

CRITERIA I

METRIC 1.3.1

Institution integrates cross cutting issues relevant to Professional Ethics, Gender, Human Values, Environment and Sustainability into the Curriculum Telangana Tribal Welfare Residential Degree College (Boys) Manuguru, believes in the holistic development of students and strives to shape the students into a responsible citizen of the nation. In achieving this broader objective, the college strives to teach the crossing-cutting issues relevant to Gender, Environment and Sustainability. These subjects are taught as part of the regular curriculum prescribed by Kakatiya University. Along with the regular curriculum teaching the College also has an inbuilt mechanism to create practical awareness towards these issues and have practical exposure through the working of various cells and committees such as:

- Women Empowerment Cell (WEC)
- Haritha Haram Committee,
- Personality development programmes under the supervision of Career guidance cell,
- NAA & NCC

As far as the issues relevant to Gender are concerned, Women Empowerment Cell looks after 'Gender Sensitization' programmes to create the awareness and celebrates women's day to create awareness and make to students sensitize towards gender equality. Promotion of such thought and action is also delivered through Course Content in the classroom instruction. The NSS & NCC Units of the college do consider Environment and Sustainability to attract students' attention and participation in creating awareness about environmental problems and impart basic knowledge about the environment and its allied problems. To enable the students and teachers to understand the endangered future of the mankind in respect of the ecological balance, the activities promote the awareness on – Plantation & Reforestation (Haritha Haram), Water Sustainability, Pollution Control, Environmental Legislation, Programme of Action on Global Warming, Sustenance of Biodiversity and so on. Environmental studies are also a regular paper being taught in the first semester across all the courses as prescribed by the Kakatiya University.

**Kakatiya University Orders towards the teaching of
Gender Sensitisation, Environmental Studies, Human Values
and Professional Ethics as part of the regular curriculum.**

Gender Sensitisation Subject

PROF. K. PURUSHOTHAM
REGISTRAR



OFFICE OF THE REGISTRAR
KAKATIYA UNIVERSITY
WARANGAL - 506 009

No. 916 /B2/KU/2017

Date: 27-07-2017

To

All the Principals of University/Affiliated
Colleges offering Under-Graduate (N.P.) courses
KAKATIYA UNIVERSITY

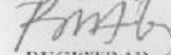
Sub- CHOICE BASED CREDIT SYSTEM (C.B.C.S.) - Teaching of Gender
Sensitization subject by qualified P.G. Gender Studies candidates -
Instructions - Regarding.

Sir/Madam,

With reference to the subject cited. I am to inform you that the subject, Gender Sensitization in I year II Semester of Under-Graduate courses may be taught by the qualified P.G. Gender Studies candidates, where available. If such candidates are not available, M.A Sociology & Master of Social Work candidates may be utilized.

Please take action accordingly.

Yours faithfully


REGISTRAR

Copy to:

1. The Dean, College Development Council, KU
2. The Dean, Academic Audit, KU
3. The Dean, Faculty of Social Sciences, KU
4. The Secretary to Vice-Chancellor, KU
5. The SF.

KAKATIYA UNIVERSITY WARANGAL 506 009
Scheme under Choice Based Credit System
With Effect from the Academic Year 2019-2020
B.A. PROGRAMME

FIRST YEAR

SEMESTER - I

Code	Course category	Title of the Paper *	No. of Credits	HPW	Max. Marks		Total Marks
					I.A	End Exam	
B A 101	AECC-1	Basic Computer Skills	2	2	10	40	50
B A 102	FL-1 A	ENGLISH	4	4	20	80	100
B A 103	SL-1 B	SECOND LANGUAGE	4	4	20	80	100
B A 104	DSC-1 A	OPTIONAL - I	5	5	20	80	100
B A 105	DSC-2 A	OPTIONAL – II	5	5	20	80	100
B A 106	DSC-3 A	OPTIONAL – III	5	5	20	80	100
		Summary of Credits	25	25	-	-	550

SEMESTER - II

Code	Course category	Title of the Paper *	No. of Credits	HPW	Max. Marks		Total Marks
					I.A	End Exam	
B A 201	AECC-2	Environmental Studies	2	2	10	40	50
B A 202	FL-2 A	ENGLISH	4	4	20	80	100
B A 203	SL-2 B	SECOND LANGUAGE	4	4	20	80	100
B A 204	DSC-1B	OPTIONAL - I	5	5	20	80	100
B A 205	DSC-2B	OPTIONAL – II	5	5	20	80	100
B A 206	DSC-3B	OPTIONAL – III	5	5	20	80	100
		Summary of Credits	25	25	-	-	550

* If a particular optional is having practical lab, the No. of credits may be considered as 4 = 1 (Theory + Lab Practical)

KAKATIYA UNIVERSITY WARANGAL 506 009
Scheme under Choice Based Credit System
With Effect from the Academic Year 2020-2021
B.A. PROGRAMME

SECOND YEAR

SEMESTER - III

Code	Course category	Title of the Paper *	No. of Credits	HPW	Max. Marks		Total Marks
					I.A	End Exam	
BA 301	SEC-1	Project Planning and Report Writing	2	2	10	40	50
BA 302	SEC-2	Entrepreneurship and Development	2	2	10	40	50
BA 303	FL-3 A	ENGLISH	3	3	15	60	75
BA 304	SL-3 B	SECOND LANGUAGE	3	3	15	60	75
BA 305	DSC-1 C	OPTIONAL - I	5	5	20	80	100
BA 306	DSC-2 C	OPTIONAL – II	5	5	20	80	100
BA 307	DSC-3 C	OPTIONAL – III	5	5	20	80	100
		Summary of Credits	25	25	110	440	550

SEMESTER - IV

Code	Course category	Title of the Paper *	No. of Credits	HPW	Max. Marks		Total Marks
					I.A	End Exam	
BA 401	SEC-3	Forms of Journalistic Writing	2	2	10	40	50
BA 402	SEC-4	Rural Politics and Leadership	2	2	10	40	50
BA 403	FL- 4 A	ENGLISH	3	3	15	60	75
BA 404	SL- 4 B	SECOND LANGUAGE	3	3	15	60	75
BA 405	DSC-1 D	OPTIONAL - I	5	5	20	80	100
BA 406	DSC-2 D	OPTIONAL – II	5	5	20	80	100
BA 407	DSC-3 D	OPTIONAL – III	5	5	20	80	100
		Summary of Credits	25	25	110	440	550

- If a particular optional is having practical lab, the No. of credits may be considered as 4 = 1 (Theory + Lab Practical)

