat yourself as you would your best friend. Be supportive, kind and understanding. Don't be hard on yourself when you make a mistake.
- Challenge negative 'self-talk' every time you criticise yourself, stop and look for objective evidence that the criticism is true. (If you feel you can't be objective, then ask a trusted friend for their opinion.) You'll realise that most of your negative self-talk is unfounded.

- Don't compare yourself to others recognise that everyone is different and that every human life has value in its own right. Make an effort to accept yourself, warts and all.
- Acknowledge the positive for example, don't brush off compliments, dismiss your achievements as 'dumb luck' or ignore your positive traits.
- Appreciate your special qualities remind yourself of your good points every day. Write a list and refer to it often. (If you feel you can't think of anything good about yourself, ask a trusted friend to help you write the list.)
- Forget the past concentrate on living in the here-and-now rather than reliving old hurts and disappointments.
- Tell yourself a positive message everyday buy a set of inspirational cards' and start each day reading out a new card and carrying the
- card's message with you all day. Stop worrying 'worry' is simply fretting about the future. Accept that you can't see or change the future and try to keep your thoughts in
- the here-and-now. Have fun schedule enjoyable events and activities into every week.
- Exercise it is such a good boost to the brain for all kinds of things but especially in combatting depression and helping you to feel good.

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Lectures on Code of Conduct and Professional Ethics

Academic Year 2022-2023

Title of the Program: Code of Conduct and Professional Ethics

Name of the Speaker: Dr.M.sashidhar, Principal, ASIST

Objective: Staff responsibilities, duties, and ethics to their profession

Venue: Seminar Hall

Date: 09.01.2022

No. of Audience: Teaching: 50 Non-Teaching: 15

Dr. M. Sasidhar, Principal, ASIST, addressed the congregation. concerning the Code of conduct and professional ethics. In this, he mentioned the Staff ethics in demonstrating in the lecture and with inside the laboratory, duties as a trainer and even as giving the lectures, doing the experiments, and undertaking examinations for concepts in addition to the laboratory. For the staff and their expertise growth, what are the measures to take and the actions in opposition to the mishaps, service guidelines and their implementation from time to time, go away eligibilities, promotions, and increment guidelines are mentioned very clearly.

PRINCIPAL

PRINCIPAL
Amrita Sai Institute of Science and Technology
Amrita Sai Nagar, Paritala
Krishna Dist 521 180

A CERTIFICATE COURSE

ON

GENDER SENSITIZATION

Organized

By

Department of Sciences and Humanities

Course Coordinator: Sri, P ESTHER Asst. Professor

Resource Persons: 1. Dr. P JYOSHNA RANI Asst. Professor

2. Sri., G LOVA KRISHNA Asst. Professor

3. Sri., P ESTHER Asst. Professor

Dates: Feb 1ST 2023 to 4TH March 2023

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www.amritasai.org.in, Phone: 0866-2428399

Date: 18/01/2023

To
The Principal,
Amrita Sai institute of Science and Technology,
Paritala.

From
P ESTHER
Asst. Professor,
Department of Science &Humanities
ASIST
PARITALA

Respected Sir,

Sub: ASIST- Permission to organize a certification course on Gender Sensitization- Request - Reg.

It is to bring to your kind notice that I am conducting a certification course on Gender Sensitization as part of Language Enhancement Activity, for B.Tech 1 Sem students from Feb 1ST 2023 to March 4TH 2023. In this regard, I kindly request you to grant permission for conducting this event. This is submitted for your kind perusal.

Thanking you Sir

Yours Faithfully,
P ESTHER
Asst. Professor
Faculty In-charge of Language Enhancement Activity
Department of Science &Humanities
Assist, Paritala.

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www.amritasai.org.in, Phone: 08672 428399

DATE:18/01/2023

CIRCULAR

All students are hereby informed that the faculty of English, Department of H&S is organizing a certification course on Gender Sensitization for B. Tech I Semester Students as part of Language Enhancement activity. This Certification Course is conducted from 01 JANUARY 2023 in the Communicative English Lab, Students who are Interested to join the course can meet Sri. P ESTHER, faculty of English.

HOD S&H

Science & Humanities
Head of the Department
Amrita Sai Institute of Sci. & Tech.
Paritala, Kanchikacherla(M), NTR Dt.

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www.amritasai.org.in, Phone: 0866 2428399.

DATE:

Name of the event :- **Certificate Course on Gender Sensitization**

Venue: **S& H seminar hall**

List of Participants

S.NO	Roll Number	Name of the student	Branch	Signature
1	22AJIA0501	A. Madhu Sri	CSE	A. Madhusri
2	22AJIA0502.	A. Srujana.	CSE	A. Srujana
3	22AJIA0503	A. Chenugotluri	CSE	A. Chenugotluri
4	22AJIA0521	E. Akshay kumar.	CSE	E. Akshay kumar.
5	22AJIA0522.	Girivardhan Rinna.	CSE	G. Rinna Vardhan
6	22AJIA0539	K. Devi Srinivas.	CSE	K. Devi Srinivas
7	22AJIA0540	K. Giritabv.	CSE	K. Giritabv
8	22AJIA0541.	K. Sai Charisma	CSE	K. Sai Krishna.
9	22AJIA0549	M. Uday kiran	CSE	M. Uday kiran
10	22AJIA0550	M. Vijaya Sri	CSE	M. Vijaya Sri
11	22AJIA0551	M. keerthana	CSE	M. keerthana
12	22AJIA0552	M. Bala Siva parvathi	CSE	M. Bala parvathi
13	22AJIA0553	M. Ramya	CSE	M. Ramya
14	22AJIA0554	M. Naga Bala	CSE	M. Naga bala
15	22AJIA0560	N. Sandhya rani	CSE	N. Sandhya Rani
16	22AJIA0561	N. Revanth kumar	CSE	N. Revanth
17	22AJIA0568	P. Praveen kumar	CSE	P. praveen
18	22AJIA0569.	P. Ganesh	CSE	P. Ganesh

19	22AJ1A0570	P. Himavanth Reddy	CSE	
20	22AJ1A0581	SK. Asif	CSE	Sk. Asif
21	22AJ1A0406	A. Uma mahesh	ECE	
22	22AJ1A0407	A. Sudheer	ECE	A. Sudheer
23	22AJ1A0408	A. Vamsi	ECE	A. Vamsi
24	22AJ1A0409	B. Charisma	ECE	B. Charisma
25	22AJ1A0410	B. Ganeswari	ECE	
26	22AJ1A0418	B. Chaitanya Kesav	ECE	
27	22AJ1A0419	B. Likitha Madhuri	ECE	B. Likitha
28	22AJ1A0425	C. Venkata Ramesh	ECE	C. Venkata Ramesh
29	22AJ1A0426	C. Raghava	ECE	
30	22AJ1A0427	C. Jaythi	ECE	C. Jaythi
31	22AJ1A0428	C. Madhu babu	ECE	C. Madhu Babu
32	22AJ1A0439	D. Gopi	ECE	D. Gopi
33	22AJ1A0440	D. Tarun Babu	ECE	D. Tarun
34	22AJ1A0441	E. Manohar	ECE	E. Manohar
35	22AJ1A0445	G. Divya	ECE	G. Divya
36	22AJ1A0446	G. Venu.	ECE	G. Venu
37	22AJ1A0447	G. Vijay Kumar.	ECE	G. Vijay Kumar
38	22AJ1A0448	G. Karthik.	ECE	G. Karthik
39	22AJ1A0457	G. Sridevi	ECE	G. Sridevi.
40	22AJ1A0458	G. Sandeep.	ECE	G. Sandeep.
41	22AJ1A0471	K. Chris mohan.	ECE	K. Chris Mohan
42	22AJ1A0472	K. Shiva.	ECE	K. Shiva
43	22AJ1A0473	K. Sambasiva Rao.	ECE	K. Sambasiva Rao

44	22AJIA0474	K. Ravi Raj.	ECE	K. Ravi Raj
45	22AJIA0481	K. Laxmi prasanna.	ECE	K. Laxmi Prasanna.
46	22AJIA0482.	K. Thrown Sai	ECE	K. Thrown Sai
47	22AJIA0483	K. Rani	ECE	K. Rani
48	22AJIA0484	K. Harika.	ECE	K. Harika
49	22AJIA0485	K. Surendra Reddy.	ECE	K. Surendra Reddy
50	22AJIA0498	M. Gokul.	ECE	M. Gokul
51	22AJIA0205	M. Pradeep.	ECE	M. Pradeep
52	22AJIA0206	N. Sravani	ECE	N. Sravani
53	22AJIA0207	N. Sruthi Alufyer.	ECE	N. Sruthi Alufyer
54	22AJIA0208	P. Sai krishna.	ECE	P. Krishna
55	22AJIA0209.	R. Dhanush.	ECE	R. Dinesh
56	22AJIA0103	Ch. Siddhardha	Civil	Ch. Siddhardha.
57	22AJIA0104	G. Santhosh Babu.	Civil.	G. Santhosh Babu.
58	22AJIA0301	B. Mahesh	mech	B. Mahesh
59	22AJIA0302	D. Yashwanth.	mech	D. Yashwanth
60	22AJIA0303.	L. chandra kumar.	mech	L. Chandra
61	22AJIA4415	G. Narashimha Rao	CBA	G. Narashimha Rao
62	22AJIA4416	G. Sai Varaprasad	CBA	G. Sai Varaprasad.
63	22AJIA4421	G. Kasi Reddy	CBA	G. Kasi Reddy
64	22AJIA5821	G. Sirisha Chowdary	CBA	G. Sirisha Chowdary.
65	22AJIA5822	G. vasusi kaishwa	CBA	G. Vasusi kaishwa
66	22AJIA5804	B. Ravindra	CSM	B. Ravindra
67	22AJIA5805	B. Guru parvan kumar	CSM	B. Guruparvan
68	22AJIA5806	B. Bhanu prakash	CSM	B. Bhanu

69	22AJ1A5887	B. Bhargavi	CSM	B. Bhargavi
70	22AJ1A5808	B. Venkata Sai Teja	CSM.	B. Venkata Sai Teja
71	22AJ1A4710.	Ch. Durga Naga Mani	CIC	Ch. Durga Naga Mani.
72	22AJ1A4711.	D. Leela Venkata Lakshmi.	CIC	D. Lalla Venkata
73	22AJ1A4719.	G. Trinadh.	CIC	G. Trinadh
74	22AJ1A4720	G. Vinay Kumar.	CIC	G. Vinay Kumar.
75	22AJ1A4721	G. Lokesh.	CIC	G. Lokesh
76	22AJ1A4749	T. Bharath Kumar Gud.	CIC	T. Bharath Kumar Gud.
77	22AJ1A4750	T. Bhargavi Naga Venkat Durga.	CIC	T. B. Naga Venkat Durga
78	22AJ1A4753	V. Monika.	CIC	V. Monika
79	22AJ1A4754	Y. Dhana Vijaya Rao.	CIC	Y. Dhana Vijaya Rao.
80	22AJ1A4755	Y. Teena Sahithi	CIC	Y. Teena Sahithi

Co-Ordinator

HOD-S&H

Science & Humanities
Head of the Department
Amrita Sai Institute of Sci. & Tech.
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Gender Sensitization

COURSE DESCRIPTION:

This course offers an introduction to Gender Studies, an interdisciplinary field that asks critical questions about the meanings of sex and gender in society. The primary goal of this course is to familiarize students with key issues, questions and debates in Gender Studies, both historical and contemporary. It draws on multiple disciplines such as literature, history, economics, psychology, sociology, philosophy, political science, anthropology and media studies - to examine cultural assumptions about sex, gender, and sexuality.

This course integrates analysis of current events through student presentations, aiming to increase awareness of contemporary and historical experiences of women, and of the multiple ways that sex and gender interact with race, class, caste, nationality and other social identities. This course also seeks to build an understanding and initiate and strengthen programmes combating gender based violence and discrimination. The course also features several exercises and reflective activities designed to examine the concepts of gender, gender-based violence, sexuality, and rights. It will further explore the impact of gender-based violence on education, health and development.

Course Objectives:

- To develop students' sensibility with regard to issues of gender in contemporary India.
- To provide a critical perspective on the socialization of men and women.
- To introduce students to information about some key biological aspects of genders.
- To expose the students to debates on the politics and economics of work.
- To help students reflect critically on gender violence.
- To expose students to more egalitarian interactions between men and women.

Unit-I: UNDERSTANDING GENDER- Introduction: Definition of Gender-Basic Gender Concepts and Terminology-Exploring Attitudes towards Gender-Construction of Gender-Socialization: Making Women, Making Men - Preparing for Womanhood. Growing up Male. First lessons in Caste.

Unit-II: GENDER ROLES AND RELATIONS- Two or Many? -Struggles with Discrimination-Gender Roles and Relations-Types of Gender Roles- Gender Roles and Relationships Matrix-Missing Women-Sex Selection and Its Consequences- Declining Sex Ratio. Demographic Consequences-Gender Spectrum: Beyond the Binary

Unit-III: GENDER AND LAB- OUR- Division and Valuation of Labour-Housework: The Invisible Labor- "My Mother doesn't Work." "Share the Load."-Work: Its Politics and Economics -Fact and Fiction. Unrecognized and Unaccounted work. -Gender Development Issues-Gender, Governance and Sustainable Development-Gender and Human Rights-Gender

UNIT-IV: GENDER-BASED VIOLENCE The Concept of Violence- Types of Gender-based Violence-Gender-based Violence from a Human Rights Perspective-Sexual Harassment: Say No! -Sexual Harassment, not Eve-teasing- Coping with Everyday Harassment- Further Reading: "Chupulu". Domestic Violence: Speaking Outs Home a Safe Place? -When Women Unite [Film]. Rebuilding Lives. Thinking about Sexual Violence Blaming, the Victim-"I Fought for my Life...."

UNIT-V: GENDER AND CULTURE Gender and Film-Gender and Electronic Media-Gender and Advertisement-Gender and Popular Literature- Gender Development Issues-Gender Issues-Gender Sensitive Language-Gender and Popular Literature - Just Relationships: Being Together as Equals Mary Kom and Onler. Love and Acid just do not Mix. Love Letters. Mothers and Fathers. Rosa Parks The Brave Heart

Classes will consist of a combination of activities: dialogue-based lectures, discussions, collaborative learning activities, group work and in-class assignments. Apart from the above prescribed book, Teachers. can make use of any authentic materials related to the topics given in the syllabus on "Gender".

ESSENTIAL READING: The Textbook, "Towards a World of Equals: A Bilingual Textbook on Gender" written by A.Suneetha, Uma Bhrugubanda, Duggirala Vasanta. Rama Melkote, Vasudha Nagaraj. Asma Rasheed, Gogu Shyamala, Deepa Sreenivas and Susie Tharu published by Telugu Akademi, Telangana Government in 2015.

ASSESSMENT AND GRADING:

Discussion & Classroom Participation: 50%

Project/Assignment: 30%

End test: 20%

Learning Outcomes:

- Students will have developed a better understanding of important issues related to gender in contemporary India.
- Students will be sensitized to basic dimensions of the biological, sociological, psychological and legal aspects of gender. This will be achieved through discussion of materials derived from research, facts, everyday life, literature and film.
- Students will attain a finer grasp of how gender discrimination works in our society and how to counter it.
- Students will acquire insight into the gendered division of labour and its relation to politics and economics.
- Men and women students and professionals will be better equipped to work and live together as equals.
- Students will develop a sense of appreciation of women in all walks of life.
- Through providing accounts of studies and movements as well as the new laws that provide protection and relief to women, the textbook will empower students to understand and respond to gender violence.

Coordinator HOD-S&H

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COURSE SCHEDULE

VENUE: SEMINAR HALL(S&H)

Day & Date	Name of the Topic	Name of the instructor Resource Person	Timing
01/02/2023	Introduction on Gender sensitization	Dr P Jyoshna Rani	3.00pm - 4.00pm
02/02/2023	**UNIT-1 Understanding Gender**	G Lova Krishna	3.00pm - 4.00pm
03/02/2023	Socialization: Making Women	P Esther	3.00pm - 4.00pm
04/02/2023	Making Men(towards a world of equal)	Dr P Jyoshna Rani	3.00pm - 4.00pm
06/02/2023	Preparing for Womanhood. Growing up Male	G Lova Krishna	3.00pm - 4.00pm
07/02/2023	Caste Different Masculinities	P Esther	3.00pm - 4.00pm
08/02/2023	First lessons in Caste.	Dr P Jyoshna Rani	3.00pm - 4.00pm
09/02/2023	**Unit-2 GENDER ROLES**	G Lova Krishna	3.00pm - 4.00pm
10/02/2023	Sex Selection and Its Consequences-	P Esther	3.00pm - 4.00pm
11/02/2023	Declining Sex Ratio. Demographic Consequences-	Dr P Jyoshna Rani	3.00pm - 4.00pm
13/02/2023	Gender Spectrum	G Lova Krishna	3.00pm - 4.00pm
14/02/2023	Beyond the Binary	P Esther	3.00pm - 4.00pm
15/02/2023	**Unit-3GENDER AND LABOUR-** Division and Valuation of Labour- Housework:	Dr P Jyoshna Rani	3.00pm - 4.00pm
16/02/2023	The Invisible Labor- "My Mother doesn't Work." "Share the Load."- Work:	G Lova Krishna	3.00pm - 4.00pm
17/02/2023	Its Politics and Economics -Fact and Fiction. Unrecognized and Unaccounted work.	P Esther	3.00pm - 4.00pm
18/02/2023	Gender Development Issues-	Dr P Jyoshna Rani	3.00pm - 4.00pm
20/02/2023	Gender and Human Rights-Gender and Mainstreaming	P Esther	3.00pm - 4.00pm
21/02/2023	**UNIT-IVGENDER - BASED VIOLENCE:** The Concept of Violence	G Lova Krishna	3.00pm - 4.00pm
22/02/2023	Gender-based Violence from a Human Rights Perspective-Sexual Harassment	Dr P Jyoshna Rani	3.00pm - 4.00pm
23/02/2023	Coping with Everyday Harassment- Further Reading: "Chupulu". Domestic Violence	G Lova Krishna	3.00pm - 4.00pm

24/02/2023	**UNIT-V: GENDER AND CULTURE** Gender and Film Genderder an Electronic Media	P Esther	3.00pm - 4.00pm
25/02/2023	Gender and Popular Literature-	Dr P Jyoshna Rani	3.00pm - 4.00pm
27/02/2023	Gender Development Issues-Gender Issues- Gender Sensitive Language	P Esther	3.00pm - 4.00pm
28/02/2023	Gender and Popular Literature	G Lova Krishna	3.00pm - 4.00pm
01/03/2023	Gender Development Issues	Dr P Jyoshna Rani	3.00pm - 4.00pm
02/03/2023	Gender Sensitive Language	P Esther	3.00pm - 4.00pm
03/03/2023	REVISION		3.00pm - 4.00pm
04/03/2023	**VALEDICTORY FUNCTION AND CERTIFICATE DISTRIBUTION**	Dr P Chiranjivi DOA & D Pavan Kumar HOD	3.00pm - 4.00pm

Coordinator

HOD-S&H

Science & Humanities
Head of the Department
a Sai Institute of
ala, Kan

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Certification course on gender sensitization

Dates

01/02/2023 to 04/03/2023

Convener

D PAVAN KUMAR ,HOD,S&H

Course Instructors

DR. P JYOSHNA RANI, Asst. Prof

Sri. G LOVA KRISHNA ,Asst. Prof

,

Coordinator

Sri. P ESTHER
Asst. Prof

Dept. of S&H

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Activity Report

Name of the Activity	**Certification course on gender sensitization**
Type of Activity	Language Enhancement Activity
Date of Activity	Feb 1ST 2023 to 4TH March 2023
Details of Participants	Students-120
Coordinators	P ESTHER
Resource persons	Dr P JYOSHNA RANI & G LOVA KRISHNA & P ESTHER
Convener	D PAVAN KUMAR, HOD-S&H
Organizing Department. /Support system	Faculty of English – Science and Humanities Department
Description	A Certificate Course on **Gender Sensitization** was evolved and taken up by the Department of Humanities and Sciences from Feb 1ST 2023 to 4TH March 2023. The coordinator for this programme is Sri.P ESTHER faculty in English. Dr.P JYOSHNA RANI and Sri. G LOVA KRISHNA faculty in English, were the resource persons for this Certificate course. 150 students have registered and 120 students attended the certificate course with utmost enthusiasm. Feedback was collected from the students at the end of the course

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Certificate of Completion

This is to certify that Mr./Ms. L. Chandra Kumar

bearing Roll No. 22AJ1A0303 has successfully completed his/her **Certification Course on Gender Sensitization organized** from **01.02.2023 to 04.03.2023**

Coordinator

HOD
Science & Humanities
Head of the Department
Amrita Sai Institute of Sc. & Tech.
Paritala, Kanchikacherla (M), NTR Dt.

Principal
PRINCIPAL
Amrita Sai Institute of Science and Technology
Amrita Sai Nagar, Paritala
Krishna Dist 521 180

AMRITA SAI INSTITUTE OF SCIENCE & TECHNOLOGY

(AUTONOMOUS)

Approved by AICTE, New Delhi, Permanently Affiliated to JNTUK, Kakinada,
Recognized by UGC under 2(f) & 12(B) of 1956 Act.,
ISO 9001:2015 Certified Institution, Accredited by NAAC "A" Grade,
Paritala, Kanchikacherla, Krishna Dist, Andhra Pradesh- 521180
www.amritasai.org.in, Phone: 0866 2428399

Certificate of Completion

This is to certify that Mr./Ms. G. Santosh Babu

bearing Roll No. 22AJ1A0104 has successfully completed his/her **Certification Course on Gender Sensitization organized** from **01.02.2023 to 04.03.2023**

Coordinator **HOD** **Principal**

Science & Humanities
Head of the Department
Amrita Sai Institute of Science & Technology
Paritala, Kanchikacherla, Krishna Dist.

