

1.1.1 - The Institution ensures effective curriculum delivery through a well planned and documented process



Autonomous Syllabus for P.G Course

REGULATIONS 2020 :: M.E. INDUSTRIAL SAFETY ENGINEERING

I TO IV SEMESTERS (FULL TIME) CURRICULUM AND SYLLABUS

SEMESTER – I

SL. NO.	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
THEORY								
1.	20PISMA101	Probability and Statistical Methods	MA	3	3	0	0	3
2.	20PISPC101	Principles of Safety Management	PC	3	3	0	0	3
3.	20PISPC102	Environmental Safety	PC	3	3	0	0	3
4.	20PISPC103	Occupational Health and Industrial Hygiene	PC	3	3	0	0	3
5.	20PISPC104	Industrial Safety, Health and Environment Acts	PC	3	3	0	0	3
6.	20PISPE1XX	Professional Elective I	PE	3	3	0	0	3
PRACTICAL								
7.	20PISEE101	Industrial safety and Hazard analysis case studies & Report writing	EE	2	0	0	2	1
8.	20PISEE102	Skill Development Training	EE	2	0	0	2	1
9.	20PISTE101	Innovative Safety Engineering Design-Live –In - Project - I	TE	4	0	0	4	2
TOTAL				26	18	0	8	22

SEMESTER - II

SL. NO.	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
THEORY								
1.	20PISPC201	Fire Engineering and Explosion Control	PC	3	3	0	0	3
2.	20PISPC202	Computer Aided Hazard Analysis	PC	3	3	0	0	3
3.	20PISPC203	Electrical Safety	PC	3	3	0	0	3
4.	20PISPC204	Safety in Chemical Industries	PC	3	3	0	0	3
5.	20PISPC205	Machine Learning & Artificial Intelligence for Industrial Safety	PC	3	3	0	0	3
6.	20PISEL2XX	Professional Elective II	PE	3	3	0	0	3
PRACTICAL								
7.	20PISPL201	Industrial Safety Laboratory	PL	2	0	0	2	1
8.	20PISTE201	Innovative Safety Engg. Design live –in Project - II	TE	4	0	0	4	2
VALUE ADDED COURSES								
9.	20PISTP201	Internship (Industrial Safety Assessment / Audit)and report Submission	TP	2	0	0	2	1
TOTAL				27	18	0	9	22

SEMESTER III

SL. NO.	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
THEORY								
1.	20PISPC301	Safety in Engineering Industry 4.0	PC	3	3	0	0	3
2.	20PISEL3XX	Professional Elective III	EL	3	3	0	0	3
3.	20PISEL3XX	Professional Elective IV	EL	3	3	0	0	3
PRACTICAL								
4.	20PISPJ301	Project Work Phase I	PJ	12	0	0	12	6
5.	20PISTP301	Data Analytics in safety engineering & Art of Journal Publication	TE	2	0	0	3	1
TOTAL				23	9	0	16	16

SEMESTER IV

SL. NO.	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
PRACTICAL								
1.	20PISPJ401	Project Work Phase II	PJ	20	0	0	20	10
TOTAL				20	0	0	20	10

TOTAL CREDITS = 70

CATEGORY WISE CREDITS

SL. NO.	CATEGORY	Total Credits
1.	BASIC SCIENCE (BS)	03
2	PROFESSIONAL CORE (PC)	30
3	PROFESSIONAL LABORATORY(PL)	01
4	TRAINING AND PLACEMENT (TP)	03
5	TALENT ENABLING COURSES (TE)	05
6	ELECTIVES (EL)	12
7	PROJECT WORK (PJ)	16
	TOTAL	70

LIST OF ELECTIVES FOR M.E. INDUSTRIAL SAFETY ENGINEERING

SEMESTER I (Elective I)

SL. NO.	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
1.	20PISEL101	Plant Layout and Materials Handling	PE	3	3	0	0	3
2.	20PISEL102	Work Study and Ergonomics	PE	3	3	0	0	3
3.	20PISEL103	Dock Safety	PE	3	3	0	0	3
4.	20PISEL104	Human Factors in Engineering	PE	3	3	0	0	3
5.	20PISEL105	Maintainability Engineering	PE	3	3	0	0	3

SEMESTER II (Elective II)

SL. NO.	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
1.	20PISEL201	Transport Safety	PE	3	3	0	0	3
2.	20PISEL202	Fireworks Safety	PE	3	3	0	0	3
3.	20PISEL203	Safety in Construction	PE	3	3	0	0	3
4.	20PISEL204	Safety in Textile Industry	PE	3	3	0	0	3
5.	20PISEL205	Safety in Mines	PE	3	3	0	0	3

SEMESTER III (Elective III & IV)

SL. NO.	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
1.	20PISEL301	Reliability Engineering	PE	3	3	0	0	3
2.	20PISEL302	Quality control Engineering	PE	3	3	0	0	3
3.	20PISEL303	Disaster Management	PE	3	3	0	0	3
4.	20PISEL304	OHSAS 18000 and ISO 14000	PE	3	3	0	0	3
5.	20PISEL305	Research Methodology & IPR	PE	3	3	0	0	3
6.	20PISEL306	Data Analytics	PE	3	3	0	0	3
7.	20PISEL307	Nuclear Engineering and Safety	PE	3	3	0	0	3
8.	20PISEL308	Robotics in Industry 4.0	PE	3	3	0	0	3
9.	20PISEL309	Radiographic Testing and Radiation Safety	PE	3	3	0	0	3
10	20PISEL310	Corrosion Engineering	PE	3	3	0	0	3

BASIC SCIENCE (BS)

SL. NO.	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
1.	20PISBS101	Probability and Statistical Methods	FC	3	3	0	0	3
Total Credits								3

PROFESSIONAL CORE (PC)

SL. NO.	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
1.	20PISPC101	Principles of Safety Management	PC	3	3	0	0	3
2.	20PISPC102	Environmental Safety	PC	3	3	0	0	3
3.	20PISPC103	Occupational Health and Industrial Hygiene	PC	3	3	0	0	3
4.	20PISPC104	Industrial Safety, Health and Environment Acts	PC	3	3	0	0	3
5.	20PISPC201	Fire Engineering and Explosion Control	PC	3	3	0	0	3
6.	20PISPC202	Computer Aided Hazard Analysis	PC	3	4	0	0	3
7.	20PISPC203	Electrical Safety	PC	3	3	0	0	3
8.	20PISPC204	Safety in Chemical Industries	PC	3	3	0	0	3
9.	20PISPC205	Machine Learning & Artificial Intelligence for Industrial Safety	PC	3	3	0	0	3
10.	20PISPC301	Safety in Engineering Industry	PC	3	3	0	0	3
Total Credits								30

PROFESSIONAL LABORATORY (PL)

SL. NO.	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
1.	20PISPL201	Industrial Safety Laboratory	PL	2	0	0	2	1
Total Credits								01

TRAINING AND PLACEMENT COURSES (TP)

SL. NO.	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
1.	20PISTP101	Industrial safety and Hazard analysis case studies & Report writing	TP	2	0	0	2	1
2.	20PISTP102	Skill Development Training	TP	2	0	0	2	1
3.	20PISTP201	Internship (Industrial Safety Assessment / Audit)and report Submission	TP	2	0	0	2	1
TOTAL Credits								03

TALENT ENABLING COURSES (TE)

SL. NO.	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
1.	20PISTE101	Innovative Safety Engineering Design-Live –In - Project - I	TE	4	0	0	4	2
2.	20PISTE201	Innovative Safety Engineering Design-Live –In - Project - II	TE	4	0	0	4	2
3.	20PISTE301	Practices on Data Analytics in safety engineering & Art of Journal Publication	TE	2	0	0	2	1
Total Credits								05

PROFESSIONAL ELECTIVE (PE)

SL. NO.	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
1.	20PISEL1XX	Professional Elective - I	PE	3	3	0	0	3
2.	20PISEL2XX	Professional Elective - II	PE	3	3	0	0	3
3.	20PISEL3XX	Professional Elective - III	PE	3	3	0	0	3
4.	20PISEL3XX	Professional Elective - IV	PE	3	3	0	0	3
Total Credits								12

PROJECT WORK (PW)

SL. NO.	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
1	20PISPJ301	Project Work Phase I	PJ	12	0	0	12	6
2	20PISPJ401	Project Work Phase II	PJ	20	0	0	20	10
								16

PROGRAMME EDUCATIONAL OBJECTIVES (PEOs)

- I. Possess a mastery of Health safety and environment knowledge and safety management skills, to reach higher levels in their profession.
- II. Knowledgeable safety Engineer rendering professional expertise to the industrial and societal needs at national and global level subject to legal requirements.
- III. Well communicate the information on Health safety and environment facilitating collaboration with experts across various disciplines so as to create and execute safe methodology in complex engineering activities.

PROGRAMME OUTCOMES (POs)

- PO1. Apply knowledge of Mathematics, Science, Engineering fundamentals and an engineering Specialization for hazard identification, risk assessment, analysis the source of incidents and control of occupational Diseases & hazards.
- PO2. Design, Establish, Implement maintain and continually improve an occupation health and safety management system to improve safety.
- PO3. Conduct investigations on unwanted incidents using e.g. (Root cause analysis, what if analysis) and generate corrective and preventive action to prevent repetition and happening of such incidents.
- PO4. Design complex man, machine, and material handling systems using human factors engineering tools so as to achieve comfort, worker satisfaction, efficiency, error free and safe work practice workplace environment.
- PO5. Function effectively as an individual and as a member or leader in diverse teams and in multi-disciplinary settings so as to provide practical solutions to safety problems.
- PO6. Communicate effectively on occupational health and safety matters among the employees and with society at large.
- PO7. Demonstrate understanding of the societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to occupation health and safety practices.
- PO8. Understand and commit to comply with legal and contractual requirements, professional ethics and responsibilities and general norms of engineering practice.
- PO9. Understand the impact of Health safety and environment solutions on productivity, quality and humanity protection at large.
- PO10. Demonstrate the use of state of the art occupational health and safety practices in controlling risks of complex engineering activities and understand their limitations.

PEO / PO Mapping

Programme Educational Objectives	Programme Outcomes									
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
I	✓		✓							
II		✓		✓	✓		✓			✓
III						✓		✓	✓	

Semester Course wise PEO mapping

		Subject	P	PO	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	
			O	2									
YEAR 1	SEM 1	Probability and Statistical Methods	I		I								
		Principles of Safety Management		II		II	II						
		Environmental Safety						I, III		I, III		I, III	
		Occupational Health and Industrial Hygiene						II, III		II, III	II, III		
		Industrial Safety, Health and Environment Acts							II			II	
		Professional Elective - I											
		Technical Seminar – I & report writing								II			II
		Skill development training on Fire fighting for Industrial safety.								II			II
		Innovative Safety Engineering Design- Live – In - Project - I								II			II
	SEM 2	Fire Engineering and Explosion Control		II		II	II						
		Computer Aided Hazard Analysis	I		I								
		Electrical Safety		II		II	II						
		Safety in Chemical Industries							III		III	III	
		Machine Learning & Artificial Intelligence in Industrial Safety											
Professional Elective-II													
Industrial Safety Laboratory									II			II	

		Internship and report Submission							II			II
		Innovative Safety Engineering Design- Live – In - Project - II							II			II
YEAR2	SEM 3	Safety in Engineering Industry	I		I							
		Professional Elective-III	I		I							
		Professional Elective-IV	I		I							
	Project Work Phase I				II,III	II,III	II,III					
	Data Analytics in safety engineering & Art of Journal Publication				II,III	II,III	II,III					
	SEM 4	Project Work Phase II				II,III	II,III	II,III				

OBJECTIVES:

This course is designed to provide the solid foundation on topics in probability and various statistical methods which form the basis for many other areas in the mathematical sciences including statistics, modern optimization methods and risk modeling. It is framed to address the issues and the principles of estimation theory, testing of hypothesis, design of experiments and time series analysis.

UNIT I PROBABILITY AND RANDOM VARIABLES**12**

Probability – Axioms of probability – Conditional probability – Bayes’ theorem - Random variables – Probability function – Moments – Moment generating functions and their properties – Binomial, Poisson, Geometric, Uniform, Exponential, Gamma and Normal distributions – Function of a random variable.

UNIT II ESTIMATION THEORY**06**

Principle of least squares–Regression–Multiple and partial correlations–Estimation of parameters – Maximum likelihood estimates – Method of moments.

UNIT III TESTING OF HYPOTHESIS**09**

Sampling distributions – Small and large samples and problems – Tests based on Normal, t - distribution, Chi - square, Goodness of fit and F – distributions.

UNIT IV DESIGN OF EXPERIMENTS**09**

Analysis of variance – Completely randomized design – Randomized block design – Latin square design – 2^2 Factorial designs.

UNIT V TIMESERIES**09**

Characteristics and representation – Moving averages – Exponential smoothing – Auto regressive processes.

TOTAL : 45 PERIODS**REFERENCES:**

- Devore, J. L., “Probability and Statistics for Engineering and Sciences”, 8th Edition, Cengage Learning, 2014.
- Johnson, R.A., Miller, I and Freund J., “Miller and Freund’s Probability and Statistics for Engineers, Pearson Education, Asia, 8th Edition, 2015.
- Anderson, O.D, “Time Series Analysis : Theory and Practice”, North - Holland, Amsterdam, 1982.
- Gupta, S.C and Kapoor, V.K., “Fundamentals of Mathematical Statistics”, Sultan and Chand Company, New Delhi, 1999.
- Montgomery D.C and Johnson, L.A, “Forecasting and Time Series”, 6th Edition, McGraw Hill, 1990.

OUTCOMES :

After completing this course, students should demonstrate competency in the following topics:

- CO 1** Basic probability axioms and rules and the moments of discrete and continuous random variables.
- CO 2** Least squares, correlation, regression, consistency, efficiency and un-biased ness of estimators, method of maximum likelihood estimation and Central Limit Theorem.
- CO 3** Use statistical tests in testing hypotheses on data.
- CO 4** Differentiate between various time series models and application of these models appropriately to engineering problems.
- CO 5** The students should have the ability to use the appropriate and relevant, fundamental and applied mathematical and statistical knowledge, methodologies and modern computational tools.

OBJECTIVES:

- To achieve an understanding of principles of safety management.
- To enable the students to learn about various functions and activities of safety department.
- To enable students to conduct safety audit and write audit reports effectively in auditing situations.
- To have knowledge about sources of information for safety promotion and training.
- To familiarize students with evaluation of safety performance.

UNIT I CONCEPTS AND TECHNIQUES**9**

History of Safety movement –Evolution of modern safety concept- general concepts of management – planning for safety for optimization of productivity -productivity, quality and safety-line and staff functions for safety-budgeting for safety-safety policy.

Incident Recall Technique (IRT), disaster control, job safety analysis, safety survey, safety inspection, safety sampling, evaluation of performance of supervisors on safety.

UNIT II SAFETY AUDIT-INTRODUCTION**9**

Components of safety audit, types of audit, audit methodology, non conformity reporting (NCR), audit checklist and report – review of inspection, remarks by government agencies, consultants, experts – perusal of accident and safety records, formats – implementation of audit indication - liaison with departments to ensure co-ordination – check list – identification of unsafe acts of workers and unsafe conditions in the shop floor.

UNIT III ACCIDENT INVESTIGATION AND REPORTING**9**

Concept of an accident, reportable and non reportable accidents, reporting to statutory authorities – principles of accident prevention – accident investigation and analysis – records for accidents, departmental accident reports, documentation of accidents – unsafe act and condition – domino sequence – supervisory role – role of safety committee –cost of accident.

UNIT IV SAFETY PERFORMANCE MONITORING**9**

ANSI (Z16.1) Recommended practices for compiling and measuring work injury experience – permanent total disabilities, permanent partial disabilities, temporary total disabilities - Calculation of accident indices, frequency rate, severity rate, frequency severity incidence, incident rate, accident rate, safety “t” score, safety activity rate – problems.

UNIT V SAFETY EDUCATION AND TRAINING**9**

Importance of training-identification of training needs-training methods – programmes, seminars, conferences, competitions – method of promoting safe practice - motivation – communication - role of government agencies and private consulting agencies in safety training – creating awareness, awards, celebrations, safety posters, safety displays, safety pledge, safety incentive scheme, safety campaign – Domestic Safety and Training.

TOTAL: 45 PERIODS**REFERENCES:**

1. Dan Petersen, “Techniques of Safety Management”, McGraw-Hill Company, Tokyo, 1981.
2. Blake R.B., “Industrial Safety” Prentice Hall, Inc., New Jersey, 1973.
3. Heinrich H.W. “Industrial Accident Prevention” McGraw-Hill Company, New York, 1980
4. “Accident Prevention Manual for Industrial Operations”, N.S.C.Chicago, 1982.
5. John Ridley, “Safety at Work”, Butterworth and Co., London, 1983
6. Lees, F.P., “Loss Prevention in Process Industries” Butterworth publications, London, 2nd edition, 1990.
7. Relevant Indian Standards and Specifications, BIS, New Delhi.

8. "Safety and Good House Keeping", N.P.C., New Delhi,1985.

OUTCOMES:

The students will be able to

- CO 1** To understand the functions and activities of safety engineering department.
- CO 2** To carry out a safety audit and prepare a report for the audit.
- CO 3** To prepare an accident investigation report.
- CO 4** To evaluate the safety performance of an organization from accident records.
- CO 5** To identify various agencies, support institutions and government organizations involved in safety.

20PISPC102

ENVIRONMENTAL SAFETY

L T P C
3 0 0 3

OBJECTIVES:

- To provide in depth knowledge in Principles of Environmental safety and its applications in various fields.
- To give understanding of air and water pollution and their control.
- To expose the students to the basis in hazardous waste management.
- To design emission measurement devices.

UNIT I AIR POLLUTION

09

Classification and properties of air pollutants – Pollution sources – Effects of air pollutants on human beings, Animals, Plants and Materials - automobile pollution-hazards of air pollution-concept of clean coal combustion technology - ultra violet radiation, infrared radiation, radiation from sun-hazards due to depletion of ozone - deforestation-ozone holes-automobile exhausts-chemical factory stack emissions-CFC.

UNIT II WATER POLLUTION

09

Classification of water pollutants-health hazards-sampling and analysis of water-water treatment - different industrial effluents and their treatment and disposal -advanced wastewater treatment - effluent quality standards and laws- chemical industries, tannery, textile effluents-common treatment.

UNIT III HAZARDOUS WASTE MANAGEMENT

09

Hazardous waste management in India-waste identification, characterization and classification- technological options for collection, treatment and disposal of hazardous waste-selection charts for the treatment of different hazardous wastes-methods of collection and disposal of solid wastes-health hazards-toxic and radioactive wastes-incineration and vitrification - hazards due to bio-process- dilution-standards and restrictions – recycling and reuse.

UNIT IV ENVIRONMENTAL MEASUREMENT AND CONTROL

12

Sampling and analysis – dust monitor – gas analyzer, particle size analyzer – lux meter-pH meter – gas chromatograph – atomic absorption spectrometer.
Gravitational settling chambers-cyclone separators-scrubbers-electrostatic precipitator - bag filter – maintenance - control of gaseous emission by adsorption, absorption and combustion methods- Pollution Control Board-laws.

UNIT V POLLUTION CONTROL IN PROCESS INDUSTRIES

16

Pollution control in process industries like cement, paper, petroleum-petroleum products-textile- tanneries-thermal power plants – dyeing and pigment industries - eco-friendly energy.

TOTAL: 45 PERIODS

REFERENCES

1. G. T Miller, Environmental Science: Working with the Earth, 11th Edition, Wadsworth Publishing Co., Belmont, CA,2006

2. Rao, CS, "Environmental pollution engineering:", Wiley Eastern Limited, New Delhi,1992.
3. E. C Wolfe, Race to Save to Save Planet, Wadsworth Publishing Co., Belmont, CA2006.
4. M.J Hammer,, and M.J Hammer,, Jr., Water and Wastewater Technology, Pearson Prentice Hall,2006
5. S. P. Mahajan, "Pollution control in process industries", Tata McGraw Hill Publishing Company, New Delhi, 1993.
6. Varma and Braner, "Air pollution equipment", Springer Publishers, SecondEdition.

OUTCOMES:

The students will be able to

- CO 1** Illustrate and familiarize the basic concepts scope of environmental safety.
- CO 2** Understand the standards of professional conduct that are published by professional safety organizations and/or certification bodies.
- CO 3** Explain the ways in which environmental health problems have arisen due to air and water pollution.
- CO 4** Illustrate the role of hazardous waste management and use of critical thinking to identify and assess environmental health risks.
- CO 5** Discuss concepts of measurement of emissions and design emission measurement devices.

20PISPC103 OCCUPATIONAL HEALTH AND INDUSTRIAL HYGIENE

L T P C
3 0 0 3

OBJECTIVES:

- To understand the basic knowledge on anatomy of human organs and its basic functions.
- To enable the students to learn about various functions and activities of occupational health services.
- To enable students to compare the hazards with the permissible levels.
- To have knowledge about types of hazards arising out of physical, chemical and biological agents.