KAKATIYA UNIVERSITY WARANGAL 506 009
Scheme under Choice Based Credit System
With Effect from the Academic Year 2021- 2022
B.A. PROGRAMME
FINAL YEAR

SEMESTER - V

Code	Course category	Title of the Paper *	No. of Credits	HPW	Max. Marks		Total Marks
					I.A	End Exam	
BA 501	FL-5 A	ENGLISH	3	3	15	60	75
BA 502	SL-5 B	SECOND LANGUAGE	3	3	15	60	75
BA 503	GE	Good Governance	4	4	20	80	100
BA 504	DSE-1 E	OPTIONAL – I	5	5	20	80	100
BA 505	DSE-2 E	OPTIONAL – II	5	5	20	80	100
BA 506	DSE-3 E	OPTIONAL – III	5	5	20	80	100
		Summary of Credits	25	25	110	440	550

SEMESTER - VI

Code	Course category	Title of the Paper *	No. of Credits	HPW	Max. Marks		Total Marks
					I.A	End Exam	
BA 601	FL-6 A	ENGLISH	3	3	15	60	75
BA 602	SL-6 B	SECOND LANGUAGE	3	3	15	60	75
BA 603	PW - / Optional	Cultural Tourism in India	4	4	20	80	100
BA 606	DSE-1 F	OPTIONAL – I	5	5	20	80	100
BA 607	DSE-2 F	OPTIONAL – II	5	5	20	80	100
BA 608	DSE-3 F	OPTIONAL – III	5	5	20	80	100
		Summary of Credits	25	25	110	440	550

NSS/NCC/ Sports/Extra Curricular	Credits under Non – CGPA 6	Up to 6 (2 in each Year)	Up to 6 (2 in each Year)	Up to 6 (2 in each Year)
Summer internship	4	Up to 4 (2 in each, after I & II years	Up to 4 (2 in each, after I & II years	Up to 4 (2 in each, after I & II years

FL-: First Language;

SL-: Second Language;

AECC: Ability Enhancement Compulsory Course;

SEC: Skill Enhancement Course;

DSC: Discipline Specific Course;

DSE: Discipline Specific Effective;

GE: Generic Elective;

PW: Project Work;

Faculty of Commerce & Business Management, Kakatiya University, Warangal.

B.Com.

(Computer Applications)

(CBCS)



FACULTY OF COMMERCE & BUSINESS MANAGEMENT
KAKATIYA UNIVERSITY
Vidyaranyapuri, Warangal

2019-2020

B.COM (Computer Applications)

CBCS COURSE STRUCTURE

Sl.No.	Code	Course Title	HPW	Credits	Exam Hrs	Marks
(1)	(2)	(3)	(5)	(6)	(7)	(8)
I Year I Semester						
1.	ELS1	English (First Language)	4	4		
2.	SLS1	Second Language	4	4		
3.	AECC1	a)Environmental Science/ b)Basic Computer Skills	2	2	1 ½ hrs	40U+10I
4.	DSC101	Financial Accounting-I	5	5	3 hrs	80U+20I
5.	DSC102	Business Organization and Management	5	5	3 hrs	80U+20I
6.	DSC103	Fundamentals of Information Technology	3T+4P	5	1 ½ hrs	50T+35P+15I
Total			27	25		
I Year II Semester						
7.	ELS2	English (First Language)	4	4		
8.	SLS2	Second Language	4	4		
9.	AECC2	a)Basic Computer Skills/ b)Environmental Science	2	2	1 ½ hrs	40U+10I
10.	DSC201	Financial Accounting-II	5	5	3 hrs	80U+20I
11.	DSC202	Business Laws	5	5	3 hrs	80U+20I
12.	DSC203	Programming with C & C++	3T+4P	5	1 ½ hrs	50T+35P+15I
Total			27	25		
II Year I Semester						
13.	ELS3	English (First Language)	3	3		
14.	SLS3	Second Language	3	3		
15.	SEC1	a)Principles of Insurance/ b)Foundation of Digital Marketing/ c)Fundamentals of Business Analytics	2	2	1 ½ hrs	40U+10I
16.	SEC2	a)Practice of Life Insurance/ b)Web Design & Analytics/ c)Application of Business Analytics	2	2	1 ½ hrs	40U+10I
17.	DSC301	Advanced Accounting	5	5	3 hrs	80U+20I
18.	DSC302	Business Statistics-I	5	5	3 hrs	80U+20I
19.	DSC303	Relational Database Management System	3T+4P	5	1 ½ hrs	50T+35P+15I
Total			27	25		

Faculty of Commerce & Business Management, Kakatiya University, Warangal.

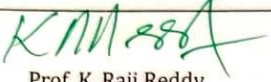
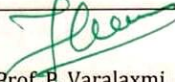
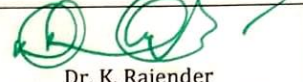
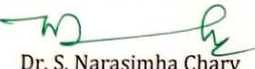


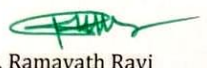
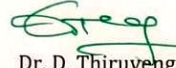
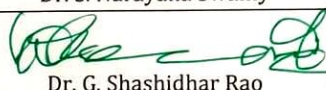
II Year II Semester						
20.	ELS4	English (First Language)	3	3		
21.	SLS4	Second Language	3	3		
22.	SEC3	a)Practice of General Insurance/ b)Social Media Marketing c)Business Intelligence	2	2	1 ½ hrs	40U+10I
23.	SEC4	a)Regulation of Insurance Business/ b)Search Engine Optimization & Online Advertising c)Data Visualisation & Storytelling	2	2	1 ½ hrs	40U+10I
24.	DSC401	Income Tax/Excel Foundation	5	5	3 hrs	80U+20I
25.	DSC402	Business Statistics-II	5	5	3 hrs	80U+20I
26.	DSC403	Web Technologies	3T+4P	5	1 ½ hrs	50T+35P+ 15I
		Total	27	25		
III Year I Semester						
27.	ELS5	English (First Language)	3	3		
28.	SLS5	Second Language	3	3		
29.	GE	a)Business Economics / b) Advanced Aspects of Income Tax	4	4	3 hrs	80U+20I
30.	DSE501	a) Cost Accounting/ b) Financial Planning & Performance/ c) International Financial Reporting-I	5	5	3 hrs	80U+20I
31.	DSE502	a) Computerized Accounting/ b) Financial Decision Making-I/ c) International Tax &Regulation	3T+4P/ 5	5	3 hrs	50T+35P+ 15I/ 80U+20I
32.	DSE503	a) Management Information Systems/ b) Ecommerce/c) Mobile Applications	3T+4P	5	1 ½ hrs	50T+35P+ 15I
		Total	29/27	25		
III Year II Semester						
33.	ELS6	English (First Language)	3	3		
34.	SLS6	Second Language	3	3		
35.	PR	Research Methodology and Project Report	2T+4R	4	1 ½ hrs	40U+10I 35R+15VV
36.	DSE601	a) Cost Control and Management Accounting/ b) Financial control/ c) International Financial Reporting-II	5	5	3 hrs	80U+20I
37.	DSE602	a) Theory and Practice of GST/ b) Financial Decision Making-II / c) International Auditing	3T+4P/ 5	5	3 hrs	50T+35P+ 15I/ 80U+20I
38.	DSE603	a) Multimedia Systems/ b) Cyber Security/c) Data Analytics	3T+4P	5	1 ½ hrs	50T+35P+ 15I
		Total	31/29	25		
		GRAND TOTAL	168/164	150		