PRINCIPAL
Amrita Sai Institute of Science and Technology
Amrita Sai Nagar, Paritala,
Krishna Dist 521 180

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Certificate of Completion

This is to certify that Mr./Ms. C. Madhu Babu

bearing Roll No. 22AJ1A0428 has successfully completed his/her **Certification Course on Gender Sensitization organized** from **01.02.2023 to 04.03.2023**

Coordinator **HOD** **Principal**

Science & Humanities
Head of the Department
Amrita Sai Institute of Science and Technology
Paritala, Kanchikacherla, Krishna Dist. 521 180

PRINCIPAL
Amrita Sai Institute of Science and Technology
Amrita Sai Nagar, Paritala
Krishna Dist. 521 180

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www.amritasai.org.in, Phone: 0866 2428399

Certificate of Completion

This is to certify that Mr./Ms. M. Bala Siva Parvathi bearing Roll No. 22A51A0552 has successfully completed his/her **Certification Course on Gender Sensitization organized** from **01.02.2023 to 04.03.2023**

Coordinator

HOD

Science & Humanities
Head of the Department
Amrita Sai Institute of Sci. & Tech.
Paritala, Kanchikacherla(M), NTR Dt.

Principal

PRINCIPAL
Amrita Sai Institute of Science and Technology
Amrita Sai Nagar, Paritala
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Feedback Form on Certificate Course On "GENDER SENSITIZATION"

04 March 2023

Organized by the Department of Humanities and Sciences

1. Please rate your overall satisfaction with Certificate course.

( ) Excellent ( ) Good ( ) Satisfactory ( ) Dissatisfactory

2. Resource persons have explained well and made me understand the objectives well

( ) Excellent ( ) Good ( ) Satisfactory

3. Rate the interaction of the resource persons with the students

( ) Excellent ( ) Good ( ) Satisfactory

4. Do you feel the programme has met its Aims & Objectives?

( )Yes ( ) No

5. How best you rate the knowledge gained by you from this certificate course.

( ) Excellent ( ) Good ( ) Satisfactory ( ) Dissatisfactory

Signature of the Participant

Feedback analysis Gender Sensitization

Roll Number	Name of the Student	Branch	Please rate your overall satisfaction with certificate	Resource person have explain well & made me understand the objectives well	Rate the interaction of the resource persons with the students	Do you feel the programme has met its aims & objectives?	How best you rate the knowledge Gained by you from this Certificate course
22-501	A. Madhusri	CSE	Excellent	Satisfactory	Good.	Yes	Good.
22-502	A. Srujana	CSE	Good	Good	Satisfactory	Yes	Excellent
22-503	A. Gangothri	CSE	Satisfactory	Excellent	Good	Yes	Good
22-524	E. Akshay	CSE	Good	Good	Excellent	Yes	Good.
22-522	Giriyadhan	CSE	Satisfactory	Good	Good	Yes	Excellent
22-539	K. Devi	CSE	Excellent	Satisfactory	Good	Yes	Satisfactory
22-540	K. Giri Babu	CSE	Good	Good	Excellent	Yes	Good
22-542	K. Veetisai	CSE	Excellent	Good	Satisfactory	Yes	Good
22-549	M. Uday	CSE	Good	Excellent	Good	Yes	Excellent
22-550	M. Vijaya	CSE	Good	Good	Excellent	Yes	Good
22-551	M. Keerthana	CSE	Satisfactory	Excellent	good	Yes	Good
22-552	M. Bala Siva	CSE	Excellent	Good	good	Yes	Satisfactory
22-553	M. Ramya.	CSE	Excellent	Good	Satisfactory.	Yes	Excellent
22-554	M. Nagababu	CSE	Good	Satisfactory	Good	Yes	Good
22-560	N. Sandhya	CSE	Good	Good	Excellent	Yes	Excellent
22-566	N. Revanth	CSE	Good	Excellent	Good	Yes	Good
22-568	P. Praveen	CSE	Good	Satisfactory	Good	Yes	Good
22-569	P. Ganesh	CSE	Excellent	Good	Satisfactory	Yes	Satisfactory
22-570	P. Himavanth	CSE	Satisfactory	Good.	Excellent	Yes	Good

Roll Number	Name of the Student	Branch	Please rate your overall satisfaction with certificate	Resource person have explain well & made me understand the objectives well	Rate the interaction of the resource persons with the students	Do you feel the programme has met its aims & objectives?	How best you rate the knowledge Gained by you from this Certificate course
22-581	S/K. ASIF	CSE	Satisfactory	Exelent	Exelent	Yes	Exelent
22-406	A. mahesh	ECE	Good	Good	Good	Yes	Good
22-407	A. Sindhaa	ECE	Good	Good	Good	Yes	Good
22-408	A. VAmsi	ECE	Exelent	Satisfactory	Good	Yes	Good
22-409	B. Chaitisha	ECE	Good	Good	Exelent	Yes	Exelent
22-410	B. Gnaneswari	ECE	Good	Exelent	Exelent	Yes	Good
22-418	B. chaitanya	ECE	Exelent	exelent	Good	Yes	Exelent
22-419	B. likhitha	ECE	exelent	Exelent	Exelent	Yes	Exelent
22-425	C. Ramesh	ECE	Good	Good	Exelent	Yes	Exelent
22-426	C. Raghava	ECE	Good	Satisfactory	Exelent	Yes	Exelent
22-427	C. Jyothi	ECE	Good	Good	Exelent	Yes	Good
22-428	C. madhubala	ECE	exelent	Good	Good	Yes	Good
22-439	D. Gopi	ECE	Exelent	Good	Exelent	Yes	Good
22-440	D. Tarun	ECE	Exelent	Satisfactory	Exelent	Yes	Exelent
22-441	E. Manohar	ECE	Satisfactory	exelent	Exelent	~~Satisfactory~~ Yes	Exelent
22-445	G. Divya	ECE	Good	exelent	Exelent	Yes	Good
22-446	G. Venu	ECE	Exelent	Good	Good	Yes	Good
22-447	G. Vijay kumar	EEE	Exelent	Exelent	Satisfactory	Yes	Satisfactory
22-448	G. Karthik	ECE	Good	Good	Good	Yes	Good
22-457	G Sai Devi	ECE	Good	Exelent	Good	Yes	Exelent

Roll Number	Name of the Student	Branch	Please rate your overall satisfaction with certificate	Resource person have explain well & made me understand the objectives well	Rate the interaction of the resource persons with the students	Do you feel the programme has met its aims & objectives?	How best you rate the knowledge Gained by you from this Certificate course
22-458	G. Sandeep	EEE	Excellent	Good	Satisifaltor	yes	Good
22-471	K. Chris mohan	ECE	Good	Satisfaltor	Good	yes	Exelent
22-472	K. Siva	ECE	Satisifactor	Good	excellent	yes	Good
22-473	K. Sambo sivarao	ECE	Good	Excellent	Good	yes	Good
22-474	K. Ravitejo	ECE	excellent	Satisifactor	excelent	yes	excellent
22-481	K. lakshmi prasana	ECE	Good	Good	Excellent	yes	Satisifactory
22-482	K. Thareen sai	ECE	Good	Satisifaltor	Good	yes	Good
22-483	K. Rani	ECE	excellent	Good	Satisifactor	yes	Good
22-484	K. Harika	ECE	Good	Excellent	Good	yes	excellent
22-485	K. Sweendra reddy	ECE	Satisifaltor	Good	Excellent	yes	Good
22-494	M. Gokul	ECE	Good	Excellent	Satisifaltor	yes	Good
22-205	M. Pradeep	EEE	Excellent	Excellent	Good	yes	Satisifactor
22-206	N. Sravani	EEE	Good	Excellent	Good	yes	Excellent
22-207	N. Sarathi Ahalya	EEE	Satisifaltor	Good	Excellent	yes	Good
22-208	P Sai Harsha	EEE	Good	Satisifaltor	Good	yes	Excellent
22-209	R. Dhanush	EEE	Good	Good	excellent	yes	Good
22-103	Ch. siddhardha	civil	Satisifactor	excellent	Good	yes	Exelent
22-104	G. santhosh Babu	civil	Excellent	Good	Good	yes	Exelent
22-301	B. mahesh	Mech	Good	Satisifaltor	Excellent	yes	Exelent
22-302	D. Yeshwanth	mech	Excellent	Good	Satisifaltor	yes	Good

COORDINATOR

HOD/S&H
Science & Humanities
Head of the Department
Amrita Sai Institute of Engg. & Tech.
Paritala, Kanchikacherla(M), NTR Dt.

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DEPARTMENT OF SCIENCE AND HUMANITIES

Certificate course on Gender Sensitization

Attendance Sheet

S.No	Roll no	Name of the student	1/2	2/2	3/2	4/2	6/2	7/2	8/2	9/2	10/2	11/2	13/2	14/2	15/2	16/2	17/2	18/2	20/2	21/2	22/2	23/2	24/2	25/2	27/2	28/2	01/3	2/3	3/3	4/3	5/3
1	22AJIA0501	A. Madhu Sri	A	A	P	P	P	P	P	P	A	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
2	22AJIA0502	A. Srujana	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
3	22AJIA0503	A. Gangothri	P	P	P	A	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
4	22AJIA0521	E. Akshay	P	P	P	P	P	P	P	P	P	P	A	P	P	P	P	P	P	P	P	P	P	P	P	A	P	P	P	P	P
5	22AJIA0534	Girivardhan. B	P	P	P	P	P	P	P	P	P	P	P	P	A	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
6	22AJIA0540	K. Giribabu	P	P	P	P	P	A	P	P	P	P	A	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
7	22AJIA0541	K. Sai Cherish	P	P	P	P	P	P	P	P	P	P	P	P	A	P	P	P	A	P	P	P	P	P	P	P	P	P	P	P	P
8	22AJIA0549	M. Uday kiran	P	P	P	P	P	P	P	A	P	P	P	P	P	P	A	P	P	P	P	P	P	P	P	P	P	P	P	P	P
9	22AJIA0550	Mamidi Vijaya	P	P	P	A	P	P	P	P	P	P	P	A	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
10	22AJIA0551	M. Keerthana	P	P	P	P	P	A	P	P	P	P	P	P	P	P	A	P	P	P	P	P	P	P	P	P	P	P	P	P	P
11	22AJIA0552	M Bala Siva	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
12	22AJIA0553	M. Ramya	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
13	22AJIA0554	M Nagababu	P	P	A	P	P	P	P	A	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
14	22AJIA0560	N. Sandhyarani	P	P	P	P	P	P	P	P	P	P	P	A	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
15	22AJIA0561	N. Revanth	P	P	P	P	P	P	P	P	A	P	P	P	P	P	A	P	P	P	P	P	P	P	P	P	P	P	P	P	P
16	22AJIA0568	P. praveen	P	P	P	P	P	P	A	P	P	P	P	P	A	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
17	22AJIA0569	P. Ganesh	P	P	P	P	A	P	P	P	P	P	A	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
18	22AJIA0570	P. Himavanth	P	P	P	P	P	P	P	P	A	P	P	P	P	P	P	P	A	P	P	P	P	P	P	P	P	P	P	P	P
19	22AJIA0581	SK. Asif	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
20	22AJIA0406	Anusri umen	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
21	22AJIA0407	A. Sudheer	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
22	22AJIA0408	A. Vamsi	P	P	P	P	P	P	A	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
23	22AJIA0409	A. Cherishma	P	P	P	A	P	P	P	A	P	P	P	P	P	P	P	P	A	P	P	P	P	P	P	P	P	P	P	P	P
24	22AJIA0410	B. Gangeshwari	P	P	P	P	P	P	P	P	P	P	P	P	P	P	A	P	P	P	P	P	P	P	P	P	P	P	P	P	P
25	22AJIA0418	B. Chaitanya	P	P	P	P	P	A	P	P	P	P	P	P	A	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
26	22AJIA0419	B. Likitha	P	P	P	P	P	P	P	P	P	A	P	P	P	P	P	P	P	A	P	P	P	P	P	P	P	P	P	P	P
27	22AJIA0425	C. Venkata	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
28	22AJIA0426	C. Raghava	P	P	P	P	P	P	P	P	P	P	P	P	A	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
29	22AJIA0427	C. Jyothi	P	P	P	P	P	P	P	P	P	P	P	P	A	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
30	22AJIA0428	C. Madhubabu	P	P	A	P	P	P	P	P	P	P	P	A	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
31	22AJIA0429	D. Gopi	P	P	P	P	P	P	P	P	P	P	P	P	A	A	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
32	22AJIA0440	D. Jaswanth	P	P	P	P	P	P	P	P	A	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
33	22AJIA0441	E. Manohar	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
34	22AJIA0445	G. Divya	P	P	A	P	P	P	P	P	A	P	P	P	P	P	A	P	P	P	P	P	P	P	P	P	P	P	P	P	P
35	22AJIA0522	K. Srinivas	P	P	P	P	A	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
36	22AJIA0446	G. Venu	A	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P

37	22AJIA0447	G. Vijay kumar	P P P P P P P P P P P P P P P P P P P P P P P P P P P P P P
38	22AJIA0448	G. Karthik	P P P A P P P P P P P A P P P A P P P P P P P P P P P P P P
39	22AJIA0457	G. Sridevi	P P P P P P P A P P P P P P P P P P P P P P P P P P P P P P
40	22AJIA0458	G. Sandeep	P P P P P P A P P P P P P P P P P P P P P P P P P P P P P P
41	22AJIA0471	K. Christmohan	P P P P P P P A P P P P P P P P P P P P P P P P P P P P P P
42	22AJIA0472	K. Siva	P P P A P P P P P P P P P P P P P P P P P P P P P P P P P P
43	22AJIA0473	K. Sambhasiva	P P P P P P P P A P P P P P P P P P P P P P P P P P P P P P
44	22AJIA0474	K. Ravi Teja	P P P P P P P P P P A P P P P P P P P P P P P P P P P P P P
45	22AJIA0481	K. Lakshmi prasad	P P P P P P P P P P P A P P P P P P P P P P P P P P P P P P
46	22AJIA0482	K. Thanusha	P P P P P P P P P P P P A P P P P P P P P P P P P P P P P P
47	22AJIA0483	K. Ravi	P P P P P P P P P P P P P P P P P P P P P P P P P P P P P P
48	22AJIA0484	K. Harika	P P P P P P P P A P P P P P A P P P P P P P P P P P P P P P
49	22AJIA0485	K. Surender	P P P P P P P P P P A P P P P P P P P P P P P P P P P P P P
50	22AJIA0494	M. Gopal	P P P P P P P P P P P P A P P P P A P P P P P P P P P P P P
51	22AJIA0205	M. pradeep	P P P P P P P P P A P P P P A P P P P P P P P P P P P P P P
52	22AJIA0206	N. Sravani	P P P P P P P P P P A P P P P P P P P P P P P P P P P P P P
53	22AJIA0207	N. Sruthi	P P P P P P P P P P P A P P P P P P A P P P P P P P P P P P
54	22AJIA0208	P. Sai krishna	P P P P P P P P A P P P P A P P P P P P P P P P P P P P P P
55	22AJIA0209	R. Dhanush	P P P P P P P P P P P P P P P P P P P P P P P P P P P P P P
56	22AJIA0103	C. Siddhardha	P P P P P P P P P P P P P P P P P P P P P P P P P P P P P P
57	22AJIA0104	G. Santhosh	P P P P P P P P P P P P P P P P P P P P P P P P P P P P P P
58	22AJIA0301	B. Mahesh	P P P P P P A P P P P P P A P P P P P P P P P P P P P P P P
59	22AJIA0302	D. Yashwanth	P P P P P P P P P P P P P P P P P P P P P P P P P P P P P P
60	22AJIA0303	L. Chandra	P P P P P P P P P P P P P P P P P P P P P P P P P P P P P P
61	22AJIA4415	G. Narshima	P P P P P P P P P A P P P A P P P P P P P P P P P P P P P P
62	22AJIA4416	G Saivaraprasad	P P P P P P P P A P P P P P A P P P P P P P P P P P P P P P
63	22AJIA4421	G. kali Reddy	P P P P P P P P P P A P P P P P P P P P P P P P P P P P P P
64	22AJIA5821	G. Sirisha	P P P P P P P A P P P P P A P P P P P P P P P P P P P P P P
65	22AJIA5822	G. Venkatesh	P P P P P P P P A P P P P P A P P P P P P P P P P P P P P P
66	22AJIA5804	B. Ravindra	P P P P P P A P P P P A P P P P P P P P P P P P P P P P P P
67	22AJIA5805	B. Guruparvan	P P P P P P P A P P P P A P P P P P P P P P P P P P P P P P
68	22AJIA5806	B. Bhanuprakash	P P P P A P P P A P P P P P P P P P P P P P P P P P P P P P
69	22AJIA5807	B. Bhargavi	P P P A P P P A P P P P P P P P P P P P P P P P P P P P P P
70	22AJIA5808	B. venkata Sai	P P P P A P P P P P P P P P P P P P P P P P P P P P P P P P
71	22AJIA4710	C. Durgarao	P P P P P P P P P P P P P P P P P P P P P P P P P P P P P P
72	22AJIA4711	D. Lella Venkata	P P P P A P P P P P P P P P P P P P P P P P P P P P P P P P
73	22AJIA4719	G. Trinadh	P P P P P P P P P P P P P P P P P P P P P P P P P P P P P P
74	22AJIA4720	G. Vinay kmy	P P P P P P P A P P P P P P P P P P P P P P P P P P P P P P
75	22AJIA4721	G. Lokesh	P P P A P P P P P P P P P P P P P P P P P P P P P P P P P P
76	22AJIA4749	T. Bharathkm	P P P P P P P A P P P P P P P P P P P P P P P P P P P P P P
77	22AJIA4750	T. Naga venkat	P P P P P P P P P P P P P P P P P P P P P P P P P P P P P P
78	22AJIA4753	V. Mounika	P P P P P P P P P P A P P P P P P P P P P P P P P P P P P P
79	22AJIA4754	Y. Dhanujaya	P P P P A P P P P P P P P P P P P P P P P P P P P P P P P P
80	22AJIA4755	Y. Veera Sahithi	P P P P P P P P P P P P P P P P P P P P P P P P P P P P P P

COORDINATOR

HOD-S&H
Science & Humanities
Head of the Department
Amrita Sai Institute of Sci. & Tech.
Paritala, Kanchikacherla(M), NTR Dt.

Course Material:

Gender sensitization refers to **the raising sensitization of Gender Sensitization concerns**. It helps people in examining their personal attitudes and beliefs and questioning the realities of both sexes.... Gender is Socially Learned behaviour, based on social expectation from Men & Women.

What is Gender Sensitization and its importance *?

Gender Sensitization **is a basic requirement to understand the sensitive needs of a particular gender**. It helps us to examine our personal attitudes and beliefs and question the 'realities' that we thought we know.... Educational spaces instil thought and make one have a perception that they believe.06-Jan-2018 What is Gender Sensitization in sociology?

Gender sensitization generally refers to **theories which claim that modification of the behaviour of teachers and parents (etc.) towards children can have a causal effect on gender equality**.... Gender sensitivity helps to generate respect for the individual regardless of sex. 16-Jul-2018

What is the process of Gender Sensitization?

Need of Gender Sensitization

As gender sensitization **is a process of behavioural change by instilling empathy into the views that people hold about their own and other sex**. The constitution of India provides for equality of status and opportunity to all the citizens in the country.

What is impact of Gender Sensitization?

Gender sensitization, therefore, **can foster meaningful participation and better integration of women into development process** and can lead to better impact on women of different projects, programmes and policies.... Such an exposure will bring a definite change in attitude and perception of students towards gender.

What do you mean by sensitization?

1: **the action or process of making sensitive or hypersensitive** allergic sensitization of the skin. 2: the process of becoming sensitive or hypersensitive (as to an antigen) also: the resulting state.

What are the objectives of Gender Sensitization?

Main objective of Gender Sensitization cell are:

To provide an integrated and interdisciplinary approach to understand the social and cultural constructions of gender that shapes the experiences of women and men in society. To generate the awareness in regard to equality in law, social system and democratic activities. 30-Jun-2021

What is gender sensitization and children?

Children tend to **distinguish between their likes and dislikes based on their observations at home and the environment they are surrounded by**. Gender sensitivity can bring a positive impact on the growth of the children, their choices, their development, and the kind of individuals they turn out to be eventually. 13-Mar-2019

How do you promote gender sensitization?

12 Steps to Achieve Gender Sensitization in Our Lifetimes

1. Talk to women and girls....
2. Let girls use mobile phones.....
3. Stop child marriage and sexual harassment.
4. Make education gender sensitive...
5. Raise aspirations of girls and their parents.
6. Empower mothers.
7. Give proper value to 'women's work.....
8. Get women into power.

Why is gender sensitivity important?

The concept of gender sensitivity is a **way to reduce the barriers caused due to discrimination and gender bias**. Creating the right kind of gender-sensitive environment leads to mutual respect regardless of their gender.23-Jul-2021

Why is gender sensitivity important in our society today?

Gender awareness raising plays an important role in informing women and men about gender equality, the benefits of a more gender-equal society and the consequences of gender inequality. ... Gender awareness raising **intends to change attitudes, behaviours and beliefs that reinforce inequalities between women and men**.21-Jan-2015

What is a sensitization example?

Sensitization is the strengthening of a neurological response to a stimulus due to the response to a secondary stimulus. For example, **if a loud sound is suddenly heard**, an individual may startle at that sound.... It is essentially an exaggerated startle response, and is often seen in trauma survivors.

What causes sensitization?

Sensitization is the process that occurs after neurogenic **inflammation when neurons become more responsive to both nociceptive and non-nociceptive stimuli**, namely decrease in thresholds of response, increase in magnitude of response, expansion of receptive field, and emergence of spontaneous activity.

What is sensitization in biology?

Sensitization is **the process that occurs after neurogenic inflammation when neurons become more responsive to both nociceptive and non-nociceptive stimuli**, namely decrease in thresholds of response, increase in magnitude of response, expansion of receptive field, and emergence of spontaneous activity.

What is the role of education in gender sensitization?

