

ADITYA ENGINEERING COLLEGE

An Autonomous Institution

Approved by AICTE • Permanently Affiliated to JNTUK • Accredited by NAAC with 'A' Grade
Recognised by UGC under sections 2(f) and 12(B) of UGC Act, 1956

Aditya Nagar, ADB Road, Surampalem - 533437, Near Kakinada, E.G.Dt., Ph:99498 76662

List of Courses for addressing Gender Equity, Environmental Sustainability, Professional Ethics and Human Values

S. No	Course Name	Subject Code	Description	Offered to Programs
1	English-I	171HS1T01	This course provides communication skills to express thoughts fluently in both written as well as oral form of language which is very much essential for the career growth and enhances the language competency.	B. Tech all Programs
2	Environmental Studies	171HS1T02 171HS2T02	The course focuses on the environment and different processes that take place on Earth. Relevant issues of global warming, pollution, floods, earthquakes, waste management and sustainable development have been given a lot of importance in the course.	B. Tech all Programs
3	English Communication Skills Lab-I	171HS1L01	This course focusses on technical skills to express fluently in both written as well as oral forms of language which is very much essential for career growth.	B. Tech all Programs
4	English-II	171HS2T03	This course enhances communication skills express thoughts fluently in both written as well as oral form of language	B. Tech all Programs
5	English Communication Skills Lab-II	171HS2L02	This course helps to express fluently in both written as well as oral forms of language which is very much essential for career growth.	B. Tech all Programs
6	Professional Ethics and Human Values	R1622267 R1621019 171HS3A09 191MC6A09	The course helps to understand human rights and quote examples on values and morals. Identify what is right and wrong through moral ethics.	B. Tech all Programs
7	Managerial Economics and Financial Analysis	R1622019 R1631355 R1631022 R1621026 R1621075 171HS4A04 171HS3T04 191HS3T02 191HS4T04	This course helps to acquire skills to understand managerial economic concept, break even concept, profit & loss concept and balance sheet of an enterprise which enable them to be employed in the field of accounting and trading related jobs in the mines.	B. Tech all Programs

S. No	Course Name	Subject Code	Description	Offered to Programs
8	Intellectual Property Rights and Patents	RT31016 RT32056 171HS4T08 171HS4A08 171HS5T08 191MC5A08	The course defines intangible assets that are owned by individual person or company contributing to the national as well as the state economies.	B. Tech all Programs
9	Environmental Engineering – I	RT32011 R1632013	This course focusses on designing of protected water supply scheme for a city enabling them to be employed in public health department of government	B. Tech (CE)
10	Environmental Engineering – II	RT41011	This course defines concepts related to design and evaluate the treatment of wastewater generated in the society and its management.	B. Tech (CE)
11	Environmental Engineering Lab	RT4101L R1632017 R32268	This course characterizes water samples with respect to physical and chemical examination required for drinking water supply and constructional activities and waste water for treatment and disposal in municipal sector of the society	B. Tech (CE, Min. E)
12	Environmental Pollution and Control	PT41011	This course focusses on concepts of pollution of various sectors of environment and apply them in sustainable development of the society.	B. Tech (CE)
13	Disaster Management	RT32016A	This course provides skills related to interpretation of various disasters in the environment and prepares one to prevent, face and combat them	B. Tech (CE)
14	Industrial Water and Waste Water Management	RT32016C	This course focusses on skills related to the industrial requirement and treatment of the waste water from various industries	B. Tech (CE)
15	Green Technologies	RT32016E	This course provides skills related to various technologies related to green building concept	B. Tech (CE)