ELS: English Language Skill; **SLS:** Second Language Skill; **AEC:** Ability Enhancement Compulsory Course; **SEC:** Skill Enhancement Course; **DSC:** Discipline Specific Course; **DSE:** Discipline Specific Elective; **GE:** Generic Elective; **T:** Theory; **P:** Practical; **I:** Internal Exam **U:** University Exam; **PR:** Project Report; **VV:** Viva- Voce Examination.

Note: If a student should opt for "a" in SEC in III semester, the student has to opt for "a" only in IV semester and so is the case with "b" and "c". In the case of DSE also the rule applies.

SUMMARY OF CREDITS

Sl. No.	Course Category	No. of Courses	Credits Per Course	Credits
1	English Language	6	4/3	20
2	Second Language	6	4/3	20
3	AECC	2	2	4
4	SEC	4	2	8
5	GE	1	4	4
6	Project Report	1	4	4
7	DSC	12	5	60
8	DSE	6	5	30
	TOTAL	40		150
	Commerce	24		106
CREDITS UNDER NON-CGPA		NSS/NCC/Sports/ Extra Curricular	Up to 6 (2 in each year)	
		Summer Internship	Up to 4 (2 in each after I & II years)	

 Prof. K. Raji Reddy	 Prof. P. Varalaxmi	 Dr. K. Rajender
 Dr. S. Narasimha Chary	 Mr. M. Somaiah	 Dr. S. Narayana Swamy
 Dr. Ramavath Ravi	 Dr. D. Thiruvengala Chary	 Dr. G. Shashidhar Rao

KAKATIYA UNIVERSITY, WARANGAL - 506 009
B.Sc. PROGRAMME
Under CBCS System
Scheme wef A.Y: 2019-20

FIRST YEAR

SEMESTER - I

Code	Course category	Title of the Paper	No. of Credits	Hrs PW	Max. Marks			Total Marks
					Internal Exam	End Exam	Lab	
BS101	AECC-1	Environmental Science	2	2	10	40	-	50
BS102	FL-1A	English	4	4	20	80	-	100
BS103	SL-1A	Second Language	4	4	20	80	-	100
BS104	DSC-1A	Optional - I	4	4	20	80	25	125
		Optional – I Lab	1	3				
BS105	DSC-2A	Optional– II	4	4	20	80	25	125
		Optional – II LAB	1	3				
BS106	DSC-3A	Optional – III	4	4	20	80	25	125
		Optional – III LAB	1	3				
		TOTAL:	25	-	110	440	75	625

SEMESTER – II

Code	Course category	Title of the Paper	No. of Credits	Hrs PW	Max. Marks			Total Marks
					Internal Exam	End Exam	Lab	
BS201	AECC-2	Basic Computer Skills (Taught by: Computer Science)	2	2	10	40	-	50
BS202	FL-2B	English	4	4	20	80	-	100
BS203	SL-2B	Second Language	4	4	20	80	-	100
BS204	DSC-1B	Optional - I	4	4	20	80	25	125
		Optional – I Lab	1	3				
BS205	DSC-2B	Optional – II	4	4	20	80	25	125
		Optional – II Lab	1	3				
BS206	DSC-3B	Optional – III	4	4	20	80	25	125
		Optional – III LAB	1	3				
		TOTAL :	25	-	110	440	75	625

KAKATIYA UNIVERSITY, WARANGAL - 506 009**B.Sc. PROGRAMME****Under CBCS System****Scheme wef A.Y: 2020-21****SECOND YEAR****SEMESTER - III**

Code	Course category	Title of the Paper	No. of Credits	Hrs PW	Max. Marks			Total Marks
					Internal Exam	End Exam	Lab	
BS 301	SEC-1	Fundamentals of Nano Technology (Taught by : Physics)	2	2	10	40	-	50
BS 302	SEC-2	Bio Statistics (Taught by : Statistics)	2	2	10	40	-	50
BS 303	FL-3 A	English	3	3	15	60	-	75
BS 304	SL-3 B	Second Language	3	3	15	60	-	75
BS 305	DSC-1C	Optional - I	4	4	20	80	25	125
		Optional – I Lab	1	3				
BS 306	DSC-2C	Optional – II	4	4	20	80	25	125
		Optional– II Lab	1	3				
BS 307	DSC-3C	Optional – III	4	4	20	80	25	125
		Optional – III Lab	1	3				
TOTAL:			25	-	110	440	75	625

SEMESTER - IV

Code	Course category	Title of the Paper	No. of Credits	Hrs PW	Max. Marks			Total Marks
					Internal Exam	End Exam	Lab	
BS401	SEC-3	Fundamentals of Python (Taught by: Computer Science)	2	2	10	40	-	50
BS402	SEC-4	Remedial Methods of Pollution – Drinking Water & Soil Fertility (Taught by: Chemistry)	2	2	10	40	-	50
BS403	FL-4 A	English	3	3	15	60	-	75
BS404	SL-4 B	Second Language	3	3	15	60	-	75
BS405	DSC-1D	Optional - I	4	4	20	80	25	125
		Optional – I Lab	1	3				
BS406	DSC-2D	Optional – II	4	4	20	80	25	125
		Optional – II Lab	1	3				
BS407	DSC-3D	Optional – III	4	4	20	80	25	125
		Optional– III Lab	1	3				
TOTAL :			25	-	110	440	75	625

KAKATIYA UNIVERSITY, WARANGAL - 506 009
B.Sc. PROGRAMME
Under CBCS System
Scheme wef A.Y: 2021-2022