Gender sensitization is possible with the help of education.... **Education develops the leadership quality among women by self confidence and self-esteem**. 5. Social awareness, Political awareness, health awareness can be better understood in the higher level with the help of higher education.

What is gender sensitivity example?

Indicators of gender-sensitive service include**: refraining from discriminating against or stereotyping clients on the basis of sex or gender**, treating all clients with equal respect, offering gender sensitivity training to all employees, and providing adequate representation of female care providers.

What is gender-sensitive governance?

Gender-sensitive governance addresses **these issues by ensuring that women have substantive representation in urban decision-making processes**.... These include applying the principles of gender mainstreaming to urban planning and decision-making, ensuring that women and men are included equally in accountability processes.03-Aug-2016

Why is sensitization useful?"

Sensitization thus enables **an animal to take advantage of statistical regularities in the occurrence of significant events**, without requiring it to detect other events that predict the significant ones.

Why is sensitization important?

Sensitization literally means **making people 'sensitive' about an issue**. This is the core of awareness raising and is what you ideally want to achieve that people become aware and react to certain issues.

What is the process of Sensitisation?

In healthy individuals, **when the immune system registers a substance as a threat, B cells, a type of white blood cell, produce antibodies**. This is a process known as sensitisation and is part of the normal immune response. In allergic individuals, the immune system misidentifies a harmless substance as a threat.

What is sensitization behavior?

Behavioural sensitization is **the process whereby repeated, intermittent stimulant administration produces a progressively greater and enduring behavioural response**. Further research is necessary to examine characteristics of sensitization in humans, including the neurobiological systems involved.

Coordinator

HOD

Science & Humanities
Head of the Department
Amrita Sai Institute of Sci. & Tech.
Paritala, Kanchikacherla(M), NTR Dt.

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Course Code	ENVIRONMENTAL STUDIES	L	T	P	C
18BS1T6 18BS2T5	Maximum expected contact hours : 56	3	--	--	3

PURPOSE: This course aims at study giving a minimum awareness and practicability for the humanbeings to presrve and protect the environment,environmental coditions.

	INSTRUCTIONAL COURSE OBJECTIVES
1	Basic understanding of the environment, global problems and ecosystems..
2	Over all understanding of the natural resources
3	Basic understanding of Biodiversity.
4	Acquaintance on various environmental challenges induced due to unplanned anthropogenic activities.
5	Awareness on the social issues, environmental legislation and global treaties
6	An understanding of the environmental impact of developmental activities
	COURSE OUTCOMES
1	The importance of environment and global environmental problems. The concepts of the ecosystem and its function in the environment. The need protecting the producers and consumers in various ecosystems and their role in the food web.
2	The natural resources and their importance for the sustenance of the life and recognize the need to conserve the natural resources.
3	The biodiversity of India and the threats to biodiversity, and conservation practices to protect the biodiversity
4	Various attributes of the pollution and their impacts and measures to reduce or control the pollution along with waste management practices
5	Social issues both rural and urban environment and the possible means to combat the challenges. The environmental legislations of India and the first global initiatives towards sustainable development.
6	About environmental assessment and the stages involved in EIA and the environmental audit. Self Sustaining Green Campus with Environment Friendly aspect of Energy, Water and Wastewater reuse Plantation, Rain water Harvesting, Parking & curriculum.

UNIT-I- Multidisciplinary nature of Environment and Ecology:
Definition, Scope and Importance, Introduction to Brief works of noted Environmentalists & Naturalists (Wangari Mathai, Salim Ali and Sunderlal Bahuguna), Sustainability: Stockholm and Rio Summit–Global environmental Challenges: Global warming and climate change, Carbon Credits, acid rains, ozone layer depletion, population growth and explosion, effects. Role of information Technology in Environment and human health.

Ecosystems:
Concept of an ecosystem, Structure and function of an ecosystem. -Producers, consumers and decomposers. Energy flow in the ecosystem, Ecological succession. Food chains, food webs and ecological pyramids. Classification of ecosystems-characteristic features, structure and function of Forest ecosystem, Grassland ecosystem, Desert ecosystem, Aquatic ecosystems: Estuaries and Mangroves.

UNIT-II Natural Resources: Natural resources and associated problems Forest resources –Use and over–exploitation, deforestation – Timber extraction –Mining, dams and other effects on forest and tribal people Water resources –Use and over utilization of surface and ground water –Floods, drought, conflicts over water, dams –benefits and problems Mineral resources: Use and exploitation, environmental effects of extracting and using mineral resources, Food resources: World food problems, changes caused by non-agriculture activities-effects of modern agriculture, fertilizer-pesticide problems, water logging, salinity.

Energy resources: Growing energy needs, renewable and non-renewable energy sources use of alternate energy sources Vs Oil and Natural Gas Extraction.
Land resources: Land as a resource, land degradation, Wasteland reclamation, man induced landslides, soil erosion and desertification.
Role of an individual in conservation of natural resources. Equitable use of resources for sustainable lifestyles.

UNIT-III Biodiversity and its conservation:

Definition: genetic, species and ecosystem diversity-classification -Value of biodiversity: consumptive use, productive use, social-Biodiversity at national and local levels. India as a mega-diversity nation -Hot-spots of biodiversity -Threats to biodiversity: habitat loss, man-wildlife conflicts -Endangered and endemic species of India–Conservation of biodiversity.

UNIT-IV Environmental Pollution:

Definition, Cause, effects and control measures of Air pollution, Water pollution, Heavy Metal pollution, Soil pollution, Noise pollution, radioactive pollution: Sources and risks. Role of an individual in prevention of pollution. Pollution case studies, Sustainable Life Style, Impact of Fire Crackers on Man and his well being.

Solid Waste Management:
Sources, Classification, effects and control measures of urban and industrial solidwastes.
Consumerism and waste products, Biomedical, Hazardous and e -waste managementUNIT-V
Network synthesis: Positive real function - basic synthesis procedure - LC immittance functions - RC impedance functions and RL admittance function - RL impedance function and RC admittance function - Foster and Cauer methods.

UNIT-V Social Issues and the Environment:

Urban problems related to energy -Water conservation-Coastal Regulatory zone management, rainwater harvesting-Resettlement and rehabilitation of people; its problems and concerns. Environmental ethics: Issues and possible solutions. Environmental Protection Act -Air(Prevention and Control of Pollution) Act. Water (Prevention and control of Pollution) Act
-Wildlife Protection Act -Forest Conservation Act-Issues involved in enforcement of environmental legislation. -Public awareness.

UNIT-VI Environmental Management: Impact Assessment and its significance various stages of EIA, preparation of EMP and EIS, Environmental audit. Environmental Modeling: Definition (Box Model and Gaussian Plume Modeling), Ecotourism, Green Campus–Green business, Green politics and Green Building.
The student should Visit an Industry / Ecosystem and submit a report individually on any issues related to Environmental Studies course and make a power point presentation.

TEXT BOOKS:

1. Environmental Studies, K. V. S. G. Murali Krishna, VGS Publishers, Vijayawada
2. Environmental Studies, R. Rajagopalan, 2ndEdition, 2011, Oxford University Press.
3. Environmental Studies, P.N. Palanisamy, P. Manikandan, A. Geetha, and K.Manjula Rani; Pearson Education, Chennai

REFERENCE:

1. Text Book of Environmental Studies, Deeshita Dave & P. Udaya Bhaskar, CengageLearning.
2. A Textbook of Environmental Studies, Shaashi Chawla, TMH, New Delhi
3. Environmental Studies, Benny Joseph, Tata McGraw Hill Co, New Delhi
4. Perspectives in Environment Studies, Anubha Kaushik, C P Kaushik, New Age International Publishers, 2014
5. Environmental pollution, Monitoring and Control by Khopkar. S.M, New Age Publishers.
6. A Text Book of Fundamentals of Ecology, E.P.Odam, Philadelphia: W.B. Saunders Company.

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PARITALA(P), KANCHIKACHERLA(M), KRISHNA (D)–521 180(A. P.)

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

COURSE STRUCTURE FOR AR20 REGULATION

I YEAR I SEMESTER:

SNO	SUB CODE	COURSE TITLE	CATEGORY	L	T	P	CREDITS
1	20HS1T1	COMMUNICATIVE ENGLISH-I	HSMC	3	0	0	3
2	20BS1T2	ORDINARY DIFFERENTIAL EQUATIONS AND CALCULUS	BSC	3	0	0	3
3	20BS1T3	ENGINEERING CHEMISTRY	BSC	3	0	0	3
4	20CS1T4	IT WORKSHOP	ESC	1	0	4	3
5	20CS1T5	PYTHON – I	ESC	3	0	0	3
6	20HS1L1	COMMUNICATIVE ENGLISH LAB	HSMC	0	0	3	1.5
7	20BS1L2	ENGINEERING CHEMISTRY LAB	BSC	0	0	3	1.5
8	20CS1L3	PYTHON LAB-I	ESC	0	0	3	1.5
TOTAL CREDITS							**19.5**

I YEAR II SEMESTER:

S.NO	SUB CODE	COURSE TITLE	CATEGORY	L	T	P	CREDITS
1	20BS2T1	APPLIED PHYSICS	BSC	3	0	0	3
2	20BS2T2	LINEAR ALGEBRA AND TRANSFORMATIONS	BSC	3	0	0	3
3	20CS2T3	DATA STRUCTURES USING C++	ESC	3	0	0	3
4	20CS2T4	PYTHON – II	ESC	3	0	0	3
5	20CS2T5	ENGINEERING GRAPHICS AND DESIGN	ESC	1	0	4	3
6	20BS2L1	APPLIED PHYSICS LAB	BSC	0	0	3	1.5
7	20CS2L2	DATA STRUCTURES AND C++ LAB	BSC	0	0	3	1.5
8	20CS2L3	PYTHON LAB-II	ESC	0	0	3	1.5
9	20MC2T6	ENVIRONMENTAL STUDIES	MC	**2**	**0**	**0**	**0**
TOTAL CREDITS							**19.5**

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DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

COURSE STRUCTURE FOR AR20 REGULATION

I YEAR I SEMESTER:

SNO	SUB CODE	COURSE TITLE	CATEGORY	L	T	P	CREDITS
1	20BS1T1	ENGINEERING PHYSICS	BSC	3	0	0	3
2	20BS1T2	ORDINARY DIFFERENTIAL EQUATIONS AND CALCULUS	BSC	3	0	0	3
3	20ES1T3	ELECTRICAL CIRCUIT ANALYSIS	ESC	3	0	0	3
4	20ES1T4	C PROGRAMMING	ESC	3	0	0	3
5	20ES1T5	ENGINEERING GRAPHICS AND DESIGN	ESC	1	0	4	3
6	20BS1L1	ENGINEERING/APPLIED PHYSICS LAB	BSC	0	0	3	1.5
7	20ES1L2	C PROGRAMMING LAB	ESC	0	0	3	1.5
8	20ES1L3	ENGINEERING WORKSHOP & ITWS LAB	ESC	0	0	3	1.5
9	20MC1T6	ENVIRONMENTAL STUDIES	MC	**2**	**0**	**0**	**0**
TOTAL CREDITS							**19.5**

I YEAR II SEMESTER:

S.NO	SUB CODE	COURSE TITLE	CATEGORY	L	T	P	CREDITS
1	20HS2T1	COMMUNICATIVE ENGLISH-I	HSMC	3	0	0	3
2	20BS2T2	LINEAR ALGEBRA AND TRANSFORMATIONS	BSC	3	0	0	3
3	20BS2T3	ENGINEERING CHEMISTRY	BSC	3	0	0	3
4	20ES2T4	PYTHON PROGRAMMIG	ESC	3	0	0	3
5	20ES2T5	ENGINEERING MECHANICS	ESC	3	0	0	3
6	20HS2L1	COMMUNICATIVE ENGLISH LAB	HSMC	0	0	3	1.5
7	20BS2L2	ENGINEERING CHEMISTRY LAB	BSC	0	0	3	1.5
8	20ES2L3	PYTHON LAB	ESC	0	0	3	1.5
TOTAL CREDITS							**19.5**

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DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

COURSE STRUCTURE FOR AR20 REGULATION

I YEAR I SEMESTER:

SNO	SUB CODE	COURSE TITLE	CATEGORY	L	T	P	CREDITS
1	20BS1T1	ENGINEERING PHYSICS	BSC	3	0	0	3
2	20BS1T2	ORDINARY DIFFERENTIAL EQUATIONS AND CALCULUS	BSC	3	0	0	3
3	20ES1T3	ELECTRICAL CIRCUIT ANALYSIS	ESC	3	0	0	3
4	20ES1T4	C PROGRAMMING	ESC	3	0	0	3
5	20ES1T5	ENGINEERING GRAPHICS AND DESIGN	ESC	1	0	4	3
6	20BS1L1	ENGINEERING/APPLIED PHYSICS LAB	BSC	0	0	3	1.5
7	20ES1L2	C PROGRAMMING LAB	ESC	0	0	3	1.5
8	20ES1L3	ENGINEERING WORKSHOP & ITWS LAB	ESC	0	0	3	1.5
9	20MC1T6	ENVIRONMENTAL STUDIES	MC	**2**	**0**	**0**	**0**
TOTAL CREDITS							**19.5**

I YEAR II SEMESTER:

S.NO	SUB CODE	COURSE TITLE	CATEGORY	L	T	P	CREDITS
1	20HS2T1	COMMUNICATIVE ENGLISH-I	HSMC	3	0	0	3
2	20BS2T2	LINEAR ALGEBRA AND TRANSFORMATIONS	BSC	3	0	0	3
3	20BS2T3	ENGINEERING CHEMISTRY	BSC	3	0	0	3
4	20ES2T4	PYTHON PROGRAMMING	ESC	3	0	0	3
5	20ES2T5	ENGINEERING MECHANICS	ESC	3	0	0	3
6	20HS2L1	COMMUNICATIVE ENGLISH LAB	HSMC	0	0	3	1.5
7	20BS2L2	ENGINEERING CHEMISTRY LAB	BSC	0	0	3	1.5
8	20ES2L3	PYTHON LAB	ESC	0	0	3	1.5
TOTAL CREDITS							**19.5**

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DEPARTMENT OF CIVIL ENGINEERING

COURSE STRUCTURE FOR AR20 REGULATION

I YEAR I SEMESTER:

SNO	SUB CODE	COURSE TITLE	CATEGORY	L	T	P	CREDITS
1	20BS1T1	ENGINEERING PHYSICS	BSC	3	0	0	3
2	20BS1T2	ORDINARY DIFFERENTIAL EQUATIONS AND CALCULUS	BSC	3	0	0	3
3	20ES1T3	ELECTRICAL CIRCUIT ANALYSIS	ESC	3	0	0	3
4	20ES1T4	C PROGRAMMING	ESC	3	0	0	3
5	20ES1T5	ENGINEERING GRAPHICS AND DESIGN	ESC	1	0	4	3
6	20BS1L1	ENGINEERING/APPLIED PHYSICS LAB	BSC	0	0	3	1.5
7	20ES1L2	C PROGRAMMING LAB	ESC	0	0	3	1.5
8	20ES1L3	ENGINEERING WORKSHOP & ITWS LAB	ESC	0	0	3	1.5
9	20MC1T6	ENVIRONMENTAL STUDIES	MC	**2**	**0**	**0**	**0**
TOTAL CREDITS							**19.5**

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S.NO	SUB CODE	COURSE TITLE	CATEGORY	L	T	P	CREDITS
1	20HS2T1	COMMUNICATIVE ENGLISH-I	HSMC	3	0	0	3
2	20BS2T2	LINEAR ALGEBRA AND TRANSFORMATIONS	BSC	3	0	0	3
3	20BS2T3	ENGINEERING CHEMISTRY	BSC	3	0	0	3
4	20ES2T4	PYTHON PROGRAMMING	ESC	3	0	0	3
5	20ES2T5	ENGINEERING MECHANICS	ESC	3	0	0	3
6	20HS2L1	COMMUNICATIVE ENGLISH LAB	HSMC	0	0	3	1.5
7	20BS2L2	ENGINEERING CHEMISTRY LAB	BSC	0	0	3	1.5
8	20ES2L3	PYTHON LAB	ESC	0	0	3	1.5
TOTAL CREDITS							**19.5**

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DEPARTMENT OF MECHANICAL ENGINEERING

COURSE STRUCTURE FOR AR20 REGULATION

I YEAR I SEMESTER:

SNO	SUB CODE	COURSE TITLE	CATEGORY	L	T	P	CREDITS
1	20BS1T1	ENGINEERING PHYSICS	BSC	3	0	0	3
2	20BS1T2	ORDINARY DIFFERENTIAL EQUATIONS AND CALCULUS	BSC	3	0	0	3
3	20ES1T3	ELECTRICAL CIRCUIT ANALYSIS	ESC	3	0	0	3
4	20ES1T4	C PROGRAMMING	ESC	3	0	0	3
5	20ES1T5	ENGINEERING GRAPHICS AND DESIGN	ESC	1	0	4	3
6	20BS1L1	ENGINEERING/APPLIED PHYSICS LAB	BSC	0	0	3	1.5
7	20ES1L2	C PROGRAMMING LAB	ESC	0	0	3	1.5
8	20ES1L3	ENGINEERING WORKSHOP & ITWS LAB	ESC	0	0	3	1.5
9	20MC1T6	ENVIRONMENTAL STUDIES	MC	**2**	**0**	**0**	**0**
TOTAL CREDITS							**19.5**

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S.NO	SUB CODE	COURSE TITLE	CATEGORY	L	T	P	CREDITS
1	20HS2T1	COMMUNICATIVE ENGLISH-I	HSMC	3	0	0	3
2	20BS2T2	LINEAR ALGEBRA AND TRANSFORMATIONS	BSC	3	0	0	3
3	20BS2T3	ENGINEERING CHEMISTRY	BSC	3	0	0	3
4	20ES2T4	PYTHON PROGRAMMING	ESC	3	0	0	3
5	20ES2T5	ENGINEERING MECHANICS	ESC	3	0	0	3
6	20HS2L1	COMMUNICATIVE ENGLISH LAB	HSMC	0	0	3	1.5
7	20BS2L2	ENGINEERING CHEMISTRY LAB	BSC	0	0	3	1.5
8	20ES2L3	PYTHON LAB	ESC	0	0	3	1.5
TOTAL CREDITS							**19.5**

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DEPARTMENT OF SCIENCE AND HUMANITIES

B.TECH I SEM TIME TABLE

Branch: CSD

A.Y:2021-22

W.E.F:06-12-2021

Period	1	2	3		4	5		6	7
Day	9.00-9.50	9.50-10.40	10.40-11.30	11.30-12.15	12.15-1.10	1.10-2.00	2.00-2.10	2.10-3.00	3.00-3.50
Monday				LUNCH			BREAK		
Tuesday						ES			
Wednesday									
Thursday									ES(T)
Friday									
Saturday									ES

	SUBJECT	NAME OF THE FACULTY	CREDITS	SUBJECT CODE	NO.OF PERIODS
ES	ENVIRONMENTAL STUDIES	P.KIRAN KUMAR	0	20MC1T6	3

HOD:S&H

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DEPARTMENT OF SCIENCE AND HUMANITIES

B.TECH I SEM TIME TABLE

Branch: CSM

A.Y:2021-22

W.E.F:06-12-2021

	1	2	3		4	5		6	7
Day/Period	9.00-9.50	9.50-10.40	10.40-11.30	11.30-12.15	12.15-1.10	1.10-2.00	2.00-2.10	2.10-3.00	3.00-3.50
Monday				LUNCH			BREAK		
Tuesday									
Wednesday									
Thursday		ES							
Friday									
Saturday		ES	ES(T)						

	SUBJECT	NAME OF THE FACULTY	CREDITS	SUBJECT CODE	NO.OF PERIODS
ES	ENVIRONMENTAL STUDIES	P.KIRAN KUMAR	0	20MC1T6	3

HOD:S&H

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DEPARTMENT OF SCIENCE AND HUMANITIES
B.TECH I SEM TIME TABLE

Branch: CIC

A.Y:2021-22

W.E.F:06-12-2021

	1	2	3		4	5		6	7
Day/Period	9.00-9.50	9.50-10.40	10.40-11.30	11.30-12.15	12.15-1.10	1.10-2.00	2.00-2.10	2.10-3.00	3.00-3.50
Monday				LUNCH			BREAK		ES
Tuesday									
Wednesday									
Thursday									
Friday									ES
Saturday								ES(T)	

	SUBJECT	NAME OF THE FACULTY	CREDITS	SUBJECT CODE	NO.OF PERIODS
ES	ENVIRONMENTAL STUDIES	P.KIRAN KUMAR	0	20MC1T6	3

HOD:S&H

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Recognized by UGC under 2(f) & 12(B) of 1956 Act.,
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www.amritasai.edu.in, Phone: 0866 2428399.