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16	Air Pollution and Control	RT41017	This course provides skills related to various aspects of air pollution concepts and their control and their application in the society	B. Tech (CE)
17	Environmental Impact Assessment and Management	RT42012B 171CE7E14	The course helps in evaluating the likely environmental impacts of a proposed project or development, taking into account inter-related socio-economic, cultural and human-health impacts, both beneficial and adverse.	B. Tech (CE)
18	Solid waste Management	RT42013B	This course focusses on various aspects of managing the municipal solid waste generated and its importance in sustainable development of the society.	B. Tech (CE)
19	Green Buildings	RT42013F	This course gives the technical skill of various green principles related to buildings in constructional activities	B. Tech (CE)
20	Environmental and Industrial Hygiene	RT42014B	This course provides skills relating environment with industrial activities and principles to be followed in industries to maintain health and safety of employees in industries	B. Tech (CE)
21	Non-Conventional Sources of Energy	RT41026	This course focusses on pivotal role in the development of a sustainable energy supply in renewable energy generation sector.	B. Tech (EEE)
22	Green Engineering Systems	RT42032 R163203D 171ME7E11 171CE8O07	This course demonstrates problem solving skills in analysing the significance of alternative sources of energy, green energy systems.	B. Tech (ME)
23	Renewable Energy Sources	R1621352 171EE5E01 191ME5O01	This course focusses on storage and application techniques of solar energy, different modern energy conversion technologies.	B. Tech (EEE and CSE)
24	Green fuel technologies	RT41016F	This course demonstrates the technical skill of characterizing different technologies, modelling and analysis of production.	B. Tech (CE)

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25	Renewable Energy Sources and Systems	RT41021	This course provides skills related to pivotal role in the development of a sustainable energy	B. Tech (EEE)
26	Renewable Energy Technologies	172TE1E03	This course provides skills related to the various renewable technologies, solar energy conversion processes, direct energy conversion processes, bio energy conversion processes and wind energy conversion processes	M. Tech (TE)
27	Renewable Energy Systems	172PD2E07 191EE5E03	This course provides skills related to various types of pivotal role in the development of a sustainable energy supply	M. Tech (PDE)& B. Tech (EEE)
28	Process Safety and Environmental aspects in Petroleum Industry	172PE2E04	This course helps to apply the knowledge of safety management enabling them to become an entrepreneur in any domain of their choice.	M. Tech (PT)
29	Green House Technologies	R164135B	Students are able to acquire skills related to techniques for the constructing of polyhouse for drying purpose, for horticultural crops	B. Tech (AG. E)
30	Mine Environment Engineering-I	RT31263	This subject enhances the skill of students to understand atmosphere and mine atmosphere conditions, heat and humidity levels in mines and controlling method. It also helps students to know about ventilation standards planning and layout.	B. Tech (Min. E)
31	Mine Environment Engineering-II	RT32263	This subject helps the student to demonstrate their problem-solving skills of the students as they will understand the process of spontaneous heating, fires, explosion, inundation and adverse effects, rescue and recovery operation and standards of lighting arrangement.	B. Tech (Min. E)
32	Mine Field Visit	R1631269	This subject makes the student demonstrate skill as well as make them ready for mining field job as student will be directly exposed to the real condition of operation an opencast and underground mine.	B. Tech (Min. E)

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33	Soil and Water Conservation Engineering	R1631352	This course helps to acquire skills related to design of various gully control structures, temporary and permanent, their designs and quantification of annual soil loss using USLE from a watershed	B. Tech (AG. E)
34	Soil and Water Engineering Lab	RT32358	This course helps in gaining technical skill of designing of various gully control structures, measurement of flow with current meter and water meter.	B. Tech (AG. E)
35	Agro Industries and Bi Product Utilization	RT42352	This course helps to acquire skills related to treatment techniques of waste water from agricultural/food industry, production of by- products from agricultural and food processing wastes	B. Tech (AG. E)
36	Alternative Energy Sources	R163201C	This course demonstrates technical skill of characterizing different Alternative Energy Sources, modelling and analysis of Automobiles.	B. Tech (CE)
37	Waste water Management	R163201D	Students are able to demonstrate technical skill of characterizing various waste water treatment technologies.	B. Tech (CE)
38	Employability Skills-I	171HS3A10 191MC3A03	This course helps the students to acquire skills to be placed in a company as it will impart employability skills in students, which will enable the students to feel comfortable to face several competitive examinations with confidence and competence.	B. Tech all Programs
39	Employability Skills-II	171HS4A11 191MC4A05	This course helps to acquire skills to be placed in a company as it will impart employability skills in students, which will enable the students to feel comfortable to face several competitive examinations with confidence and competence.	B. Tech all Programs