THIRD YEAR

SEMESTER - V

Code	Course Type	Title of the Paper	No. of Credits	Hrs PW	Max. Marks			Total Marks
					Internal Exam	End Exam	Lab	
BS 501	FL-5 A	English	3	3	15	60	-	75
BS 502	SL-5 B	Second Language	3	3	15	60	-	75
BS 503	G.E.	Water Resources Management (Taught by: Any Science Dept.)	4	4	20	80	-	100
BS 504	DSE-1E	Optional – I	4	4	20	80	25	125
		Optional – I Lab	1	3				
BS 505	DSE-2E	Optional – II	4	4	20	80	25	125
		Optional – II Lab	1	3				
BS506	DSE-3E	Optional – III	4	4	20	80	25	125
		Optional – III Lab	1	3				
TOTAL:			25	-	110	440	75	625

SEMESTER - VI

Code	Course Type	Title of the Paper	No. of Credits	Hrs PW	Max. Marks			Total Marks
					Internal Exam	End Exam	Lab	
BS 601	FL-6A	English	3	3	15	60	-	75
BS 602	SL-6 B	Second Language	3	3	15	60	-	75
BS 603	P.W / Optional	Optional: Public Health & Hygiene (Taught by: Zoology / Botany / Biotechnology / Micro Biology)	4	4	20	80	-	100
BS 604	DSE-1F	Optional - I	4	4	20	80	25	125
		Optional – I Lab	1	3				
BS 605	DSE-2F	Optional – II	4	4	20	80	25	125
		Optional – II Lab	1	3				
BS 606	DSE-3F	Optional – III	4	4	20	80	25	125
		Optional – III Lab	1	3				
TOTAL:			25	-	110	440	75	625

NSS/NCC/Sports/Extra Curricular	Credits under Non – CGPA 6	Up to 6 (2 in each Year)	Up to 6 (2 in each Year)	Up to 6 (2 in each Year)
Summer internship	4	Up to 4 (2 in each, after I & II years	Up to 4 (2 in each, after I & II years	Up to 4 (2 in each, after I & II years

F.L : First Language;

S.L : Second Language;

A.E.C.C: Ability Enhancement Compulsory Course;

S.E.C : Skill Enhancement Course;

D.S.C : Discipline Specific Course;

D.S.E : Discipline Specific Effective;

G.E : Generic Elective;

P.W : Project Work;

AECC: ENVIRONMENTAL STUDIES

5×2=10

KAKATIYA UNIVERSITY
B.SC I YEAR SEMESTER-I - CBCS
Ability Enhancement Compulsory Course (AECC)

ENVIRONMENTAL STUDIES

(2 hrs./week)

Credits – 2

UNIT - I : Ecosystem, Biodiversity & Natural Resources

(15 hrs.)

1. Definition, Scope & Importance of Environmental Studies.
2. Structure of Ecosystem – Abiotic & Biotic components Producers, Consumers, Decomposers, Food chains, Food webs, Ecological pyramids)
3. Function of an Ecosystem :Energy flow in the Ecosystem (Single channel energy flow model)
4. Definition of Biodiversity , Genetic,Species & Ecosystem diversity , Hot-spots of Biodiversity, Threats to Biodiversity , Conservation of Biodiversity (Insitu & Exsitu)
5. Renewable & Non – renewable resources, Brief account of Forest , Mineral & Energy (Solar Energy & Geothermal Energy) resources
6. Water Conservation , Rain water harvesting & Watershed management.

UNIT – II: Environmental Pollution , Global Issues & Legislation

(15 hrs.)

1. Causes, Effects & Control measures of Air Pollution, Water Pollution
2. Solid Waste Management
3. Global Warming & Ozone layer depletion.
4. Ill – effects of Fire- works
5. Disaster management – floods, earthquakes & cyclones
6. Environmental legislation :-
(a) Wild life Protection Act (b) Forest Act (c) Water Act (d) Air Act
7. Human Rights
8. Women and Child welfare
9. Role of Information technology in environment and human health

❖ **Field Study:**

(5 hours)

- Pond Ecosystem
- Forest Ecosystem

REFERENCES:

- Environmental Studies - from crisis to cure – by R. Rajagopalan (Third edition) Oxford University Press.
- Text book of Environmental Studies for undergraduate courses (second edition) by Erach Bharucha
- A text book of Environmental Studies by Dr.D.K.Asthana and Dr. Meera Asthana



DR. G. SHAMITHA
Chairperson
Board of Studies
Department of Zoology & Sericulture Unit
Kakatiya University, Warangal (TS)

ABILITY ENHANCEMENT COMPLYSONY COURSE GENDER SENSITISATION

SYLLABUS

GENDER SENSITISATION

Unit – I (Theory) 1 credit – 1 hour of instruction per week.

1. Gender: Definition, Nature and Evolution, Culture, Tradition, Historicity.
2. Gender Spectrum: Biological, Sociological, Psychological Conditioning.
3. Gender based division of labour – domestic work and use value.
4. Gender, Human Rights and Parity (parallel progress of both genders).

Unit – II (Practical Activity) 1 credit – 2 hours of activity per week.

Group discussion, Presentation, Role play, Survey, Case studies, Group project based on following issues:

- Respect and Co-Existence.
- Social, Biological, Psychological, Political, Economic, Cultural, Health issues.
- Domestic Violence, Etc-teasing, Sexual Harassment.
- Real Life Experiences of Gender Interaction.
- Print and Electronic Media and Gender Inequalities.
- Contemporary Challenges.

**GENERIC ELECTIVE
WATER RESOURCES MANAGEMENT**

**KAKATIYA UNIVERSITY
U.G. B.Sc. Final Year (Under CBCS)
Semester – VI: Generic Elective Paper-II
(FOR ALL SCIENCE FACULTY DEPARTMENTS)**

WATER RESOURCES MANAGEMENT

UNIT-I

1. Importance of Natural Resources – Different Types Resources
2. Significance of Water Resources and their uses
3. Conservation of water and recycling of the water – Global distribution of water
4. Water shed programmes and their management
5. Storing the rain water in tanks and recharging ground water.

Unit-II

6. Rain water harvesting in rural areas (chekdam, trenches etc.,)
7. Over use of surface and ground water and control measures.
8. Aims, objectives and implementation of Mission Bhagiratha (Telangana Government Drinking water programme)
9. Aims, objectives and implementation of Mission Kakatiya (Telangana Government minor irrigation programme)
10. Issues and challenges in Water Resources Management

KAKATIYA UNIVERSITY, WARANGAL
B.Sc. Programme
Under CBCS System wef A.Y: 2020-21
Second Year :: Semester - IV
BS-402/ SEC-4 (Common to all Science Courses)

Remedial Methods of Pollution - Drinking Water & Soil Fertility

[2HPW, #Credits: 2, Marks:50 (Internal:10, External:40)]

(Taught by: Chemistry Department)

UNIT I: Remedial Methods for Pollution:

Prevention and control of air pollution: Ozone hole - Causes and harm due to ozone depletion, Effect of CFC's in Ozone depletion and their replacements, Global Warming and Green-house effect, Precaution measures to control global warming, Deleterious effect of pollutants, Endangered monuments, Acid rain, Precautions to protect monuments, Sources of Radiation pollution, Chernobyl accident and its consequences. Radiation effect by usage of cell phones and protection tips, Deleterious effects of cell phone towers and health hazards.