DEPARTMENT OF SCIENCE AND HUMANITIES
B.TECH I SEM TIME TABLE

Branch: CBA

A.Y:2021-22

W.E.F:06-12-2021

	1	2	3		4	5		6	7
Day/Period	9.00-9.50	9.50-10.40	10.40-11.30	11.30-12.15	12.15-1.10	1.10-2.00	2.00-2.10	2.10-3.00	3.00-3.50
Monday				LUNCH			BREAK	ES(T)	
Tuesday									
Wednesday								ES	
Thursday									
Friday					ES				
Saturday									

	SUBJECT	NAME OF THE FACULTY	CREDITS	SUBJECT CODE	NO.OF PERIODS
ES	ENVIRONMENTAL STUDIES	P.KIRAN KUMAR	0	20MC1T6	3

HOD:S&H

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DEPARTMENT OF SCIENCE AND HUMANITIES

B.TECH I SEM TIME TABLE

Branch: CSE-A A.Y:2021-22 W.E.F:06-12-2021

Period	1	2	3		4	5		6	7
Day	9.00-9.50	9.50-10.40	10.40-11.30	11.30-12.15	12.15-1.10	1.10-2.00	2.00-2.10	2.10-3.00	3.00-3.50
Monday									
Tuesday			ES						
Wednesday			ES						
Thursday					ES(T)				
Friday									
SATURDAY									

	SUBJECT	NAME OF THE FACULTY	CREDITS	SUBJECT CODE	NO.OF PERIODS
ES	ENVIRONMENTAL STUDIES	P.KIRAN KUMAR	0	20MC1T6	3

HOD:S&H

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DEPARTMENT OF SCIENCE AND HUMANITIES

B.TECH I SEM TIME TABLE

Branch: CSE-B A.Y:2021-22 W.E.F:06-12-2021

Period	1	2	3		4	5		6	7
Day	9.00-9.50	9.50-10.40	10.40-11.30	11.30-12.15	12.15-1.10	1.10-2.00	2.00-2.10	2.10-3.00	3.00-3.50
Monday									
Tuesday					ES				
Wednesday					ES	ES(T)			
Thursday									
Friday									
Saturday									

	SUBJECT	NAME OF THE FACULTY	CREDITS	SUBJECT CODE	NO.OF PERIODS
ES	ENVIRONMENTAL STUDIES	P.KIRAN KUMAR	0	20MC1T6	3

HOD:S&H

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DEPARTMENT OF SCIENCE AND HUMANITIES
B.TECH I SEM TIME TABLE

Branch: ECE-A **A.Y:2021-22** **W.E.F:06-12-2021**

	1	2	3		4	5		6	7
Day/Period	**9.00-9.50**	**9.50-10.40**	**10.40-11.30**	**11.30-12.15**	**12.15-1.10**	**1.10-2.00**	**2.00-2.10**	**2.10-3.00**	**3.00-3.50**
Monday	ECA	EP	CP		ODE&C	EP/EWS LAB		EP/EWS LAB	
Tuesday	ECA	EP	ODE&C		CP(T)	CP LAB		CP LAB	
Wednesday	ECA(T)	EP	ODE&C	LUNCH	CP	EGD	BREAK	EGD	
Thursday	EP(T)	CP	ODE&C		ECA	EP/EWS LAB		EP/EWS LAB	
Friday	EGD				ODE&C(T)	ECA		EP	LIB/COUN
Saturday	ECA	EP	ODE&C		CP	ITWS LAB		ITWS LAB	

	SUBJECT	NAME OF THE FACULTY	CREDITS	SUBJECT CODE	NO.OF PERIODS
EP	ENGINEERING PHYSICS	N.BHANU MURTHY	3	20BS1T1	6
ODE&C	ORDINARY DIFFERENTIAL EQUATIONS AND CALCULUS	GPV KUMAR	3	20BS1T2	6
ECA	ELECTRICAL CIRCUIT ANALYSIS	DYVA ASHIRVADAM	3	20ES1T3	6
CP	C PROGRAMMING	B.BALAJI	3	20ES1T4	5
EGD	ENGINEERING GRAPHICS AND DESIGN	M.CHIRANJEEVI	3	20ES1T5	6
EP LAB	ENGINEERING PHYSICS LAB	N.BHANU MURTHY	1.5	20BS1L1	3
CP LAB	C PROGRAMMING LAB	CH.PRABHAVATHI	1.5	20ES1L2	3
EWS	ENGINEERING WORKSHOP	A.FIROZ	1.5	20ES1L3	3
ITWS	IT WORKSHOP	P.JAYA KRISHNA			3

HOD:S&H

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PROFESSIONAL ETHICS AND HUMAN VALUES

UNIT I : Human Values
Morals, Values and Ethics – Integrity – Work Ethics – Service Learning – Civic Virtue – Respect for others – Living Peacefully – Caring – Sharing – Honesty –Courage – Value time – Co-operation – Commitment – Empathy – Self-confidence – Spirituality- Character.

UNIT II : Engineering Ethics
The History of Ethics-Purposes for Engineering Ethics-Engineering Ethics- Consensus and Controversy –Professional and Professionalism –Professional Roles to be played by an Engineer –Self Interest, Customs and Religion-Uses of Ethical Theories-Professional Ethics-Types of Inquiry – Engineering and Ethics-Kohlberg"s Theory – Gilligan"s Argument –Heinz"s Dilemma.

UNIT III : Engineering as Social Experimentation
Comparison with Standard Experiments – Knowledge gained – Conscientiousness – Relevant Information – Learning from the Past – Engineers as Managers, Consultants, and Leaders – Accountability – Role of Codes – Codes and Experimental Nature of Engineering.

UNIT IV : Engineers' Responsibility for Safety and Risk
Safety and Risk, Concept of Safety – Types of Risks – Voluntary v/s Involuntary Risk- Short term v/s Long term Consequences- Expected Probability- Reversible Effects- Threshold Levels for Risk- Delayed v/s Immediate Risk- Safety and the Engineer – Designing for Safety – Risk- Benefit Analysis-Accidents.

UNIT V : Engineers' Responsibilities and Rights
Collegiality-Techniques for Achieving Collegiality –Two Senses of Loyalty- obligations of Loyalty-misguided Loyalty – professionalism and Loyalty- Professional Rights –Professional Responsibilities – confidential and proprietary information-Conflict of Interest-solving conflict problems – Self- interest, Customs and Religion- Ethical egoism-Collective bargaining-Confidentiality-Acceptance of Bribes/Gifts-when is a Gift and a Bribe- examples of Gifts v/s Bribes-problem solving-interests in other companies- Occupational Crimes-industrial espionage-price fixing-endangering lives- Whistle Blowing-types of whistle blowing-when should it be attempted- preventing whistle blowing.

UNIT VI : Global Issues
Globalization- Cross-culture Issues-Environmental Ethics-Computer Ethics- computers as the instrument of Unethical behavior-computers as the object of Unethical Acts-autonomous computers-computer codes of Ethics- Weapons Development-Ethics and Research-Analyzing Ethical Problems in Research-Intellectual Property Rights.

Text Books

- "Engineering Ethics & Human Values" by M.Govindarajan, S.Natarajan and V.S.SenthilKumar-PHI Learning Pvt. Ltd-2009.
- "Professional Ethics and Morals" by Prof.A.R.Aryasri, Dharanikota Suyodhana-Maruthi Publications.
- "Professional Ethics and Human Values" by A.Alavudeen, R.Kalil Rahman and M. Jayakumaran- Laxmi Publications
- "Professional Ethics and Human Values" by Prof. D.R. Kiran.
- "Indian Culture, Values and Professional Ethics" by PSR Murthy- BS Publication.
- "Ethics in Engineering" by Mike W. Martin and Roland Schinzinger – Tata McGraw-Hill – 2003.
- "Engineering Ethics" by Harris, Pritchard and Rabins, CENGAGE Learning, India Edition, 2009.

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COURSE STRUCTURE MECHANICAL ENGINEERING

Semester VI (Third year)

S.NO	CATEGORY	SUB CODE	COURSE TITLE	L	T	P	CREDITS
1	PCC-ME	20ME6T1	INSTRUMENTATION & CONTROL SYSTEMS	3	0	0	3
2	PCC-ME	20ME6T2	ENGINEERING METROLOGY	3	0	0	3
3	PCC-ME	20ME6T3	HEAT TRANSFER	3	0	0	3
4	PEC-ME-2	20ME6T4	ELECTIVE-2	3	0	0	3
5	OEC-2	20OE6T5	OPEN ELECTIVE-2	2	0	2	3
6	PCC-LAB	20ME6L1	HEAT TRANSFER LAB	0	0	3	1.5
7	PCC-LAB	20ME6L2	METROLOGY & INSTRUMENTATION LAB	0	0	3	1.5
	PCC-LAB	20ME6L3	SIMULATION LAB	0	0	3	1.5
8	SKILL ORIENTED COURSE	20ME6S4	CODING & TECHNICAL TRAINING	1	0	2	2
9	MANDATORY COURSE (AICTE SUGGESTED)	20MC6T6	PROFESSIONAL ETHICS & HUMAN VALUES	2	0	0	0
TOTAL CREDITS							21.5

INDUSTRIAL/RESEARCH INTERNSHIP (MANDATORY) 2 MONTHS DURING SUMMER VACATION

Category	CREDITS
Professional core courses	13.5
Professional Elective courses	3
Open Elective Course/Job oriented elective	3
Skill advanced course/ soft skill course*	2
Mandatory course (AICTE)	0
Industrial/Research Internship (Mandatory) 2 Months	-
TOTAL CREDITS	**21.5**

HOD-MECH

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DEPARTMENT OF CIVIL ENGINEERING

V-SEM- III Year

Sl.No	Subcode	Course Title	Hours per week			Credits
			L	T	P	
1	20CE5T1	Concrete Technology	3	0	0	3
2	20CE5T2	Structural Analysis -II	3	0	0	3
3	20CE5T3	Transportation Engineering -II	3	0	0	3
4	20OE5T4	Open Elective-I (Groundwater Development)	2	0	2	3
5	20PE5T5	Professional Elective –I (Design and Drawing Reinforced Concrete Structure)	3	0	0	3
6	20CE5L1	Concrete Technology Lab	0	0	3	1.5
7	20CE5L2	Transportation Engineering Lab	0	0	3	1.5
8	20SO5T6A 20SO5T6B 20SO5T6C 20SO5T6D 20SO5T6E	1.Web and Mobile Development-3 2.Cloud Computing-3 3.Cyber Security-3 4.Data Analyst-3 5. Computer Aided Drawing -2	1	0	2	2
9	20MC5T7	Professional Ethics & Human Values	2	0	0	
10	20SI5L7	Summer Internship	0	0	0	1.5
11		Total				21.5

Sl.No	Category	Course Code	Total Credits
1	Professional Core Course	PCC,PCC Lab	12
2	Professional Elective Course	PEC	3
3	Open Elective Course	OEC	3
4	Skill Oriented Course	SOC	2
5	Summer Internship	SI	1.5
		Total Credits	21.5

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DEPARTMENT OF MECHANICAL ENGINEERING

TIME TABLE

Class: III B. Tech II Semester AR-20
Class In-Charge: B SAI RAM KRISHNA

Branch: MECH
CLASSROOMNO. -BG-06

AY: 2022-23
w.e.f: -26-12-2023

III-A	I	II	BREAK	III	IV	LUNCH BREAK	V	VI	VII
	09:00-09:55	09:55-10:50		11:00-11:55	11:55-12:50		1:30-02:20	02:20-3.15	03:15-04:10
MON									
TUE									
WED					PEHV				
THU					PEHV				
FRI					PEHV				
SAT									

	SUBJECT	T	P	C	NAME OF THE FACULTY
PEHV (MC)	PROFESSIONAL ETHICS & HUMAN VALUES	2			P SRINIVASARAO

HOD –MECH

HEAD OF THE DEPARTMENT
Mechanical Engineering
Amrita Sai Institute of Science and Technology
Paritala, Kanchikacherla (MD), Krishna Dt.

Certificate Course

On

Sustainable Engineering

Coordinator: Dr.S VIJAY VARDINI

Date of Event: 18/10/2022 to 4/11/2022

Organizing Department: Sciences & Humanities

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www.amritasai.org.in, Phone: 0866 2428399

Lr./ASIST/S&H/Sustainable Engineering/Certification Course/2022

Date: **14.10.2022**

To

The Principal,

Amrita Sai institute of science & technology

Paritala.

From

D PAVAN KUMAR,

Assistant Professor, H&S Department

Amrita Sai institute of science & technology

Paritala.

Respected Sir,

Sub: ASIST-Permission to conduct Certification Course on Sustainable Engineering –S&H Department- Requested Reg.

It is being brought to your kind notice that, With reference to the cited, the S&H Department is planning to organise Certification Course on Sustainable Engineering for B.Tech Students from 18th October to 19th November 2022. In this regard I kindly request you Sir to grant the permission for organizing Certification Course in online mode. This is submitted for your kind perusal.

Thanking you Sir,

HOD S&H

Science & Humanities
Head of the Department
Amrita Sai Institute of Science & Technology
Paritala, Kanchikacherla (M), Krishna Dt.

Yours Faithfully,

D PAVAN KUMAR,

Assistant Professor,

S&H Department

ASIST.College

(Autonomous)

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DATE:14/10/2021

CIRCULAR

All B. Tech students are hereby informed that Sciences and Humanities department is going to organize a certification course on Sustainable engineering for B.Tech students from 18th October 2021 to 19th November 2022. So interested students may register their names with Sustainable engineering Certification Course Coordinator Dr S .VIJAY VARDINI, Assistant professor in S&H department on or before 17 October 2022.

PRINCIPAL

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Amrita Sai Nagar, Paritala
Krishna Dist 521 180

Copy to Management /CEO
DOA'S
ALL HODS
Canteen
Library
Office
Exam cell
Admin chamber
Master File

Course Title	SUSTAINABLE ENGINEERING	B.Tech: Open to all branches

Course Objectives:

-To develop an increased awareness among students on issues in areas of sustainability

- To make students understand the role of engineering and technology within sustainable development

- To give students some familiarity with the methods and tools used for sustainable product- service system development

- To establish in students an understanding of the role and impact of engineering activities and engineering decisions on environmental, societal, and economic well-being

Course Outcomes: On successful completion of this course, The student will be able to	
CO 1	Students have an increased awareness on issues in the area of sustainability
CO 2	Students get an understanding the role of engineering and technology within sustainable development
CO 3	Students gain familiarity with the methods and tools employed for sustainable product-service system development
CO 4	Students gain an understanding of the role and impact of engineering activities and engineering decisions on the environment, society, and economies

UNIT-I: Sustainability: Introduction-Concepts - Need to promote sustainability - three pillars of sustainability - Nexus between technology and sustainable development - Challenges for sustainable development - Benefits of sustainable living.

UNIT-II: The Environment and Key Life Styles: Food - Housing - Mobility - Consumer goods - Leisure time. Factors influencing consumption and lifestyles - Determinants Driving Factors-Motivating factors.

UNIT-III: Natural Resources and their Pollution: Air pollution - effects of air pollution - Clean development mechanism - Water Pollution - Sustainable waste water treatment - Solid waste – sources - Impacts of solid waste - Zero waste concepts - 3R concept – Global-environmental issues - Resource degradation - Climate change - Global warming - Ozone layer depletion. Carbon credits and carbon trading - Carbon foot prints.

UNIT-IV: Life Cycle Assessment (LCA): Introduction - LCA & Sustainability - LCA and Environmental system - LCA and Water, Food & Energy - Environmental risk assessment - Environmental data collection and LCA methods - ISO 14040 Key points of good LCA with examples.

UNIT-V: Design for Sustainability: Green engineering - Sustainable engineering principles - Green sustainable materials Sustainable urbanization - Industrial ecology - Industrial symbiosis - Case Studies.

Reference Books:

Alleng, D.T. and Shonnard, D.R., Sustainability Engineering: Concepts, Design and

Case studies, Prentice Hall Bradley. A.S., Adebayo, A.O., Maria, P. Engineering Applications in Sustainable

Design and Development, Cengage learning. Ni Bin Chang, *Systems Analysis for Sustainable Engineering: Theory and Applications, Tata McGraw-Hill Publications.*

Purohit, S.S., ***Green Technology: An Approach for Sustainable Environment***, Agrobios Publications.

HOD

Science & Humanities
Head of the Department
Amrita Sai Institute of Sci. & Tech.
Paritala, Kanchikacherla(M), NTR Dt.

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Date	Timing	Course instructor	Topic to be covered
18-10-2021	3-5 pm	Dr.G VIJAY VARDINI	Need to promote sustainability - Three pillars of sustainability - Nexus between technology and sustainable development
9-10-2021	3-5 pm	Dr.G VIJAY VARDINI	Challenges For sustainable development -Benefits of sustainable living.
20-10-201	3-5 pm	P SRINIVAS REDDY	Food Housing Mobility Consumer goods-Leisure time
21-10-2021	3-5 pm	P SRINIVAS REDDY	Factors influencing consumption And lifestyles Determinants Driving factors Motivating factors.
22-10-2021	3-5 pm	Dr.G VIJAY VARDINI	Air pollution effects of air pollution
23-10-2021	3-5 pm	Dr.G VIJAY VARDINI	Clean DEVELOPMENT mechanism
24-10-2021	3-5 pm	Dr.G VIJAY VARDINI	3R concept - Water pollution - Sustainable
25-10-2021	3-5 pm	Dr.G VIJAY VARDINI	Solid waste-sources- Impacts of solid waste Zero waste concepts
26-10-201	3-5 pm	Dr.G VIJAY VARDINI	Global environmental issues - Resource degradation Climate change
27-10-201	3-5 pm	Dr.G VIJAY VARDINI	Global warming - Ozone layer depletion
28-10-201	3-5 pm	Dr.G VIJAY VARDINI	Carbon credits and carbon trading
29-10-201	3-5 pm	Dr.G VIJAY VARDINI	Carbon foot prints and LCA & sustainability

30-10-201	3-5 pm	Dr.G VIJAY VARDINI	LCA and Environmental system – LCA and water, Food & Energy – Environmental risk assesment
31-10-201	3-5 pm	Dr.G VIJAY VARDINI	Environmental data collection and LCA methods – ISO 14040-Key points of good LCA with examples
1-11-2021	3-5 pm	P SRINIVAS REDDY	Green engineering Sustainable engineering principles
2-11-2021	3-5 pm	P SRINIVAS REDDY	Green sustainable materials – Sustainable urbanization
3-11-2021	3-5 pm	P SRINIVAS REDDY	Industrial ecosystem – industrial symbiosis- case studies

Co-ordinator: D PAVAN KUMAR

Course Instructor 1 : Dr G VIJAY VARDINI

Course Instructor 2: P SRINIVAS REDDY

HOD & S&H

Science & Humanities
Head of the Department
Amrita Sai Institute of Sci. & Tech.
Paritala, Kanchikacherla(M), NTR Dt.

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Department of S&H

Certificate course on Sustainable Engineering

Date

13th October to 14th November , 2022

Eligibility : All branches of B.Tech students

Venue : Seminar Hall (s&h)

Course Co-ordinator :

Dr. D PAVAN KUMAR

Course Instructors :

Dr. G VIJAY VARDINI

P SRINIVAS REDDY

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ACTIVITY REPORT

Certification Course

On

"SUSTAINABLE ENGINEERING"

18th October to 4th November 2022

Target Group : B. Tech Students

Details of Participants : 108 Students

Co-ordinator : Dr.G VIJAY VARDINI Asst. Prof, Dept. of H&S

Organizing Department: Department of Sciences & Humanities

Venue : SEMINAR HALL

Description:

Certification course on "Sustainable Engineering" was organized by Dept. of S&H from **18th October to 4th November**, 2022 in online mode. The Course instructors are Dr. G VIJAY VARDINI &Sri P SRINIVAS REDDY. The main aim of the course is to create awareness among students about this course of Sustainability practices applied in various fields like Engineering and Industrial applications to conserve environment. Course is completed and certificates are provided for the participants.

AMRITA SAI INSTITUTE OF SCIENCE & TECHNOLOGY

(AUTONOMOUS)

Certificate

Of Appreciation

This is to certify that Mr./Ms./Smt. Rayala kavitha ***has successfully completed the certificate course on Sustainable Engineering organised by Department of Sciences & Humanities, A.S.I.S.T from 18th October to 19rd November, 2022.***

PRINCIPAL

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Amrita Sai Nagar, Paritala
Krishna Dist 521 180

AMRITA SAI INSTITUTE OF SCIENCE &TECHNOLOGY

(AUTONOMOUS)

Certificate

Of Appreciation

This is to certify that Mr./Ms./Smt. Alladi Prasanth ***has successfully completed the certificate course on Sustainable Engineering organised by Department of Sciences & Humanities, A.S.I.S.T from 18th October to 3rdNovember, 2021.***

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Amrita Sai Institute of Science and Technolo
Amrita Sai Nagar, Paritala
Krishna Dist 521 180

AMRITA SAI INSTITUTE OF SCIENCE & TECHNOLOGY

(AUTONOMOUS)

Certificate

Of Appreciation

This is to certify that Mr./Ms./Smt. C. Mounika ***has successfully completed the certificate course on Sustainable Engineering organised by Department of Sciences & Humanities, A.S.I.S.T from 18th October to 3rdNovember, 2021.***

PRINCIPAL

PRINCIPAL
Amrita Sai Institute of Science and Technology
Amrita Sai Nagar, Paritala
Krishna Dist 521 180

Feedback Form & Certification details for Certification course on Sustainable engineering (October 18 to 3 November 2022)

Amrita Sai Institute of Science & Technology (Autonomous), Vijayawada , Paritala ,Andhra Pradesh , India-521180. Approved by AICTE, New Delhi & Affiliated to JNTUK , Kakinada

We appreciate your help in evaluating the session on certification course on the parameters mentioned below using a scale from 1 (Low) to 5 (High). You will receive the certificate based on your feedback.

1. Please rate your overall satisfaction with Certificate course.

( ) Excellent ( ) Good ( ) Satisfactory ( ) Dissatisfactory

2. Resource persons have explained well and made me understand the objectives well

( ) Excellent ( ) Good ( ) Satisfactory

3. Rate the interaction of the resource persons with the students

( ) Excellent ( ) Good ( ) Satisfactory

4. Do you feel the programme has met its Aims & Objectives?

( )Yes ( ) No ( ) Dissatisfactory ( ) Dissatisfactory

5. How best you rate the knowledge gained by you from this certificate course.

( )Good ( ) Excellent ( ) Dissatisfactory ( ) Dissatisfactory

Signature of the Participant

AMRITA SAI INSTITUTE OF SCIENCE & TECHNOLOGY

(AUTONOMOUS)

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Paritala, Kanchikacherla, Krishna Dist, Andhra Pradesh- 521180.
www.amritasai.org.in, Phone: 0866 2428399.