S. No	Course Name	Subject Code	Description	Offered to Programs
40	Management Science	R1622026 RT32025 171HS4T05 171HS5T05 191HS4T03	This course demonstrates competency in the domain of business management enabling them to become an entrepreneur.	B. Tech all Programs Except (ME, AG. E, Min. E)
41	Energy Conservation Audit and Management	RT41024 172PD1E04 R163202F	This course focuses on the loss and profit studies and other company maintenance activities, creates the interest among the students to have own company.	B. Tech (EEE)
42	Disaster Management	192MC1A02, 192MC2A02, 171EC8O02	The course provides different disasters, tools and methods for disaster management.	B. Tech (EEE, CSE, IT)
43	Environmental Impact Assessment	RT41266	This course demonstrates the technical skills as they will know the hazardous effect of various pollution that is happening because of mining activities.	B. Tech (Min. E)
44	Energy Management	172TE2T06 RT41016A	This course provides skills related to different energy resources	M. Tech (TE) B. Tech (CE)
45	Micro Irrigation Engineering	RT41351	This course provides skills related to designing sprinkler and drip irrigation systems enabling them to be employed as micro irrigation engineers.	B. Tech (AG. E)
46	Industrial Pollution Control Engineering	R163235D	This course enhances the knowledge related to unit operations and unit processes involved in conversion of highly polluted water to potable standards, analysis and quantification of waste water treatment	B. Tech (AG. E)
47	Rural water supply, sanitation and Environmental Engineering	171AG5E02	This course provides knowledge about wastewater collection system, treatment and disposal of wastewater	B. Tech (AG. E)
48	Alternative Fuel Technologies	172TE1E08 192TE1E06	This course analyses potential alternative liquid and potential gaseous fuels.	M. Tech (TE)

S.No	Course Name	Subject Code	Description	Offered to Programs
49	Fuels, Combustion and Environment	172TE2T05	This course analyses various fuels and the effect of combustion of fuels on environment	M. Tech (TE)
50	Communicative English	191HS1T01 201HS1T01	This course demonstrates technical skills to express fluently in both written as well as oral form of language which is very much essential for the career growth.	B. Tech all Programs
51	Communicative English Lab-I	191HS1L01 201HS1L01	This course demonstrates communication skills to express fluently in both written as well as oral form of language which is very much essential for the career growth.	B. Tech all Programs
52	Environmental Science	201MC1T01 191MC1A01	The course discusses concepts related to social issues, environmental legislation and global treaties. Explain the social issues of both rural and urban environment to combat the challenge.	B. Tech all Programs
53	Constitution of India	201MC2T02, 191MC1A02, 192MC1A05, 192MC2A05	The course gives awareness to individuals about the significance about the constitution of India. The course lays down the framework that demarcates fundamental political code, structure, procedures, powers, and duties of government institutions and sets out fundamental rights, directive principles, and the duties of citizens.	B. Tech all Programs
54	Communicative English Lab-II	191HS2L01	This course demonstrates technical skills to express fluently in both written as well as oral form of language which is very much essential for the career growth	B. Tech all Programs
55	Solid and Hazardous Waste Management	171CE8E18 R164201C	This course provides knowledge related to various aspects of managing the municipal solid waste generated and its importance in sustainable development of the society in various industries and municipalities	B. Tech (CE)

S.No	Course Name	Subject Code	Description	Offered to Programs
56	Alternative Energy Sources for Automobiles	171PT8O03 201ME7M08	This course demonstrates technical skill of characterizing different Alternative Energy Sources, modelling and analysis of Automobiles.	M. Tech all Programs (Except PT) & B. Tech (ME)
57	Waste Water Treatment	171PT8O04	This course demonstrates technical skill of characterizing different waste water materials, modelling and analysis of treatments.	M. Tech all Programs (Except PT)
58	Green House/Poly House Technology	171AG6E06	This course gives development of different manufacturing techniques in agricultural machinery and cutting tools	B. Tech (AG. E)
59	Industrial Pollution Control Engineering	171AG8O02	This course provides knowledge related to unit operations and unit processes involved in conversion of highly polluted water to potable standards, analysis and quantification of waste water treatment	B. Tech all Programs (Except AG. E)
60	Professional Communication Skills Lab	201HS2L02 201MC2L01	demonstrate technical skills to express fluently in both written as well as oral form of language which is very much essential for the career growth.	B. Tech all Programs
61	Essence Of Indian Traditional Knowledge	191MC3A04	This course demonstrates technical skills as they were able to understand concept of Traditional knowledge and its importance, enactments related to the protection of traditional knowledge and traditional knowledge in Agriculture and Medicine.	B. Tech all Programs
62	Green Building Systems	192ST3O02	This course demonstrates technical skill of various green principles related to buildings in constructional activities	M. Tech all Programs (Except ST)
63	Fuels and Combustion	192TE3O02	This course information about various fuels and the effect of combustion of fuels on environment	M. Tech all Programs (Except TE)
64	Energy Systems	192TE3O01	This course provides the importance of energy management in the functional area and carrying out budgeting and risk analysis of projects	M. Tech all Programs (Except TE)