Sources of water pollution: (i) Pollution due to pesticides and inorganic chemicals, (ii) Thermal pollution (iii) Ground water pollution (iv) Eutrophication.

Methods for control of water pollution and water recycling: Dumping of plastics in rivers and oceans and their effect on aquatic life, Determination of (i) Dissolved oxygen and (ii) Chemical Oxygen demand in polluted water, Illustration through charts (or) demonstration of experiments,

Sources of soil pollution: (i) Plastic bags (ii) Industrial and (iii) Agricultural sources, Control of soil pollution, Environmental laws in India, Environmental benefits of planting trees.

UNIT II: Drinking Water and Soil Fertility Standards and Analysis:

Water quality and common treatments for private drinking water systems, Drinking Water Standards: 1. Primary drinking water standards: Inorganics, Organics and Volatile Organic Chemicals, 2. Secondary drinking water standards: Inorganics and Physical Problems, Water testing, Mineral analysis, Microbiological tests, Pesticide and Other Organic Chemical Tests, Principle involved in Water Treatment Techniques: (i) Reverse Osmosis (ii) Disinfection methods such as Chlorination, Ultraviolet light, ozonation etc... (iii) Chemical oxidation and iv) Ion exchange (water softeners). Visit to nearby drinking water plants and interaction at sites.

Introduction to Soil Chemistry: Basic Concepts. Effect of P^H on nutrient availability, Macronutrients and their effect on plants, Carbon, Hydrogen, Oxygen, Nitrogen and Phosphorus, other macronutrients, Calcium, Magnesium and Sulfur, Micronutrients and their effect on plants, Boron ($B_4O_7^{2-}$), Copper (Cu^{2+}), Iron (Fe^{2+} , Fe^{3+}), Manganese (Mn^{2+}), Molybdenum (MoO_4^{2-}), Zinc (Zn^{2+}), Cobalt (Co^{2+}), Chlorine (Cl^-) and others. Determination of soil nitrogen by Kjeldahl method, Illustration through charts and demonstration of experiment, Visit to nearby agricultural farms and interaction with farmers, Discussion with farmers on the use of 'Soil Analysis Kits'.

MODEL QUESTION PAPER: ENVIRONMENTAL STUDIES

2986/6

FACULTIES OF ARTS/SCIENCE/COMMERCE/SOCIAL SCIENCES

B.A./B.A.(L)/B.Sc./B.Com./B.B.A. (II Semester) Examination

ENVIRONMENTAL STUDIES

Paper II

(New)

Time : 1½ Hours]

[Max. Marks : 40

Answer all questions in serial order.

Section A – (Marks: 4 × 4 = 16)

(Short Answer Questions)

1. Answer any **four** of the following:
 - (a) Non-renewable source of energy
 - (b) Food chain
 - (c) Biodiversity
 - (d) Global Warming
 - (e) Earthquakes
 - (f) Child Welfare.

Section B – (Marks: 2 × 12 = 24)

(Essay Type Questions)

Answer all questions.

2. (a) Describe the structure of different components of Ecosystem.
Or
(b) Explain about renewable and non-renewable sources of energy.
3. (a) Write about environmental legislation.
Or
(b) Discuss about Global Warming and Ozone Layer depletion.

[P.T.O.

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Telangana Tribal Welfare Residential Degree College (Boys) Manuguru
BA/B.Com/B.Sc
Semester-I
Internal Examination
Environmental Studies

Answer all the following Questions

5*2=10

1. Ecological Pyramids?
2. Explain Solar Energy?
3. Write about wildlife protection act?
4. Describe the structure of an eco-system?
5. Write about non-renewable resources?

Telangana Tribal Welfare Residential Degree College (Boys) Manuguru
BA/B.Com/B. Sc
Internal Examination
GENDER SENSITIZATION

Answer all the following Questions

5*2=10

1. Agents of Socialisation?
2. Write about women empowerment?
3. What are the reasons of domestic violence?
4. Sex and Gender?
5. Human Rights?

Telangana Tribal Welfare Residential Degree College (Boys) Manuguru

B. Sc Sciences

Semester-IV

Internal Examination

Remedial Methods of Pollution - Drinking Water & Soil Fertility

Answer all the following Questions

5*2=10

1. Write about ozone depletion?
2. What are the Sources of water pollution?
3. What are the Sources of soil pollution?
4. Write about drinking water standards?
5. Global warming?

Telangana Tribal Welfare Residential Degree College (Boys) Manuguru

B. Sc Sciences

Semester-V

Internal Examination

Water Resource Management

Answer all the following Questions

5*2=10

1. What are the main resources of water resources management?
2. What are natural resources?
3. Explain rain water harvesting method?
4. What are the issues and challenges in water resources management?
5. Write about Drip irrigation and its uses?

Activities at the College towards inculcation of the Values relating to Gender, Environment and sustainability, Human Values, Ethics

క్లీన్ ఇండియా 2.0 ప్రోగ్రాం నిర్వహణ

భద్రాచలం అక్టోబర్ 19: కేంద్ర ప్రభుత్వం ఎంతో ప్రతిష్టాత్మకంగా నిర్వహిస్తున్న క్లీన్ ఇండియా 2.0 కార్యక్రమంలో భాగంగా భద్రాచలంలో ఎన్ఎస్ఎస్ విద్యార్థుల ఆధ్వర్యంలో స్వచ్ఛభారత్ నిర్వహించారు. బుధవారం దేశవ్యాప్తంగా కేంద్ర ప్రభుత్వం క్లీన్ ఇండియా 2.0 కార్యక్రమం నిర్వహించాలని పిలుపు ఇవ్వడంతో జిల్లా ఎన్ఎస్ఎస్ యూనిట్ ఆధ్వర్యంలో భద్రాచలం పరిశుభ్రపరిచారు. ఈ క్రమంలో పట్టణంలోని వైద్యశాలలు, పబ్లిక్ మార్కెట్ ప్రధాన రహదారులలో పేరుకుపోయిన ప్లాస్టిక్ వ్యర్థాలను ఎన్ఎస్ఎస్ విద్యార్థులు తొలగించారు. ఇదే సమయంలో ప్రజల్లో ఆవగాహన కల్పించేందుకు ప్లాస్టిక్ నిరోధించండి వర్కావరణాన్ని కాపాడండి అంటూ నినదిస్తూ ఆవగాహన కల్పించారు. ఈ కార్యక్రమంలో ప్రభుత్వ డిగ్రీ జూనియర్ కళాశాలల ప్రిన్సిపాల్స్ భద్రయ్య కృష్ణవేణి, ఎన్ ఎస్ ఎస్ జిల్లా కోఆర్డినేటర్ పి. ఆనంద్ బాబు, భద్రాచలం ప్రభుత్వ డిగ్రీ కళాశాల ఎన్ఎస్ఎస్ ప్రోగ్రామింగ్ ఆధికారి వీరన్న, సుజాత, రమా, శ్రీకాంత్ భద్రాచలంకు చెందిన ప్రభుత్వ డిగ్రీ, జూనియర్ కళాశాలల గిరిజిన సంకేషం కళాశాల విద్యార్థులు, ఐటీసీ వాచ్ సంస్థ, గ్రామపంచాయతీ అధ్యక్షుల పాల్గొన్నారు.