Name of the event: - Certificate course on Sustainable Engineering DATE: 17/02/2022

Venue: seminar hall

Registration Form

S.NO	Roll Number	Name	Branch	Signature
1	21AJ1A0401	AADADA SHANMUKHA RAO	ECE	A. Shanmukha Rao
2	21AJ1A0402	ACHANTA SATISH	ECE	A. SATISH
3	21AJ1A0403	ADURI GOPI	ECE	A Gopi
4	21AJ1A0404	ADDANKI BHARGAV	ECE	A. Bhargav
5	21AJ1A0405	ANABATTINA SRIKANTH	ECE	A. SRIKANTH
6	21AJ1A0416	BODA PAVAN KALYAN	ECE	B. pavan kalyan
7	21AJ1A0417	BOPPANA VAMSI KRISHNA	ECE	B. V. K Krishna
8	21AJ1A0430	DEVINENI PRASANNA	ECE	D. Prasanna.
9	21AJ1A0431	ANANTHA SAI CHENNA	ECE	A. Sai chenna
10	21AJ1A0432	DUNNALA SAI KUMAR SYAM	ECE	D. S. K. Shyam
11	21AJ1A0446	GUNDIMEDA CHANDU	ECE	G. Chandu
12	21AJ1A0447	IMMADABATTINA AJAY	ECE	I. Ajay
13	21AJ1A0448	INTURI CHANDRA SAHITHI	ECE	I. C. SAHITHI
14	21AJ1A0461	KEERTHI GOPI KRISHNA	ECE	K. Gopi Krishna
15	21AJ1A0462	KODALI RAMYA	ECE	K. Ramya.
16	21AJ1A0475	LUKKA HARSHAVARDHAN	ECE	L. H. VARDHAN
17	21AJ1A0476	MACHA SUNIL KUMAR	ECE	M. Sunil Kumar
18	21AJ1A0494	NAKKA SAI KUMAR REDDY	ECE	N. Sai Kumar
19	21AJ1A0495	MUNAGANTI JYOTHI	ECE	M. Jyothi

20	21AJ1A0496	NAGIREDDY VIJAYASIMHA REDDY	ECE	N. Vijayasimha Reddy
21	21AJ1A04A8	PATHURI POORNA SRI VANI	ECE	P. Poorna Sri Vani
22	21AJ1A04A9	POPURI ABHINAV	ECE	P. Abhinav
23	21AJ1A04B6	RAYALA KAVITHA	ECE	R. Kavitha
24	21AJ1A04B7	SABBASANI BHARGAVA REDDY	ECE	S. Bhargav Reddy
25	21AJ1A04B8	SAMUDRALA PAVAN SRI GUPTHA	ECE	Pavan Sri Gupta. S.
26	21AJ1A04D6	THOTA SAI KIRAN	ECE	T. Sai Kiran
27	21AJ1A04D7	TULLIMILLI LOK SAI MAHESH	ECE	T. Sai Mahesh
28	21AJ1A04G1	ROYYALA SANTOSH KUMAR	ECE	R. Santosh
29	21AJ1A04G2	SANIKOMMU HYMAVATHI	ECE	S. Hymavathi
30	21AJ1A04G3	SURA SRI LAKSHMI	ECE	S. S. Lakshmi
31	21AJ1A04G5	BANDI NANDINI	ECE	B. Nandini
32	21AJ1A04G6	BADDALA MAHESH	ECE	B. Mahesh
33	21AJ1A04G7	BOGOLU ANJI REDDY	ECE	B. Anji Reddy
34	21AJ1A04G8	OLETI RAGHAVENDRA	ECE	O. Raghavendra
35	21AJ1A04G9	NALLAKA CHANDANA RAVITHRENI	ECE	N. Chandana Ravithreni
36	21AJ1A0503	ALLADI PRASHANTH	CSE	A. Prashanth
37	21AJ1A0504	ANKAM SUMANA SRI	CSE	A. SUMANA SRI
38	21AJ1A0505	ANUPOJU NAGA ABHINAV	CSE	A. Naga Abhinav
39	21AJ1A0506	ATKURI S S S V S KRISHNA SWAMY	CSE	A. S. S. S. V. S. Krishna Swamy
40	21AJ1A0507	ATLA HARSHITHA	CSE	A. Harshitha
41	21AJ1A0521	CHAVATAPALLI PAVAN CHAITHANYA	CSE	Ch. Pavan Chaithanya
42	21AJ1A0522	CHINKA NARESH	CSE	C. Naresh
43	21AJ1A0523	CHINNI DEVENDRA VENKATA PHANI KRISHNA	CSE	C. D. V. P. Krishna
44	21AJ1A0537	GOPANABOINA LINGARAO	CSE	G. Lingarao

44	21AJ1A0538	GORANTLA VENU	CSE	G. Venu
45	21AJ1A0557	KRISHNA LOHITHA	CSE	K. LOHITH
46	21AJ1A0558	KUNAPANENI SRIRAM	CSE	K. Sriram
47	21AJ1A0559	LINGALA CHANDU BABU	CSE	L. Chandubabu
48	21AJ1A0570	MUSINANI LEELA VENKATASAI ANJALI SUDHAVANI	CSE	M. Leelavankat
49	21AJ1A0571	NADAKUDITI AKSHAY	CSE	N. Akshay
50	21AJ1A0572	NAGIREDDY VASANTHA	CSE	N. Vasantha
51	21AJ1A0584	POLASU LAKSHMI NARAYANA	CSE	P. Lakshmi Narayana
52	21AJ1A0585	POLUBOINA KARTHIKA	CSE	P. Karthika
53	21AJ1A0586	PONNAPULA NAVYA	CSE	P. NAVYA
54	21AJ1A0598	THORLIKONDA RATHAIAH	CSE	T. Rathaiah
55	21AJ1A0599	THELIKE PALLI SNEHA	CSE	T. P. SNEHA
56	21AJ1A05A0	MAKKE GOWTHAMI MADHAVI KAMALA	CSE	M. G. M. Kamala
57	21AJ1A05A1	SYED FAIZAN	CSE	S. FAIZAN
58	21AJ1A05A2	TALAMALA MEGHANA	CSE	T. Meghana
59	21AJ1A05B3	VANAPARTHI SRINIVASA ANIL	CSE	V. S. Anil
60	21AJ1A05B4	VARAKALA RATNA TEJA	CSE	V. R. Teja
61	21AJ1A4401	ABBURI GUNA SAI VARDHAN	CSD	A. G. S. Vardhan
62	21AJ1A4402	ALURU VIDYA SRI	CSD	A. VIDYA SRI
63	21AJ1A4403	ANKATHI HARISH	CSD	A HARISH
64	21AJ1A4414	CHINTHALA MOUNIKA	CSD	C. Mounika
65	21AJ1A4415	DARA VENKATA KRISHNA	CSD	D. V. Krishna
66	21AJ1A4416	DHAMMU SHIVA SAI BABU	CSD	D. Shiva Sai
67	21AJ1A4423	GUDE YUVAN VENKAT SAI KRISHNA VAMSI	CSD	G. Yuva Venkat Sai
68	21AJ1A4424	GUNTURU VINITH	CSD	G. VINITH

69	21AJ1A4431	KONDEPATI JAYANDER	CSD	K. Jayander
70	21AJ1A4432	KOTHURI YASASWINI	CSD	K. Yesaswini
71	21AJ1A4433	KOTIKALAPUDI PREM SAGAR	CSD	K. PREM SAGAR
72	21AJ1A4439	NALLAMOTHU JAYANTHI	CSD	N. Jayanthi
73	21AJ1A4440	PASUPULETI GEETHASRI	CSD	P. Geetha Sri
74	21AJ1A4441	PINNENI NAGA PRAVALIKA	CSD	P. Pravalika
75	21AJ1A4442	RANGISETTI PUJITHA	CSD	R. Pujitha
76	21AJ1A5803	ALLADI TRINATH	CBA	A. TRINATH
77	21AJ1A5804	CHEREDDY BALANJANEYULU	CBA	C. Balanjaneyulu
78	21AJ1A5811	KOKA SRI LALITHA	CBA	K. Sri Lalitha
79	21AJ1A5812	KOLLA BHAVANI	CBA	K. Bhavani
80	21AJ1A5823	SHAIK JOHARA	CBA	S. Johara
81	21AJ1A4208	CHIMBILI VEDA SAI	CSM	C. Veda Sai
82	21AJ1A4209	ABDUL SAMEER	CSM	A. Sameer
83	21AJ1A4255	THONDEPU POOJITHA	CSM	T. POOJITHA
84	21AJ1A4256	NEERUKATTU SREEKANTH	CSM	N. Sreekanth
85	21AJ1A4706	BELLAMKONDA MOUNIKA	CIC	B. MOUNIKA
86	21AJ1A4707	CHAPALAMADUGU CHINNI RAGHAVA	CIC	C. Chinni Raghava
87	21AJ1A4719	GARLAPATI MANIKANTA	CIC	G. Manikanta
88	21AJ1A4720	GOPU DHANUSH	CIC	G. Dhanush
89	21AJ1A4721	GORIPARTHI VARA PRASAD	CIC	G. Vara prasad
90	21AJ1A0201	AVULA BHARGAV	EEE	A. Bhargav
91	21AJ1A0202	CHITTEM BINDU MADHAVI	EEE	C. B. MADHAVI
92	21AJ1A0209	MODUGU YASWANTH	EEE	M. Yeswanth
93	21AJ1A0210	MURIMURI TEJA SRI	EEE	M. TEJA SRI

94	21AJ1A0213	PULI VIJAY KUMAR	EEE	P. Vijay kumar
95	21AJ1A0301	GIDDAKULA HARIKRISHNA	MECH	G. Harikrishna
96	21AJ1A0302	SAKAMURI SUMANTH	MECH	S. Sumanth
97	21AJ1A0303	SHAIK FAYAZ	MECH	S. Fayaz
98	21AJ1A0304	VAMPATAPU NIKESH	MECH	V. Nikesh
99	21AJ1A0305	YENUGULA PAVAN NAGA GOPI	MECH	Y. Pavan Naga gopi
100	21AJ1A0101	BHOGINENI PUJITHA	CIVIL	B. Pujitha
101	21AJ1A0102	CHINTHALA NAVEEN	CIVIL	CH. NAVEEN
102	21AJ1A0103	KOMMUKURI MAHESH	CIVIL	K. Mahesh
103	21AJ1A0104	KOUTHARAPU THIRUMALESH	CIVIL	K. Thirumalesh
104	21AJ1A0105	PULUGUJJU LOKESH	CIVIL	P. Lokesh
105	21AJ1A0106	SATLA ADI KESHAVULU	CIVIL	S. A. Keshavulu
106	21AJ1A0107	TOGATI NIKHITHA	CIVIL	T. Nikhitha
107	21AJ1A0108	TUMMAPUDI JITENDRA DURGARAO	CIVIL	T. J. Durgarao
108	21AJ1A0109	KILARU CHARAN SAI	CIVIL	K. Charan sai

Coordinator

HOD-S&H

Feedback analysis Gender Sensitization

Roll Number	Name of the Student	Branch	Please rate your overall satisfaction with certificate	Resource person have explain well & made me understand the objectives well	Rate the interaction of the resource persons with the students	Do you feel the programme has met its aims & objectives?	How best you rate the knowledge Gained by you from this Certificate course
21-401	A. Shanmukh	ECE	Excellent	satisfactory	Good	Yes	Good.
21-402	A. Satish	ECE	Good	Good	satisfactor	Yes	Excellent
21-403	A. Gopi	ECE	Satisfactor	Excellent	Good	Yes	Good.
21-404	A. Bhargav	ECE	Good	Good	Excellent	Yes	Good
21-405	A. Srikanth	ECE	satisfactor	Good	Good	Yes	Excellent.
21-416	B. Kalyan	ECE	Excellent	Satisfactor	Good	yes	Satisfactor
21-417	B. V. krishna	ECE	Good	Good	Excellent	yes	Good
21-430	D. Prasanna	ECE	Excellent	Good	satisfactor	Yes	Good
21-432	D. Syam	ECE	Good	Excellent	Good	Yes	Excellent
21-446	G. Chandu	ECE	Good	Good	Excellent	yes	Good
21-447	I. Ajay	ECE	satisfactor	Excellent	good	Yes	Good
21-448	I. Sahiti	ECE	Excellent	Good	good	Yes	Satisfactor
21-461	K. krishna	ECE	Excellent	Good	Satisfactor	yes	Excellent
21-462	K. Ramya	ECE	Good	satisfactor	Good	Yes	Good
21-475	L. Vardhan	ECE	Good	Good	Excellent	Yes	Excellent
21-476	M. Sunil	ECE	Good	Excellent	Good	yes	Good
21-494	N. Sai	ECE	Good	Satisfactor	Good	yes	Good
21-495	M. Jyothi	ECE	Excellent	Good	Satisfactor	Yes	satisfactor
4-496	N. Vijay	ECE	Satisfactor	Good	Excellent	yes	Good.

Roll Number	Name of the Student	Branch	Please rate your overall satisfaction with certificate	Resource person have explain well & made me understand the objectives well	Rate the interaction of the resource persons with the students	Do you feel the programme has met its aims & objectives?	How best you rate the knowledge Gained by you from this Certificate course
21-A8	P. Sri Vani	ECE	Excellent	Good	Satisifactor	yes	Good
21-A9	P. Abhinav	ECE	Good	Satisfactor	Good	yes	Excellent
21-B6	R. kavitha	ECE	Satisifactor	Good	Excellent	yes	Good
21-B7	S. Reddy	ECE	Good	Excellent	Good	yes	Good
21-B8	Sri Gupta	ECE	Excellent	Satisifactor	Excellent	yes	Excellent
21-D6	T. Sai kiran	ECE	Good	Good	Excellent	yes	Satisifactor
21-D7	S. Mahesh	ECE	Good	Satisifactor	Good	yes	Good
D1-G1	R. Santosh	ECE	Excellent	Good	Satisifactor	yes	Good
21-G2	S. Hymavathi	ECE	Good	Excellent	Good	yes	Excellent
21-G3	S. Lakshmi	ECE	Satisifactor	Good	Excellent	yes	Good
21-G5	B. Nandini	ECE	Good	Excellent	Satisifactor	yes	Good
21-G6	B. Mahesh	ECE	Excellent	Excellent	Good	yes	Satisifactor
21-G7	B. Anji	ECE	Good	Excellent	Good	yes	Excellent
21-G8	O. Raghav	ECE	Satisifactor	Good	Excellent	yes	Good
21-G9	N Kavithrani	ECE	Good	Satisifactor	Good	yes	Excellent
21-503	A. Prasanth	CSE	Good	Good	Excellent	yes	Good
21-504	A. Sumana	CSE	Satisifactor	Excellent	Good	yes	Excellent
21-505	A Abhi	CSE	Excellent	Good	Good	yes	Excellent
21-506	A. krishna	CSE	Good	Satisifactor	Excellent	yes	Excellent
21-507	A. Harshitha	CSE	Excellent	Good	Satisifactor	yes	Good

Feedback analysis Sustainable Engineering

Roll Number	Name of the Student	Semester & Branch	Please rate your overall satisfaction with certificate	Resource person have explain well & made me understand the objectives well	Rate the interaction of the resource persons with the students	Do you feel the programme has met its aims & objectives?	How best you rate the knowledge Gained by you from this Certificate course
21-521	C. Parun	CSE	Excellent	Satisfactor	Good	yes	Good
21-523	C. Phani	CSE	Good	Good	Satisfactor	Yes	Excellent
21-528	C. Naresh	CSE	Satisfactor	Excellent	Good	Yes	Good
21-537	G. Lingrao	CSE	Good	Good	Excellent	yes	Good.
21-538	G. Venu	CSE	Satisfactor	Good	Good	Yes	Excellent
21-539	J. Chandu	CSE	Excellent	Satisfactor	Good	yes	Satisfactor
21-570	M. Sudha	CSE	Good	Good	Excellent	yes	Good
21-571	N. Akshay	CSE	Excellent	Good	Satisfactor	Yes	Good
21-572	N. Vasantha	CSE	Good	Excellent	Good	yes	Excellent
21-584	P. Narayana	CSE	Good	Good	Excellent	Yes	Good
21-585	P. Karthika	CSE	Satisfactor	Excellent	good	yes	Good
21-586	P. Navya	CSE	Excellent	Good	Good	Yes	Satisfactor
21-598	T. Rathnid	CSE	Excellent	Good	Satisfactor	Yes	Excellent
21-599	T. Sneha	CSE	Good	Satisfactor	Good	Yes	Good
21-5A0	M. Kamala	CSE	Good	Good	Excellent	yes	Excellent
21-5A1	S. Faizan	CSE	Good.	Excellent	Good	yes	Good.

Roll Number	Name of the Student	Branch	Please rate your overall satisfaction with certificate	Resource person have explain well & made me understand the objectives well	Rate the interaction of the resource persons with the students	Do you feel the programme has met its aims & objectives?	How best you rate the knowledge Gained by you from this Certificate course
21-SA2	T. Meghana	CSE	satisfactory	excelent	excelent	yes	excelent
21-SB3	V Anil	CSE	Good	Good	Good	yes	Good
21-SB4	V. Teja	CSE	Good	Good	Good	yes	Good
21-401	A. Vardhan	CSD	excelent	satisfactory	Good	yes	Good
21-402	A. Vidya Sri	CSD	Good	Good	excelent	yes	excelent
21-403	A. Harish	CSD	Good	excelent	excelent	yes	Good
21-414	C. Mounika	CSD	excelent	excelent	Good	yes	excelent
21-415	D. Krishna	CSD	excelent	excelent	excelent	yes	excelent
21-416	D. Sai Babu	CSD	Good	Good	excelent	yes	excelent
21-423	G. Vamsi	CSD	Good	satisfactory	excelent	yes	excelent
21-424	G. Vinith	CSD	Good	Good	excelent	yes	Good
21-431	K. Jayandar	CSD	excelent	Good	Good	yes	Good
21-432	K. Aswini	CSD	excelent	Good	excelent	yes	Good
21-433	K. Sagar	CSD	excelent	satisfactory	excelent	yes	excelent
21-439	N Jayanth	CSD	satisfactory	excelent	excelent	yes	excelent
21-440	P. Geethasri	CSD	Good	excelent	excelent	yes	Good
21-441	P. Pravalika	CSD	excelent	Good	Good	yes	Good
21-442	R. Pujitha	CSD	excelent	excelent	satisfactory	yes	satisfactory
21-803	A. Trinath	CBA	Good	Good	Good	yes	Good
21-804	C. Bala	CBA	Good	excelent	Good	yes	excelent
21-811	K. Srilatha	CBA					

Roll Number	Name of the Student	Semester & Branch	Please rate your overall satisfaction with certificate	Resource person have explain well & made me understand the objectives well	Rate the interaction of the resource persons with the students	Do you feel the programme has met its aims & objectives?	How best you rate the knowledge Gained by you from this Certificate course
21-812	K. Bharani	CBA	Satisfactory	exelent	exelent	Yes	exelent
21-823	S. Jhora	CBA	Good	Good	Good	yes	Good
21-4208	C. Veda	CSM	Good	Good	Good	Yes	Good
21-4209	A. Samaer	CSM	exelent	Satstactory	Good	yes	Good
21-4255	T. Poojitha	CSM	Good	Good	exelent	Yes	exelent
21-4256	N. Sreekanth	CSM	Good	exelent	exelent	yes	Good
21-4706	B. Mounica	CIC	exelent	exelent	Good	yes	exelent
21-4707	C. Raghava	CIC	exelent	exelent	exelent	yes	Exelent
21-4719	G. Manikanta	CIC	Good	Good	exelent	Yes	exelent
21-4720	G. Dhanush	CIC	Good	Satsfactor	Exelent	Yes	exelent
21-4271	G. Prasad	CIC	Good	Good	exelent	yes	good
21-201	A. Bhargav	EEE	exelent	Good	exelent	yes	good
21-202	C. Madhavi	EEE	exelent	Good	Good	Yes	good
21-209	M. Yaswanth	EEE	exelent	Satsfactory	exelent	yes	exelent
21-210	M. Teja Sri	EEE	Satsifactory	exelent	exelent	yes	exelent
21-213	P. Vijay	EEE	Good	exelent	Good	Yes	good.

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www.amritasai.org.in, Phone: 0866 2428399

Department of S&H

Certificate course on Sustainable Engineering

Date

18th October to 3rd November , 2022

Eligibility : All branches of B.Tech students

Venue : Seminar Hall (s&h)

Course Co-ordinator :

Dr.

Course Instructors :

Dr.

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www.amritasai.org.in, Phone: 0866 2428399

ACTIVITY REPORT

Certification Course

On

"Sustainable Engineering"

18th October to 3rd November 2021

Target Group : B. Tech Students

Details of Participants : 33 Students

Co-ordinator : Dr.B.Prashanti Asst. Prof, Dept. of H&S

Organizing Department: Department of Sciences & Humanities

Venue : Online mode (Google meet)

https://classroom.google.com/c/NDA2MDA5OTYyMTQz?cjc=bhwlems
https://meet.google.com/bza-dwzs-byb

Description:

Certification course on "Sustainable Engineering" was organized by Dept. of S&H from **18th October to 3rd November**, 2021 in online mode. The Course instructors are Dr. B. Prashanti &Smt.M.Mary jasmine. The main aim of the course is to create awareness among students about this course of Sustainability practices applied in various fields like Engineering and Industrial applications to conserve environment. Course is completed and certificates are provided for the participants.