S.No	Course Name	Subject Code	Description	Offered to Programs
65	Green Engineering Technology	192TE3O03	This course analyses the significance of alternative sources of energy, green energy systems.	M. Tech all Programs (Except TE)
66	Basic Crop Production Practices	191AG5O01	This course provides information related to production practices and management techniques of agricultural and horticultural crops	B. Tech all Programs (Except AG. E)
67	Biology For Engineers	201MC3T03 191MC4A06	The course will help students to understand the basic principles of engineering and introduction of biological concepts so that they can effectively interact to concern for providing solutions to the problems related to biosystems.	B. Tech all Programs
68	Essence of Indian Traditional Knowledge	201MC4T04 191MC3A04	The course provides information about Indian traditional knowledge systems evolved over centuries through the cultures of various communities. Traditional knowledge is knowledge, know-how skills and practices that are developed, sustained and passed on from generation to generation within a community, often forming part of its cultural or spiritual identity.	B. Tech all Programs
69	Survey Camp	191MC5A07	Students are able to demonstrate Problem solving skills to the case studies they undertake as mini projects involving various surveying techniques	B. Tech (CE)
70	Industrial Safety	192PD3O05	This course helps to enable the students learn about environmental factors related to human, to enrich the students with anthropometric principles for work space design and to make the students to acquire knowledge on advance effects of air pollution, safety regulations and standards.	M. Tech (PD)


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71	Human Engineering and safety	R164235B	This course helps to enable the students learn about environmental factors related to human, to enrich the students with anthropometric principles for work space design and to make the students to acquire knowledge on advance effects of air pollution, safety regulations and standards.	B. Tech (AG.E)
72	Mine Health and Safety Engineering	R1642262	This subject demonstrates the technical skills of different aspects of mine health and safety related problems also it creates awareness of the hazardous effect of mining in mining workers health.	B. Tech (Min.E)
73	Environmental Engineering	171CE7T19 191CE7T16	The course helps to learn different types of principles of environmental science, water treatment, control on air pollution, solid, liquid and industrial waste management.	B. Tech (CE)
74	Environmental Pollution and Control	191CE5E03	The course describes various characteristics of the municipal solid and hazardous waste.	B. Tech (CE)
75	Air Pollution Engineering	191CE6E06	The course provides the methods to minimize/control the Air pollution control by using substitutive ways to minimize the excess release of harmful chemicals into the atmosphere, as ambient air consists of liquids, gas, and most surprisingly, solids.	B. Tech (CE)
76	Industrial Waste and Waste Water Engineering	191CE6E14	The course describes various industrial waste related to iron and steel industry, Textiles, leather factory and refineries, mining, metal, paper and pulp factory etc.	B. Tech (CE)
77	Environmental Impact Assessment	191CE7E18	The course Environmental Impact Assessment (EIA) provide policies, plans, and programs which are related to the proposed program associated with the organ of the state.	B. Tech (CE)