UNIT I PHYSICAL HAZARDS

9

Noise, compensation aspects, noise exposure regulation, properties of sound, occupational damage, risk factors, sound measuring instruments, octave band analyzer, noise networks, noise surveys, noise control program, industrial audiometry, hearing conservation programs- vibration, types, effects, instruments, surveying procedure, permissible exposure limit.

Ionizing radiation, types, effects, monitoring instruments, control programs, OSHA standard- non- ionizing radiations, effects, types, radar hazards, microwaves and radio-waves, lasers, TLV- cold environments, hypothermia, wind chill index, control measures- hot environments, thermal comfort, heat stress indices, acclimatization, estimation and control

UNIT II CHEMICAL HAZARDS

9

Recognition of chemical hazards-dust, fumes, mist, vapour, fog, gases, types, concentration, Exposure vs. dose, TLV - Methods of Evaluation, process or operation description, Field Survey, Sampling methodology, Industrial Hygiene calculations, Comparison with OSHA Standard.

Air Sampling instruments, Types, Measurement Procedures, Instruments Procedures, Gas and Vapour monitors, dust sample collection devices, personal sampling

Methods of Control - Engineering Control, Design maintenance considerations, design specifications - General Control Methods - training and education

UNIT III BIOLOGICAL AND ERGONOMICAL HAZARDS

9

Classification of Bio-hazardous agents – examples, bacterial agents, rickettsial and chlamydial agents, viral agents, fungal, parasitic agents, infectious diseases - Biohazard control program, employee health program-laboratory safety program-animal care and handling-biological safety cabinets - building design.

Work Related Musculoskeletal Disorders –carpal tunnel syndrome CTS- Tendon pain-disorders of the neck-back injuries.

UNIT IV OCCUPATIONAL HEALTH AND TOXICOLOGY

9

Concept and spectrum of health - functional units and activities of occupational health services, pre-employment and post-employment medical examinations - occupational related diseases, levels of prevention of diseases, notifiable occupational diseases such as silicosis, asbestosis, pneumoconiosis, siderosis, anthracosis, aluminosis and anthrax, lead-nickel, chromium and manganese toxicity, gas poisoning (such as CO, ammonia, coal and dust etc) their effects and prevention – cardio pulmonary resuscitation, audiometric tests, eye tests, vital function tests.

Industrial toxicology, local, systemic and chronic effects, temporary and cumulative effects, carcinogens entry into human systems

UNIT V OCCUPATIONAL PHYSIOLOGY

9

Man as a system component – allocation of functions – efficiency – occupational work capacity – aerobic and anaerobic work – evaluation of physiological requirements of jobs – parameters of measurements – categorization of job heaviness – work organization – stress – strain – fatigue – rest pauses – shift work – personal hygiene.

TOTAL: 45 PERIODS

REFERENCES:

1. Encyclopedia of “Occupational Health and Safety”, Vol.I and II, published by International Labour Office, Geneva,1985
2. Hand book of “Occupational Safety and Health”, National Safety Council, Chicago,1982.
3. Benjamin O.Alli, Fundamental Principles of Occupational Health and Safety ILO2008.
4. DanutaKoradecka, Handbook of Occupational Health and Safety, CRC,2010.
5. Hand book of “Occupational Safety and Health”, National Safety Council, Chicago,1982.
6. Lawrence Slotte , Handbook of occupational safety and health, Wiley,2001.
7. Louis J. Di Berardinis, Handbook of occupational safety and health Wiley,1999

OUTCOMES:

The students will be able

- CO 1** To understand the various physiological functions of our body and the test methods for periodical monitoring of health.
- CO 2** To understand the functions and activities of Occupational health services.
- CO 3** To identify various types of hazards arising out of physical, chemical and biological agents in a process.
- CO 4** To identify notifiable occupational diseases arising out of Occupation and suggest methods for the prevention of such diseases.
- CO 5** To understand the categorization of job heaviness, stress and strain in working organization.

OBJECTIVES:

- To provide exposure to the students about safety and health provisions related to hazardous processes as laid out in Factories act 1948.
- To familiarize students with powers of inspectorate of factories.
- To help students to learn about Environment act 1986 and rules framed under the act.
- To provide wide exposure to the students about various legislations applicable to an industrial unit.

UNIT I FACTORIES ACT- 1948**09**

Statutory authorities – inspecting staff, health, safety, provisions relating to hazardous processes, welfare, working hours, employment of young persons – special provisions – penalties and procedures-Tamilnadu Factories Rules 1950 under Safety and health chapters of Factories Act 1948

UNIT II ENVIRONMENT ACT – 1986**09**

General powers of the central government, prevention, control and abatement of environmental pollution-Biomedical waste (Management and handling Rules, 1989-The noise pollution (Regulation and control) Rules, 2000-The Batteries (Management and Handling Rules) 2001- No Objection certificate from statutory authorities like pollution control board.

Air Act 1981 and Water Act 1974: Central and state boards for the prevention and control of air pollution-powers and functions of boards – prevention and control of air pollution and water pollution – fund – accounts and audit, penalties and procedures.

UNIT III MANUFACTURE, STORAGE AND IMPORT OF HAZARDOUS CHEMICAL RULES 1989**09**

Definitions – duties of authorities – responsibilities of occupier – notification of major accidents – information to be furnished – preparation of offsite and onsite plans – list of hazardous and toxic chemicals – safety reports – safety data sheets.

UNIT IV OTHER ACTS AND RULES**09**

Indian Boiler Act 1923, static and mobile pressure vessel rules (SMPV), motor vehicle rules, mines act 1952, workman compensation act, rules – electricity act and rules – hazardous wastes (management and handling) rules, 1989, with amendments in 2000- the building and other construction workers act 1996., Petroleum rules, Gas cylinder rules-Explosives Act 1983-Pesticides Act

UNIT V INTERNATIONAL ACTS AND STANDARDS**09**

Occupational Safety and Health act of USA (The Williams - Steiger Act of 1970) – Health and safety work act (HASAWA 1974, UK) – OSHAS 18000 – ISO 14000 – American National Standards Institute (ANSI).

TOTAL: 45 PERIODS**REFERENCES**

1. Water (Prevention and control of pollution) act 1974, Commercial Law publishers (India) Pvt.Ltd., NewDelhi.
2. Air (Prevention and control of pollution) act 1981, Commercial Law Publishers (India) Pvt.Ltd., NewDelhi.
3. The Indian boilers act 1923, Commercial Law Publishers (India) Pvt.Ltd.,Allahabad.
4. The Mines Act 1952, Commercial Law Publishers (India) Pvt.Ltd.,Allahabad.
5. The manufacture, storage and import of hazardous chemical rules 1989, Madras Book Agency, Chennai.
6. National seminar on hazardous waste management organized by National Safety council, Ministry of environment and forests, Government of India, United States – Asia environmental partnership, Tamilnadu pollution control board and Indian chemical manufacturers association, April 2001.

7. The Factories Act 1948, Madras Book Agency, Chennai,2000
8. The Environment Act (Protection) 1986, Commercial Law Publishers (India) Pvt.Ltd., NewDelhi.

OUTCOMES:

The students will be able

- CO 1** To list out important legislations related to health, Safety and Environment.
- CO 2** To list out requirements mentioned in factories act for the prevention of accidents.
- CO 3** To understand the health and welfare provisions given in factories act.
- CO 4** To understand the statutory requirements for an Industry on registration, license and its renewal.
- CO 5** To prepare onsite and offsite emergency plan

20PISTP101

**INDUSTIAL SAFETY AND HAZARD ANALYSIS CASE
STUDIES & REPORT WRITING**

**L T P
C
0 0 2
1**

OBJECTIVES

- To develop journal paper reading and understandingskill.
- To improve communication and presentation skill ofstudents.
- To develop technical report writing Skills.

GUIDELINES

- The students are expected to make a presentation on the state of research on a particular topic based on current journal publications in thattopic.
- A faculty guide is to be allotted and he / she will guide and monitor the progress of the student and maintain attendancealso.
- Students are encouraged to use various teaching aids such as overhead projectors, power point presentation and demonstrative models.
- Students are practiced to do report writing on technical/ Case studies.

TOTAL: 30 PERIODS

OUTCOMES

The students will be able to

1. Select the method, analysis and optimize the given problem for the given field applications

20PISTP102

SKILL DEVELOPMENT TRAINING

**L T P C
0 0 2 1**

OBJECTIVES

- To study the different types of fire extinguisher types.
- To get hands on training on FIRE PREVENTIONAND PROTECTION.

GUIDELINES

- The students are expected to practice outdoor & Indoor training on FIRE PREVENTION AND

PROTECTION.

- To capable of writing a brief description of safety procedures and safety procedures of FIRE prevention.

OUTCOMES

The students will be able to

1. Select the suitable type of Fire extinguisher for fire and practical exposure on fire services.

20PISPC201 FIRE ENGINEERING AND EXPLOSION CONTROL

L T P C
3 0 0 3

OBJECTIVES:

- To provide an in depth knowledge about the science of fire.
- To understand the causes and effects of fire.
- To know the various fire prevention systems and protective equipments.
- To understand the science of explosion and its prevention techniques.
- To understand the various fire prevention techniques to be followed in a building.

UNIT I PHYSICS AND CHEMISTRY OF FIRE

9

Fire properties of solid, liquid and gases - fire spread - toxicity of products of combustion - theory of combustion and explosion - vapour clouds - flash fire - jet fires - pool fires - unconfined vapour cloud explosion, shock waves - auto-ignition - boiling liquid expanding vapour explosion - case studies - Flixborough, Mexico disaster, Pasadena Texas, Piper Alpha, Peterborough and Bombay Victoria dock ship explosions.

UNIT II FIRE PREVENTION AND PROTECTION

9

Sources of ignition - fire triangle - principles of fire extinguishing - active and passive fire protection systems - various classes of fires - A, B, C, D, E - types of fire extinguishers - fire stoppers - hydrant pipes - hoses - monitors - fire watchers - lay out of stand pipes - fire station - fire alarms and sirens - maintenance of fire trucks - foam generators - escape from fire rescue operations - fire drills - notice-first aid for burns.

UNIT III INDUSTRIAL FIRE PROTECTION SYSTEMS

9

Sprinkler-hydrants-stand pipes - special fire suppression systems like deluge and emulsifier, selection criteria of the above installations, reliability, maintenance, evaluation and standards - alarm and detection systems. Other suppression systems - CO₂ system, foam system, dry chemical powder (DCP) system, halon system - need for halon replacement - smoke venting. Portable extinguishers - flammable liquids - tank farms - indices of inflammability-fire fighting systems.

UNIT IV BUILDING FIRE SAFETY

9

Objectives of fire safe building design, Fire load, fire resistant material and fire testing - structural fire protection - structural integrity - concept of egress design - exists - width calculations - fire certificates - fire safety requirements for high rise buildings - snookers.

UNIT V EXPLOSION PROTECTING SYSTEMS

9

Principles of explosion-detonation and blast waves-explosion parameters - Explosion Protection, Containment, Flame Arrestors, isolation, suppression, venting, explosion relief of large enclosure- explosion venting-inert gases, plant for generation of inert gas-rupture disc in process vessels and lines explosion, suppression system based on carbon dioxide (CO₂) and halons-hazards in LPG, ammonia (NH₃), sulphur dioxide (SO₃), chlorine (CL₂) etc.

TOTAL: 45 PERIODS

REFERENCES

1. "Accident Prevention manual for industrial operations" N.S.C., Chicago, 1982.

2. "Davis Daniel et al, "Hand Book of fire technology"
3. Derek, James, "Fire Prevention Hand Book", Butter Worths and Company, London,1986.
4. Fire fighters hazardous materials reference book "Fire Prevention in Factories", anNostrand Rein Hold, New York,1991.
5. Gupta, R.S., "Hand Book of Fire Technology" Orient Longman, Bombay1977.
6. Relevant Indian Acts and rules, Government ofIndia.
7. "Fire Prevention and firefighting", Loss prevention Association,India
8. DinkoTuhtar, "Fire and explosionprotection"

OUTCOMES:

The students will be able to

- CO 1** To make familiar about basic concepts of fire and explosion science.
- CO 2** To know the different source of ignition and their prevention techniques.
- CO 3** To understand the operation of various types of fire-fighting equipments.
- CO 4** To understand the causes and prevention of explosion.
- CO 5** To equip the students to effectively employ explosion protection techniques and their significances to suit the industrial requirement.

20PISPC202

COMPUTER AIDED HAZARD ANALYSIS

L T P C
3 0 0 3

OBJECTIVES:

- To provide knowledge on risk, hazard and their assessment techniques inIndustry
- To understand the principles of operation of various equipment for safetyapplication
- To know the consequences of fire, explosion and toxicrelease
- To know the various software available for riskquantification
- To conduct a risk assessment technique inIndustries.

UNIT I HAZARD, RISK ISSUES AND HAZARD ASSESSMENT

09

Introduction, hazard, hazard monitoring-risk issue, group or societal risk, individual risk, voluntary and involuntary risk, social benefits Vs technological risk, approaches for establishing risk acceptance levels, Risk estimation.

Hazard assessment, procedure, methodology; safety audit, checklist analysis, what-if analysis, safety review, preliminary hazard analysis(PHA), human error analysis, hazard operability studies(HAZOP),safety warning systems.

UNITII COMPUTER AIDED INSTRUMENTS

09

Applications of Advanced Equipments and Instruments, Thermo Calorimetry, Differential Scanning Calorimeter(DSC), Thermo Gravimetric Analyser(TGA), Accelerated Rate Calorimeter(ARC), Reactive Calorimeter(RC), Reaction System Screening Tool(RSST) - Principles of operations, Controlling parameters, Applications, advantages.

Explosive Testing, Deflagration Test, Detonation Test, Ignition Test, Minimum ignition energy Test, Sensitiveness Test, Impact Sensitiveness Test(BAM) and Friction Sensitiveness Test (BAM), Shock

Sensitiveness Test, Card Gap Test.

UNIT III RISK ANALYSIS QUANTIFICATION AND SOFTWARES

09

Fault Tree Analysis and Event Tree Analysis, Logic symbols, methodology, minimal cut set ranking - fire explosion and toxicity index(FETI), various indices - Hazard analysis(HAZAN)- Failure Mode and Effect Analysis(FMEA)- Basic concepts of Reliability- Software on Risk analysis, CISCON, FETI, HAMGARS modules on Heat radiation, Pool fire, Jet, Explosion. Reliability softwares on FMEA for mechanical and electrical systems.

UNIT IV CONSEQUENCES ANALYSIS

09

Logics of consequences analysis- Estimation- Hazard identification based on the properties of chemicals- Chemical inventory analysis- identification of hazardous processes- Estimation of source term, Gas or vapour release, liquid release, two phase release- Heat radiation effects, BLEVE, Pool fires and Jet fire- Gas/vapour dispersion- Explosion, UVCE and Flash fire, Explosion effects and confined explosion- Toxic effects- Plotting the damage distances on plot plant/layout.

UNIT V CREDIBILITY OF RISK ASSESSMENT TECHNIQUES

09

Past accident analysis as information sources for Hazard analysis and consequences analysis of chemical accident, Mexico disaster, Flixborough, Bhopal, Seveso, Pasadena, Feyzin disaster(1966), Port Hudson disaster-convey report, hazard assessment of non-nuclear installation- Rijnmond report, risk analysis of size potentially Hazardous Industrial objects- Rasmussen masses report, Reactor safety study of Nuclear powerplant

TOTAL: 45 PERIODS

REFERENCES

1. Brown, D.B. System analysis and Design for safety, Prentice Hall,1976.
2. Hazop and Hazom, by Trevor A Klett, Institute of ChemicalEngineering.
3. Loss Prevention in Process Industries-Frank P. Less Butterworth-Hein UK 1990 (Vol.I, II andIII)
4. Methodologies for Risk and Safety Assessment in Chemical Process Industries, Common wealth Science Council,UK
5. Quantitative Risk assessment in Chemical Industries, Institute of Chemical Industries, Centre for Chemical process safety.
6. Course Material Intensive Training Programme on Consequence Analysis, by Process Safety Centre, Indian Institute of Chemical Technology, Tarnaka and CLRI,Chennai.
7. Guidelines for Hazard Evaluation Procedures, Centre for Chemical Process safety, AICHE1992
8. ILO- Major Hazard control- A practical Manual, ILO, Geneva,1988.

OUTCOMES:

The students will be able to

- CO 1** This course would make familiarizing of basic concepts in risk and hazard
- CO 2** Course would be helpful to understand the various instruments to bring safety in Industries
- CO 3** Students would be trained to find solution for risk assessment studies through the use of software
- CO 4** Students would be able to make use of a risk assessment technique to quantify the risk
- CO 5** Course would equip the students effectively to employ hazard analysis techniques in Industry and helpful to prevent the accidents in Industry

OBJECTIVES:

- To provide knowledge on basics of electrical fire and statutory requirements for electrical safety
- To understand the causes of accidents due to electrical hazards
- To know the various protection systems in Industries from electrical hazards
- To know the importance of earthing
- To distinguish the various hazardous zones and applicable fire proof electrical devices

UNIT I CONCEPTS AND STATUTORY REQUIREMENTS**9**

Introduction – electrostatics, electro magnetism, stored energy, energy radiation and electromagnetic interference – Working principles of electrical equipment-Indian electricity act and rules-statutory requirements from electrical inspectorate-international standards on electrical safety – first aid-cardio pulmonary resuscitation(CPR).

UNIT II ELECTRICAL HAZARDS**9**

Primary and secondary hazards-shocks, burns, scalds, falls-human safety in the use of electricity. Energy leakage-clearances and insulation-classes of insulation-voltage classifications-excess energy- current surges-Safety in handling of war equipments-over current and short circuit current-heating effects of current-electromagnetic forces-corona effect-static electricity –definition, sources, hazardous conditions, control, electrical causes of fire and explosion-ionization, spark and arc- ignition energy-national electrical safety code ANSI.

Lightning, hazards, lightning arrestor, installation – earthing, specifications, earth resistance, earth pit maintenance.

UNIT III PROTECTION SYSTEMS**9**

Fuse, circuit breakers and overload relays – protection against over voltage and under voltage – safe limits of amperage – voltage –safe distance from lines-capacity and protection of conductor-joints-and connections, overload and short circuit protection-no load protection-earth fault protection.

FRLS insulation-insulation and continuity test-system grounding-equipment grounding-earth leakage circuit breaker (ELCB)-cable wires-maintenance of ground-ground fault circuit interrupter-use of low voltage-electrical guards-Personal protective equipment – safety in handling hand held electrical appliances tools and medical equipments.

UNIT IV SELECTION, INSTALLATION, OPERATION AND MAINTENANCE**9**

Role of environment in selection-safety aspects in application - protection and interlock-self diagnostic features and fail safe concepts-lock out and work permit system-discharge rod and earthing devices- safety in the use of portable tools-cabling and cable joints-preventive maintenance.

UNIT V HAZARDOUS ZONES**9**

Classification of hazardous zones-intrinsically safe and explosion proof electrical apparatus-increase safe equipment-their selection for different zones-temperature classification-grouping of gases-use of barriers and isolators-equipment certifying agencies.

TOTAL: 45 PERIODS**REFERENCES**

1. "Accident prevention manual for industrial operations", N.S.C., Chicago, 1982.
2. Power Engineers – Handbook of TNEB, Chennai, 1989.
3. Martin Glov Electrostatic Hazards in powder handling, Research Studies Pvt. Ltd., England, 1988.
4. Indian Electricity Act and Rules, Government of India.
5. Fordham Cooper, W., "Electrical Safety Engineering" Butterworth and Company, London, 1986.

OUTCOMES:

The students will be able to

- CO 1** This course would make familiar of basic concepts in electrical circuit and hazards involved in it.
- CO 2** Course would be helpful to understand the electrical hazards in Industries.
- CO 3** Course would be helpful to understand the protection systems in Industries.
- CO 4** Students would be able to understand the operation of various protection systems from electrical hazards
- CO 5** Recognize different hazardous zones in Industries

20PISPC204

SAFETY IN CHEMICAL INDUSTRIES

**L T PC
3 0 03**

OBJECTIVES:

- To provide knowledge on design features for a process industry and safety in the operation of various equipment in industry.
- To understand the various hazards and prevention in commissioning stage of industry.
- To recognise and identify the safe operation of equipment in process industry.
- To plan and trained for emergency planning in a process industry.
- To get fundamental knowledge on safe storage of chemicals.

UNIT I SAFETY IN PROCESS DESIGN AND PRESSURE SYSTEM DESIGN 9

Design process, conceptual design and detail design, assessment, inherently safer design- chemical reactor , types, batch reactors, reaction hazard evaluation, assessment, reactor safety, operating conditions, unit operations and equipments, utilities.

Pressure system, pressure vessel design, standards and codes- pipe works and valves- heat exchangers- process machinery- over pressure protection, pressure relief devices and design, fire relief, vacuum and thermal relief, special situations, disposal- flare and vent systems- failures in pressure system.