Roll Number	Name of the Student	Branch	Please rate your overall satisfaction with certificate	Resource person have explain well & made me understand the objectives well	Rate the interaction of the resource persons with the students	Do you feel the programme has met its aims & objectives?	How best you rate the knowledge Gained by you from this Certificate course
21-301	G. Harikrishna	MECH	Excellent	Good	Satisifactory	yes	Good
21-302	S. Sumanth	MECH	Good	Satisfactory	Good	yes	Excellent
21-303	S. Fayaz	MECH	Satisifactory	Good	Excellent	yes	Good
21-304	V. Nikesh	MECH	Good	Excellent	Good	yes	Good
21-305	Y. Gopi	MECH	Excellent	Satisifactory	Excellent	yes	Excellent
21-101	B. Rajitha	CIVIL	Good	Good	Excellent	yes	Satisif-actory
21-102	C. Naveen	CIVIL	Good	satisifactory	Good	yes	Good
21-103	K. Mahesh	CIVIL	Excellent	Good	Satisifactory	yes	Good
21-104	K. Tirumalesh	CIVIL	Good	Excellent	Good	yes	Excellent
21-105	P. Lokesh	CIVIL	Satisifactory	Good	Excellent	yes	Good
21-106	S. Adi	CIVIL	Good	Excellent	Satisifactory	yes	Good
21-107	T. Nikhita	CIVIL	Excellent	Excellent	Good	yes	Satisifactory
21-108	T. Durgarao	CIVIL	Good	Excellent	Good	yes	Excellent
21-109	K. Charan	CIVIL	Satisifactory	Good	Excellent	yes	Good
21-406	A. Sai	ECE	Good	Satisifactory	Good	yes	Excellent
21-407	A. Harish	ECE	Good	Good	Excellent	yes	Good
21-408	A. Krishna	ECE	Satisifactory	Excellent	Good	yes	Excelent
21-409	B. Sri Ram	ECE	Excellent	Good	Good	yes	Excelent
21-410	B. Manjunath	ECE	Good	Satisifactory	Excellent	yes	Excelent
21-411	B. Gopichand	ECE	Excellent	Good	Satisifactory	yes	Good

COORDINATOR

HOD/S&H

Science & Humanities
Head of the Department
Amrita Sai Institute of Sci. & Tech.
Paritala, Kanchikacherla(M), NTR Dt.

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www.amritasai.org.in, Phone: 0866 2428399

DEPARTMENT OF SCIENCE AND HUMANITIES

Certificate course on Gender Sensitization

Attendance Sheet

S.No	Roll no	Name of the student	12/10	18/10	19/10	20/10	21/10	22/10	24/10	25/10	26/10	27/10	28/10	29/10	31/10	1/11	2/11	3/11	4/11	5/11	7/11	8/11	9/11	10/11	11/11	12/11	14/11	15/11	16/11	17/11	18/11	19/11
1	21 401	A. Shanmukha	P	P	P	P	P	P	P	P	A	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
2	21 402	A. Satish	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
3	21 403	A. Gopi	P	P	P	A	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
4	21 404	A. Bhargav	P	P	P	P	P	P	P	P	P	P	P	A	P	P	P	P	P	P	P	P	P	P	P	P	A	P	P	P	P	P
5	21 405	A. Srikanth	P	P	P	P	P	P	P	P	P	P	P	P	P	P	A	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
6	21 416	B. Pavan Kalyan	P	P	P	P	P	A	P	P	P	P	A	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
7	21 417	B. Vamsi Krishna	P	P	P	P	P	P	P	P	P	P	P	P	A	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
8	21 430	D. Prasanna	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
9	21 431	A. Sai Chenna	P	P	P	A	P	P	P	P	P	P	A	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
10	21 432	D. Saikumar Syam	P	P	P	P	P	A	P	P	P	P	P	P	P	P	P	A	P	P	P	P	P	P	P	P	P	P	P	P	P	P
11	21 446	G. Chandu	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
12	21 447	J. Ajay	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
13	21 448	I. Chandrasekhar	P	P	A	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
14	21 461	K. Gopi Krishna	P	P	P	P	P	P	P	P	P	P	P	P	P	P	A	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
15	21 462	K. Ramya.	P	P	P	P	P	P	P	P	P	A	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
16	21 475	L. Harshavardhan	P	P	P	P	A	P	A	P	P	P	P	P	A	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
17	21 476	M. Sunil Kumar	P	P	P	P	A	P	P	P	P	P	P	P	P	A	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
18	21 494	N. Saikumar Reddy	P	P	P	P	P	P	P	P	A	P	P	P	P	P	P	P	A	P	P	P	P	P	P	P	P	P	P	P	P	P
19	21 495	M. Jyothi	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
20	21 496	N. Vijaya Simha Reddy	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
21	21 4A8	P. Poorna Sri Vani	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
22	21 4A9	P. Abhinav	P	P	P	P	P	P	A	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
23	21 4B6	R. Kavitha	P	P	P	A	P	P	P	A	P	P	P	P	P	P	P	P	P	A	P	P	P	P	P	P	P	P	P	P	P	P
24	21 4B7	S. Bhargava Reddy	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	A	P	P	P	P	P	P	P	P	P	P	P	P	P	P
25	21 4B8	S. Pavan Sai Gupta	P	P	P	P	P	A	P	P	P	P	P	P	A	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
26	21 4D6	T. Sai Kiran	P	P	P	P	P	P	P	P	P	A	P	P	P	P	P	P	P	A	P	P	P	P	P	P	P	P	P	P	P	P
27	21 4D7	T. Saimahesh	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
28	21 4G1	R. Santosh Kumar	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
29	21 4G2	S. Hymavathi	P	P	P	P	P	P	P	P	P	P	P	P	A	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
30	21 4G3	S. Srilakshmi	P	P	A	P	P	P	P	P	P	P	P	P	A	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
31	21 4G5	B. Nandini	P	P	P	P	P	P	P	P	P	P	P	P	P	A	A	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
32	21 4G7	B. Anji Reddy	P	P	P	P	P	P	P	P	A	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
33	21 4G8	O. Ragavendra	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
34	21 4G9	N. Chandana Ravitheja	P	P	A	P	P	P	P	P	P	A	P	P	P	P	P	P	A	P	P	P	P	P	P	P	P	P	P	P	P	P
35	21 503	A. Prashanth	P	P	P	P	A	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
36	21 504	A. Sumana Sri	A	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P

37	21	4G6	B. Mahesh	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
38	21	505	A. Naga Abhinay	P	P	P	A	P	P	P	P	P	P	P	A	P	P	P	A	P	P	P	P	P	P	P	P	P	P	P	P	P	P
39	21	506	A. SSSVS Krishna Swamy	P	P	P	P	P	P	P	A	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
40	21	507	A. Harshitha	P	P	P	P	P	P	A	P	P	P	P	P	P	A	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
41	21	521	C. Pavan Chaitanya	P	P	P	P	P	P	P	A	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
42	21	522	C. Naresh	P	P	P	A	P	P	P	P	P	A	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
43	21	523	C. Devendra Venkata Phanindra	P	P	P	P	P	P	P	P	P	P	P	A	A	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
44	21	537	G. Linga Rao	P	P	P	P	P	P	P	A	P	P	P	P	P	P	P	A	P	P	P	P	P	P	P	P	P	P	P	P	P	P
45	21	538	G. Venu	P	P	P	P	P	P	P	P	P	A	P	P	P	P	P	P	A	P	P	P	P	P	P	P	P	P	P	P	P	P
46	21	557	K. Lohitha	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
47	21	558	K. SriRam	P	P	P	P	P	P	P	P	A	P	P	P	P	P	P	A	P	P	P	P	P	P	P	P	P	P	P	P	P	P
48	21	559	L. Chandu Babu	P	P	P	P	P	P	P	P	P	P	A	P	P	P	P	P	P	P	A	P	P	P	P	P	P	P	P	P	P	P
49	21	570	N. Leela Venkata Sai Anjali Sudharani	P	P	P	P	P	P	P	P	P	P	P	P	P	A	P	P	P	P	A	P	P	P	P	P	P	P	P	P	P	P
50	21	571	N. Akshay	P	P	P	P	P	P	P	P	P	A	P	P	P	P	A	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
51	21	572	N. Vasantha	P	P	P	P	P	P	P	P	A	P	P	P	P	P	P	P	P	A	P	P	P	P	P	P	P	P	P	P	P	P
52	21	584	P. Lakshminarayana	P	P	P	P	P	P	P	P	P	P	P	P	A	P	P	P	P	P	P	A	P	P	P	P	P	P	P	P	P	P
53	21	585	P. Karthika	P	P	P	P	P	P	P	P	A	P	P	P	P	A	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
54	21	586	P. Navya	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
55	21	598	T. Rathaiah	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	A	A	P	P	P	P	P	P	P	P	P	P	P	P
56	21	599	T. Sneha	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	A	P	P	P	A	P	P	P	P	P	P	P	P
57	21	5A0	M. Gowthami Madhavi Kamala	P	P	P	P	P	P	P	P	P	P	A	P	P	P	P	P	P	P	P	P	A	P	P	P	P	P	P	P	P	P
58	21	5A1	S. Faizan	P	P	P	P	P	P	A	P	P	P	P	P	P	P	A	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
59	21	5A2	T. Meghana	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
60	21	5B3	V. Srinivas Anil	P	P	P	P	P	P	P	P	P	P	P	A	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
61	21	5B4	V. Ratna Teja	P	P	P	P	P	P	P	P	P	P	P	P	P	A	P	P	P	P	A	P	P	P	P	P	P	P	P	P	P	P
62	21	4401	A. Guna Sai Vardhan	P	P	P	P	P	P	P	P	A	P	P	P	P	P	P	A	P	P	P	P	P	P	P	P	P	P	P	P	P	P
63	21	4402	A. Vidya Sri	P	P	P	P	P	P	P	P	P	P	A	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
64	21	4403	A. Harish	P	P	P	P	P	P	P	A	P	P	P	P	P	A	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
65	21	4414	C. Mounika	P	P	P	P	P	P	P	P	P	A	P	P	P	A	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
66	21	4415	D. Venkata Krishna	P	P	P	P	P	A	P	P	P	P	A	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
67	21	4416	D. Shiva Sai Babu	P	P	P	P	P	P	A	P	P	P	P	P	A	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
68	21	4423	G. Yuvan Venkata Sai Krishna Vamsi	P	P	P	P	A	P	P	P	A	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
69	21	4424	G. Vinith	P	P	P	A	P	P	P	A	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
70	21	4431	K. Jayander	P	P	P	P	A	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
71	21	4432	K. Yasaswini	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	A	P	P	P	P	P	P	P	P	P	P	P	P
72	21	4433	K. Prem Sagar	P	P	P	P	A	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
73	21	4439	N. Jayanthi	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	A	P	P	P	P	P	P	P	P	P	P	A	P	P
74	21	4440	P. Geethasri	P	P	P	P	P	P	P	A	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
75	21	4441	P. Naga Pravalika	P	P	P	A	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
76	21	4442	R. Pujitha	P	P	P	P	P	P	P	P	A	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
77	21	5803	A. Trinath	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
78	21	5804	C. Balanjaneyulu	P	P	P	P	P	P	P	P	P	P	P	P	P	A	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
79	21	5811	K. Srilalitha	P	P	P	P	A	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	A	P	P	P	P	P	P	P	P	P
80	21	5812	K. Bhavani	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	A	P	P	P	P	P	P	P	P	P	P	P

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80	21	5825	S. Johara	P P P P A P P P P P P A P P P P P P P P A P P P P A P P P P P
81	21	4208	C. Veda Sai	P P P P P P P P P P P P P P P P P P P P P P P P P P P P P P
82	21	4209	A. Sameer	P A P P P P P A P P P P A P P P P P P A P P P P A P P P P P
83	21	4255	I. Pavithra	P P P A P P P P P P P P P P P P P P P P P P P P P P P P P P
84	21	4256	N. Sreekanth	P P P P P P P P P P P P P P P P P P P P P P P P P P P P P P
85	21	4706	B. Manikanta	P P P P P P A P P P P A P P P A P P P P P A P P P A P P P P
86	21	4707	C. Chinnikaya	P P P P P P P P P P P P P P P P P P P P P P P P P P P P P P
87	21	4719	G. Manikanta	P P P P P P P P P P P P P P P P P P P P P P P P P P P P P P
88	21	4720	G. Bharath	P P P P P P P P P P P P P P P P P P P P P P P P P P P P P P
89	21	4721	G. Vara Prasad	P P P P P P P P P P P P P P P P P P P P P P P P P P P P P P
90	21	0201	A. Bhargav	P P P P P P P P P P P P P P P P P P P P P P P P P P P P P P
91	21	0202	C. Bindumadhav	P P P P P P P P P P P P P P P P P P P P P P P P P P P P P P
92	21	0203	M. Yashwanth	P P P P P P A P P P P P A P P P P A P P P P A P P P P A P P
93	21	210	M. Teja Sri	P P P P P P P P P P P P P P P P P P P P P P P P P P P P P P
94	21	3013	P. Vijaykumar	P P P P P P P P P P P P P P P P P P P P P P P P P P P P P P
95	21	304	G. Harikrishna	P P P P P P P P P P P P P P P P P P P P P P P P P P P P P P
96	21	308	S. Srivanth	P P P P P P P P P P P P P P P P P P P P P P P P P P P P P P
97	21	309	S. Fayaz	P P P P P P P P P P P P P P P P P P P P P P P P P P P P P P
98	21	3014	V. Nikesh	P P P P P P P P P P P P P P P P P P P P P P P P P P P P P P
99	21	305	Y. Pavan Nagaraju	P P P P P P P P P P P P P P P P P P P P P P P P P P P P P P
100	21	101	B. Pavitha	P P P A P P P P A P P P P A P P P P A P P P P A P P P P P P
101	21	102	C. Naveen	P P P P P P P P P P P P P P P P P P P P P P P P P P P P P P
102	21	103	K. Mahesh	P P P P P P P P P P P P P P P P P P P P P P P P P P P P P P
103	21	104	K. Thirumalesh	P P P P P P P P P P P P P P P P P P P P P P P P P P P P P P
104	21	105	P. Lokesh	P P P P P P P P P P P P P P P P P P P P P P P P P P P P P P
105	21	106	S. Keshavulu	P P P P P P P P P P P P P P P P P P P P P P P P P P P P P P
106	21	107	T. Nikhitha	P P A P A P P P P P P A P A P P P P A P P P P A P P P P P P
107	21	108	T. Jitendra Nagarao	P P P P P P P P P P P P P P P P P P P P P P P P P P P P P P
108	21	109	K. Charansai	P P P P P P P P P P P P P P P P P P P P P P P P P P P P P P

G. Vardini
COORDINATOR

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HEAD OF THE DEPARTMENT

CERTIFICATE COURSE ON SUSTAINABLE ENGINEERING

Course Objectives:

To have increased awareness among engineering students on sustainability to know the environment & key lifestyles and their influencing factors

To understand the various types of environmental pollutions and their sustainable solutions

To have a better perception of life cycle assessment and environmental risk assessment. To develop sustainable practices by utilizing the engineering knowledge and principles

To become critical and proactive thinkers and, with this, successful engineers in the field

UNIT-I: Sustainability: Introduction-Concepts-Need to promote sustainability- Three pillars of sustainability - Nexus between technology and sustainable Development-Challenges for sustainable Development-Benefits of sustainable living.

UNIT-II: The Environment and Key Life Styles: Food-Housing-Mobility-Consumer goods-Leisure time. Factors influencing consumption and Lifestyles-Determinants-Driving Factors-Motivating factors

UNIT-III: Natural Resources and their Pollution: Air pollution-effects of air pollution - Clean development mechanism - Water pollution -Sustainable waste water Treatment-Solid waste-sources- Impacts of solid Waste-Zero waste concepts-3R concept - Global environmental issues - Resource Degradation-Climate Change-Global warming - Ozone layer depletion. Carbon credits and carbon trading Carbon foot prints.

UNIT-IV: Life Cycle Assessment (LCA): Introduction-LCA & Sustainability-LCA and Environmental system-LCA and Water, Food & Energy-Environmental Risk Assessment-Environmental data collection and LCA methods-ISO 14040-Key points of good LCA with examples.

UNIT-V: Design for Sustainability: Green Engineering-Sustainable engineering principles - Green sustainable materials - Sustainable urbanization - Industrial Ecology-Industrial Symbiosis-Case Studies.

Reference Books:

Alleng, D.T. and Shonnard, D.R., Sustainability Engineering: Concepts, Design and Case studies, Prentice Hall Bradley. A.S., Adebayo, A.O., Maria, P. Engineering Applications in Sustainable Design and Development, Cengage learning. Ni Bin Chang, Systems Analysis for Sustainable Engineering: Theory and Applications, Tata McGraw-Hill Publications. Purohit, S.S., Green Technology: An Approach for Sustainable Environment, Agrobios Publications.

Introduction

Humans make hundreds of thousands of decisions during the course of their lives.

For the lucky among us, those decisions will vary wildly.

What food will I eat?

what house will I live in?

How will I get to work in the morning?

What type of clothes will I wear?

How will I spend my spare time?

The list is endless.

- No matter how we choose to answer these questions, the lifestyles we end up living.
- In some cases, are forced to live - have a profound impact on our planet.
- Affecting everything from how our economies grow to the health of our environment.
- Our consumption habits are putting our resources levels at great risk.
- No matter how we choose to answer these questions, the lifestyles we end up living.
- In some cases, are forced to live - have a profound impact on our planet.
- Affecting everything from how our economies grow to the health of our environment.
- Our consumption habits are putting our resources levels at great risk.

The amount of stuff we use in order to live has exploded in many parts of the world.

Highlighted by the fact that the global extraction of materials has tripled over the past four decades,

rising to an enormous 100 billion tonnes in 2020.

If current trends continue, then this dramatic increase in the amount of material

we consume will continue to rise as populations grow, the middle class expands, and incomes increase.

Concepts on sustainability

- Sustainable development
- fulfils the needs of the present without compromising the ability of the future generations to meet their own needs.'
- As people become richer and are able to afford more, they are more likely to want to have access to recreation and this means clean water and air, unpolluted land, natural ecosystems etc.
- Thus, jobs, or development, is a critical vehicle in eliminating environmental degradation.

Sustainable engineering

- Sustainable engineering is the process of using resources in a way that does not compromise the environment or deplete the materials for future generations.
- Sustainable engineering requires an interdisciplinary approach in all aspects of engineering and it should not be designated as a sole responsibility of environmental engineering.
- All engineering fields should incorporate sustainability into their practice in order to improve the quality of life for all.
- One way of measuring the socio-economic improvement of societies is the Millennium Development Goals.
- Through creating and maintaining the physical infrastructures that help eradicate extreme poverty and hunger, achieve universal primary education, reduce child mortality and improve maternal health,
- Engineers are demonstrating their social and environmental responsibility to sustainably develop societies.

- creation of the Sustainable Development Goals, engineers will continue to play a decisive role in their success.
- The necessity for environmentally-friendly technologies in the future will require the expertise of engineers.
- Therefore, the UNESCO Engineering Initiative (UEI) is working with partners to develop engineering curricula that incorporate sustainability as an overarching theme.
- Recently, the UEI in partnership with the Association of German Engineers, the German Commission for UNESCO and leading German educational facilities and companies,
- created the Quality Engineering for Sustainability initiative.
- This initiative aims to develop North-South-South partnerships by integrating sustainability topics into engineering education.

Need to promote Sustainability

- Satat Bharat-Sanatan Bharat (Sustainable India) India's climate action strategies call for clean and efficient energy systems, disaster resilient infrastructure, and planned eco-restoration.
- Acting on its nationally-determined contributions, India has electrified 100% of its villages,
- reduced 38 million tonnes of CO2 emissions annually through energy efficient appliances
- provided clean cooking fuel to 80 million poor households, and set a target to install 450GW of renewable energy and
- restores 26 million hectares of degraded land by 2030,
- Globally, India stands third in renewable power, fourth in wind power, and fifth in solar power.
- India launched the Coalition for Disaster Resilient Infrastructure and
- the International Solar Alliance to leverage global partnerships for climate action and disser resilience
- In the spirit of South-South Cooperation, for realizing the 2030 Agenda
- India supports developing countries through the USD 150 million India-UN Development Partnership Fund. In this spirit of regional and global partnerships, and the country's commitment to 'leave no one behind'

- India steps into the Decade of Action, drawing confidence from its experience in addressing challenges.
- Government of India will continue to work collaboratively with all domestic and global stakeholders to accelerate efforts for a sustainable planet for future generations.

Three Pillars of Sustainability

1. Environment Pillar

Sustainable development can only exist it conservation is embraced more fully than wasting resources or preservation of all resources

2. Economy Pillar

Efforts to set prices of commodities and goods based not only on supply and demand but also on costs to the environment.

3. Society Pillar Modifying the wants of cultures in regards to shelter, food, and and clothing to objects that are sustainable

Nexus between technology and Sustainable developmenthttps://www.eli.org/international-programs/technologies-sustainable-development

Hardware, software, know-how, and other technologies are an essential tool for sustainable development. They can be instrumental in ensuring that people: have access to clean water (through water purification, efficiency, delivery, and sanitation technologies); have access to energy that is clean, affordable, and sustainable (e.g., through energy-efficient technologies and technologies that use alternative sources of energy);

Technology and Sustainable development

- live in a less toxic environment (e.g., by putting in place alternative agricultural and industrial technologies
- That reduce the quantity and toxicity of the raw materials and processes, as well as treatment techniques);
- live in a more stable environment by mitigating the effects of climate change

  (e.g., more energy-efficient processes and emissions control) and

- Adapting to climate change (e.g., using GIS to assist in land use planning); and
- Are able to more effectively and efficiently manage natural resources;
- Have effective environmental governance regimes (e.g., in monitoring compliance and enforcement,
- Providing public access to information, building capacity, and raising public awareness).
  - One of greatest challenges that countries especially developing countries sustainable development is face in realizing
  - obtaining and putting in place the necessary technologies.
  - While access to technology depends to some extent on financial resources, it is not only a financial issue.
  - In many instances, legal and institutional frameworks impede the development
  - Import/export, transfer, and use of technologies for sustainable development.
  - Quotas and tariffs can affect the ability to import technologies.
  - Similarly, subsidies may promote the use of technologies that may waste energy, water, or other resources.
  - Moreover, decision makers should consider cultural norms when selecting and putting in place technologies.
  - seeks to promote the development, import/export, transfer, and use of technologies for sustainable development. We will:
  - examine legal, institutional, and other barriers to the effective application of technologies;
  - identify innovative approaches to promote technologies for sustainable development, drawing upon lessons learned from experiences to date (what works, in what
  - contexts, why, how, ...); and
  - understand the legal, socio-economic, and political factors

- that may affect the effectiveness of initiatives to obtain and implement particular technologies. work with local partners to identify challenges to the
- development, import, and
- use of technologies, and possible solutions to help put in place the necessary technologies.
- These collaborations will entail a combination of research, capacity building, and legal and technical assistance.