పట్టణంలో నిర్వహించిన ర్యాలీ

PROGRAM
N.S.S.
T.T. Nagar, (M.C.)
Dist. Bhadrachalam



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Shapng

PRINCIPAL

T.T.W.R.D.C. (M), Manug
at Bhasrachalam
Bhadrairi Kothagudem D

NSS volunteer's services at college.

Mother's Day Celebration



Bathukamma Celebrations



Martyrs' Day



AIDS Day Rally

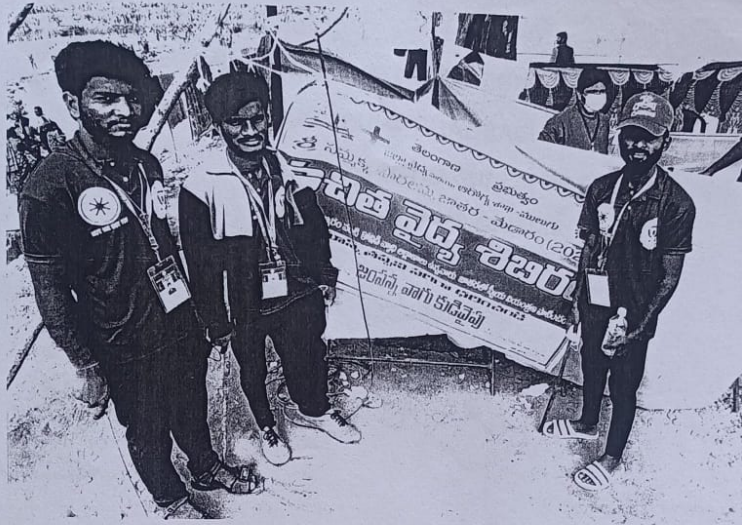


Haritha Haram



Say No to Plastic Campaign





ದಿನ: 14/02/2022 ಸು02 19/02/2022 ವಕೂ ಚೂನ
 Medaram mega Camp /



PRC
 National
 I.T.W.R.D.C. (M),
 @ BHADRACHALAM - 507111.
 Bhadrachalam
 Bhadrachalam
 Bhadrachalam

Signature

PRINCIPAL
 I.T.W.R.D.C. (M),
 Bhadrachalam
 Bhadrachalam Dist

Medaram mega Camp NSS

Service

Voters awareness day

Conducted voter's awareness programme on voter's day with the help of political science and public administration departments. NSS team, staff and students participated in awareness program



AIDS day awareness rally and program

Conducted awareness program and rally on AIDS day 01/12/2023. NSS team, staff and students participated in awareness program and rally





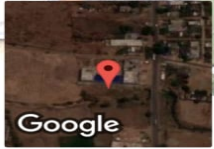


Children's day celebrations

Children's day celebrated on 14th November every year on the birthday of first prime minister of India Jawaharlal Nehru.

Celebrated children's day program on 14/11/2023





GPS Map Camera
Samathsingaram, Telangana, India
Mittagudem X Road, VRQH+JV2, Manuguru - Bhadrachalam Rd, Samathsingaram,
Telangana 507117, India
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Long 80.82935°
14/11/23 04:28 PM GMT +05:30

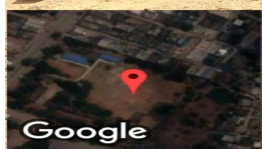
Telangana state assembly elections

NSS team and staff participated Telangana state general assembly elections 29/11/2023





GPS Map Camera



Manuguru (PT), Telangana, India
WRM8+QJ5, Ashok Nagar, Manuguru (PT), Telangana 507117, India
Lat 17.934712°
Long 80.816876°
29/11/23 12:07 PM GMT +05:30



GPS Map Camera



Manuguru (PT), Telangana, India
WRP8+6F6, Pilot Colony, Manuguru (PT), Telangana 507117, India
Lat 17.935627°
Long 80.816182°
29/11/23 12:06 PM GMT +05:30

National Unity Day or Rashtriya Ekta Diwas

Conducted national unity day or rashtriya ekta diwas on 30/10/2023 and taking pledge on national unity



Awareness program on fire safety

Conducted awareness program on fire safety on 27/12/2023



Community outreach program

NSS team and staff participated in community outreach around college premises on 11/01/2024&01/02/2024





Samathsingaram, Telangana, India
VRQH+HX3, Manuguru - Bhadrachalam Rd, Samathsingaram, Telangana 507117, India
Lat 17.876788°
Long 80.825829°
11/01/24 03:53 PM GMT +05:30



Samathsingaram, Telangana, India
Mittagudem X Road, VRQH+JV2, Manuguru - Bhadrachalam Rd, Samathsingaram, Telangana 507117, India
Lat 17.888813°
Long 80.828972°
01/02/24 04:08 PM GMT +05:30

Sickle cell awareness program





Forest day

Awareness rally conducted on forest day with the help of botany department on 21/03/2024



Shaheed Diwas

Martyr's day or Shaheed diwas is also commemorated on 23rd march to remember the sacrifice of three extraordinary revolutionaries of India







World tubercular day awareness program

Conducted awareness program on world tubercular day with help of zoology department on 27/03/2024



Plantation program

Plantation program is to save protect the environment by plantation work. Plantation program conducted on 14/03/2024 & 21/03/2024









Google

Samathsingaram, Telangana, India
VRPH+MQH, Samathsingaram, Telangana 507117, India
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Long 80.829678°
14/03/24 04:24 PM GMT +05:30