UNIT II PLANT COMMISSIONING AND INSPECTION 9

Commissioning phases and organization, pre-commissioning documents, process commissioning, commissioning problems, post commissioning documentation

Plant inspection, pressure vessel, pressure piping system, non destructive testing, pressure testing, leak testing and monitoring- plant monitoring, performance monitoring, condition, vibration, corrosion, acoustic emission- pipe line inspection.

UNIT III PLANT OPERATIONS 9

Operating discipline, operating procedure and inspection, format, emergency procedures- hand over and permit system- start up and shut down operation, refinery units- operation of fired heaters, driers, storage- operating activities and hazards- trip systems- exposure of personnel

UNIT IV PLANT MAINTENANCE, MODIFICATION AND EMERGENCY PLANNING 9

Management of maintenance, hazards- preparation for maintenance, isolation, purging, cleaning, confined spaces, permit system- maintenance equipment- hot works- tank cleaning, repair and demolition- online repairs- maintenance of protective devices- modification of plant, problems- controls of modifications.

Emergency planning, disaster planning, onsite emergency- offsite emergency, APELL

UNITV STORAGES

9

General consideration, petroleum product storages, storage tanks and vessel- storages layout- segregation, separating distance, secondary containment- venting and relief, atmospheric vent, pressure, vacuum valves, flame arrestors, fire relief- fire prevention and protection- LPG storages, pressure storages, layout, instrumentation, vapourizer, refrigerated storages- LNG storages, hydrogen storages, toxic storages, chlorine storages, ammonia storages, other chemical storages- underground storages- loading and unloading facilities- drum and cylinder storage- ware house, storage hazard assessment of LPG and LNG

TOTAL : 45 PERIODS

REFERENCES

1. "Accident Prevention Manual for Industrial Operations" NSC, Chicago,1982.
2. "Quantitative Risk Assessment in Chemical Process Industries" American Institute of Chemical Industries, Centre for Chemical Process safety.
3. Carbide of Calcium Rules, Government of India.
4. Fawcett, H.h. and Wood, "Safety and Accident Prevention in Chemical Operations" Wiley inters, Second Edition.
5. GREEN, A.E., "High Risk Safety Technology", John Wiley and Sons,.1984.
6. Lees, F.P. "Loss Prevention in Process Industries" Butterworths and Company,1996
7. Petroleum Act and Rules, Government of India.
8. "Quantitative Risk Assessment in Chemical Process Industries" American Institute of Chemical Industries, Centre for Chemical Process safety.
9. Fawcett, H.h. and Wood, "Safety and Accident Prevention in Chemical Operations" Wiley inters, Second Edition.

OUTCOMES:

- CO 1** This course would make familiar of safe design of equipment which are the essential to chemical industry and leads to design of entire process industries.
- CO 2** Course would be helpful to understand the design of pressure systems.
- CO 3** Students would understand the problems and find innovative solutions while industries facing Problems in commissioning and maintenance stages.
- CO 4** Students can prepare the emergency planning for chemical industry problems
- CO 5** Students would be able to create safe storage systems.

20PISPC205	MACHINE LEARNING &ARTIFICIAL INTELLIGENCE FOR	L	T	P	C
	INDUSTRIAL SAFETY	3	0	0	3

OBJECTIVES:

- To understand the need for machine learning for various problem solving
- To understand the latest trends in machine learning
- To know the fundamental concepts and applications of Artificial intelligence.
- To familiarize with AI languages like PROLOG and LISP.
- To understand the various features of expert system
- To have knowledge about Neural Network and corresponding selection of parameters.

UNIT I INTRODUCTION TO MACHINE LEARNING

9

Learning Problems – Perspectives and Issues – Concept Learning – Version Spaces and Candidate Eliminations – Inductive bias – Decision Tree learning – Representation – Algorithm – Heuristic Space Search.

UNIT II NEURAL NETWORKS, GENETIC ALGORITHMS & ADVANCED LEARNING 9

Neural Network Representation – Problems – Perceptrons – Multilayer Networks and Back Propagation Algorithms – Advanced Topics – Genetic Algorithms – Hypothesis Space Search – Genetic Programming – Models of Evaluation and Learning. Explanation Base Learning – FOCL Algorithm – Reinforcement Learning – Task – Q-Learning – Temporal Difference Learning

UNIT III INTRODUCTION TO AI & COGNITIVE PSYCHOLOGY 11

Artificial intelligence: Historical background, applications of AI, objections and myths, AI languages: Introduction to PROLOG and LISP.

The mind – informative and cybernetics, components for thought, modes of perception – visual, auditory and other systems: memory mechanisms, problem solving – planning, search, the GPS systems; types of learning – rote, parameter, method and concept: Game playing, reasoning, Artificial Vision – picture processing – identifying real objects; Vision programs, factory vision systems.

UNIT IV KNOWLEDGE ENGINEERING 9

Introduction – role of knowledge engineer, knowledge representation – psychology, production rules, logic and programming, Common sense and fuzzy logic, semantic networks, learning systems.

UNIT V INTRODUCTION TO NEURAL NETWORKS 7

Neural Network Architecture – Learning methods – Architecture of a Back Propagation Network – Selection of parameters – Simple variations of BPN.

TOTAL: 45 PERIODS

REFERENCES

1. Stephen Marsland, —Machine Learning: An Algorithmic Perspective, CRC Press, 2009.
2. Dan W. Patterson, “Introduction to Artificial Intelligence and Expert Systems”, Prentice Hall of India, 1992.
3. Elaine R., and Kevin, “Artificial Intelligence”, 2nd Edition, Tata McGraw Hill, 1994.
4. Nilsson, N.J., “Principles of AI”, Narosa Publishing House, 1990.
5. Rajasekaran S and Vijayalakshmi Pai, G.A, “Neural Networks, Fuzzy Logic and Genetic Algorithms – Synthesis and Applications”, PHI, 2003.
6. Schalkoff, R.J., “Artificial Intelligence” – An Engineering Approach”, McGraw Hill International Edition, Singapore, 1992.
7. Winston, P.H., “Artificial Intelligence”, Addison Wesley, 1990.

OUTCOMES:

- CO 1** To apply various aspects of intelligence to diverse industrial situations
- CO 2** To apply neural network concepts in safety engineering discipline
- CO 3** Differentiate between supervised, unsupervised, semi-supervised machine learning approaches
- CO 4** Analyse and suggest appropriate machine learning approaches for various types of problems
- CO 5** To apply various features of expert systems.

OBJECTIVES:

- To provide opportunity to operate the equipment to acquire practical knowledge.
- To know the various PPEs and software.
- To carry out experiments to find out the environmental parameters.
- To assess the impact of sensitivity of chemicals on explosivity.
- To run the software to assess the consequence effects of major accidents.

NOISE LEVEL MEASUREMENT AND ANALYSIS

Measurement of sound pressure level in dB for Impact, continuous and intermittent sources at various networks, peak and average values.

FRICTION TEST

Explosive materials like barium nitrate, gun powder, white powder, amorces composition etc.

IMPACT TEST

Explosive materials like gun powder, white powder, amerce composition etc.

Burst strength test of packaging materials like paper bags, corrugated cartoons, wood etc. Auto ignition temperature test.

EXHAUST GAS MEASUREMENT AND ANALYSIS

Measurement of Sox, Nox, Cox, hydrocarbons.

ENVIRONMENTAL PARAMETER MEASUREMENT

Dry Bulb Temperature, Wet Bulb Temperature, Determination of relative humidity, wind flow and effective corrective effective.

Particle size Measurement

Air sampling analysis

TRAINING IN USAGE AND SKILL DEVELOPMENT**Personal protective equipment:**

Respiratory and non-respiratory-demonstration-self contained breathing apparatus. Safety helmet, belt, hand gloves, goggles, safety shoe, gum boots, ankle shoes, face shield, nose mask, ear plug, ear muff, anti static and conducting plastics/rubber materials, apron and legguard.

Fire extinguishers and its operations

Water Co₂

Foam

Carbon dioxide (Co₂)

Dry chemical powder and

Currently amendment fire safety systems

Static charge testing on plastic, rubber, ferrous and non-ferrous materials.

Illumination testing - by lux meter and photo meter.

Electrical safety

Insulation resistance for motors and cables

Estimation of earth resistance

Earth continuity test ,Sensitivity test for MCB, ELCB, RCCB, MCC

Software Usage

Dispersion modeling of various highly dangerous chemicals using ALOHA software

First-Aid

Road safety signals and symbols

Equipments Required

1. Noiselevelmeter : 1No
2. Frictiontester : 1No
3. Impacttester : 1No
4. Exhaustgasanalyzer: 1 No
5. High volumesampler: 1 No
6. PPEset : 1 No
7. Fire extinguisherset : 1 No
8. Staticchargetester : 1 No
9. Firstaidkit : 1No
10. Lockout/Tagout : 1No
11. Software: ALOHA,CAMEO

TOTAL: 60 PERIODS

OUTCOMES:

- This course would make students to know and run the various equipments to bring out the safety environment in the industry.
- Course would be helpful for the students to measure the particulate matter and assess the impact of air pollution.
- Students would be trained to conduct experiments to find out various environmental parameters. Students would be able to use personal protective equipment independently.
- Students can recognise the various problems with the use of software and hence to predict the real situations on major accidents.

20PISTP201	INTERNSHIP(INDUSTRIAL SAFETY ASSESSMENT /AUDIT REPORT SUBMISSION	L	T	P	C
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OBJECTIVE:

- The course emphasizes hazardous unit processes and safety measures practiced and health issues of the process industries to the safety student.
- This syllabus paves way to know-how the statutory requirements are put into practice in the process and engineering industries so as to make the pupil competent enough in pinpointing the risk.
- The course also develops auditing and documenting skills among student.

OUTCOME:

At the end of the course the student will be able to

- Understand the industrial process, safety management systems, policies, education and training about the concern industry.

- Investigate accident and find the root cause analysis.
- Interpret personal protective equipment, communication, employee behaviour emergency preparedness and planning, problems faced on implementing safety in industry by safety engineers etc
- Document the report of the industrial visit undergone.
- Present the report of the documentation.

Guide Line:

- Industrial Visit is compulsory for every student.
- At least one faculty must accompany the students during industrial visit.
- Before the day of industrial visit, the student should furnish the undertaking form and he/she must have a sound knowledge of the process whatever is going on in the visiting industry.
- The student has to submit the walk through survey / plant safety inspection report pertaining to the industrial Visit within 3 working days to the faculty Incharge.
- The student has to collect accident data, investigate on it and perform a root cause analysis .
- The student must undergo first aid and firefighting training in this phase.
- The student must undergo Internal Auditor training course.
- The student must undergo ergonomics training course and be aware of material handling and posture evaluation tools.
- The faculty incharge will evaluate the report and award marks in the basis of the content.
- The content should have a manufacturing process, process flow diagram, safety management systems, identified gaps, accident investigation, root cause analysis, trainings undergone, suggestions and recommendations.
- The evaluated report has to be submitted to the professor incharge and HOD.
- A final presentation will be there to sum up the entire activity undergone.

20PISPC301

SAFETY IN ENGINEERING INDUSTRY 4.0

**L T P C
3 0 0 3**

OBJECTIVES:

- To know the safety rules and regulations, standards and codes
- To study various mechanical machines and their safety importance
- To understand the principles of machine guarding and operation of protective devices.
- To know the working principle of mechanical engineering processes such as metal forming and joining process and their safety risks.
- Developing the knowledge related to health and welfare measures in engineering industry

UNIT I SAFETY IN METAL WORKING MACHINERY AND WOOD WORKING MACHINES

9

General safety rules, principles, maintenance, Inspections of turning machines, boring machines, milling machine, planning machine and grinding machines, CNC machines,

Wood working machinery, types, safety principles, electrical guards, work area, material handling, inspection, standards and codes- saws, types, hazards.

UNIT II PRINCIPLES OF MACHINE GUARDING 9

Guarding during maintenance, Zero Mechanical State (ZMS), Definition, Policy for ZMS – guarding of hazards - point of operation protective devices, machine guarding, types, fixed guard, interlock guard, automatic guard, trip guard, electron eye, positional control guard, fixed guard fencing- guard construction- guard opening.

Selection and suitability: lathe-drilling-boring-milling-grinding-shaping-sawing-shearing-presses-forge hammer-flywheels-shafts-couplings-gears-sprockets wheels and chains-pulleys and belts-authorized entry to hazardous installations-benefits of good guarding systems.

UNIT III SAFETY IN WELDING AND GAS CUTTING 9

Gas welding and oxygen cutting, resistances welding, arc welding and cutting, common hazards, personal protective equipment, training, safety precautions in brazing, soldering and metalizing – explosive welding, selection, care and maintenance of the associated equipment and instruments – safety in generation, distribution and handling of industrial gases-colour coding – flashback arrestor – leak detection-pipe line safety-storage and handling of gas cylinders.

UNIT IV SAFETY IN COLD FARMING AND HOT WORKING OF METALS 9

Cold working, power presses, point of operation safe guarding, auxiliary mechanisms, feeding and cutting mechanism, hand or foot-operated presses, power press electric controls, power press set up and die removal, inspection and maintenance-metal sheers-press brakes.

Hot working safety in forging, hot rolling mill operation, safe guards in hot rolling mills – hot bending of pipes, hazards and control measures.

Safety in gas furnace operation, cupola, crucibles, ovens, foundry health hazards, work environment, material handling in foundries, foundry production cleaning and finishing foundry processes.

UNIT V SAFETY IN FINISHING, INSPECTION AND TESTING 9

Heat treatment operations, electro plating, paint shops, sand and shot blasting, safety in inspection and testing, dynamic balancing, hydro testing, valves, boiler drums and headers, pressure vessels, air leak test, steam testing, safety in radiography, personal monitoring devices, radiation hazards, engineering and administrative controls, Indian Boilers Regulation.

Health and welfare measures in engineering industry-pollution control in engineering industry- industrial waste disposal.

TOTAL: 45 PERIODS

REFERENCES

1. “Accident Prevention Manual” – NSC, Chicago,1982.
2. “Occupational safety Manual” BHEL, Trichy,1988.
3. Indian Boiler acts and Regulations, Government of India.
4. Safety in the use of wood working machines, HMSO, UK1992.
5. Health and Safety in welding and Allied processes, welding Institute, UK, High Tech. Publishing Ltd., London,1989.

OUTCOMES:

- CO 1** Students can have the knowledge in safety rules, standards and codes in various mechanical engineering processes
- CO 2** They can design machine guarding systems for various machines such as lathe, drilling,boring,

- milling etc.,
- CO 3** They can implement the safety concepts in welding, gas cutting, storage and handling of gas cylinders, metal forming processes etc.,
- CO 4** Students will have knowledge in testing and inspection as per rules in boilers, heat treatment operations etc.,
- CO 5** They can take preventive measures in health and welfare of workers' aspects in engineering industry.

20PISTP301	DATA ANALYTICS IN SAFETY ENGINEERING & ART OF JOURNAL PUBLICATION	L	T	P	C
		0	0	3	1

OBJECTIVES

- To get an industrial exposure through various industrial environmental experiences and learning safety measures.
- To enhance the collective skills between theoretical knowledge and real-time safety implementations.
- To enrich the communication skills of the student through presentation of topics in recent advances in Industrial safety engineering/technology.
- **The Student should be made to:**
 - ✓ Be exposed to big data
 - ✓ Learn the different ways of Data Analysis
 - ✓ Be familiar with data streams
 - ✓ Learn the mining and clustering
 - ✓ Be familiar with the visualization

PRACTICES ON:

1. Big data platform
2. Data Analysis - Regression modeling, Bayesian networks, Neural networks, Fuzzy logic
3. Mining Data Streams – Real time Analytics Platform(RTAP) applications.
4. Frequent Item Sets And Clustering.
5. Frameworks And Visualization

ART OF PUBLICATION OF JOURNAL:

1. Journal Publication is compulsory for every student.
2. The student should publish the journal based on the aspects of safety engineering with the help of faculty.
3. The published journal has to be submitted to the professor incharge and HOD.

TOTAL: 45 PERIODS

OUTCOME:

Students will develop skills to read, write, comprehend and present research papers. Students shall give presentations on recent areas of research in industrial safety engineering in two cycles. Depth of understanding, coverage, quality of presentation material (JOURNAL) and communication skill of the student will be taken as measures for evaluation.

OBJECTIVES

- To provide provided with the knowledge of the process of analyzing and developing information to produce a plant layout based on the locations and working conditions.
- To educate the students about the basic things of work conditions which includes ventilation, comfort, lighting and its effect based on various nature of work.
- To provide knowledge on effective and safe layout design of an industry.

UNIT I PLANT LOCATION**9**

Selection of plant locations, territorial parameters, considerations of land, water, electricity, location for waste treatment and disposal, further expansions

Safe location of chemical storages, LPG, LNG, CNG, acetylene, ammonia, chlorine, explosives and propellants

UNIT II PLANT LAYOUT**9**

Safe layout, equipment layout, safety system, fire hydrant locations, fire service rooms, facilities for safe effluent disposal and treatment tanks, site considerations, approach roads, plant railway lines, security towers.

Safe layout for process industries, engineering industry, construction sites, pharmaceuticals, pesticides, fertilizers, refineries, food processing, nuclear power stations, thermal power stations, metal powders manufacturing, fireworks and match works

UNIT III WORKING CONDITIONS**9**

Principles of good ventilation, purpose, physiological and comfort level types, local and exhaust ventilation, hood and duct design, air conditioning, ventilation standards, application.

Purpose of lighting, types, advantages of good illumination, glare and its effect, lighting requirements for various work, standards- House keeping, principles of 5S.

UNIT IV MANUAL MATERIAL HANDLING AND LIFTING TACKLES**9**

Preventing common injuries, lifting by hand, team lifting and carrying, handling specific shape machines and other heavy objects – accessories for manual handling, hand tools, jacks, hand trucks, dollies and wheel barrows – storage of specific materials - problems with hazardous materials, liquids, solids – storage and handling of cryogenic liquids - shipping and receiving, stock picking, dock boards, machine and tools, steel strapping and sacking, glass and nails, pitch and glue, boxes and cartons and car loading – personal protection – ergonomic considerations

Fiber rope, types, strength and working load inspection, rope in use, rope in storage - wire rope, construction, design factors, deterioration causes, sheaves and drums, lubrication, overloading, rope fitting, inspection and replacement – slings, types, method of attachment, rated capacities, alloy chain slings, hooks and attachment, inspection

UNIT V MECHANICAL MATERIAL HANDLING**9**

Hoisting apparatus, types - cranes, types, design and construction, guards and limit devices, signals, operating rules, maintenance safety rules, inspection and inspection checklist – conveyors, precautions, types, applications.

Powered industrial trucks, requirements, operating principles, operators selection and training and performance test, inspection and maintenance, electric trucks, gasoline operated trucks, LPG trucks – power elevators, types of drives, hoist way and machine room emergency procedure, requirements for the handicapped, types- Escalator, safety devices and brakes, moving walks – man lifts, construction, brakes, inspection.

REFERENCES:

1. "Accident prevention manual for industrial operations" N.S.C., Chicago,1982.
2. Alexandrov. M.P. "Material handling equipment" Mir Publishers, Moscow,1981
3. "Encyclopedia of occupational safety and health", ILO Publication,1981.
4. APPLE M. JAMES "Plant layout and material handling", 3rd edition, John Wiley andsons.
5. R.B. Choudhary, G.R.N Tagore, "Plant Layout and Material Handling", second edition, Khanna Publishers.

OUTCOMES:

The students will be able to

- CO 1** Identify equipment requirements for a specific process and for various locations and working conditions.
- CO 2** Design an efficient material handling system.
- CO 3** Understand the difficulties during the design and implementation of the plant layout.
- CO 4** Students will have knowledge in testing and inspection as per rules in boilers, heat treatment operations etc.,
- CO 5** They can take preventive measures in health and welfare of workers' aspects in engineering industry.

20PISEL102

WORK STUDY AND ERGONOMICS

**L T PC
3 0 0 3**

OBJECTIVES:

- To study the applications of ergonomic principles and physiology of workers
- To know the concepts of personal protective equipment and its usages
- To create the knowledge in process and equipment design in safety aspects

UNIT I WORK STUDY

9

Study of operations – work content – work procedure – breakdown – human factors – safety and method study – methods and movements at the workplace – substitution with latest devices – robotic concepts – applications in hazardous workplaces – productivity, quality and safety (PQS).

UNIT II ERGONOMICS

9

Definition – applications of ergonomic principles in the shop floor – work benches – seating arrangements – layout of electrical panels- switch gears – principles of motion economy – location of controls – display locations – machine foundations – work platforms, fatigue, physical and mental strain – incidents of accident – physiology of workers.

UNIT III PERSONAL PROTECTION

9

Concepts of personal protective equipment – types – selection of PPE – invisible protective barriers – procurement, storage, inspection and testing – quality – standards – ergonomic considerations in personal protective equipment design.

UNIT IV PROCESS AND EQUIPMENT DESIGN

9

Process design – equipment – instrument – selection – concept modules – various machine tools - in- built safety – machine layout-machine guarding-safety devices and methods – selection, inspection, maintenance and safe usage – statutory provisions, operator training and supervision – hazards and prevention.