Challenges for Sustainable development

- Degrading Air Quality Index
- Rampant Environmental Degradation
- Loss of Biodiversity
- Urbanization in Himalayas
- Loss of Resilience in Ecosystems
- Lack of Waste Management
- Depletion of Resources (land, air, water, forest, minerals etc.)
- Growing Water scarcity

Benefits of Sustainable Living

- Save Money
- Reduce Energy consumption
- Generate your own power
- Cut back on water use
- Grow your own food

Reuse, buy recycled products

UNIT II

- The Environment and Key Life Styles:
- Food
- Housing
- Mobility
- Consumer goods
- Leisure time
- Factors influencing consumption and lifestyles
- Determinants
- Driving factors
- Motivating factors

Environment and key lifestyles

Sustainable lifestyle:

"sustainable lifestyle" is a cluster of habits and patterns of behaviour embedded in a society.

Facilitated by institutions, norms and infrastructures that frame individual choice

In order to minimize the use of natural resources and generation of wastes

while supporting fairness and prosperity for all.

Creating sustainable lifestyles

- Requires a change in social norms and in the design of the systems that support lifestyles.
- It means rethinking our ways of living - including how
- we buy and organize our everyday lives.
- There are also implications for how we socialize, exchange, share, educate, and develop our identities. At the macro level, it is about transforming societies to
- better meet people's needs in balance with the natural environment
- As citizens, at home and at work,
- the choices we make on food, housing, mobility
- consumer goods (including clothes and appliances, etc.),
- leisure (including tourism products and services)
- communication, and interaction contribute to building sustainable lifestyles.
- (This is an updated definition based on UNEP (2010), the Taskforce on Sustainable Lifestyles (Sweden, n.d.).

Food

- What we eat and drink - how it is produced, processed and provided -
- how we dispose of it have impacts on the environment and society
- People make decisions related to food based on both objectives
- subjective factors, including cost, freshness, health impacts, presentation (e.g., packaging), place of origin, convenience, taste, and culture
- At the use phase in the food system
- some factors that have impacts on the environment include outlet of purchase, storage period and facilities, preparation process, and consumption.
- Apart from environmental impacts, concerns around lifestyles and
- food include health, obesity, an increasing number and intensity of allergies
- social impacts of agricultural practices
- Globally, almost a third of food harvested is wasted or lost: Due to changing dietary trends, particularly in urban environments which increasingly favour more resource intensive (GHG producing) foods such as processed foods and meats. This occurs in a global contest where I in 9 people are hungry and 2 in 10 are obese There is clearly potential to shift to more sustainable patterns.

Housing

- How we live, where we live, what is used to build Heat and cool our living spaces and what we install in our houses Have social and environmental impacts, The building sector contributes up to 30 per cent of global annual greenhouse gas emissions uses up to 40% of all energy (UNEP, 2009)
- The mining process alone causes biodiversity loss, deforestation
- Emissions of GHGs and use of hazardous chemicals People make decisions related to housing Based on both objective and subjective factors cat and sine of the building, building characteristics aesthetics, the neighbourhood, and available amenities While living in house we ne energy and water, and depose of waste:
- Cities can encourage more sustainable diets that ensure adequate nutrition

- while reducing environmental footprint raising awareness, and changing behaviour around food
- waste.
- Enacting policies in planning, housing and transportation can also support more sustainable low carbon food systems encourage more sustainable local food production such as backyard and community gardens
- The mining process alone causes biodiversity loss,
- deforestation
- Emissions of GHGs and use of hazardous chemicals.
- People make decisions related to housing
- Based on both objective and subjective factors
- cost and size of the building, building characteristics
- aesthetics, the neighbourhood, and available amenities
- While living in houses we use energy and water, and dispose of waste
- important energy considerations include
- efficiency insulation
- heating or cooling
- The way neighbourhoods are built affects many aspects
- of society
- including the rate of crime
- commuting distances
- opportunities for neighbours
- to create strong ties
- form vibrant communities

Mobility

- What forms of transport we choose, how often we travel
- The transport sector is responsible for 13 per cent of greenhouse gas emissions
- 23% of CO2 emissions from global energy consumption (GEF-STAP, 2010).
- Citizens make mobility decisions based on cost, choice of transportation mode,
- Mode of transportation is particularly significant
- flying tends to have the highest environmental impact, followed by private car use.
- Other factors, such as distance covered, number of people in the vehicle per use,
- For example, policy responses can include combinations of measures that discourage unnecessary transportation,
- adopt more sustainable modes of transport, and improve existing systems of transport.
- CONVENIENCE, CLEANLINESS, EFFICIENCY, ACCESS, AESTHETIC.

Consumer goods

- The products we buy, the type and quantity of materials that are used in producing them,
- how we use them, and how often we replace them have impacts on society and the environment.

- Examples include electric and electronic appliances, clothing

- Products which tend to have the highest impacts are those produced using mined materials and fossil fuels.
- Consumer goods are important because of their daily use and their role in defining our image and habits.

Leisure

- How we spend leisure time, our choice of tourism destinations and activities,
- and the facilities we use have significant contributions to the
- environment and society. Leisure embodies a wide variety of activities -
- from meditation and reading to flying and watching television, or swimming, golfing,
- The expanding role in modern lifestyles of electric and electronic products
- e.g. mobile phones and other information communication products
- means related environmental impacts are increasing, through the growth of electronic waste, pollution
- mining of rare earth metals.
- These consumption patterns have huge implications for resource scarcity and pollution, with impacts that vary according to fabrics, dyes, chemicals, transportation,
- and packaging method used. Clothes help us to define who we are and what we stand for, and are connected to our daily lives on a very personal level.
- With women spending tens to hundreds of hours shopping for clothing every
- year, fashion has the unique ability to be a highly visible engine for change and even a medium for consumer education.
- weekend trips, and owning second homes.
- Each reflects different levels of materialism and social interaction.
- Staying at and using the services of a five-star hotel, for example, has a higher impact than staying in a three-star hotel.

Key messages from research on

sustainable lifestyles

- There is no universal sustainable lifestyle. What is sustainable in one locality may not be sustainable in another
- Lifestyles occur within - and are enabled and constrained by - social norms and the physical environment.
- It is important to differentiate between the factors that can be addressed at the individual or the household level, and those that are beyond individual control (Akenji, 2014).
- As society evolves, or becomes more complex and/or affluent, what constitute basic social needs evolve.
- For example, a mobile phone was perceived as a luxury two decades ago, now it is a perceived need for most adults in industrialized cities, yet it remains a luxury in some parts of the developing world
- Beyond cities enabling basic necessary and needs to operate with dignity within a society, increases in income not directly translate into happiness.
- Efforts must be made to address the extremes of poverty and wealth in society
- in order to ensure sustainable lifestyles.
- Manifestations of social tension get stronger as the disparity of economic conditions

- between the social classes get wider (Death, 2014; Hilton, 2007) The environmental impacts of lifestyles are not intentional but rather a consequence of people aspiring to fulfil needs and desires, as well as to function in society.
- It is important to examine how society is organized to provide for the wellbeing of citizens (Shove, 2006; Spaargaren, 2004)
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Influencing factors of consumption and

lifestyles

- There is vast literature addressing lifestyles and consumption and sustainability (Akenji, 2014; T Jackson, 2005; Mont & Power, 2013; OECD, 2002; Tukker, Cohen, Hubacek, & Mont, 2010; Vergragt, Akenji, & Dewick, 2014).
- Though the study of lifestyles is not new, looking at "sustainable" lifestyles increases the complexity of intervening factors and their interdependence. This is because sustainability (unlike health, safety and ethics) is not a criterion
- engrained in operations of many communities, the impacts are not felt immediately or directly, and the translation from theory to policy and practice remains ineffective.
- What works or does not work is still subject to experiment and debate.
- There is consensus that, to have more effective sustainable lifestyles policies and
- practices, it is critical to get context-specific to understand why people consume and what shapes their related behaviours.
- This context-specific understanding can be derived through three interlinked underlying lifestyle factors: i) motivations; ii) drivers; and iii) determinants.
- These should be the focus of policies, institutional frameworks,
- programmes and infrastructure when influencing lifestyle design.
- i. Motivations refer to the immediate personal and social reasons and justifications that compel people and society to take certain actions or make certain decisions - a
- e.g. the desire to spend time with friends and family, or the seductive presentation of a product.
- ii. Drivers refer to circumstances that support motivation, normalizing it, or making it practicable - e.g. cultural norms or media marketing.
- iii. Determinants are super-factors that decide on the possibility of lifestyle or consumer
- action.
- Three key determinants explain types of lifestyles: attitudes, facilitators (access), and infrastructure.

Motivations of lifestyle

- Why do people consume?

- Studies and empirical evidence suggest that people do not consume
- with the intention to harm the environment.
- Resulting environmental impacts are an unintended consequence of the pursuit of well-being.
- To meet basic needs e.g. nutrition and subsistence, health, housing, mobility
- To fulfil social functions/expectations e.g. convenience, connectedness, maintaining relationships, traditions.
- To satisfy personal desires, preferences and tastes e.g. leisure, food preferences, consumer goods (electronics or cars).
- Due to the influence of advertising marketing e.g. creation of new product markets such as pet food and cosmetics, planned obsolescence, or enhanced functionality such as mobile phones that do more than make calls and.
- The widely referenced Needs-Opportunities-Ability model looks at consumption from the macro-level of society and the micro-level of the household (Gatersleben & Vlek, 1998; OECD, 2002). It assumes that given the opportunities and the necessary abilities, people would pursue fulfilling their needs and desires to improve their
- quality of life. According to Vlek, needs include relationships, development, comfort, work, health, money, status and safety. Max-Neef, in his widely accepted work (Max-Neef, 1991), has
- identified some universally present needs
- subsistence, protection, affection, understanding, participation, recreation, creation, identity and freedom.
- These resonate with the motivation behind consumption and lifestyles

Drivers of lifestyles

- Lifestyles and consumption are governed by a set of complex and dynamic drivers
- reflect the personal situation (income, identity, individual taste, and values)
- and external socio-technical and economic conditions (culture, social context, peer pressures, etc.).
- There are also physical or natural boundaries
- which allow or constrain lifestyle options.
- Studies on consumer decision-making in several fields show that
- cognitive abilities, psychological, social, economic and policy and institutional frameworks all come into play
- highlighting that driving factors behind lifestyles are inter-linked, and sometimes contradictory.
- In essence, how we fulfil needs and wants (lifestyles) is framed by factors that range from the personal situation, through the enablers or constraints of broader external sociotechnical conditions, to ultimately physical and natural boundaries. Defra (2011) has referred to this as a distinction between behavioural factors and situational factors.

Below some of the main lifestyle drivers

- Income level: This is one of the strongest lifestyle indicators and drivers of consumption.

- More disposable income means greater affordability of goods and services and easier access to more credit, that can further consumerism
- In addition, there is compounded social pressure to maintain lifestyle levels once adopted.
- ii. Values: Values are powerful determinants of attitudes and actions (Brodhag, 2010).

UNIT-III: Natural Resources and their Pollution:

- Air pollution effects of air pollution
- Clean development mechanism
- Water pollution
- Sustainable waste water treatment -
- Solid waste
- sources
- Impacts of solid waste
- Zero waste concepts
- 3R concept
- Global environmental issues
- Resource degradation
- Climate change
- Global warming
- Ozone layer depletion
- Carbon credits and carbon trading
- Carbon foot prints.

Air pollution

- Air pollution is a mixture of solid particles and gases in the air.
- Car emissions, chemicals from factories, dust, pollen and mould spores may be suspended as particles.

Effects of Air pollution

- Long-term health effects from air pollution
- heart disease
- lung cancer
- respiratory diseases
- emphysema

clean development mechanism

- The clean development mechanism was designed to
- meet a dual objective Help developed countries fulfill their commitments to
- reduce emissions
- Assist developing countries in achieving sustainable development

Goals of CDM

- It has two main goals:
- one, to assist countries without emissions targets (developing countries) in achieving sustainable development.

- Two, help those countries with emission reduction targets under Kyoto (developed countries) in achieving compliance by allowing them to purchase offsets created by CDM projects.

Water pollution

- Is the contamination of water bodies, usually as a result of human activities.
- Water bodies include for example
- Dlakes, rivers, oceans, aquifers and groundwater.
- Water pollution results when contaminants are introduced into the natural environment

Sustainable waste water treatment

- The centralized sewage treatment technologies expensive, complex
- failing to cater to the total wastewater generated.
- The untreated/partially treated wastewater makes its way to the water body causing
- immense degradation of the ecosystem
- environmental health.

Decentralized sewage treatment

- The decentralized sewage treatment can be both
- electro-mechanical system
- higher energy requirement or natural systems
- less or no energy requirement.

CSE-CENTRE FOR SCIENCE AND ENVIRONMENT

- CSE has reviewed and documented select case studies that
- present innovative, sustainable and affordable ways
- treating the sewage locally
- reuse/recycle.

- The case studies comprise of the wastewater treatment systems implemented at
- individual
- community/cluster
- municipal level
- The case studies comprise of the wastewater treatment systems implemented at individual community/cluster a municipal level

Vambay scheme

- The housing project is funded under the Vambay scheme
- Its objective
- improved sanitation situation in the community.
- sewage streams are conveyed
- houses

- collected

Solid waste

- Solid wastes from industries are a source of toxic metals, hazardous wastes, and chemicals.
- Solid waste sources
- Eight main sources of solid wastes are as follows:

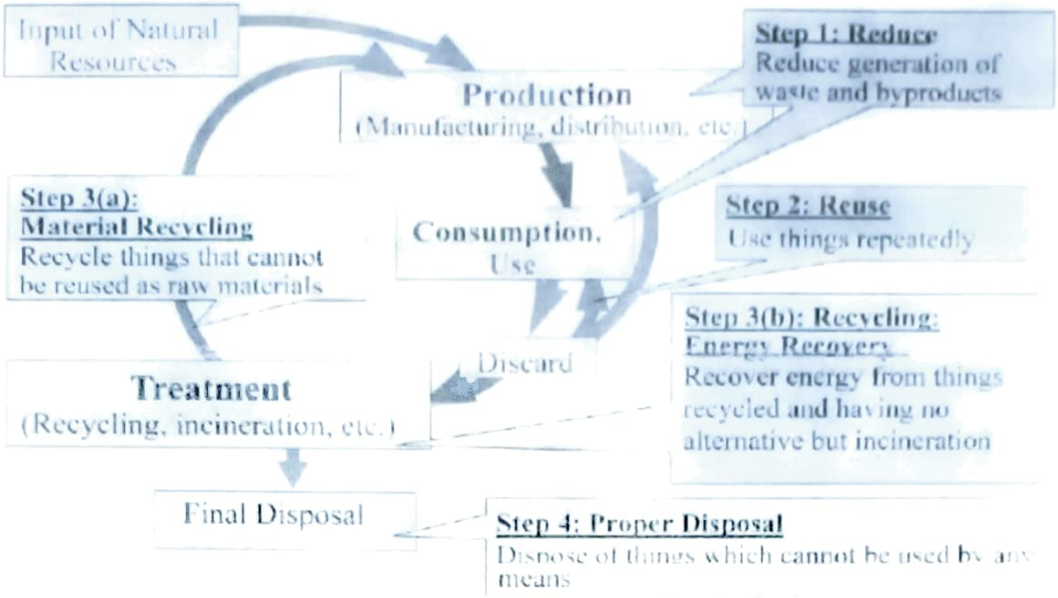
1. Municipal solid wastes
2. Industrial Solid Wastes
3. Mining solid wastes
4. Fertilizers
5. Pesticides and Biocides
6. Excretory products of humans and livestock
7. Electronic wastes
8. Hospital Wastes.

Impacts of solid waste

- An inefficient municipal solid waste management system
- Negative environmental impacts
- infectious diseases
- land and water pollution
- obstruction of drains
- loss of biodiversity

https://en.wikipedia.org/wiki/Zero_waste

- Zero Waste is a set of principles focused on waste prevention that encourages the redesign of resource life cycles so that all products are reused. The goal is for no trash to be sent to landfills, incinerators or the ocean.
- Currently, only 9% of plastic is actually recycled.
- In a zero waste system, material will be reused until the optimum level of consumption.



Key Global Environmental Problems

1 Global Warming.

2 Ozone Depletion and Destruction....

3 Sharp Decrease of Forest Cover.....

4 Declining of Biological Diversity.....

5 Acid Rain Pollution....

6 Land Desertification.

7 Marine Pollution and Damage.....

8 Water Pollution and Freshwater Resource Shortage.

Resource degradation

Due to the increasing global population, the levels of natural resource degradation is also increasing.

Causes of Depletion of Natural Resources

Overpopulation...

Poor Farming Practices....

Logging....

Overconsumption of Natural Resources

Pollution

Industrial and Technological Development.

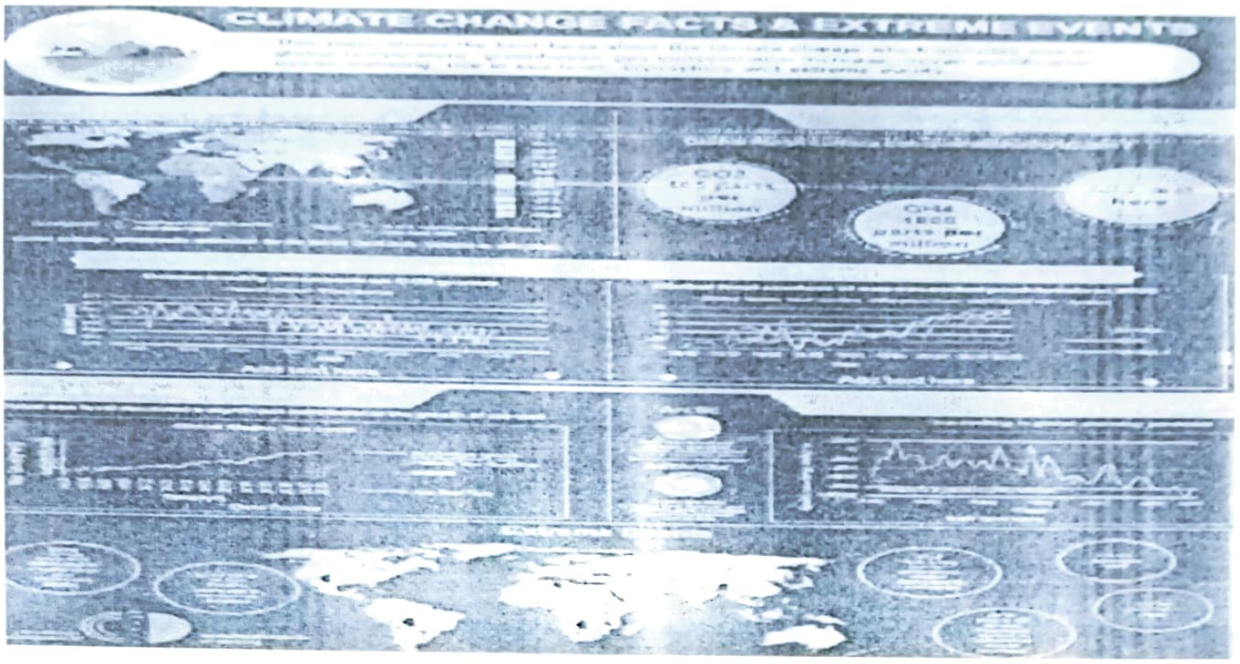
Climate change

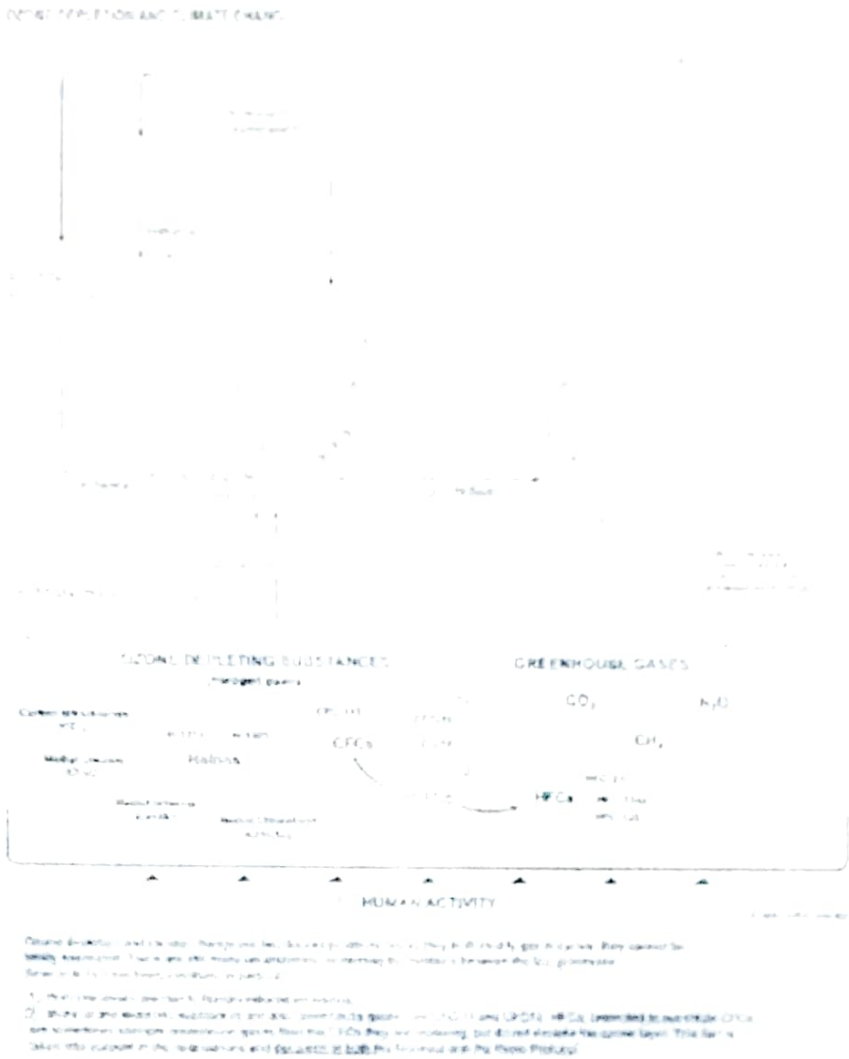
Environmental problem

water shortages

loss of biodiversity

waste management.





carbon credit

- 1 carbon credit corresponds to 1 metric tonne of carbon dioxide prevented from entering the atmosphere.
- Carbon credits allow companies to compensate for their greenhouse gas emissions.
- Now a new blueprint offers a route to create a universally comparable standard for much carbon they save.
- By paying someone else to either reduce their emissions or capture their carbon
- companies can compensate for their environmental footprint
- use carbon credits to get to carbon-neutral status

Calculation of carbon credit earned

- On considering the average value of 0.932 tonnes of CO_2, emission reduction per megawatt-hour of electricity
- CO_2 emission reduction per megawatt-hour per year as per the calculation will be $0.353 \times 0.932 = 0.33$ tonnes

carbon credit tradable permit

- A carbon credit is a tradable permit or certificate that provide
- the holder of the credit the right to emit one ton of carbon dioxide or an equivalent of another greenhouse gas - it's essentially an offset for producers of such gases.
- The main goal for the creation of carbon credits is the reduction of emissions of carbon dioxide and other greenhouse gases from industrial activities to reduce the effects of global warming.