GPS Map Camera



Google

Samathsingaram, Telangana, India
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Lat 17.888733°
Long 80.829704°
14/03/24 04:26 PM GMT +05:30

GPS Map Camera









Mehndi and Rangoli program

Mehndi and Rangoli program conducted on national youth day 12/01/2024









Community Outreach

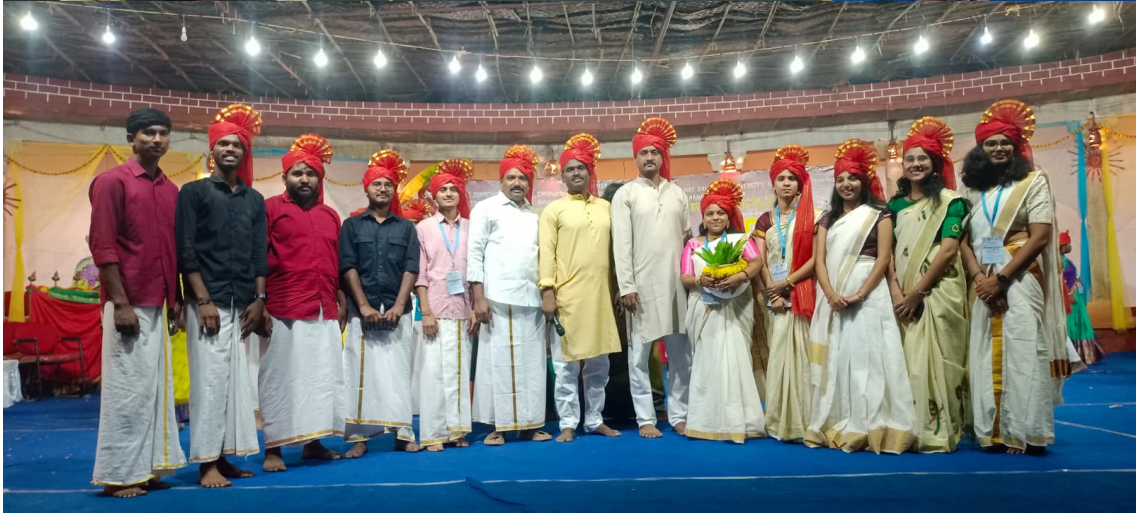
Community outreach program conducted on 01/02/2024



National integration camp @ Bengaluru

D Sai ram 3rd B.COM (CA) participated in Telangana cultural dance from TTWRDC(B) manuguru













AIDS RALLY ON 01/12/2021



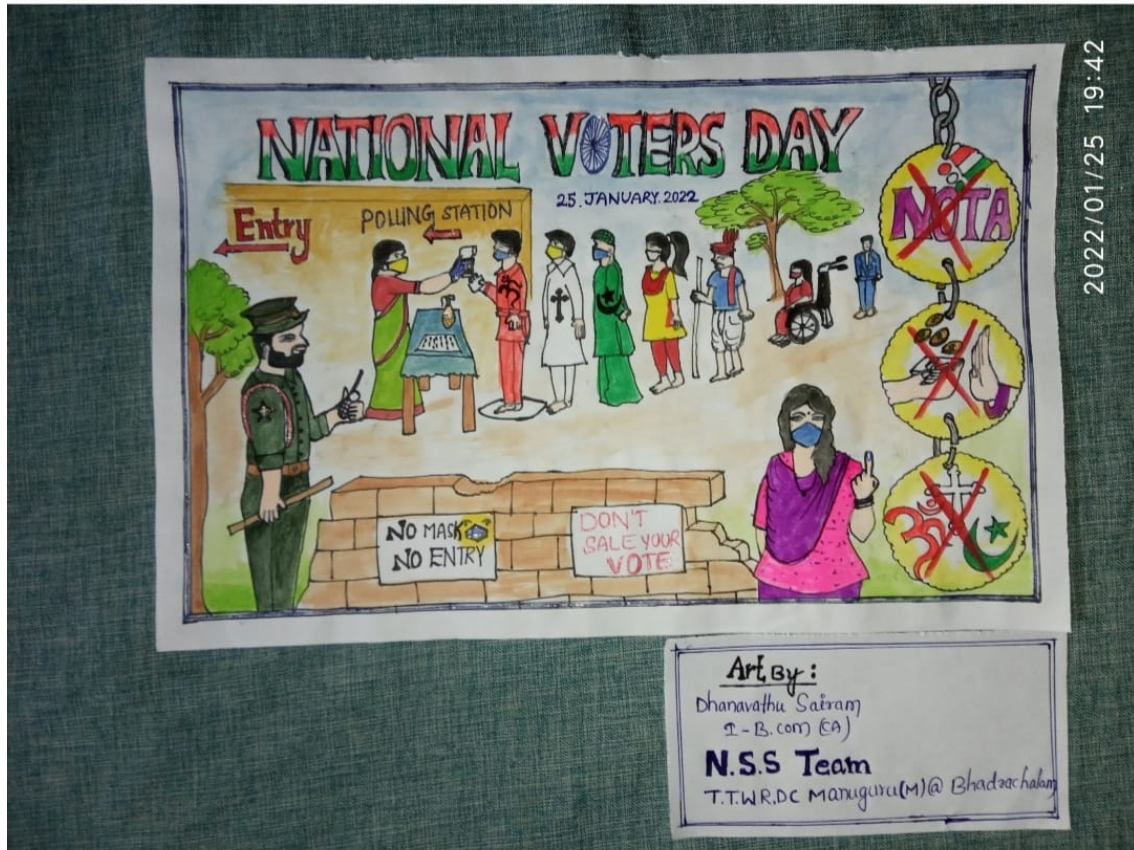
COVID-19 VACCINATION CAMP ON 06/12/2021



National youth day celebrations conducted on 12/01/2022



NATIONAL VOTER'S DAY - DRAWING COMPETITION CONDUCTED ON 25TH JANUARY 2022



2022/01/25 19:42

**BLOOD DONATION AWARENESS PROGRAM CONDUCTED BY NSS TEAM ON
24/03/2022**



AMBEDKARJAYANTHI CELEBRATIONS ON 14/04/2022



VISITED TRIBAL MUSEUM ON 18/04/2022



NSS 7 DAYS SUMMER SPECIAL CAMP 19 TO 25TH APRIL 2022







NATIONAL INTEGRATION CAMP AT COIMBATORE 18 TO 24TH MAY 2022



NSS TEAM CONDUCTED COMMUNITY CLINGING ON 05/06/2022



HEALTH CAMP ON 23/06/2022



WORLD YOGA DAY PROGRAM CONDUCTED ON 21/06/2022

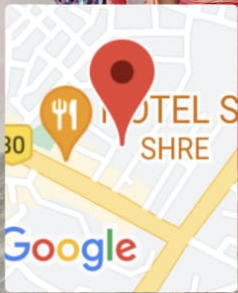


HARITHAHARAM PROGRAM CONDUCTED ON 04/08/2022





SWACHH GURUKUL PROGRAM CONDUCTED ON 09/09/2022



Bhadrachalam, Telangana, India
13-3-30, Ashok Nagar Rd, Ashok Nagar Colony,
Bhadrachalam, Telangana 507111, India
Lat 17.671968°
Long 80.892756°
11/09/22 12:39 PM GMT +05:30