UNITV MAN MACHINE SYSTEMS

9

Job and personal risk factors – standards-selection and training-body size and posture-body dimension(static/dynamic)–adjustment range–penalties–guidelines for safe design and postures – evaluation and methods of reducing posture strain.

Man-machine interface-controls -types of control-identification and selection-types of displays- compatibility and stereotypes of important operations-fatigue and vigilance-measurement characteristics and strategies for enhanced performance.

TOTAL: 45 PERIODS

REFERENCES

1. “Accident Prevention Manual for Industrial Operations”, NSC Chicago,1982.
2. E.J.McCormick and M.S.Sanders “Human Factors in Engineering and Design”, TMH, New Delhi, 1982.
3. Hunter, Gomas, “Engineering Design for Safety”, McGraw Hill Inc.,1992.
4. “Work Study”, National Productivity Council, New Delhi,1995.
5. Lakhwinder Pal Singh, “Work Study and Ergonomics”, Cambridge University Press,2015.

OUTCOMES:

The students will be able to

- CO 1 To know in work procedure and applications in hazardous
- CO 2 Incorporate human factors in design of Personal protective equipment
- CO 3 Know the risk factors, guide lines for safe design of man machine systems considering human factors
- CO 4 Students will have knowledge in Process and Design of Equipments.
- CO 5 To understand the concept of Man machines systems.

20PISEL103

DOCK SAFETY

L T P C

3 0 0 3

OBJECTIVES:

- To understand safety legislation related to dock activities in India.
- To understand the causes and effects of accidents during dock activities.
- To know the various material handling equipment and lifting appliances in dock.
- To know the safe working on board the ship and storage in the yards.
- To understand the safe operation of crane, portainers, lift trucks and container handling equipment.

UNITI HISTORY OF SAFETY LEGISLATION

9

History of dock safety statutes in India-background of present dock safety statutes- dock workers (safety, health and welfare) act 1986 and the rules and regulations framed there under, other statutes like marking of heavy packages act 1951 and the rules framed there under - manufacture, storage and import of hazardous chemicals. Rules 1989 framed under the environment (protection) act,1989

– few cases laws to interpret the terms used in the dock safety statutes.

Responsibility of different agencies for safety, health and welfare involved in dock work – responsibilities of port authorities – dock labour board – owner of ship master, agent of ship – owner of lifting appliances and loose gear etc. – employers of dock workers like stevedores – clearing and forwarding agents – competent persons and dock worker. Forums for promoting safety and health in ports – Safe Committees and Advisory Committees. Their functions, training of dockworkers.

UNIT II WORKING ON BOARD THE SHIP

9

Types of cargo ships – working on board ships – Safety in handling of hatch beams – hatch covers including its marking, Mechanical operated hatch covers of different types and its safety features – safety in chipping and painting operations on board ships – safe means of accesses – safety in storage etc. – illumination of decks and in holds – hazards in working inside the hold of the ship and on decks – safety precautions needed – safety in use of transport equipment - internal combustible engines like forklift trucks-pallet loaders etc. Working with electricity and electrical management – Storage – types, hazardous cargo.

UNIT III LIFTING APPLIANCES

9

Different types of lifting appliances – construction, maintenance and use, various methods of rigging of derricks, safety in the use of container handling/lifting appliances like portainers, transtainer, top lift trucks and other containers – testing and examination of lifting appliances – portainers – transtainers – top lift trucks – derricks in different rigging etc.
Use and care of synthetic and natural fiber ropes – wire rope chains, different types of slings and loose gears.

UNIT IV TRANSPORT EQUIPMENT

9

The different types of equipment for transporting containers and safety in their use – safety in the use of self loading container vehicles, container side lifter, fork lift truck, dock railways, conveyors and cranes.
Safe use of special lift trucks inside containers – Testing, examination and inspection of containers – carriage of dangerous goods in containers and maintenance and certification of containers for safe operation
Handling of different types of cargo – stacking and unstacking both on board the ship and ashore – loading and unloading of cargo identification of berths/walking for transfer operation of specific chemical from ship to shore and vice versa – restriction of loading and unloading operations.

UNIT V EMERGENCY ACTION PLAN AND DOCK WORKERS (SHW) REGULATIONS 1990

9

Emergency action Plans for fire and explosions - collapse of lifting appliances and buildings, sheds etc., - gas leakages and precautions concerning spillage of dangerous goods etc., - Preparation of on-site emergency plan and safety report.
Dock workers (SHW) rules and regulations 1990-related to lifting appliances, Container handling, loading and unloading, handling of hatch coverings and beams, Cargo handling, conveyors, dock railways, forklift.

TOTAL: 45 PERIODS

REFERENCES

1. Bindra SR “Course in Dock and Harbour Engineering”
2. Srinivasan “Harbour, Dock and Tunnel Engineering”
3. ”Dock Safety” Thane Belapur Industries Association, Mumbai.
4. Safety and Health in Dock work, IInd Edition, ILO, 1992.
5. Taylor D.A., “Introduction to Marine Engineering.

OUTCOMES:

The students will be able to

- CO 1** This course would make the student to familiar of various operations carried out in a dock.
- CO 2** Students would know the different acts and rules for safe dock operations.
- CO 3** Students could be able to understand the operation of various types of material handling equipments.
- CO 4** Students would be prepared to response at the time of emergency in a dock.
- CO 5** Students can recognize the various problems associated with the use of lifting Equipment and in the storage yards.

OBJECTIVES:

- Studying the work procedure and understanding the relationships between the workers and working environments.
- To study the applications of ergonomic principles and physiology of workers.
- To know the concepts of personal protective equipment and its uses.
- To create the knowledge in process and equipment design in safety aspects.

UNIT I ERGONOMICS AND ANATOMY**9**

Introduction to ergonomics: The focus of ergonomics, ergonomics and its areas of application in the work system, a brief history of ergonomics, attempts to humanize work, modern ergonomics, future directions for ergonomics

Anatomy, Posture and Body Mechanics: Some basic body mechanics, anatomy of the spine and pelvis related to posture, posture stability and posture adaptation, low back pain, risk factors for musculoskeletal disorders in the workplace, behavioural aspects of posture, effectiveness and cost effectiveness, research directions

UNIT II HUMAN BEHAVIOR**9**

Individual differences, Factors contributing to personality, Fitting the man to the job, Influence of difference on safety, Method of measuring characteristics, Accident Proneness. Motivation, Complexity of Motivation, Job satisfaction. Management theories of motivation, Job enrichment theory. Frustration and Conflicts, Reaction to frustration, Emotion and Frustration. Attitudes- Determination of attitudes, Changing attitudes Learning, Principles of Learning, Forgetting, Motivational requirements.

UNIT III ANTHROPOMETRY AND WORK DESIGN FOR STANDING AND SEATED WORKS**9**

Designing for a population of users, percentile, sources of human variability, anthropometry and its uses in ergonomics, principals of applied anthropometry in ergonomics, application of anthropometry in design, design for everyone, anthropometry and personal space, effectiveness and cost effectiveness

Fundamental aspects of standing and sitting, an ergonomics approach to work station design, design for standing workers, design for seated workers, work surface design, visual display units, guidelines for design of static work, effectiveness and cost effectiveness, research directions

UNIT IV MAN - MACHINE SYSTEM AND REPETITIVE WORKS AND MANUAL HANDLING TASK**9**

Applications of human factors engineering, man as a sensor, man as information processor, man as controller – Man vs Machine.

Ergonomics interventions in Repetitive works, handle design, key board design- measures for preventing in work related musculoskeletal disorders (WMSDs), reduction and controlling, training Anatomy and biomechanics of manual handling, prevention of manual handling injuries in the work place, design of manual handling tasks, carrying, postural stability

UNIT V HUMAN SKILL AND PERFORMANCE AND DISPLAY, CONTROLS AND VIRTUAL ENVIRONMENTS**9**

A general information-processing model of the users, cognitive system, problem solving, effectiveness.

Principles for the design of visual displays- auditory displays- design of controls- combining displays and controls- virtual (synthetic) environments, research issues.

TOTAL: 45 PERIODS**REFERENCES**

1. Ergonomic design for organizational effectiveness, Michael O'Neill
2. The Ergonomics manual, Dan McLeod, Philip Jacobs and Nancy Larson

3. Wesley E. Woodson, Barry Tillman, "Human Factors Design Handbook", second edition, McGraw-Hill Publishing Company, New York.
4. Human factors in engineering and design, MARKS.SANDERS
5. Introduction to Ergonomics, R.S. Bridger, Taylor and Francis.

OUTCOMES:

The students will be able to

- CO 1** Students can have the knowledge in work procedure and applications in hazardous workplaces.
- CO 2** Students can design their own safety devices and equipment to reduce the accidents possibilities.
- CO 3** Students could be able to understand the operation of various types of material handling equipments.
- CO 4** Students will be able to incorporate human factors in design of Personal protective equipment.
- CO 5** They know the risk factors, guide lines for safe design of man machine systems considering human factors.

20PISEL105

MAINTAINABILITY ENGINEERING

L T PC

3 0 03

OBJECTIVES:

- To enable the students know about the basic concept of maintainability engineering.
- To impart knowledge on various maintenance models, maintenance policies and replacement model of various equipment.
- To provide knowledge on logistics for the effective utilization of existing resources and facilities availability of spares parts.

UNIT I MAINTENANCE CONCEPT

6

Maintenance definition – Need for maintenance – Maintenance objectives and challenges – Tero technology – Maintenance costs - Scope of maintenance department.

UNIT II MAINTENANCE MODELS

12

Proactive/Reactive maintenance – Imperfect maintenance – Maintenance policies – PM versus b/d maintenance – PM schedule and product characteristics – Inspection models-Optimizing profit/downtime – Replacement decisions.

UNIT III MAINTENANCE LOGISTICS

11

Human factors – Maintenance staffing: Learning curves – Simulation – Maintenance resource requirements: Optimal size of service facility – Optimal repair effort – Maintenance planning and scheduling – Spare parts planning.

UNIT IV MAINTENANCE QUALITY

8

Maintenance excellence–Five Zero concept–FMECA–Root cause analysis–System effectiveness – Design for maintainability – Reliability Centered Maintenance.

UNIT V TOTAL PRODUCTIVE MAINTENANCE

8

TPM features – Chronic and sporadic losses – Equipment defects – Six major losses – Overall Equipment Effectiveness – TPM pillars – Autonomous maintenance – TPM implementation

TOTAL: 45 PERIODS

REFERENCES

1. Seichi Nakajima, "Total Productive Maintenance", Productivity Press, 1993.
2. Charles E. Ebeling, "An Introduction to Reliability and Maintainability Engineering", Indian edition, McGraw-Hill Publishing Company, New York.
3. Andrew K.S. Jardine & Albert H.C. Tsang, "Maintenance, Replacement and Reliability", Taylor and Francis, 2006.
4. Bikas Badhury & S.K. Basu, "Tero Technology: Reliability Engineering and Maintenance Management", Asian Books, 2003.

OUTCOMES:

The students will be able to

- CO 1** Students can have the knowledge in work procedure and applications in hazardous workplaces.
- CO 2** Students can design their own safety devices and equipment to reduce the accidents possibilities.
- CO 3** Understand the various terms and terminologies about the maintenance concept.
- CO 4** Understand the various maintenance modes and logistics meant for the execution of various services.
- CO 5** Apply their knowledge in areas where the down time, over replacement are existing and could lead to improve the productivity and quality.

20PISEL201

TRANSPORT SAFETY

L T P C
3 0 0 3

OBJECTIVES:

- To provide the students about the various activities/steps to be followed in safehandling the hazardous goods transportation from one location to another location.
- To educate the reasons for the road accident and the roles and responsibilities of a safe Driver and the training needs of the driver.
- To inculcate the culture of safe driving and fuel conservation along with knowing of basic traffic symbols followed throughout the highways.

UNIT I TRANSPORTATION OF HAZARDOUS GOODS

9

Transport emergency card (TREM) – driver training-parking of tankers on the highways-speed of the vehicle – warning symbols – design of the tanker lorries -static electricity-responsibilities of driver – inspection and maintenance of vehicles-check list- loading and decanting procedures – communication.

UNIT II ROAD TRANSPORT

8

Introduction – factors for improving safety on roads – causes of accidents due to drivers and pedestrians-design, selection, operation and maintenance of motor trucks-preventive maintenance- check lists-motor vehicles act – motor vehicle insurance and surveys.

UNIT III DRIVER AND SAFETY

9

Driver safety programme – selection of drivers – driver training-tacho-graph-driving test-driver's responsibility- accident reporting and investigation procedures-fleet accident frequency-safe driving incentives-slogans in driver cabin-motor vehicle transport workers act- driver relaxation and rest pauses – speed and fuel conservation – emergency planning and Haz mat codes

UNIT IV ROAD SAFETY

10

Road alignment and gradient-reconnaissance-ruling gradient-maximum rise per k.m.- factors influencing alignment like tractive resistance, tractive force, direct alignment, vertical curves-breaking characteristics of vehicle-skidding-restriction of speeds-significance of speeds- Pavement conditions – Sight distance – Safety at

intersections – Traffic control lines and guide posts-guard rails and barriers
– street lighting and illumination overloading-concentration of driver.

Plant railway: Clearance-track-warning methods-loading and unloading-moving cars-safety practices.

UNIT V SHOP FLOOR AND REPAIR SHOP SAFETY

9

Transport precautions-safety on manual, mechanical handling equipment operations-safe driving- movement of cranes-conveyors etc., servicing and maintenance equipment-grease rack operation- wash rack operation-battery charging-gasoline handling-other safe practices-off the road motorized equipment.

TOTAL : 45 PERIODS

REFERENCES

1. "Accident Prevention Manual for Industrial Operations", NSC, Chicago,1982.
2. Babkov, V.F., "Road Conditions and Traffic Safety" MIR Publications, Moscow,1986.
3. K.W.Ogden, "Safer Roads – A guide to Road Safety Engineering"
4. Motor Vehicles Act, 1988, Government of India.
5. Pasricha, "Road Safety guide for drivers of heavy vehicle" Nasha Publications, Mumbai,1999.
6. Kadiyali, "Traffic Engineering and Transport Planning" Khanna Publishers, New Delhi,1983.
7. Popkes, C.A. "Traffic Control and Road Accident Prevention" Chapman and Hall Limited,1986.

OUTCOMES:

The students will be able to

- CO 1** Recognize various safety activities undertaken in transporting of hazardous goods
- CO 2** Understand the various symbols which are specific to the road safety and able to reduce the accidents occurred in the roads.
- CO 3** Understand the various terms and terminologies about the maintenance concept.
- CO 4** Apply for the safe transportation of hazardous goods, creating TREM card and safe loading and unloading procedure.
- CO 5** Apply their knowledge in areas of shop floor and repair shop safety.

20PISEL202

FIREWORKS SAFETY

L T P C

3 0 0 3

OBJECTIVES:

- To study the properties of pyrotechnic chemicals
- To know about the hazards in the manufacture of various fireworks
- To understand the hazards in fireworks industries related processes
- To study the effects of static electricity
- To learn pyrotechnic material handling, transportation and user safety

UNIT I PROPERTIES OF FIREWORKS CHEMICALS

9

Fire properties – potassium nitrate (KNO₃), potassium chlorate (KClO₃), barium nitrate (BaNO₃), calcium nitrate (CaNO₃), Sulphur (S), Phosphorous (P), antimony (Sb), Pyro Aluminum (Al) powder- Reactions-metal powders, Borax, ammonia (NH₃) – Strontium Nitrate, Sodium Nitrate, Potassium perchlorate. Fire and explosion, impact and friction sensitivity.

UNIT II STATIC CHARGE AND DUST

9

Concept-prevention-earthing-copper plates-dress materials-static charge meter lightning, Causes- effects-hazards in fireworks factories-lightning arrestor :concept-installation-earth pit-maintenance- resistance-legal requirements-case studies.

Dust: size-desirable, non-respirable-biologicalbarriers-hazards-personal protective equipment- pollution prevention.

UNITIII PROCESS SAFETY

8

Safe-quantity, mixing-filling-fuse cutting – fuse fixing – finishing – drying at various stages-packing- storage-hand tools-materials, layout: building-distances- factories act – explosive act and rules – fire prevention and control – risk related fireworks industries.

UNITIV MATERIAL HANDLING AND TRANSPORTATION:

10

Manual handling – wheel barrows-trucks-bullock carts-cycles-automobiles-fuse handling – paper caps handling-nitric acid handling in snake eggs manufacture-handling the mix in this factory-material movement-godown-waste pit.

Packing-magazine-design of vehicles for explosive transports loading into automobiles-transport restrictions-case studies-overhead power lines-driver habits-intermediate parking-fire extinguishers- loose chemicals handling and transport.

UNITV WASTE CONTROL ANDUSER SAFETY

9

Concepts of wastes – Wastes in fireworks-Disposal-Spillages-storage of residues.Consumer anxiety- hazards in display-methods in other countries-fires, burns and scalds-sales outlets-restrictions-role of fire service.

TOTAL : 45 PERIODS

REFERENCES

1. “Seminar on explosives”, Dept.of of explosives.
2. Bill of once, “Fireworks Safetymanual”
3. “Goeff, “Dust Explosion prevention, Part1”
4. A.Chelladurai, “Fireworks related accidents”
5. A.Chelladurai, “Fireworks principles andpractice”
6. A.Chelladurai, “History of the fireworks in India” Brock, “History offireworks”
7. “Proceedings of National seminar on Fireworks Safety-1999”,MSEC-1999.

OUTCOMES:

Upon completion of the course the students will be able

- CO 1** To gain knowledge of the chemical reactions of Fireworks chemicals
- CO 2** To know safe manufacture of Fireworks items
- CO 3** To improve process safety in fireworks industries
- CO 4** To analyse safety measures applicable against static electricity
- CO 5** To suggest safe practices for handling of fireworks in factories, transport and at user end

20PISEL203

SAFETY IN CONSTRUCTION

L T P C

3 0 0 3

OBJECTIVES:

- To know causes of accidents related to construction activities and human factors associatedwith theseaccident
- To understand the construction regulations and quality assurance inconstruction
- To have the knowledge in hazards of construction and their preventionmethods
- To know the working principles of various constructionmachinery
- To gain knowledge in health hazards and safety in demolitionwork

UNIT I ACCIDENTS CAUSES AND MANAGEMENT SYSTEMS 9

Problems impeding safety in construction industry- causes of fatal accidents, types and causes of accidents related to various construction activities, human factors associated with these accident – construction regulations, contractual clauses – Pre contract activates, preconstruction meeting - design aids for safe construction – permits to work – quality assurance in construction -compensation
– Recording of accidents and safety measures – Education and training

UNIT II HAZARDS OF CONSTRUCTION AND PREVENTION 9

Excavations, basement and wide excavation, trenches, shafts – scaffolding , types, causes of accidents, scaffold inspection checklist – false work – erection of structural frame work, dismantling – tunneling – blasting, pre blast and post blast inspection – confined spaces – working on contaminated sites – work over water - road works – power plant constructions – construction of high rise buildings.

UNIT III WORKING AT HEIGHTS 9

Fall protection in construction OSHA 3146 – OSHA requirement for working at heights, Safe access and egress – safe use of ladders- Scaffoldings , requirement for safe work platforms, stairways, gangways and ramps – fall prevention and fall protection , safety belts, safety nets, fall arrestors, controlled access zones, safety monitoring systems – working on fragile roofs, work permit systems, height pass – accident case studies.

UNIT IV CONSTRUCTION MACHINERY 9

Selection, operation, inspection and testing of hoisting cranes, mobile cranes, tower cranes, crane inspection checklist - builder’s hoist, winches, chain pulley blocks – use of conveyors - concrete mixers, concrete vibrators – safety in earth moving equipment, excavators, dozers, loaders, dumpers, motor grader, concrete pumps, welding machines, use of portable electrical tools, drills, grinding tools, manual handling scaffolding, hoisting cranes – use of conveyors and mobile cranes – manual handling.

UNIT V SAFETY IN DEMOLITION WORK 9

Safety in demolition work, manual, mechanical, using explosive - keys to safe demolition, pre survey inspection, method statement, site supervision, safe clearance zone, health hazards from demolition
- Indian standard - trusses, girders and beams – first aid – fire hazards and preventing methods – interesting experiences at the construction site against the fire accidents.

TOTAL: 45 PERIODS

REFERENCES

1. Hudson, R., "Construction hazard and Safety Hand book, Butter Worth's, 1985.
2. Jnatha D. Sime, "Safety in the Build Environment", London, 1988.
3. V.J. Davies and K. Thomasin "Construction Safety Hand Book" Thomas Telford Ltd., London, 1990.
4. Handbook of OSHA Construction safety and health Charles D. Reese and James V. Edison
5. R.K. Mishra, "Construction Safety", Aitbs Publishers, India, 2013.

OUTCOMES:

Upon completion of the course the students will be able

- CO 1** To identify the problems impeding safety in construction industries.
- CO 2** To identify types and causes of accidents, and designing aids for safe construction.
- CO 3** To understand the hazards during construction of power plant, road works and high rise buildings.
- CO 4** To have knowledge in selection, operation, inspection and testing of various construction machinery.
- CO 5** To list out construction regulations and Indian standards for construction and demolition work.