S. No	Course Name	Subject Code	Description	Offered to Programs
78	Environmental Remediation and Contaminated Sites	191CE8E26	The course Environmental remediation deals with the removal of pollution or contaminants from environmental media such as soil, groundwater, sediment, or surface water.	B. Tech (CE)
79	Energy storage systems	191EE7E16	Energy storage system course provide valuable added benefits to improve stability, power quality and reliability of power systems.	B. Tech (EEE)
80	Research Methodology and IPR	192HS1T01	The course provides legitimacy and wider acceptance to the sociological work. Different methods are used for different purposes of research like Positivist research or Interpretivist research.	M. Tech all Programs (Except ST)
81	English for Research Paper Writing	192MC1A01, 192MC2A01	The course helps in writing report and how it helps in professional career. As it is focused mainly on teaching and learning, the research aimed at linguistic and communicative competence of the professional students.	M. Tech all Programs
82	Sanskrit for Technical Knowledge	192MC1A03, 192MC2A03	The course teaches a person to be a better learner, worker, not only in terms of knowledge, understanding and skills but also in terms of human values and motives which give meaning and significance to all his behaviour	M. Tech all Programs
83	Value Education	192MC1A04, 192MC2A04	The course helps to develop an individual and help him/her lifelong in many ways: It gives a positive direction to the students to shape their future and even helps them to know the purpose of their life.	M. Tech all Programs
84	Stress management by Yoga	192MC1A07, 192MC2A07	The course helps the students to works on three-face as mental, physical and social states resulting in improved health, lesser greed for possession and efficient management of human life.	M. Tech all Programs
85	Personality Development through life Enlightenment skills	192MC1A08, 192MC2A08	The course helps to develop an impressive personality and makes you stand apart from the rest. It helps in improving one's communication skills. Individuals ought to master the art of expressing their thoughts and feelings in the most desired way.	M. Tech all Programs

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86	Soft Skills	192MC1A09, 192MC2A09	The course enables in improving one's ability to work with others and can have a positive influence on furthering student career. A small business owner or self-employed can be benefitted with the soft skills by attracting, and retaining clients.	M. Tech all Programs
87	Cogeneration & Waste water recovery systems	201ME6H12	This course provides details about operational efficiency and reduces energy waste enhancement thereby increasing energy efficiency.	B. Tech (ME)
88	Asset Management	191PT6O04	This course will help to gain skills in making investment decisions in the financial market in the short- and long-term perspective	B. Tech all programs Except PT
89	Entrepreneurship Development and Incubation	191ME6O12	The course provides the basics of what it takes to develop an entrepreneurial mindset thereby encouraging the journey of transformation to convert an idea or a solution into a business.	B. Tech all programs Except ME
90	Waste Water Management	191CE7O03	The course deals with the transportation and cleaning of black water, greywater, and irrigation water.	B. Tech all programs Except CE
91	Greenhouse Technology	191AG7O04	The course provides the most practical method of achieving the objectives of protected agriculture, where the natural environment is modified by using sound engineering principles to achieve optimum plant growth and yields.	B. Tech of all programs (Except AGE)
92	Reusability of Municipal Effluent in Agriculture	191AG7O05	The course give details of effluents of municipal wastewater treatment plants are classified as one of the primary emerging contaminants sources, as conventional treatment processes do not effectively prevent the release of these compounds into the environment.	B. Tech all programs (Except AGE)
93	Rural Innovation Projects	194MB1O0	This course helps to design business models to support the rural problems, to support agriculture, economic development and environment issues.	MBA
94	Environmental pollution Control	191MI6E10	This course addresses environmental issues in mining, various causes of air and water pollution, mine reclamation and environmental impact assessment.	B. Tech (Min. E)
95	Green Mining	191MI6E05	This course focusses on importance of green mining, mine waste management, mine closure planning and usage of renewable energy in mines.	B. Tech (Min. E)

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96	Intellectual Property Rights	175HR9E08	This course gives the knowledge of different labour acts, minimum wages act	IMBA
97	Research Methodology	175IM5T25	This course helps to analyse the functional area problems in Industries	IMBA
98	Energy Conservation and Management	192TE1E07	This course gives the importance of energy management in the functional area and carrying out budgeting and risk analysis of projects.	M. Tech (TE)
99	Solar Energy Technologies	192TE2E10	This course is related to the concepts about the types of solar collectors and their measuring principles and impart the knowledge of the various types of thermal energy storage methods and its applications.	M. Tech (TE)
100	Combustion Emissions and Environment	192TE2E12	This course helps to understand the principles and thermodynamics of combustion, emissions and pollution control.	M. Tech (TE)
101	Waste to Energy	192TE3E20	This course focusses on different methods of waste to energy conversion.	M. Tech (TE)
102	Bio-Energy Systems Design and Applications	191AG6O03	This course helps to acquire skills related to biomass and agrochemical conversion techniques, biomass production and bio-diesel production	B. Tech (AG. E)
103	Entrepreneurship Development and Business Management	201HS4T07	This course helps to apply the knowledge of entrepreneurial skills, legal steps to start enterprises.	B. Tech (AG. E)


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