GPS Map Camera



SINGLE USE PLASTIC AWARENESS PROGRAM 19/10/2022



Bhadrachalam, Telangana, India
MVCQ+99G, Bhadrachalam, Telangana
Lat 17.67102°
Long 80.88865°
19/10/22 11:49 AM



Bhadrachalam, Telangana, India
MVCR+H34, Bhadrachalam, Telangana
Lat 17.671552°
Long 80.890377°
19/10/22 12:04 PM



Bhadrachalam, Telangana, India
MVCR+P4J, Bus Stand Rd, Bhadrachalam, T
Lat 17.671644°
Long 80.890289°
19/10/22 12:03 PM



Bhadrachalam, Telangana, India
MVCQ+JHP, Bhadrachalam, Telangana
Lat 17.671718°
Long 80.889028°
19/10/22 11:53 AM



Bhadrachalam, Telangana, India
MVCQ+JHP, Bhadrachalam, Telangana 507111,
Lat 17.671718°
Long 80.889028°
19/10/22 11:53 AM



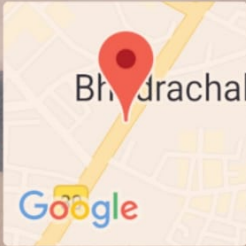
Bhadrachalam, Telangana, India
MVCQ+99G, Bhadrachalam, Telangana 507111,
Lat 17.671033°
Long 80.888638°
19/10/22 11:49 AM



NATIONAL EDUCATIONAL DAY PROGRAM ON 11/11/2022

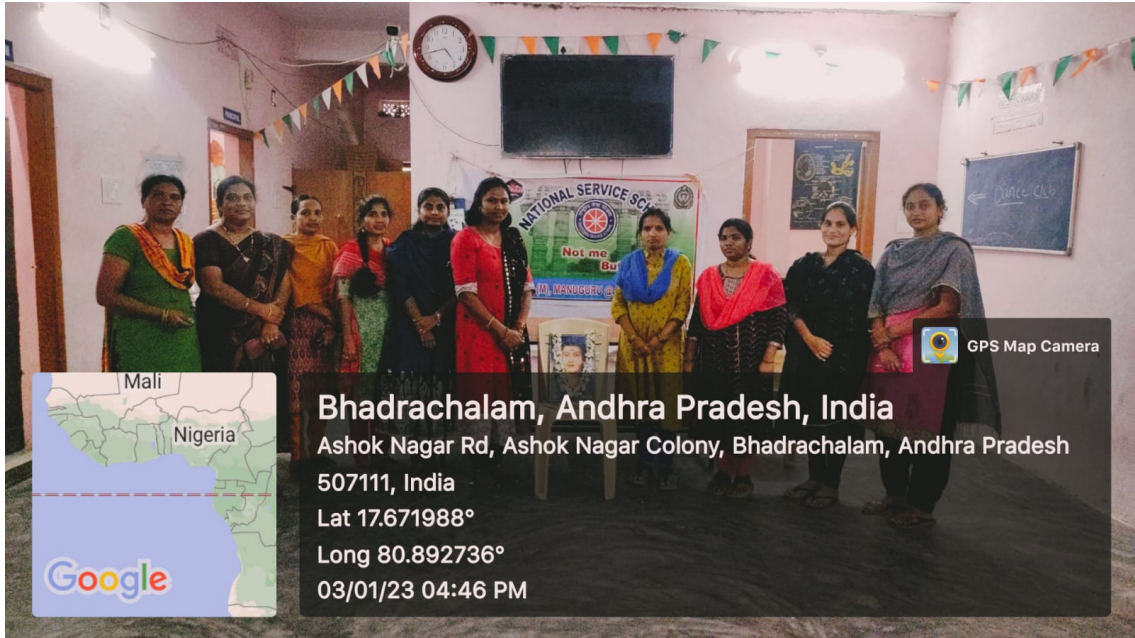


NATIONAL AIDS DAY AWARENESS RALLY ON 01/12/2022



Bhadrachalam, Telangana, India
MV9R+CVW, Bhadrachalam, Telangana 507111, India
Lat 17.66849°
Long 80.892346°
01/12/22 10:10 AM

SAVITHRI BHAI PHULE JAYANTHI CELEBRATIONS ON 03/01/2023



NATIONAL YOUTH DAY CELEBRATIONS ON 12/01/2023



NATIONAL VOTER'S DAY AWARENESS PROGRAM 25/01/2023



TRIBAL DAY CELEBRATIONS ON 9TH AUGUST 2023



SINGLE USE PLASTIC AWARENESS PROGRAM AND DISTRIBUTION OF JUTE BAGS ON
25/09/2023





MERI MATTI MERA DESH PROGRAM FROM 9TH TO 12TH OCTOBER 2023







NATIONAL UNITY DAY CELEBRATIONS 31/10/2023



Samathsingaram, Telangana, India
Mittagudem X Road, VRQH+JV2, Manuguru - Bhadrachalam
Samathsingaram, Telangana 507117, India
Lat 17.888853°
Long 80.829416°
31/10/23 09:21 AM GMT +05:30



Samathsingaram, Telangana, India
Mittagudem X Road, VRQH+JV2, Manuguru - Bhadrachalam
Samathsingaram, Telangana 507117, India
Lat 17.888853°
Long 80.829416°
31/10/23 09:27 AM GMT +05:30



Samathsingaram, Telangana, India
VRQH+HX3, Manuguru - Bhadrachalam Rd, Samathsingaram,
Telangana 507117, India
Lat 17.876788°
Long 80.825829°



Samathsingaram, Telangana, India
VRQH+HX3, Manuguru - Bhadrachalam Rd, Samathsingaram,
Telangana 507117, India
Lat 17.876788°
Long 80.825829°
31/10/23 09:14 AM GMT +05:30



Samathsingaram, Telangana, India
VRQH+HX3, Manuguru - Bhadrachalam Rd, Samathsingaram,
Telangana 507117, India
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Long 80.825829°
31/10/23 03:44 PM GMT +05:30