OBJECTIVES:

- To provide the student about the basic knowledge about the textile industries and its products by using various machineries.
- To enforce the knowledge on textile processing and various processes in making the yarn from cotton or synthetic fibres.
- To understand the various hazards of processing textile fibres by using various activities.
- To inculcate the knowledge on health and welfare activities specific to the Textile industries as per the Factories Act.

UNIT I INTRODUCTION**9**

Introduction to process flow charts of i) short staple spinning, ii) long staple spinning, iii) viscose rayon and synthetic fibre, manufacturer, iv) spun and filament yarn to fabric manufacture, v) jute spinning and jute fabric manufacture-accident hazard, guarding of machinery and safety precautions in opening, carding, combing, drawing, flyer frames and ring frames, doubles, rotor spinning, winding, warping, softening/spinning specific to jute.

UNIT II TEXTILE HAZARDS I**9**

Accident hazards i) sizing processes- cooking vessels, transports of size, hazards due to steam ii) Loom shed – shuttle looms and shuttleless looms iii) knitting machines iv) non-wovens.

UNIT III TEXTILE HAZARDS II**9**

Scouring, bleaching, dyeing, punting, mechanical finishing operations and effluents in textile processes.

UNIT IV HEALTH AND WELFARE**9**

Health hazards in textile industry related to dust, fly and noise generated-control measures-relevant occupational diseases, personal protective equipment-health and welfare measures specific to textile industry, Special precautions for specific hazardous work environments.

UNIT V SAFETY STATUS**9**

Relevant provision of factories act and rules and other statutes applicable to textile industry – effluent treatment and waste disposal in textile industry.

TOTAL: 45 PERIODS**REFERENCES**

1. 100 Textile fires – analysis, findings and recommendations LPA
2. Groover and Henry DS, “Hand book of textile testing and quality control”
3. “Quality tolerances for water for textile industry”, BIS
4. Little, A.H., “Water supplies and the treatment and disposal of effluent”

OUTCOMES:

Upon completion of the course the students will be able

- CO 1** The student will be able to know about the overall picture about the textile industries and its operations.
- CO 2** The student could understand the various concepts underlying in the processes involved in processing of fibres to yarn.
- CO 3** The student will be able to find out various hazards in the textile industry and will be able to apply the control measures to mitigate the risk emanating from the hazard.

- CO 4** The student could have the capability to handle the various health and welfare activities as per the Factories act and could implement statutory requirements.
- CO 5** The student could create of his own arrangement in designing various methods meant for mitigating the risk and able to guide his subordinates in executing the worksafely.

20PISEL205

SAFETY IN MINES

L T P C
3 0 0 3

OBJECTIVES:

- To provide in depth knowledge on Safety of mine s of varioustypes.
- To study, know and understand about the types of mines and various risk involved in the mining operations.
- To get exposed to various types of accidents happened in mines and how to manage during accidents.
- To analyse the nature of mining activities and developing a safety system to reduce the risk and also to implement the Emergency preparedness in the working environment of mines and to plan for the disastermanagement.

UNITI OPEN CAST MINES

9

Causes and prevention of accident from: Heavy machinery, belt and bucket conveyors, drilling, hand tools-pneumatic systems, pumping, water, dust, electrical systems, fire prevention. Garage safety – accident reporting system-working condition-safe transportation – handling of explosives.

UNITII UNDER GROUND MINES

9

Fall of roof and sides-effect of gases-fire and explosions-water flooding-warning sensors-gas detectors-occupational hazards-working conditions-winding and transportation.

UNITIII TUNNELLING

9

Hazards from: ground collapse, inundation and collapse of tunnel face, falls from platforms and danger from falling bodies. Atmospheric pollution (gases and dusts) – trapping –transport-noise- electrical hazards-noise and vibration from: pneumatic tools and other machines – ventilation and lighting – personal protectiveequipment.

UNITIV RISK ASSESSMENT

9

Basic concepts of risk-reliability and hazard potential-elements of risk assessment – statistical methods – control charts-appraisal of advanced techniques-fault tree analysis-failure mode and effect analysis – quantitative structure-activity relationship analysis-fuzzy model for risk assessment.

UNITV ACCIDENT ANALYSIS AND MANAGEMENT

9

Accidents classification and analysis-fatal, serious, minor and reportable accidents – safety audits- recent development of safety engineering approaches for mines-frequency rates-accident occurrence- investigation-measures for improving safety in mines-cost of accident-emergency preparedness – disaster management.

TOTAL: 45 PERIODS

REFERENCES

1. DGMS Circulars-Ministry of Labour, Government of India press, OR Lovely Prakashan - DHANBAD,2002.
2. Dhillon, Balbir S. “Mine Safety”, springer series in Reliability Engineering.
- 3.Kejiriwal, B.K. Safety in Mines, GyanPrakashan, Dhanbad, 2001.
- 4.“Mine Health and Safety Management”, Michael Karmis ed., SME, Littleton,Co.2001.

OUTCOMES:

Upon completion of the course the students will be able

- CO 1** This course would make the student familiar with the concept of safety aspects in the mining industries.
- CO 2** Course would be helpful in understanding the various types of mining activities like open case mines, underground mines and tunnelling.
- CO 3** The students will understand about the various risks involved in the mining activities and come to know about the various safety activities to be taken to ensure the safety of the workers.
- CO 4** Students could be able to implement the techniques like risk assessment Disaster management and emergency preparedness with the proper knowledge on accident prevention.
- CO 5** Course would equip the students to effectively employ their knowledge on accident prevention in mines.

20PISEL301

RELIABILITY ENGINEERING

L T P C
3 0 0 3

OBJECTIVES

- To provide provided with the knowledge of the process of analyzing and developing information to produce a plant layout based on the locations and working conditions.
- To educate the students about the basic things of work conditions which includes ventilation, comfort, lighting and its effect based on various nature of work.
- To provide knowledge on effective and safe layout design of an industry.

UNIT I RELIABILITY CONCEPT

9

Reliability function – failure rate – mean time between failures (MTBF) – mean time to failure (MTTF)

– A priori and a posteriori concept - mortality curve – useful life – availability – maintainability – system effectiveness.

UNIT II FAILURE DATA ANALYSIS

9

Time to failure distributions – Exponential, normal, Gamma, Weibull, ranking of data – probability plotting techniques – Hazard plotting.

UNIT III RELIABILITY PREDICTION MODELS

9

Series and parallel systems – RBD approach – Standby systems – m/n configuration – Application of Bayes' theorem – cut and tie set method – Markov analysis – Fault Tree Analysis – limitations.

UNIT IV RELIABILITY MANAGEMENT

9

Reliability testing – Reliability growth monitoring – Non-parametric methods – Reliability and life cycle costs – Reliability allocation – Replacement model.

UNIT V RISK ASSESSMENT

9

Definition and measurement of risk – risk analysis techniques – risk reduction resources – industrial safety and risk assessment.

TOTAL: 45 PERIODS

REFERENCES

1. John Davidson, "The Reliability of Mechanical system" published by the Institution of Mechanical Engineers, London, 1988.

2. Smith C.O. "Introduction to Reliability in Design", McGraw Hill, London, 1976.
3. Srinath L.S, "Reliability Engineering", Affiliated East-West Press Pvt Ltd, New Delhi, 1998.
4. Modarres, "Reliability and Risk analysis", Maral Dekker Inc. 1993.

OUTCOMES:

Upon completion of the course the students will be able

- CO 1** This course would make the student familiar with the concept of maintenance aspects in the industries.
- CO 2** Identify equipment requirements for a specific process and for various locations and working conditions.
- CO 3** Design an efficient material handling system.
- CO 4** Understand the difficulties during the design and implementation of the plant layout.
- CO 5** Course would equip the students to effectively employ their knowledge on accident prevention in industries.

20PISEL302 QUALITY CONTROL ENGINEERING

L T P C
3 0 0 3

OBJECTIVES:

- To know the quality engineering concepts in product design and development processes.
- To know the control and process parameters' characteristics with feedback system.
- To know the methods for production and diagnosis process improvements.
- To have knowledge on ISO quality systems and types of quality tools such as failure and effect analysis.
- To understand the six-sigma concepts and its implementation in engineering industries.

UNIT I INTRODUCTION TO QUALITY ENGINEERING AND LOSS FUNCTION 9

Quality value and engineering- overall quality system-quality engineering in product design - quality engineering in design of production processes - quality engineering in production - quality engineering in service. Loss function Derivation – use-loss function for products/system- justification of improvements-loss function and inspection- quality evaluations and tolerances-N type, S type, L type

UNIT II ON-LINE QUALITY CONTROL 9

On-line feedback quality control variable characteristics-control with measurement interval- one unit, multiple units-control systems for lot and batch production. On-line process parameter control variable characteristics-process parameter tolerances- feedback control systems-measurement error and process control parameters.

UNIT III ON-LINE QUALITY CONTROL ATTRIBUTES AND METHODS FOR PROCESS IMPROVEMENTS 9

Checking intervals- frequency of process diagnosis. Production process improvement method- process diagnosis improvement method- process adjustment and recovery improvement methods.

UNIT IV QUALITY ENGINEERING AND TPM 9

Preventive maintenance schedules- PM schedules for functional characteristics- PM schedules for large scale systems. Quality tools-fault tree analysis, event tree analysis, failure mode and effect analysis. ISO quality systems.

UNITV SIX SIGMA ANDITS IMPLEMENTATION

9

Introduction- definition-methodology- impact of implementation of six sigma-DMAIC method-roles and responsibilities –leaders, champion, black belt, green belts. Do’s and dont’s - readiness of organization – planning-management role- six sigma tools – sustaining sixsigma.

TOTAL: 45 PERIODS

REFERENCES

1. Brue G, “Six Sigma for Managers”, Tata-McGraw Hill, New Delhi, Second reprint,2002.
2. De Feo J A and Barnard W W, “Six Sigma: Breakthrough and Beyond”, Tata McGraw-Hill, New Delhi,2005.
3. Pyzdek T and Berger R W, ”Quality Engineering Handbook”, Tata-McGraw Hill, New Delhi,1996
4. Taguchi G, Elsayed E A and Hsiang, T.C., ”Quality Engineering in Production Systems”, Mc-Graw- Hill Book company, Singapore, International Edition,1989

OUTCOMES:

Upon completion of the course the students will be able

- CO 1** Students can understand the loss function derivation and quality engineering in product design and development processes.
- CO 2** Students can develop their knowledge in online quality control systems and process an control parameters.
- CO 3** The students will be able to improve the production and process diagnosis and production process.
- CO 4** The students will be able to gain knowledge in ISO quality management systems.
- CO 5** The students will be able to list the roles and responsibilities of leaders.

20PISEL303

DISASTER MANAGEMENT

**L T P C
3 0 0 3**

OBJECTIVES:

- To study the disaster types and their control using space technology with casestudies.
- To study about on site and off site emergencyplans.
- To create awareness on global warming, eco-friendly products, environmental impact assessment and environmental policies with proper casestudies.
- To study about the marine pollution and earth quake disasters and their effects.
- To give the knowledge on environmental education including laws, risk & disaster assessment disaster profile of India.

UNITI

10

Philosophy of Disaster management-Introduction to Disaster mitigation-Hydrological, Coastal and Marine Disasters-Atmospheric disasters-Geological, meteorological phenomena-Mass Movement and Land Disasters-Forest related disasters-Wind and water related disasters-deforestation-Use of space technology for control of geological disasters-Master thesis

UNITII

10

Technological Disasters-Case studies of Technology disasters with statistical details-Emergencies and control measures-APELL-Onsite and Offsite emergencies-Crisis management groups-Emergency centers and their functions throughout the country-Softwares on emergency controls-Monitoring devices for detection of gases in the atmosphere-Right to knowact

UNIT III**8**

Introduction to Sustainable Development-Bio Diversity-Atmospheric pollution-Global warming and Ozone Depletion-ODS banking and phasing out-Sea level rise-El Nino and climate changes-Eco friendly products-Green movements-Green philosophy-Environmental Policies-Environmental Impact Assessment-case studies-Life cycle

UNIT IV**8**

Offshore and onshore drilling-control of fires-Case studies-Marine pollution and control-Toxic, hazardous and Nuclear wastes-state of India's and Global environmental issues-carcinogens-complex emergencies-Earthquake disasters-the nature-extreme event analysis-the immune system-proof and limits

UNIT V**10**

Environmental education-Population and community ecology-Natural resources conservation- Environmental protection and law-Research methodology and systems analysis-Natural resources conservation-Policy initiatives and future prospects-Risk assessment process, assessment for different disaster types-Assessment data use, destructive capacity-risk adjustment-choice-loss acceptance-disaster aid- public liability insurance-stock taking and vulnerability analysis-disaster profile of the country-national policies-objectives and standards-physical event modification- preparedness, forecasting and warning, land use planning

TOTAL: 45 PERIODS**REFERENCES**

1. Introduction to Environmental Engineering and Science, Gilbert, M.Masters
2. Environmental Science, Miller, G.Tylor
3. Principles of Environmental Science and Engineering, Bagad Vilas.
4. Environmental Science sustaining the earth, G. Tylor, Miller
5. Principles of Environmental Science and Engineering, R.Sivakumar

OUTCOMES:

Upon completion of the course the students will be able

- CO 1** To explain the philosophy of disaster management and their control using the sophisticated technologies.
- CO 2** To understand the emergency measures and how to control with monitoring devices.
- CO 3** To understand earth quake disasters and nuclear wastes disposals.
- CO 4** To gain knowledge in risk and disaster assessment processes including standards, and national policies.
- CO 5** The students will be able to list the roles and responsibilities of safety leaders.

20PISEL304**OHSAS 18000 AND ISO 14000****L T P C****3 0 0 3****OBJECTIVES:**

- The course could provide the basic knowledge on Occupational Health and Safety Management System and Environmental Management System standards.
- To inculcate the knowledge on various terms and terminologies which are used in the Occupational Health, Safety and Environmental Management system.
- To educate about the various steps to be taken for certification of Occupational Health and Safety Assessment Series (OHSAS) and ISO14001 (Environmental Management Systems) standards.
- To impart knowledge on Environment Impact Assessment (EIA), Life Cycle Assessment of product and

principles of Ecolabelling.

UNIT I OHSAS STANDARD 9

Introduction – Development of OHSAS standard – Structure and features of OSHAS 18001 – Benefits of certification-certification procedure – OH and S management system element, specification and scope - correspondence between OHSAS 18001, ISO 14001:1996 and ISO 9001:1994 – Guidelines (18002:2000) for implementing OHSAS 18001.

UNIT II OHSAS 18001 POLICY AND PLANNING 9

Developing OH and S policy– Guidelines – Developments - procedure - Content of OH and S policy – General principle, strategy and planning, specific goals, compliance – methodology.

Planning – Guidelines, methodology steps developing action plan – Analysis and identify the priorities, objective and Targets, short term action plan, benefits and cost of each option, Development of action plan.

UNIT III IMPLEMENTATION AND OPERATION, CHECKING AND REVIEW 9

Guidelines for structure and Responsibilities, Top Management, middle level management, co- ordinator and employees - Developing procedures, identifying training needs, providing training, documentation of training, Training methodology consultation and communications.

Checking and Review; performance measurement and monitoring, Proactive and Reactive monitoring, measurement techniques, inspections, measuring equipment - Accidents reports, Process and procedures, recording, investigation corrective action and follow up - records and records management. Handling documentation, information, records.

UNIT IV ISO 14001 9

EMS, ISO 14001, specifications, objectives, Environmental Policy, Guidelines and Principles (ISO 14004), clauses 4.1 to 4 5. Documentation requirements, 3 levels of documentation for a ISO 14000 based EMS, steps in ISO 14001.

Implementation plan, Registration, Importance of ISO 14000 to the Management. Auditing ISO14000- General principles of Environmental Audit, Auditor, steps in audit, Audit plan.

UNIT V ENVIRONMENT IMPACT ASSESSMENT 9

ISO 14040(LCA), General principles of LCA, Stages of LCA, Report and Review. ISO 14020 (Eco labeling) – History, 14021, 14024, Type I labels, Type II labels, ISO 14024, principles, rules for eco labeling before company attempts for it. Advantages. EIA in EMS, Types of EIA, EIA methodology EIS, Scope, Benefits.

Audit-methodology, Auditors Audit results management review-Continual improvement.

TOTAL: 45 PERIODS

REFERENCE

- 1.“The Occupational Environment Its Evaluation and Control”, second edition,. Dinardi, Salvatore. Fairfax, VA: American Industrial Hygiene Association, 2003.
- 2.ISO 9000 to OHSAS 18001, Dr. K.C. Arora, S.K. Kataria and Sons, Delhi.
- 3.Mancomm Inc.,”OSHA General Industry Regulations Book”.

OUTCOMES:

Upon completion of the course the students will be able

- CO 1** The student would be able to remember the various standards which is meant mainly for maintaining the Health of the employee and for the maintenance of the Environment.
- CO 2** The student could be able to understand the basic difference between the ISO 9000 series and OHSAS 18001 and ISO 14000 standards and the various clauses which governs the system in

- maintaining the standard.
- CO 3** The course could provide the sufficient knowledge on various clauses and subsequent preparation of procedures and related documents and could be able to apply their knowledge in preparing the OHSAS manual for getting the certification from the external certifying agencies.
- CO 4** Course could help the students in acquiring the knowledge on various standards and provide the skill in analysing the various clauses and its suitability and applicability on the nature of organization.
- CO 5** The students will be able to list the roles and responsibilities of safety executives.

20PISEL305

RESEARCH METHODOLOGY & IPR

L T P C
3 0 0 3

OBJECTIVES

- To impart scientific, statistical and analytical knowledge for carrying out research work effectively.
- To introduce fundamental aspects of Intellectual property Rights to students who are going to play a major role in development and management of innovative projects in industries.
- To disseminate knowledge on patents, patent regime in India and abroad and registration aspects

UNIT I INTRODUCTION TO RESEARCH

9

The hallmarks of scientific research – Building blocks of science in research – Concept of Applied and Basic research – Quantitative and Qualitative Research Techniques –Need for theoretical framework – Hypothesis development – Hypothesis testing with quantitative data. Research design – Purpose of the study: Exploratory, Descriptive, Hypothesis Testing.

UNIT II EXPERIMENTAL DESIGN

9

Laboratory and the Field Experiment – Internal and External Validity – Factors affecting Internal validity. Measurement of variables – Scales and measurements of variables. Developing scales – Rating scale and attitudinal scales – Validity testing of scales –Reliability concept in scales being developed – Stability Measures.

UNIT III DATA COLLECTION METHODS

9

Interviewing, Questionnaires, etc. Secondary sources of data collection. Guidelines for Questionnaire Design – Electronic Questionnaire Design and Surveys. Special Data Sources: Focus Groups, Static and Dynamic panels. Review of Advantages and Disadvantages of various Data-Collection Methods and their utility. Sampling Techniques – Probabilistic and non-probabilistic samples. Issues of Precision and Confidence in determining Sample Size. Hypothesis testing, Determination of Optimal sample size.

UNIT IV MULTIVARIATE STATISTICAL TECHNIQUES

9

Data Analysis – Factor Analysis – Cluster Analysis – Discriminant Analysis – Multiple Regression and Correlation – Canonical Correlation – Application of Statistical (SPSS) Software Package in Research.

UNIT V INTRODUCTION TO INTELLECTUAL PROPERTY RIGHT

9

Patents - Elements of Patentability: Novelty , Non Obviousness (Inventive Steps), Industrial Application - Non - Patentable Subject Matter - Registration Procedure, Rights and Duties of Patentee, Assignment and licence , Restoration of lapsed Patents, Surrender and Revocation of Patents, Infringement, Remedies & Penalties - Patent office and Appellate Board

TOTAL = 45 PERIODS

REFERENCES

1. Donald H. McBurney, Research Methods, Thomson Asia Pvt. Ltd. Singapore, 2002.
2. Donald R. Cooper and Ramela S. Schindler, Business Research Methods, Tata McGraw- Hill Publishing

- Company Limited, New Delhi, 2000
3. G.W.Ticehurst and A.J.Veal, Business Research Methods, Longman,1999.
 4. Ranjit Kumar, Research Methodology, Sage Publications, London, New Delhi,1999.
 5. Nithyananda, K V. (2019). Intellectual Property Rights: Protection and Management. India, IN: Cengage Learning India Private Limited.
 6. C.R.Kothari, Research Methodology, WishvaPrakashan, New Delhi,2001.
 7. Neeraj, P., & Khusdeep, D. (2014). Intellectual Property Rights. India, IN: PHI learning Private Limited.

OUTCOMES:

Upon completion of the course the students will be able

- CO 1** The student would be able to remember the various standards techniques.
- CO 2** The student could be able to understand the basic things about research report.
- CO 3** The course could provide the sufficient knowledge on Intellectual Property Right.
- CO 4** Course could help the students in acquiring the knowledge on Data collection methods.
- CO 5** The students will be able to list Multi-variate statistical techniques.