Types of carbon credit

- Those from reduced emissions (typically energy efficiency measures)
- Removed emissions (carbon capture and planting forests)
- And avoided emissions (for example refraining from cutting down rainforests).

- They can purchase carbon credits to comply with the emission cap.
- Companies that achieve the carbon offsets (reducing the emissions of greenhouse gases) are usually rewarded with additional carbon credits.
- The sale of credit surpluses may be used to subsidize future projects for the reduction of emissions.
- The introduction of such credits was ratified in the Kyoto Protocol.
- The Paris Agreement validates the application of carbon credits and sets the provisions for the further facilitation of the carbon credits market Types of Carbon Credits

Types of carbon credits

- Voluntary emissions reduction (VER): A carbon offset that is exchanged in the over-the- counter or voluntary market for credits.
- Certified emissions reduction (CER): Emission units (or credits) created through a regulatory framework with the purpose of offsetting a project's emissions.
- The main difference between the two is that there is a third party certifying body that regulates the CER as opposed to the VER.s.

certified emissions reductions (CERs)

- product that can be used as investments in the credits CERs are sold by special carbon funds large financial institutions.
- The carbon funds provide small investors opportunity to enter the market.

Trading Credits

- Carbon credits can be traded on both private and public markets. Current rules of trading allow the international transfer of credits.
- The prices of credits are primarily that specialize in the trading of the credits, including

- European Climate Exchange
- NASDAQ OMX Commodities Europe exchange European Energy Exchange.
- Other organizations have cut the bulk of their emissions and used credits to compensate for those they cannot avoid.
- Credits are generally traded in units of 1 tonne of CO2, and it's estimated that credits worth 2 billion tonnes of CO2 will be needed to get to the 2030 target

Carbon credits in action

- The Katingan Project in Indonesia is one such scheme. In 2007, two environmental entrepreneurs began persuading local farmers to abstain from clearing virgin forest in return for selling carbon credits from their land.
- Today, it's the world's largest forest-based avoided-emissions project.
- The project says it has prevented the release of more than 37 million tonnes of CO2 and saved 200,000 hectares of rare peat swamp forest, which is home to five critically endangered species including the Borneo orangutan.
- Europe's most energy-intensive industries, including airlines operating flights between EU member countries, can already use carbon credits to meet mandatory limits on their emissions under the EU Emissions Trading Scheme (EU ETS) which has been operating since 2005.

carbon footprint

- A carbon footprint is the total amount of greenhouse gases (including carbon dioxide and methane) that are generated by our actions.
- The average carbon footprint for a person in the United States is 16 tons, one of the highest rates in the world.
- Throughout a product's lifetime, or lifecycle, different
- greenhouse gases GHGs
- may be emitted
- carbon dioxide (CO_2)
- methane (CH)
- nitrous oxide (N_2O)
- each with a greater or lesser ability to trap heat in the atmosphere.
- These differences are accounted for by calculating the global warming potential (GWP) of each gas in units of carbon dioxide equivalents (CO,e), giving carbon footprints a single unit for easy comparison. See the Center for Sustainable Systems "Greenhouse Gases Factsheet" for more information on GWP. A typical U.S. household has a carbon footprint of 48 metric tons CO_2e/yr.2

SOURCES OF EMISSIONS FOOD

- Food accounts for 10-30% of a household's carbon footprint, typically a higher portion in lower-income households. Production accounts for 68% of food emissions, while transportation accounts for 5%.
- Food production emissions consist mainly of CO_2, N_2O, and CH, which result primarily from agricultural practices.
- Meat products have larger carbon footprints per calorie than grain or vegetable products because of the inefficient transformation of plant energy to animal energy,
- and due to the methane released from manure management and enteric fermentation in ruminants.

Life cycle Assessment &

ISO 14040

UNIT-IV: LIFE CYCLE ASSESSMENT (LCA):

- Introduction
- LCA & Sustainability
- LCA and Environmental system
- LCA and Water, Food & Energy
- Environmental risk assessment
- Environmental data collection and LCA methods
- ISO 14040
- Key points of good LCA with examples

LIFE CYCLE ASSESSMENT (LCA) IS DEFINED

- "as the systematic analysis of the potential environmental impacts of products or services during their entire life cycle".
- During a Life Cycle Assessment (Life Cycle Analysis),
- Evaluate the potential environmental impacts
- Throughout the entire life cycle of a product (production, distribution, use and end-of-life phases) or service. This also includes the upstream (e.g., suppliers) and downstream (e.g., waste management) processes
- associated with the production (e.g., production of raw, auxiliary and operating materials),
- use phase
- disposal (e.g., waste incineration).

LCA

- LCA is a tool for quantifying the environmental performance of products taking into account the complete life cycle
- starting from the production of raw materials to the final disposal of the products
- Including material recycling if needed.

LCA &SUSTAINABILITY

LIFE CYCLE ASSESMENT

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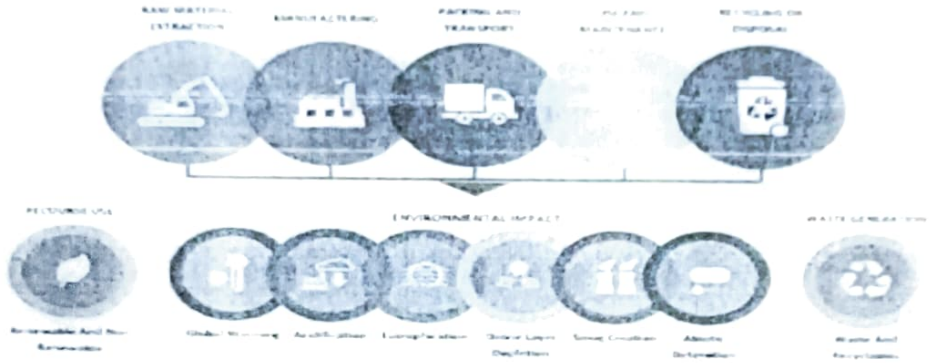
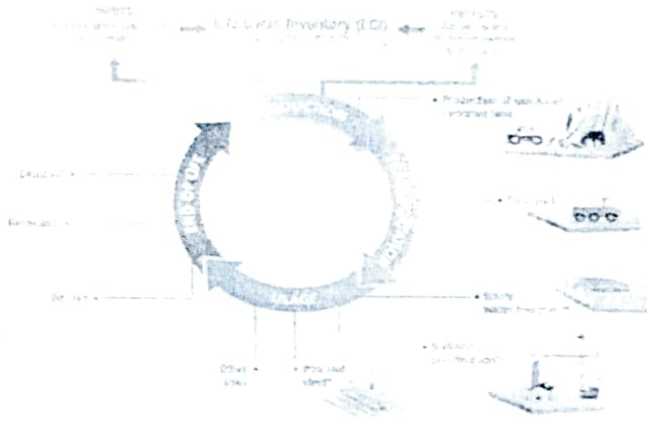
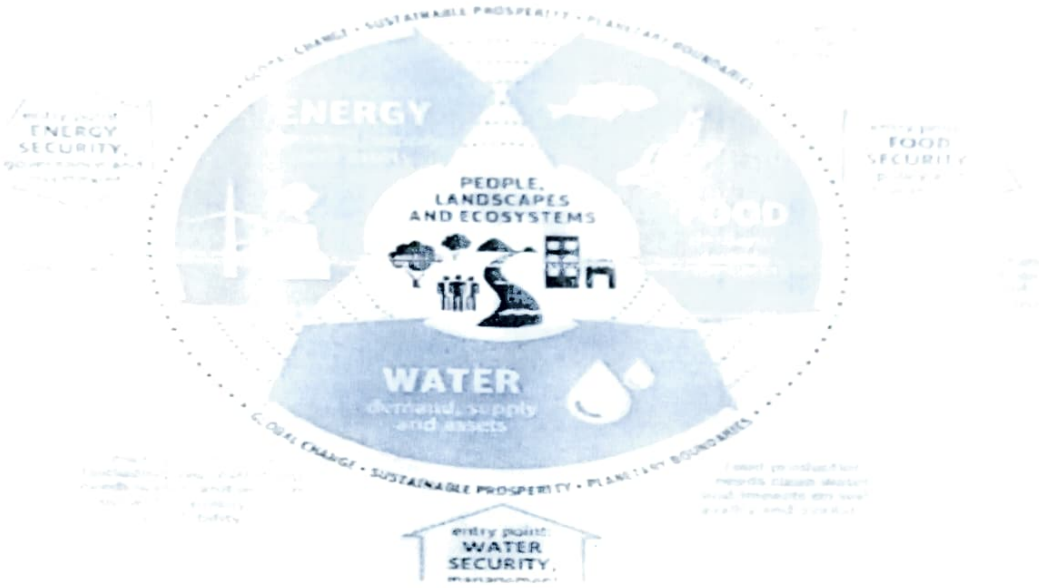


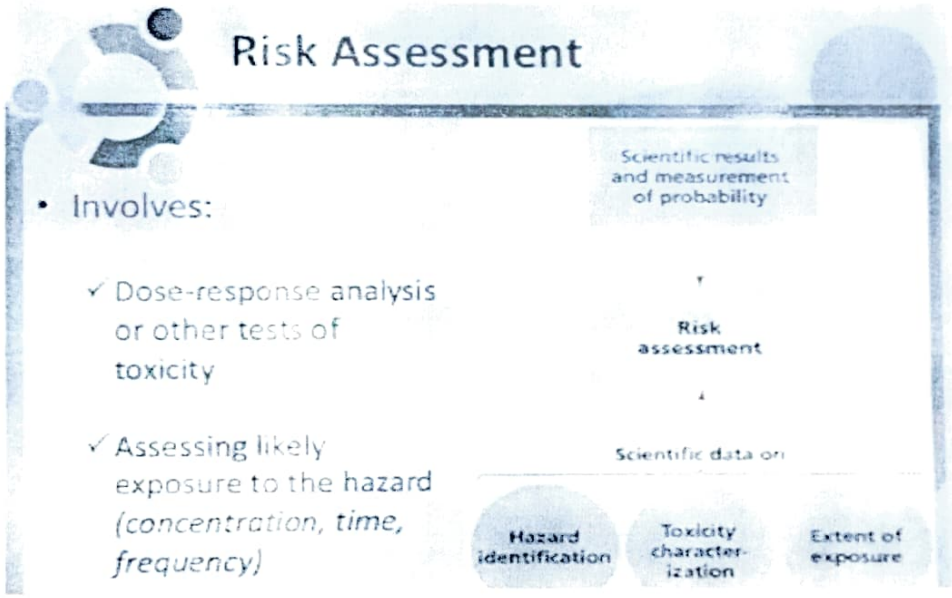
ENVIRONMENTAL DATA COLLECTION AND LCA METHODS



LCA and Environmental system

LCA and Water, Food & Energy



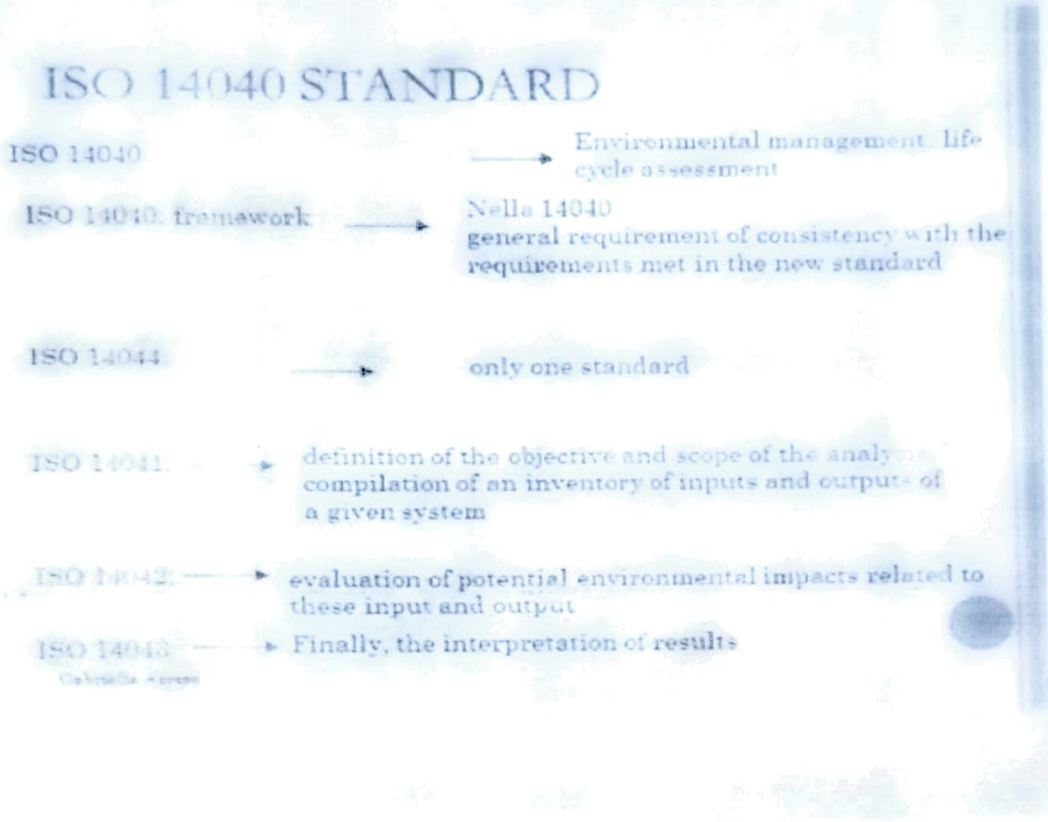


APPLICATIONS OF LIFE CYCLE ASSESSMENT

- The most important applications for an LCA are:
- Identification of improvement opportunities through identifying environmental hot spots in the life cycle of a product.
- Analysis of the contribution of the life cycle stages to the overall environmental load, usually with the objective of prioritizing improvements on products or processes.

LIFE CYCLE IMPACT ASSESSMENT (LCIA)

- covers all relevant inputs from the environment
- e.g., ores and crude oil, water, land use
- Demission into air, water and soil
- e.g., carbon dioxide and nitrogen oxides
- The International Organization for Standardization conducting a Life Cycle Assessment according to ISO 14040 and 14044.

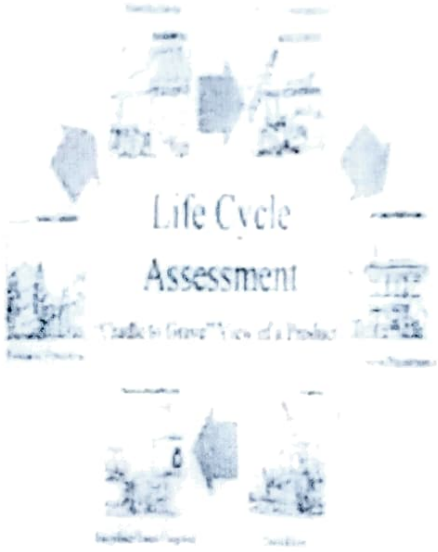


KEY POINTS OF GOOD LCA WITH EXAMPLES

Life Cycle Assessment of buildings

Buildings became a major target for environmental improvement as building sector accounted for nearly

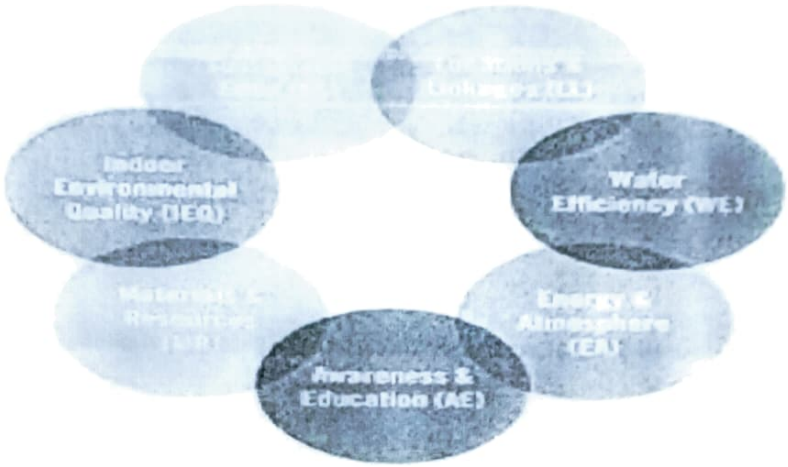
- 40% of the world's energy consumption,
- 30% of raw material use and
- 33% of the related global greenhouse gas (GHG) emissions



Unit V

- Design for Sustainability:
- Green engineering
- Sustainable engineering principles
- Green sustainable materials
- Sustainable urbanization
- Industrial ecology
- Industrial symbiosis
- Case Studies
- https://bioplasticsnews.com/2020/01/14/orange-peel-mushrooms-building-materials/

Design for sustainability



Green engineering

- https://www.accessscience.com/content/green-engineering/299903
- Green engineering involves
- Design of products, processes, and systems
- manageable costs
- minimize environmental impacts

Sustainable engineering principle

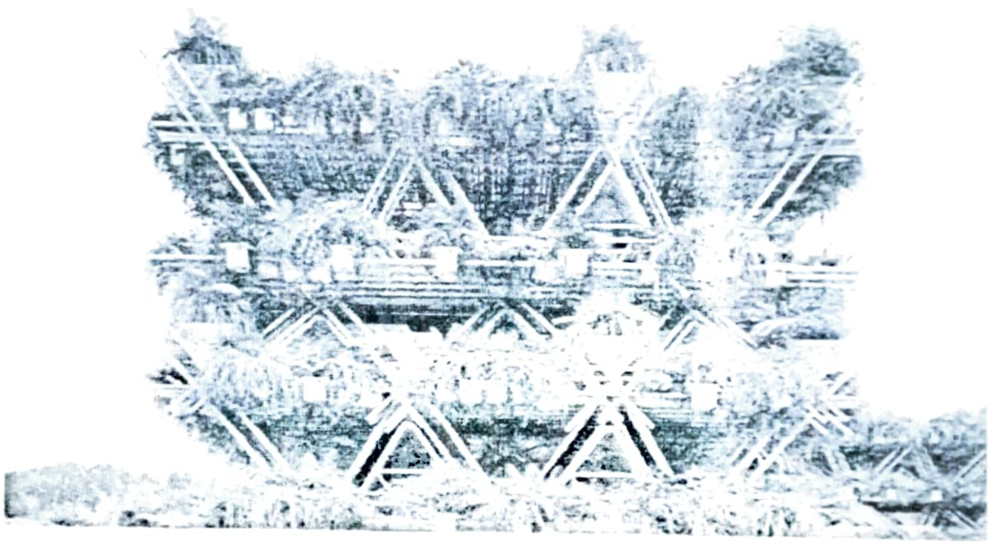
- https://www.e-education.psu.edu/eme504/node/5 s
- Strive to ensure that material/energy inputs and outputs not hazardous
- Waste minimization over waste management.
- Design for easy separation and purification.
- Designed for maximum mass, energy, and temporal
- efficiency.
- Avoid unnecessary consumption of mass/energy versus.
- Use entropy and complexity as guidelines to decide end-of-cycle.
- A product must not outlast its uses.
- Not have unnecessary capabilities/capacities.

- Minimize material diversity.
- Product creation is only one part of the cycle.
- Evaluate products based on life-cycle analysis.
- Prioritize the use of renewable and readily available resources

Green sustainable materials

- [illegible] construction_o
- Buildings with a significant amount of biomass-based materials (sustainably harvested, of course) may therefore be viewed as carbon banks.
- Beijing-based Penda's 2015 Beijing Design Week Contribution Rising Canes,
- an adaptable, multi-storey construction system that uses nothing but bamboo and natural fibre rope-two biomass products
- that require minimal processing and therefore maximize this kind of literal carbon accounting in architecture.

Rising Canes, a proposal for multi-story bamboo construction by Beijing firm Penda



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Sustainable urbanization

- Green urbanism has been defined as the practice of creating communities beneficial to humans and the environment.
- According to Timothy Beatley, it is an attempt to shape more sustainable places, communities and lifestyles, and consume less of the world's resources

Industrial Ecology (IE)

- Is a field of study focused on the stages of the
- Production processes of goods and services from a
- Point of view of nature, trying to mimic a natural
- System by conserving and reusing resource (Chertow
- 2008)

Principles of industrial ecology

- Defined by Tibbs (1992) are:
- Create industrial ecosystem- close the loop; view
- Waste as a resource; create partnership with
- Other industrial to trade by – product which are used as
- Inputs to other processes
- Industrial ecology was popularized in 1989 in a scientific American article by Robert Frosch and Nicholas E.Gallopoulos