20PISEL306

DATA ANALYTICS

L T P C

3 0 0 3

OBJECTIVES:

The Student should be made to:

- Be exposed to bigdata
- Learn the different ways of DataAnalysis
- Be familiar with datastreams
- Learn the mining andclustering
- Be familiar with thevisualization

UNITI INTRODUCTION TO BIGDATA

8

Introduction to Big Data Platform – Challenges of conventional systems - Web data – Evolution of Analytic scalability, analytic processes and tools, Analysis vs reporting - Modern data analytic tools, Stastical concepts: Sampling distributions, resampling, statistical inference, prediction error.

UNITII DATA ANALYSIS

12

Regression modeling, Multivariate analysis, Bayesian modeling, inference and Bayesian networks, Support vector and kernel methods, Analysis of time series: linear systems analysis, nonlinear dynamics - Rule induction - Neural networks: learning and generalization, competitive learning, principal component analysis and neural networks; Fuzzy logic: extracting fuzzy models from data, fuzzy decision trees, Stochastic search methods.

UNITIII MINING DATA STREAMS

8

Introduction to Streams Concepts – Stream data model and architecture - Stream Computing, Sampling data in a stream – Filtering streams – Counting distinct elements in a stream – Estimating moments – Counting oneness in a window – Decaying window - Realtime Analytics Platform(RTAP) Applications.

UNITIV	FREQUENT ITEM SETS AND CLUSTERING	9
Mining Frequent itemsets - Market based model – Apriori Algorithm – Handling large data sets in Main memory – Limited Pass algorithm – Counting frequent itemsets in a stream – Clustering Techniques – Hierarchical – K- Means – Clustering high dimensional data – CLIQUE and PROCLUS – Frequent pattern based clustering methods – Clustering in non-euclidean space – Clustering for streams and Parallelism.		
UNITV	FRAMEWORKS AND VISUALIZATION	8
Map Reduce – Hadoop, Hive, MapR – Sharding – NoSQL Databases - S3 - Hadoop Distributed file systems – Visualizations - Visual data analysis techniques, interaction techniques; Systems and applications:		
		TOTAL : 45 PERIODS

REFERENCES:

1. AnandRajaraman and Jeffrey David Ullman, Mining of Massive Datasets, Cambridge University Press,2012.
2. Bill Franks, Taming the Big Data Tidal Wave: Finding Opportunities in Huge Data Streams with advanced analytics, John Wiley & sons,2012.
3. Glenn J. Myatt, Making Sense of Data, John Wiley & Sons,2007 Pete Warden, Big Data Glossary, O'Reilly,2011.
4. Jiawei Han, MichelineKamber “Data Mining Concepts and Techniques”, Second Edition, Elsevier, Reprinted2008.
5. Michael Berthold, David J. Hand, Intelligent Data Analysis, Springer,2007.

OUTCOMES:

Upon completion of the course the students will be able

- CO 1** The student would be able to apply the statistical analysis methods.
- CO 2** The student could be able to Compare and contrast various soft computing frameworks.
- CO 3** The course could provide the sufficient knowledge on Design distributed file systems.
- CO 4** Course could help the students in acquiring the knowledge on Apply Stream data model.
- CO 5** The students will be able to list the use of Visualisation techniques

20PISEL307

NUCLEAR ENGINEERING AND SAFETY
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OBJECTIVES:

- To know about nuclear energy and fission fusion process.
- To gain knowledge in reactor types, design considerations and their operational problems.
- To know the current status of India in nuclear energy.

UNITI INTRODUCTION

9

Binding energy – fission process – radio activity – alpha, beta and gamma rays radioactive decay – decay schemes – effects of radiation – neutron interaction – cross section – reaction rate – neutron moderation – multiplication – scattering – collision – fast fission – resonance escape – thermal utilization – criticality.

UNITII REACTOR CONTROL

9

Control requirements in design considerations – means of control – control and shut down rods – their operation and operational problems – control rod worth – control instrumentation and monitoring – online central data processing system.

UNIT III REACTOR TYPES**9**

Boiling water reactors – radioactivity of steam system – direct cycle and dual cycle power plants- pressurized water reactors and pressurized heavy water reactors – fast breeder reactors and their role in power generation in the Indian context – conversion and breeding – doubling time – liquid metal coolants – nuclear power plants in India.

UNIT IV SAFETY OF NUCLEAR REACTORS**9**

Safety design principles – engineered safety features – site related factors – safety related systems – heat transport systems – reactor control and protection system – fire protection system – quality assurance in plant components – operational safety – safety regulation process – public awareness and emergency preparedness. Accident Case studies- Three Mile island and Chernobyl accident.

UNIT V RADIATION CONTROL**9**

Radiation shielding – radiation dose – dose measurements – units of exposure – exposure limits – barriers for control of radioactivity release – control of radiation exposure to plant personnel – health physics surveillance – waste management and disposal practices – environmental releases.

TOTAL: 45 PERIODS**REFERENCES**

1. Loffness, R.L., “Nuclear Power Plant” Van Nostrand Publications, 1979.
2. M.M.E.L.Wakil, “Nuclear Energy Conversion”, International Text Book Co.
3. M.M.E.L.Wakil, “Nuclear Power Engineering”, International Text Book Co.
4. R.L.Murray, “Introduction to Nuclear Engineering”, Prentice Hall.
5. Sterman U.S. ”Thermal and Nuclear Power Stations”, MIR Publications, Moscow, 1986.
6. “Loss prevention in the process Industries” Frank P. Lees Butterworth-Hein-UK, 1990.
7. Sri Ram K, “Basic Nuclear Engineering” Wiley Eastern Ltd., New Delhi, 1990.

OUTCOMES:

Upon completion of the course the students will be able

- CO 1** The student would be able to Demonstrate nuclear fission and fusion process and their utilization.
- CO 2** The student could be able to Compare and contrast various types of reactors.
- CO 3** The course could provide the sufficient knowledge on types of reactors and their Control requirements.
- CO 4** Course could help the students in acquiring the knowledge on safety design principles and safety regulation process.
- CO 5** The students will be able to list the role of safety executives.

20PISEL308**ROBOTICS FOR INDUSTRY 4.0****L T P C****3 0 0 3****OBJECTIVES:**

- To understand the functions of the basic components of a Robot.
- To study the use of various types of End of Effectors and Sensors
- To impart knowledge in Robot Kinematics and Programming
- To learn Robot safety issues and economics.

UNIT I FUNDAMENTALS OF ROBOT**6**

Robot - Definition - Robot Anatomy - Co ordinate Systems, Work Envelope Types and Classification- Specifications-Pitch, Yaw, Roll, Joint Notations, Speed of Motion, Pay Load- Robot Parts and their Functions- Need for Robots-Different Applications.

UNIT II ROBOT DRIVE SYSTEMS AND END EFFECTORS**9**

Pneumatic Drives-Hydraulic Drives-Mechanical Drives-Electrical Drives-D.C. Servo Motors, Stepper Motors, A.C. Servo Motors-Salient Features, Applications and Comparison of all these Drives, End Effectors-Grippers-Mechanical Grippers, Pneumatic and Hydraulic- Grippers, Magnetic Grippers, Vacuum Grippers; Two Fingered and Three Fingered Grippers; Internal Grippers and External Grippers; Selection and Design Considerations.

UNIT III SENSORS AND MACHINE VISION**12**

Requirements of a sensor, Principles and Applications of the following types of sensors- Position sensors - Piezo Electric Sensor, LVDT, Resolvers, Optical Encoders, pneumatic Position Sensors, Range Sensors Triangulations Principles, Structured, Lighting Approach, Time of Flight, Range Finders, Laser Range Meters, Touch Sensors ,binary Sensors., Analog Sensors, Wrist Sensors, Compliance Sensors, Slip Sensors, Camera, Frame Grabber, Sensing and Digitizing Image Data- Signal Conversion, Image Storage, Lighting Techniques, Image Processing and Analysis-Data Reduction, Segmentation, Feature Extraction, Object Recognition, Other Algorithms, Applications- Inspection, Identification, Visual Servicing and Navigation.

UNIT IV ROBOT KINEMATICS AND ROBOT PROGRAMMING**13**

Forward Kinematics, Inverse Kinematics and Difference; Forward Kinematics and Reverse Kinematics of manipulators with Two, Three Degrees of Freedom (in 2 Dimension), Four Degrees of freedom (in 3 Dimension) Jacobians, Velocity and Forces-Manipulator Dynamics, Trajectory Generator, Manipulator Mechanism Design-Derivations and problems. Lead through Programming, Robot programming Languages-VAL Programming-Motion Commands, Sensor Commands, End Effector commands and simple Programs.

UNIT V IMPLEMENTATION AND ROBOT ECONOMICS**5**

RGV, AGV; Implementation of Robots in Industries-Variou Steps; Safety Considerations for Robot Operations - Economic Analysis of Robots.

TOTAL: 45 PERIODS**REFERENCES:**

1. Craig J.J., "Introduction to Robotics Mechanics and Control", Pearson Education, 2008.
2. Deb S.R., "Robotics Technology and Flexible Automation" Tata McGraw Hill Book Co., 1994.
3. Koren Y., "Robotics for Engineers", Mc Graw Hill Book Co., 1992.
4. Fu.K.S.,Gonzalz R.C. and Lee C.S.G., "Robotics Control, Sensing, Vision and Intelligence", McGraw Hill Book Co., 1987.
5. Janakiraman P.A., "Robotics and Image Processing", Tata McGraw Hill, 1995.
6. Rajput R.K., "Robotics and Industrial Automation", S.Chand and Company, 2008.
7. Surender Kumar, "Industrial Robots and Computer Integrated Manufacturing", Oxford and IBH Publishing Co. Pvt. Ltd., 1991.

OUTCOMES:

Upon completion of the course the students will be able

- CO 1** The student would be able to understand the fundamentals of robot.
- CO 2** The student could be able to Compare the robot drive systems and effectors.
- CO 3** The course could provide the sufficient knowledge on types of sensors and machine vision.
- CO 4** Course could help the students in acquiring the knowledge on robot kinematics and robot programming.
- CO 5** The students will be able to list the role of robot economics implementation.

OBJECTIVES:

- To know about Radiographic Testing and Radiation Safety process.
- To gain knowledge in film radiography and radiography image quality .
- To know the procedures of radiation Safety .

UNIT I BASIC PRINCIPLES OF RADIOGRAPHY**9**

Geometric exposure principles, shadow formation, shadow sharpness, etc – Radioisotopic sources – types and characteristics- Production and processing of radioisotopes - radiographic cameras - X-ray sources generation and properties - industrial X-ray tubes - target materials and characteristics- change of mA and KVP effect on “quality” and intensity of X-rays. High energy X-ray sources - linear accelerators.

UNIT II FILM RADIOGRAPHY**9**

X-ray film – structure and types for industrial radiography - sensitometric properties -use of film, characteristic curves (H & D curve) - latent image formation on film - radiographic exposure, reciprocity law, photographic density - X-ray and gamma ray exposure charts - exposure time calculations -film handling and storage - Effect of film processing on film characteristics - Processing defects and their appearance on films - control and collection of unsatisfactory radiographs - Automatic film processing.

UNIT III RADIOGRAPHIC IMAGE QUALITY AND RADIOGRAPHIC TECHNIQUES**9**

Radiographic Contrast, film Contrast, Subject Contrast, Definition, Radiographic densitypenetrimeters or Image Quality Indicators - Intensifying screens -intensification factor, control of scattered radiation, filters, diaphragms, masks- Radiography of Weldments – single and double wall Radiography - panoramic radiography-interpretation of radiographs and inspection standards - applicable codes, standards and specifications (ASME, ASTM, AWS, BS, IBR etc.)

UNIT IV SPECIAL RADIOGRAPHIC TECHNIQUES**9**

Principles and applications of Fluoroscopy/Real-time radioscopy - advantages and limitations - recent advances, intensifier tubes, vidicon tubes. Etc - Digital Radiography - Principle of neutron radiography - attenuation of neutrons - direct and indirect technique - advantages and limitations – Principle and application of in-motion and flash radiography.

UNIT V RADIATION SAFETY**9**

Special and SI Units of radiation - Photoelectric effect, Compton effect, Pair production - Principle of radiation detectors - ionisation chamber, proportional counter, G. M. counters, scintillation counters, solid state detectors - Biological effect of ionising radiation - Operational limits of exposures - Radiation hazards evaluation and control - Design of radiography installation and shielding calculations.

Total Hours 45

REFERENCES:

1. Radiographic Testing, Classroom training hand book, (CT -6-6) SanDiego, CA, General Dynamics/Convair Division, 1983.
2. Baldev raj, Practical Non – Destructive Testing, Narosa Publishing House,2009.
3. “Radiation Protection and Safety in Industrial Radiography”, Safety Reports Series No.13, International Atomic Energy Agency, Vienna, 1999.

OUTCOMES:

Upon completion of the course the students will be able

- CO 1** The student would be able to understand the fundamentals principles of radiography.
- CO 2** The student could be able to know about film radiography.
- CO 3** The course could provide the sufficient knowledge on radio graphic image quality and radio graphic techniques.
- CO 4** Course could help the students in acquiring the knowledge on special radio graphic techniques
- CO 5** The students will be able to list the radio graphic safety rules

20PISEL310**CORROSION ENGINEERING**

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OBJECTIVES:

1. To know the definition and classification of corrosion.
2. To gain knowledge on principles of corrosion, common corrosion forms.
3. To know the different corrosion testing methods and its control methods and material

UNIT– I: INTRODUCTION**9**

Definition, corrosion environments, damage, classification of corrosion. Principles and corrosion rate expressions. Environmental effects such as velocity, temperature, galvanic coupling. Metallurgical and other aspects

UNIT– II: DIFFERENT FORMS OF CORROSION**9**

Uniform attack, galvanic corrosion, crevice corrosion, fitting corrosion, inter– granular corrosion, selective leaching, erosion corrosion, stress corrosion and hydrogen damage. Pitting: pit shape and growth, velocity, metallurgical variables, evaluation of pitting damage, prevention.

UNIT– III: CORROSION TESTING METHODS**9**

Classification, purpose, surface preparation, measuring and weighing, duration, plant interval test, NACE test methods, slow – strain rate test and paint test. Composites testing: Exposure techniques, Huey test, Sea water test, Stress corrosion, Corrosion of palstics, Invivo corrosion.

UNIT –IV: CORROSION PREVENTION METHODS

12

Selection of metals and alloys–Cast iron, steel, Al, Mg, Ti, Composites and Refractory metals. Non-metallics: Thermosetters, laminates and reinforced plastics, Rubbers, Wood, Ceramics, Carbon and Graphite. Alteration of environment such as changing mediums, lowering temperature, design rules, design of cathodic and anodic protection, selected coating techniques to prevent corrosion; Failure analysis. High temperature corrosion.

UNIT –V: ADVANCED TECHNIQUES

6

Modern theory–principles and applications, electrode kinetics, predicting corrosion behavior, corrosion prevention, Corrosion rate measurements in Petroleum Industry with examples.

REFERENCES:

1. Pierre R Roberge, “Corrosion Engineering – Principles and Practice, McGraw-Hill, 2008
2. Pierre R. Roberge, Corrosion Basics: An Introduction, NACE International, 2006.
3. Mars Guy Fontana, “Corrosion Engineering”, Materials science and engineering series, vol 1 of Mc Graw-Hill series in materials science and engineering, 1986.
4. Pierre R. Roberge, “Handbook of Corrosion Engineering”, 2nd edition, McGraw-Hill, New York, 2012.
5. Zaki Ahmad, “Principles of Corrosion Engineering and Corrosion Control”, Butterworth-Heinemann, 2006.

OUTCOMES:

Upon completion of the course the students will be able

- CO 1** The student would be able to understand the fundamentals principles of corrosion.
- CO 2** The student could be able to know about different form of corrosion.
- CO 3** The course could provide the sufficient knowledge on testing methods.
- CO 4** Course could help the students in acquiring the knowledge on corrosion prevention.
- CO 5** The students will be able to list the advanced techniques of corrosion testing and prevention.

1.1.2 - The institution adheres to the academic calendar including for the conduct of Continuous Internal Evaluation (CIE)

We build a Better nation
through Quality education.



Sri
SAIRAM
INSTITUTE OF TECHNOLOGY
An Autonomous Institution
West Tambaram, Chennai - 44
www.sairamit.edu.in

Administrative Office : 'Sai Bhavan', 31-B, Madley Road,
T. Nagar, Chennai - 600 017. Tel : +91 - 44 - 4226 7777
www.sairamgroup.in



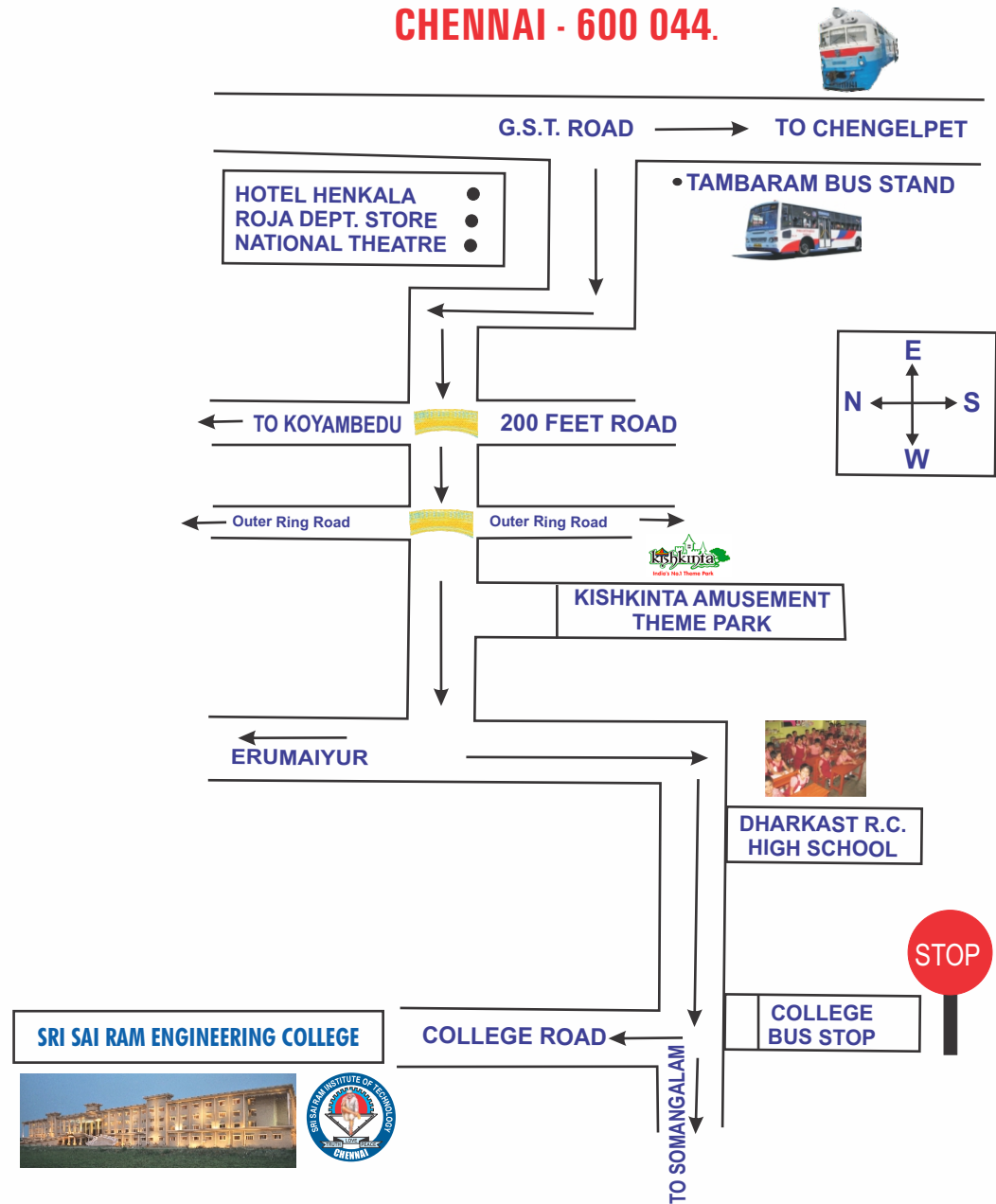
Sri SAIRAM INSTITUTE OF TECHNOLOGY

An Autonomous Institution | Affiliated to Anna University & Approved by AICTE, New Delhi
Accredited by NBA and NAAC "A+" | An ISO 9001:2015 Certified and MHRD NIRF ranked institution
Sai Leo Nagar, West Tambaram, Chennai - 600 044. www.sairamit.edu.in



Academic Calendar 2020-21

ROUTE MAP OF SRI SAI RAM INSTITUTE OF TECHNOLOGY CHENNAI - 600 044.



Imagine the Future and
Make it happen!



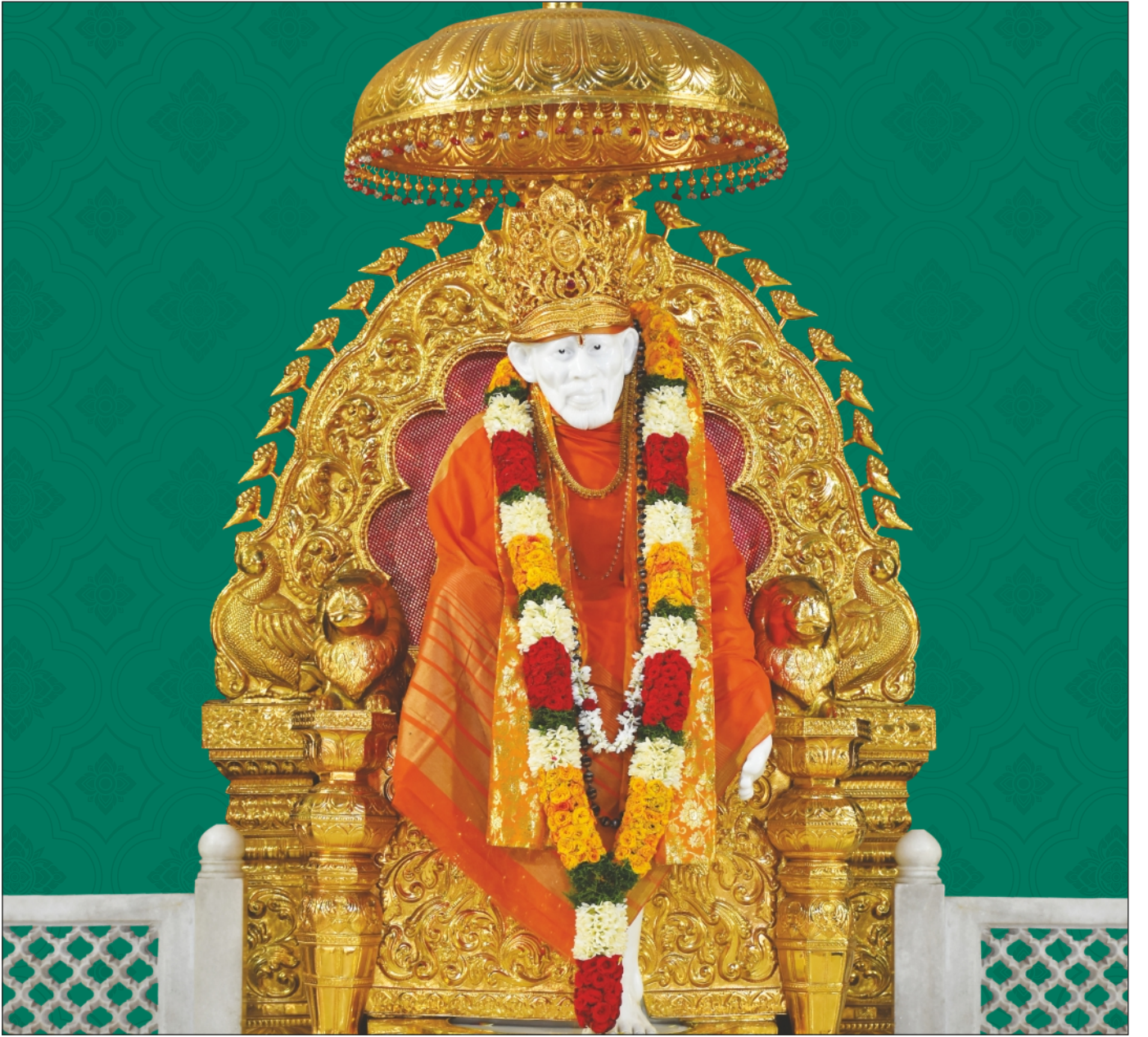
<p>1 NO POVERTY</p>	<p>2 ZERO HUNGER</p>	<p>3 GOOD HEALTH AND WELL-BEING</p>	<p>4 QUALITY EDUCATION</p>	<p>5 GENDER EQUALITY</p>	<p>6 CLEAN WATER AND SANITATION</p>
<p>7 AFFORDABLE AND CLEAN ENERGY</p>	<p>8 DECENT WORK AND ECONOMIC GROWTH</p>	<p>9 INDUSTRY, INNOVATION AND INFRASTRUCTURE</p>	<p>10 REDUCED INEQUALITIES</p>	<p>11 SUSTAINABLE CITIES AND COMMUNITIES</p>	<p>12 RESPONSIBLE CONSUMPTION AND PRODUCTION</p>
<p>13 CLIMATE ACTION</p>	<p>14 LIFE BELOW WATER</p>	<p>15 LIFE ON LAND</p>	<p>16 PEACE, JUSTICE AND STRONG INSTITUTIONS</p>	<p>17 PARTNERSHIPS FOR THE GOALS</p>	<p>Sairam SDG ACTION PROGRAM</p>



For the goals to be reached, everyone needs to do their part: governments, the private sector, civil society and **People like you.**

Together we can...

Sai Prakash Leo Mutthu
CEO - Sairam Institutions



எம்மதமும் சம்மதம் எனும் ஷீரடி சாயிநாதரே !
கருணையோ கண்களில், கல்வியோ கரங்களில்;
எங்கள் பிரார்த்தனைகள் உம் பாதங்களில்...

Shirdi Sai Baba's 11 Assurances



1. Whomsoever puts their feet on Shirdi soil, their sufferings will come to an end.
2. The wretched and miserable will rise to joy and happiness as soon as they climb the steps of My Samadhi.
3. I shall be ever active and vigorous even after leaving this earthly body.
4. My tomb shall bless and speak to the needs of my devotees.
5. I shall be active and vigorous even from my tomb.
6. My mortal remains will speak from My tomb.
7. I am ever living to help and guide all who come to Me, who surrender to Me and who seek refuge in Me.
8. If you look at Me, I look at you.
9. If you cast your burden on Me, I shall surely bear it.
10. If you seek My advice and help, it shall be given to you at once.
11. There shall be no want in the house of My devotee.

Personal Memoranda

Name :

Department :

College ID. No. :

Roll No. :

Year :

University Reg. No. :

Father's / Guardian's Name :

Aadhar No. :

Permanent Address :

Address for Communication :

Mobile No. :

E-mail ID :

Date of Birth :

Age :

Height :

Weight :

Blood Group :

Identification Marks :

Bus Pass No. :

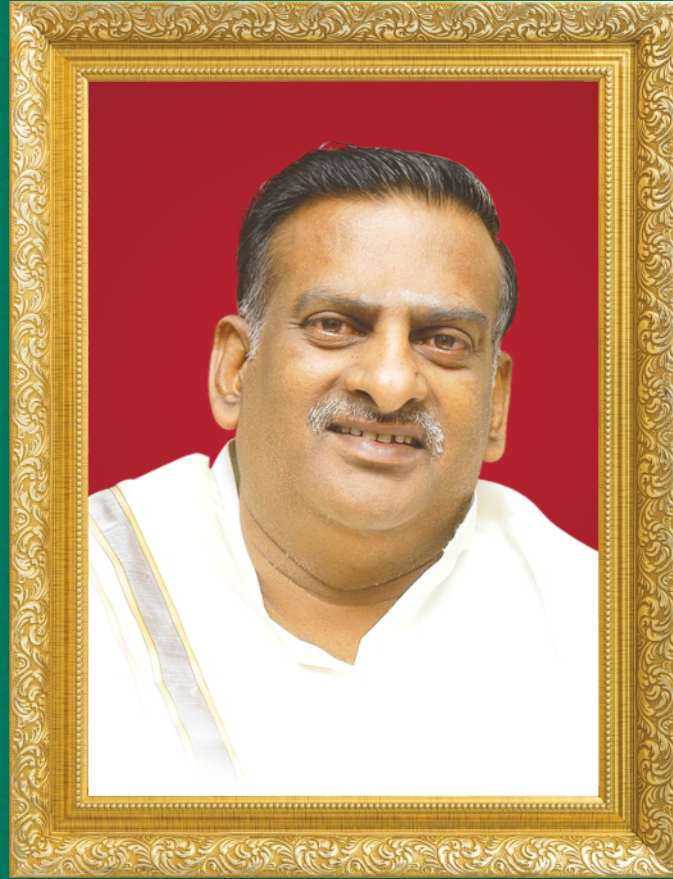
Driving Lic.No. :

LIC Policy No. :

Bank A/c No. :

Vehicle No. :

*Education is the manifestation of the
perfection already in man*



MJF. Ln. LEO MUTHU

Founder Chairman
Sairam Group of Institutions



Launch



Vision



Mission



Values



Target



Value Systems



Core Focus



Ideas



Excellence

Vision & Mission

Vision

To be identified as a “Centre of Excellence” with high standards of Knowledge Dissemination and Research opportunities and to transform the students to imbibe qualities of technical expertise of international standards and high levels of ethical values, who in turn shall contribute to the advancement of society and human kind.

Mission

We shall dedicate and commit ourselves to attain and maintain excellence in Technical Education through commitment and continuous improvement of infrastructure and equipment and provide an inspiring environment for Learning, Research and Innovation for our students to transform them into complete human beings with ethical and social values.



Quality Policy

Sri SAI RAM INSTITUTE OF TECHNOLOGY

Chennai - 44

We at Sri Sai Ram Institute of Technology are committed to build a better nation through Quality Education with team spirit. Our students are enabled to excel in all values of Life and become Good Citizens. We continually improve the System, Infrastructure and Services to satisfy the Students, Parents, Industry and Society.

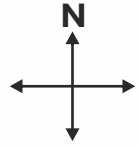


Best Wishes for a Highly Successful Academic year 2020 - 2021

If boys and girls do not learn discipline in their college days, money and time spent on their education is so much a national loss.

- Mahatma Gandhi

Campus Map



NATIONAL ANTHEM

Jana-gana-mana-adhinayaka, jaya he
Bharata-bhagya-vidhata.
Punjab-Sindh-Gujarat-Maratha
Dravida-Utkala-Banga
Vindhya-Himachala-Yamuna-Ganga
Uchchala-Jaladhi-taranga.
Tava shubha name jage,
Tava shubha asisa mage,
Gahe tava jaya gatha,
Jana-gana-mangala-dayaka jaya he
Bharata-bhagya-vidhata.
Jaya he, jaya he, jaya he,
Jaya jaya jaya, jaya he!

- Rabindranath Tagore

தமிழ்த்தாய் வாழ்த்து

நீராரும் கடலுடுத்த நிலமடந்தைக் கெழிலொழுகும்
சீராரும் வதனமெனத் திகழ்பரதக் கண்டமிதில்
தெக்கணமும் அதிற்சிறந்த திராவிடநல் திருநாடும்
தக்கசிறு பிறைநுதலும் தரித்தநறுந் திலகமுமே!
அத்திலக வாசனைபோல் அனைத்துலகும் இன்பமுற,
எத்திசையும் புகழ்மணக்க இருந்தபெருந் தமிழணங்கே! தமிழணங்கே!
உன் சீரிளமைத் திறம் வியந்து
செயல் மறந்து வாழ்த்துதுமே! வாழ்த்துதுமே! வாழ்த்துதுமே!

- மனோன்மணியம் பெ. சுந்தரம் பிள்ளை

PLEDGE

India is my Country. All Indians are my brothers and sisters. I love my country and I am proud of its rich and varied heritage. I shall always strive to be worthy of it.

I shall give my parents, teachers and all my elders respect and treat everyone with courtesy.

To my country and my people I pledge my devotion. In their well being and prosperity alone lies my happiness.

SLOKAM

Om Guru Brahma Guru Vishnu
Guru Devo Maheshwaraha,
Guru Saakshat, Para Brahma
Thasmai Sree Guru Ve Namaha

PLEDGE BY THE TEACHERS

I shall in thought, word and deed ever endeavour to uphold the duty of my profession and I will update and impart knowledge freely and without bias.

I will certainly set an example to my wards in every way.

I will teach and treat all my wards equally. I will be impartial in discharging my duties.

I will not stand as a hindrance to the development of faculties and I will always strive for cordial relations among the students.

I will always co-operate with higher authorities and strive to secure national integration to the best of my ability.



SAPTHAGIRI EDUCATIONAL TRUST

"SAI BHAVAN", # 31B, Madley Road, T. Nagar, Chennai - 17. Ph : 4226 7777

BOARD OF MANAGEMENT

Founder Chairman

MJF. Ln. LEO MUTHU

Chief Executive Officer

Thiru. SAI PRAKASH LEOMUTHU

Vice-Chairman

Tmt. KALAISELVI LEOMUTHU

Secretary

Thiru. A. VEERAIYAN

Treasurer

Tmt. SHARMILA RAJAA

Trust Members

Thiru. B. MOORTHY

Thiru. M. VASU

Thiru. R. SATHISH KUMAR

Thiru. P. BALASUBRAMANIAN

Thiru. K. MUNUSAMY



MEMBERS OF THE COLLEGE GOVERNING COUNCIL

1. **Shri. Sai Prakash LeoMuthu**
Sapthagiri Educational Trust
“SAI BHAVAN”, # 31B, Madley Road, T.Nagar, Chennai - 17.
Chairman of the Trust
2. **Prof. Mukesh Mohania**
UGC Nominee
3. **Dr. K. Parthiban**
State Govt. Nominee
4. **Dr. V. Mary Anita Rajam**
Anna University Nominee
5. **Prof. Dr. R. Ramakrishnan**
Member / Academic
6. **Mr. J. Sujith Kumar**
Member / Industry
7. **Mr. B. Moorthi**
Member
8. **Mr. K. Munusamy**
Member
9. **Mr. R. Sathish Kumar**
Member
10. **Mr. P. Balasubramanian**
Member
11. **Dr. S. Rajarajan**
Member
12. **Dr. B. Sreedevi**
Member
13. **Dr. K. Palanikumar**
Ex-Officio

PATRONS AND ADVISORY COMMITTEE

Dr. T. C. MOHAN

Former Vice - Chancellor,
Annamalai University, Tamil Nadu

Dr. A. KALANIDHI

Vice Chairman
Commonwealth Science & Technology Academy
for Research (C-STAR)

Mr. V. PONRAJ

Advisor to **Dr. A.P.J. Abdul Kalam**,
Former President of India

EXECUTIVE COMMITTEE

MJF. Ln. LEO MUTHU

Chairman

Shri. SAI PRAKASH LEOMUTHU

Chief Executive Officer

Dr. K. PALANIKUMAR

Principal

Dr. K. MARAN

Director - SIMS

STAFF COUNCIL

1. **Dr. K. Palanikumar** Principal
2. **Dr. S. Murali** Associate Professor, Department of Mechanical Engineering
3. **Dr. M. Jagadeesh Kumar** Head, Department of Electrical & Electronics Engineering
4. **Dr. G. Prakash** Associate Professor, Department of Electrical & Electronics Engineering
5. **Dr. G. Thamarai Selvi** Head, Department of Electronics & Communication Engineering
6. **Dr. B. Sreedevi** Head, Department of Computer Science & Engineering
7. **Dr. K.C. Suresh** Associate Professor, Department of Computer Science & Engineering
8. **Dr. V. Brindha Devi** Head, Department of Information Technology
9. **Dr. D. Muruga Radha Devi** Professor, Department of Information Technology
10. **Ms. K. Ramya** Head, Department of Civil Engineering
11. **Dr. C. R. Senthilnathan** Head, Department of Master of Business Administration
12. **Mr. V. Balaji** Associate Professor, Department of Science & Humanities
13. **Dr. S. Rathika** Associate Professor, Department of Science & Humanities
14. **Mr. T. Prabahar Godwin James** Co-ordinator, Training & Placement
15. **Dr. S. Rajarajan** Co-ordinator, Research and Development
16. **Dr. T.N.M. Tharinni Mai** Senior Librarian
17. **Dr. P. Ranjith** Physical Director
18. **Mr. S. Ramaraj** Manager

PLANNING AND MONITORING BOARD

Name	Position in the committee	Designation
Dr. K.Palanikumar	Chairperson	Principal
Mr. A.Srithar	Member	HOD/MECH
Ms. B. Anusha	Member	Asso. Prof./S&H
Dr. A. Rajendra Prasad	Member	Principal/SEC
Mr. K. Rajagopal	Member	General Manager - Ramco Cements
Dr. A. Velayudham	Member	Deputy Director - CVRDE - Avadi, Chennai
Mr. A. Vijayakumar	Member	Architecture -Vijaya Associates, T. Nagar, Chennai

ANTI – RAGGING COMMITTEE

Name of the Members	Designation	Associated with
Dr. K. Palani Kumar	Principal / SIT	Principal (Head of the Institution)
Mr. K. Bharath	Sub-Inspector of Police, Kundrathur	Sub-Inspector of Police
Mr. Panjatcharam	Revenue Taluk Civil Officer	Revenue Dept / Govt. of Tamilnadu
Mr. A. Baskaran	Official of NGO	Good Life Orphanage
Ms. Cynthia Milton	Business	Representative of Parents
Mr. G. Mohanraj	Student	Representative of Student
Ms. Kowsalya	Student	Representative of Student
Mr. M. Ramesh	Junior Assistant, Office	Representative of Non-Teaching Staff
Mr. Vasanth Subramanian	Press Reporter	Media Person

ANTI-RAGGING SQUAD

Name	Designation	Associated with
Dr. K. Palani Kumar	Principal/SIT	Principal (Head of the Institution)
Dr. S. Rajarajan	Convener	Professor/ECE
Mr. V. Balaji	HOD/S&H	Member - Faculty
Dr. G. Thamarai Selvi	HOD / ECE	Member - Faculty
Dr. V. Brindha Devi	HOD/IT	Member - Faculty
Dr. G. Prakash	AP/EEE	Member - Faculty
Dr. B. Sreedevi	HOD / CSE	Member - Faculty
Mr. M. Ramesh	Junior Assistant, Office	Member - Faculty
Dr. K. Baranidharan	Professor/MBA	Member - Faculty

DISCIPLINE AND WELFARE COMMITTEE

Name of the Members	Position in the committee	Designation
Dr. K. Palanikumar	Chairman	Principal
Dr. G. Thamaraiselvi	Member	HOD / ECE
Dr. B. Sreedevi	Member	HOD/CSE
Dr. V. Brindha Devi	Member	HOD/IT
Dr. S. Murali	Member	Associate Professor/MECH
Mr. V. Balaji	Member	HOD/S&H
Ms. K. Rekha	Member	Assistant Professor/EEE

GRIEVANCES & REDRESSAL CELL

Name	Position in the committee	Designation
Dr. K. Palanikumar	Chairperson	Principal
Dr. S. Rajarajan	Convener	Professor/ECE
Dr. G.Thamaraiselvi	Member	Prof & HOD/ECE
Dr. B. SreeDevi	Member	HOD/CSE
Mr. A.Srithar	Member	HOD/MECH.
Dr. K. Baranidharan	Member	Professor/MBA
Mr. A. Anbazhagan	Member	Asso.Prof./EEE
Ms. P. Leela Jancy	Member	Asst. Prof/ IT

INTERNAL COMPLAINTS COMMITTEE

Name	Position in the committee	Designation
Dr. K. Palanikumar	Chairperson	Principal
Dr. B. SreeDevi	Convener	HOD/CSE
Dr. G.Thamaraiselvi	Member	Prof & HOD/ECE
Dr. V. Brindha Devi	Member	HOD/IT
Ms. K.Ramya	Member	HOD/CIVIL
Ms. E.Maheswari	Member	Asso.Professor/EEE
Dr.S.M.Lalitha	Member	Asso. Professor/MATHS
Dr.S.Helen Roselin Gracy	Member	Asst. Prof/MBA
Dr. Kannan Gireesh	Student's Counsellor	CEO, Live Life Education Pvt.Ltd.

PREAMBLE

SAPTHAGIRI EDUCATIONAL TRUST is a non-profitable trust established by the Philanthropist, M.J.F. Ln. LEO MUTHU, Managing Director of Leo Group of Companies. Being an ardent Educationalist, with a vision to promote Technical Education in semi-urban areas, he established SRI SAI RAM INSTITUTE OF TECHNOLOGY, in the year 2008, at Sai Leo Nagar, Dharkast, near Tambaram, a few kilometers away from the well known Kishkinta Amusement Park.

With the motto, “ Prosperity through quality technical education”, the institution disseminates knowledge and entrepreneurship skills among the students and strives to achieve academic excellence in the fields of technical, computer and management education.

The college is situated amidst sylvan surroundings and everlasting green locality at Sai Leo Nagar, West Tambaram with all essential and suitable infrastructural facilities with regard to Classrooms, Workshops, Drawing Halls, Laboratories, Air-conditioned & Computerised Library, Computer Centres, Internet facilities with RF connectivity at a speed of 68Mbps, CAD/CAM Laboratory, Auditoriums, Audio Visual (A/c) Hall, Seminar Halls, Canteen and Sports complex. The college also has its own perennial water resources to cater to its various needs. Within the campus a PCO, Courier Service, a big Stationery store and the core Banking facility from City Union Bank, Poonthandalam Branch with 24 hours ATM service within the campus to help the students and the staff. The whole campus has wi-fi connectivity.



Courses offered



The institution offers the following Four Year Degree Courses at UG level leading to the award of B.E. / B.Tech. degrees from the Anna University, Chennai

1. Civil Engineering
2. Computer Science and Engineering
3. Electrical and Electronics Engineering
4. Electronics and Communication Engineering
5. Mechanical Engineering
6. Information Technology

The institution also offers Post-Graduate Degree Course leading to the award of M.E. / M.B.A., degree from the Anna University.

1. M.E. Industrial Safety Engineering - Full time - 2 years
2. Master of Business Administration (M.B.A.) Full time - 2 years



Features that set us apart

- ★ **An autonomous institution for ten years.**
- ★ **Accreditation for Five Departments (CSE, EEE, ECE, MECH & IT) by National Board of Accreditation.**
- ★ NAAC Accreditation with a CGPA of 3.30 & A+ Grade for 5 years.
- ★ ISO Certification with excellent remarks and has NIRF RANKING.
- ★ Achievement within Top 10 among all Engineering Colleges in Tamil Nadu ever since Anna University started announcing the rankings.
- ★ **Attainment of 95% results over the years with 318 University Ranks including 2 Gold medals since inception.**
- ★ Consistent placement record of over 90% in reputed firms.
- ★ **Attained Excellent Band in the ranking list released by the MHRD, Government of India, Ranked a within Top 25 in Atal Ranking of Institutions on Innovation Achievements (ARIIA) Rankings by the Ministry of Education, Government of India.**
- ★ **Recognized as one of the best institutions under Institute Innovation Council (IIC) by the Government of India.**
- ★ Recognition as IIRS - NODAL Center for online courses.
- ★ Approval as a Host Institution for Innovation under the Scheme support for Entrepreneurial and Management Development through incubators by the MSME, New Delhi.
- ★ Average experience of faculty - 12 Years.
- ★ Activities like FDP, Technical Workshops, International and National Conferences regularly.
- ★ Excellent performance of Vibrant Industry-Institute-Interaction Cell and DST Funded IEDC cell.
- ★ Recognition of student's projects at various International Conferences and Workshops.
- ★ Amenities like modern sports complex & good hostel facilities within the campus.
- ★ Idyllic campus amidst sylvan surroundings spread over 500 acres.
- ★ Dedicated & Proven Cell for Personality Development & Effective Counselling.
- ★ Career development and soft skill Training Programmes.
- ★ Well stacked centrally air-conditioned library with National & International Journals.
- ★ Focus on integrating Technology & Management in a cross culture environment.
- ★ The management awards Scholarship worth over Rs.50 lakh every year.
- ★ Dedicated and Proven Cell for Innovation and Entrepreneurship Development
- ★ Vibrant student clubs ensuring multiple avenues for the students to exhibit their skills.
- ★ Air Conditioned multi-purpose, World Class Leo Muthu Indoor Stadium which measures about 2,00,000 sq.ft. with a seating capacity in excess of 7,000 people.



Recognition & Accreditation

Accreditation & Recognition



All major departments of **Sri Sairam Institute of Technology** have been accredited by NBA



Sri Sairam Institute of Technology has got NAAC Accreditation with a **CGPA of 3.30 & A+ Grade** for 5 years from Sept. 2018



NIRF - Sri Sairam Institute of Technology has been ranked within 250 Band Engineering Institutions of the country ranking list released by the MHRD, Government of India.



ARIIA - Sri Sairam Institute of Technology has been ranked **EXCELLENT BAND** in the ARIIA ranking list released by the MHRD, Government of India.



AICTE-CII Survey of Industry-Linked Technical Institute.

Sri Sairam Institute of Technology has been **Awarded Platinum Category** by AICTE-CII Survey of Industry-Linked Technical Institute.



Sri Sairam Institute of Technology is one of the **Best Performing Institution** Recognised by MHRD Innovation Cell by Ministry of Human Resource Development, Government of India.



Sri Sairam Institute of Technology is awarded for maintaining, promoting and encouraging the culture of "SWACHHTA" in higher educational institutions in the country.



Autonomous Status... Testimony to Quality !

The University Grants Commission (UGC) has accorded autonomous status to Sri Sairam Institute of Technology for a period of 10 years.

MEMBERS OF THE STAFF

Dr. K. PALANIKUMAR, M.E., Ph.D.,
Principal

SCIENCE & HUMANITIES

MATHS

Teaching

- | | | |
|-----|--|---------------------------|
| 1. | Mr. V. Balaji, M.Sc., M.Phil., <u>Ph.D.</u> | Associate Professor |
| 2. | Dr. S. M. Lalitha, M.Sc., M.Phil., Ph.D. | Associate Professor |
| 3. | Mr. D. Muralidharan, M.Sc., M.Phil., B.Ed., <u>Ph.D.</u> | Associate Professor |
| 4. | Dr. V. Yuvaraj, M.Sc., M.Phil., Ph.D. | Associate Professor |
| 5. | Dr. D. Paul, M.Sc., M.Phil., Ph.D., | Asst. Professor - Gr. III |
| 6. | Dr. V. Rajeshwari, M.Sc., M.Phil., Ph.D | Asst. Professor – Gr. III |
| 7. | Dr. S. James Immanuel, M.Sc., Ph.D | Asst. Professor – Gr. III |
| 8. | Ms. T. Flora, M.Sc., M.Phil., <u>Ph.D.</u> | Asst. Professor - Gr. II |
| 9. | Ms. R. Avudainayaki, M.Sc., M.Phil., <u>Ph.D.</u> | Asst. Professor - Gr. II |
| 10. | Ms. Y. Sherlin Nisha, M.Sc., M.Phil., <u>Ph.D.</u> | Asst. Professor - Gr. III |
| 11. | Ms. N. Aishwarya, M.Sc., M.Phil. | Asst. Professor - Gr. III |
| 12. | Mr. A. Joseph Thomas Rajan, M.Sc., M.Phil. | Asst. Professor - Gr. III |
| 13. | Mr. C. Seetharaman, M. Sc., | Asst. Professor – Gr. III |
| 14. | Mr. A. Ponmanaselvan, M.Sc., M. Phil. | Asst. Professor – Gr. III |
| 15. | Ms. G. Uma Maheswari, M.Sc., | Asst. Professor – Gr. III |
| 16. | Mr. K. Mohankumar, M.Sc., M. Phil. | Asst. Professor – Gr. III |

PHYSICS

Teaching

- | | | |
|----|---|---------------------------|
| 1. | Ms. B. Anusha, M.Sc., M.Phil., <u>Ph.D.</u> , | Associate Professor |
| 2. | Dr. T. Arivazhagan, M.Sc., M.Phil., Ph.D., | Asst. Professor - Gr. III |
| 3. | Ms. V. Ramya, M.Sc., M.Phil., | Asst. Professor - Gr. II |

- | | | |
|----|--|---------------------------|
| 4. | Ms. C. Deepa, M.Sc., M.Phil., <u>Ph.D.</u> | Asst. Professor – Gr.III |
| 5. | Mr. E. Viswanathan, M.Sc., M.Phil. | Asst. Professor - Gr. III |

CHEMISTRY

Teaching

- | | | |
|-----|--|---------------------------|
| 1. | Dr. S. Rathika, M.Sc., M.Phil., Ph.D. | Associate Professor |
| 2. | Dr. S. Daisylin Anbu Sujitha, M.Sc, Ph.D. | Associate Professor |
| 3. | Ms. S. Sumathi, M.Sc, M.Phil, <u>Ph.D.</u> | Associate Professor |
| 4. | Dr. K. Rajeswari, M.Sc., M.Phil, Ph.D | Assistant Professor |
| 5. | Ms. R. Kiruthika, M.Sc, M.Phil, | Asst. Professor – Gr.III |
| 6. | Ms. I. Jemina, M.Sc, M.Phil, | Asst. Professor – Gr.III |
| 7. | Ms. T. Meena, M.Sc, | Asst. Professor – Gr.III |
| 8. | Ms. S. Anjali, M.Sc., M. Phil. | Asst. Professor – Gr. III |
| 9. | Mrs. C. Padmapriya, M.Sc., M.Phil | Asst. Professor – Gr. III |
| 10. | Mrs. G. Lakshmi Priya, M.Sc., M. Phil. | Asst. Professor – Gr. III |

ENGLISH

Teaching

- | | | |
|----|---|---------------------------|
| 1. | Ms. P. Yamini, M.A., M.Phil., | Asst. Professor – Gr.II |
| 2. | Ms. K. Poornima Varalakshmi M.A., M.Phil., <u>Ph.D.</u> , | Asst. Professor – Gr.III |
| 3. | Ms. K. Ezhilmathi, M.A., M.Phil | Asst. Professor – Gr.III |
| 4. | Ms. D. Beena Devi, M.A., M.Phil, | Asst. Professor – Gr.III |
| 5. | Ms. M. Ramya Sri, M.A. | Asst. Professor – Gr. III |
| 6. | Ms. V. Gayathri. M.A., | Asst. Professor – Gr. III |
| 7. | Ms. S. Subashini, M.A. | Asst. Professor – Gr. III |
| 8. | Ms. S. Vishnupriya, M.A., M. Phil. | Asst. Professor – Gr. III |

Non – Teaching – S & H Dept.,

- | | | |
|----|----------------------------|----------------|
| 1. | Mr. S. Thiagarajan, M.Sc., | Lab Technician |
| 2. | Mr. N. Anbazhagan | Lab Assistant |
| 3. | Mr. D. Jacob | Lab Assistant |

4.	Ms. J. Joice Esther	Lab Assistant
5.	Ms. K. Vijayalakshmi	Office Assistant
6.	Mr. J. Subarubi	Lab Technician
7.	Ms. J. Mani Megalai	Lab Technician

COMPUTER SCIENCE & ENGINEERING

Teaching

1.	Dr. B. Sreedevi, M.Tech., Ph.D.,	Head & Professor
2.	Dr. A.M . Sameeullah, M.Sc., (Engg.,) Ph.D	Professor
3.	Dr. K. C. Suresh, M.E., Ph.D	Associate Professor
4.	Mr. T. Prabahar Godwin James, MCA, M.Phil., M.Tech.,	Associate Professor
5.	Mr. R. Rajesh, M.E	Associate Professor
6.	Mr.J.Jayachandran,M.Phil,M.E	Assoc Professor
7.	Ms.J.M.Nandhini, M.E. <u>Ph.D.</u>	Assoc Professor
8.	Dr. M. Pachhaimmal @ Priya, M.Tech., Ph.D	Asst. Professor – Gr. II
9.	Ms. P. Suganthi, M.E.,	Asst. Professor – Gr. II
10.	Mr. P. Annadurai, M.Tech.,	Asst. Professor – Gr. II
11.	Ms. D. Rajalakshmi, M.E., <u>Ph.D</u>	Asst. Professor – Gr. II
12.	Ms. D. Roopa, M.E., <u>Ph.D.</u> ,	Asst. Professor – Gr. II
13.	Ms. G. Vinithra, M.E.,	Asst. Professor – Gr. III
14.	Mr. G. Ilamurugan, M.E.,	Asst. Professor – Gr. III
15.	Ms. S. Madhupriya, M.E., <u>Ph.D.</u> ,	Asst. Professor – Gr. III
16.	Ms. M. Bharathi, M.E.,	Asst. Professor – Gr. III
17.	Ms. S. Ananthi, M.E.,	Asst. Professor – Gr. III
18.	Mr. P. Rayavel, M.E., <u>Ph.D.</u> ,	Asst. Professor – Gr. III
19.	Ms. C. Vanaja, M.E.,	Asst. Professor – Gr. III
20.	Mr. P. Ashok, M.E., <u>Ph.D.</u> ,	Asst. Professor – Gr. III
21.	Ms. M. Subashini, M.E., <u>Ph.D.</u> ,	Asst. Professor - Gr. III
22.	Ms. B. Suganya, M.Tech.,	Asst. Professor – Gr. III

23.	Mr. D. Naveen Raju, M. Tech., <u>Ph.D.</u> ,	Asst. Professor – Gr. III
24.	Mr. M. Parthiban, M.E., <u>Ph.D.</u> ,	Asst. Professor – Gr. III
25.	Dr. M. Anbarasan, M.E., Ph.D	Asst. Professor – Gr. III
26.	Ms. Vijayalakshmi Veerabahu, M.E.	Asst. Professor – Gr. III
27.	Dr. P. Punithavathi, M.E., Ph.D	Asst. Professor – Gr. III
28.	Ms. J. Gladys Aani Sujitha, M.E.	Asst Professor – Gr. III
29.	Ms. H. Kavietha, M.E.	Asst Professor – Gr. III
30.	Ms. C. Lekha, M.E.	Asst Professor – Gr. III
31.	Mr.S.Murugesan,M.E, <u>Ph.D.</u> ,	Asst Professor – Gr. III
32.	Mr.J.Thirunavukkarasu, M.E	Asst Professor – Gr. III
33.	Ms.V.Aswni,M.E	Asst Professor – Gr. III
34.	Ms.A.Priyadarshini,M.E	Asst Professor – Gr. III

Non – Teaching

1.	Mr. B. Sugumar, B.E.,	System Programmer
2.	Mr. R. Paul Pandian, DCE	Lab Technician
3.	Mr. A. Mohan	Office Assistant
4.	Ms. S. Saranya, B.Sc.,	Lab Technician
5.	Mr. Milkiyas	Lab Technician
6.	Ms. Andrea Galdina	Jr. Assistant
7.	Ms. Leoni Priya	Jr. Assistant
8.	Ms. S.S. Kavitha	Lab Technician

ELECTRICAL AND ELECTRONICS ENGINEERING

Teaching

1.	Dr. M. Jagadeeshkumar, M.E., Ph.D.,	HOD & Professor
2.	Dr. G. Prakash, M.E. Ph.D,	Associate Professor
3.	Dr. T. Muthamizhan,M.E Ph.D.,	Associate Professor
4.	Mr. A. Anbazhagan, M.Tech. <u>Ph.D.</u>	Associate Professor

5.	Ms. E. Maheswari, M.E., <u>Ph.D.</u> ,	Associate Professor
6.	Dr. S. Sivarajeswari, M.E., Ph.D.,	Associate Professor
7.	Mr. M. Veerasundaram, M.E	Associate Professor
8.	Ms. A. Sasikala, M.Tech.,	Asst. Professor – Gr. II
9.	Ms.G.Ezhilarasi G M.Tech.,	Asst. Professor – Gr. II
10.	Ms. N. Shanthy, M.E., M.B.A., <u>Ph.D.</u>	Asst. Professor – Gr. II
11.	Mr. R. Dhanasekar, M.E., <u>Ph.D.</u>	Asst. Professor – Gr. II
12.	Mr. P. Rathnavel, M.E.,	Asst. Professor – Gr. II
13.	Mr. L. Vijayaraja, M.Tech., <u>Ph.D.</u>	Asst. Professor – Gr. II
14.	Ms. K. Rekha, M.E.,	Asst. Professor – Gr. III
15.	Mr. S. Surenderanath, M.E.,	Asst. Professor – Gr. III
16.	Ms. T. Thenmozhi, M.E.,	Asst. Professor – Gr. III
17.	Ms. R. Anitha, M.E.,	Asst. Professor – Gr. III
18.	Ms. M. Razmah, M.E.,	Asst. Professor – Gr. III
19.	Ms. R. Kiruthiga, M.Tech.,	Asst. Professor – Gr. III

Non – Teaching

1.	Mr. A. Gopinath, DEEE.,	Lab Technician
2.	Mr. S. Thangappan,	Electrician
3.	Mr. C. Jambulingam	Office Assistant
4.	Ms. J. Nithya, DEEE	Lab Technician
5.	Ms. R. Kousalya, DECE	Lab Technician
6.	Mr. M. Ramesh, MA	Junior Assistant
7.	Ms. S. Hemalatha	Office Assistant
8.	Ms. G. Saranya	Lab Technician

ELECTRONICS AND COMMUNICATION ENGINEERING

Teaching

1.	Dr. G. Thamarai Selvi, M.E., Ph.D.,	HOD & Professor
2.	Dr. S. Rajarajan, M.E., Ph.D.,	Professor
3.	Dr. P. Saravanan, M.E., Ph.D.,	Associate Professor
4.	Dr. G. Saravanan, M.E., Ph.D.,	Associate Professor
5.	Dr. Su. Suganthi, M.Tech., Ph.D.,	Associate Professor
6.	Dr. R. Prabha, Ph.D.,	Associate Professor
7.	Mr. Ramprasad Maharana, M.E.,	Associate Professor
8.	Ms. S. Deivanayagi, M.Tech., <u>Ph.D.</u> ,	Associate Professor
9.	Ms. R. Lakshmi Devi, M.Tech.,	Asst. Professor – Gr. II
10.	Ms. G. Saritha, M.E., <u>Ph.D.</u> ,	Asst. Professor – Gr. II
11.	Mr. N. Oral Roberts, M.E.,	Asst. Professor – Gr. II
12.	Ms. K. Sumathi, M.E., <u>Ph.D.</u> ,	Asst. Professor – Gr. II
13.	Ms. V. Subashini, M.E.,	Asst. Professor – Gr. II
14.	Ms. G. Valarmathi, M.E., <u>Ph.D.</u> ,	Asst. Professor – Gr. II
15.	Mr. V. Narasimman, M.E.,	Asst. Professor – Gr. II
16.	Ms. K. Sangeetha, M.E.,	Asst. Professor – Gr. II
17.	Ms. D. Pushgara Rani, M.E.,	Asst. Professor – Gr. II
18.	Mr. A. Ravindran, M.E., <u>Ph.D.</u> ,	Asst. Professor – Gr. II
19.	Ms. G.P. Bharathi, M.Tech., <u>Ph.D.</u> ,	Asst. Professor – Gr. II
20.	Ms. K. Sivasankari, M.E.,	Asst. Professor – Gr. III
21.	Ms. R. Janaki, M.E.,	Asst. Professor – Gr. III
22.	Ms. S. Sweetline Shamini, M.E.,	Asst. Professor – Gr. III
23.	Mr. S. Prasath Kumar, M.E.,	Asst. Professor – Gr. III
24.	Ms. P. Rajeshwari, M.E.,	Asst. Professor – Gr. III

Non – Teaching

1. Mr. D. Jagan, B.E.
2. Ms. L. Rajeswari, ITI
3. Mr. Lazar
4. Mr. Vijayaraman
5. Ms. J. Gigy Philip
6. Mr. Megavannan, DECE
7. Ms. B. Ramya, B.Com.,
8. Mr. N. Rajasekaran

System Programmer
Lab Assistant
Office Assistant
Lab Assistant
Lab Assistant
Lab Technican
Jr. Assistant
Lab Assistant

INFORMATION TECHNOLOGY

Teaching

1. **Dr. V. Brindha Devi, M.E., Ph.D.,**
2. Dr. D. Muruga Radha Devi, M.E., Ph.D.,
3. Dr. D. Gokulakrishnan, M.E., Ph.D.,
4. Ms. P. Leela Jancy, M.E., Ph.D.
5. Ms. A. Ponmalar, M.E., Ph.D.
6. Ms. B. Deepa, M.E., Ph.D.
7. Ms. K. Anuratha, M.E., Ph.D.,
8. Ms. C. Rekha, M.E., Ph.D.
9. Ms. S. Sujeetha, M.Tech.,
10. Ms. J. Ghayathri, M.E.,
11. Ms. P. Subha, M.E.
12. Mr. M. Gnana Prakash, M.E., Ph.D.
13. Ms. P. Sharmila, M.E., Ph.D.
14. Mr. C. Srinivasan, M.E.,
15. Mr.S.Mohamed Sanjar Khan, M. E,
16. Ms. J. Ilakkiya, M.Tech.,
17. Mr. T. Selvaganapathy, M.Tech.,
18. Ms. R. Jegatha, M.E.,
19. Mr. P. Suthahar, M.E.,

HOD & Professor

Professor
Associate Professor
Associate Professor
Associate Professor
Associate Professor
Asst. Professor – Gr. II
Asst. Professor – Gr. II
Asst. Professor – Gr. II
Asst. Professor – Gr. II
Asst. Professor – Gr. III
Asst. Professor – Gr. III
Asst. Professor – Gr. III
Asst. Professor – Gr. III
Asst. Professor – Gr. III
Asst. Professor – Gr. III

20.	Ms. R.Shobana Lakshmi, M.Tech.,	Asst. Professor – Gr. III
21.	Ms. Josephine Ruth Fenitha, M.E.	Asst. Professor – Gr. III
22.	Mr. R. Viswananth, M.E.,	Asst. Professor – Gr. III
23.	Ms. K. Poorna Pushkala, M.E.	Asst. Professor – Gr. III
24.	Ms. R. Sanchana, M. Tech.	Asst. Professor – Gr. III
25.	Ms.S.Anubha Pearline, M. Tech., <u>Ph.D.</u>	Asst. Professor – Gr. III
26.	Ms. M. Shanmughapriya, M.E., <u>Ph.D.</u>	Asst. Professor – Gr. III
27.	Ms. R. Prabavathi, M.E., <u>Ph.D.</u>	Asst. Professor – Gr. III

Non- Teaching

1.	Ms. S. Geetha, BCA	Lab Technician
2.	Mr. M. Vinothkumar, B.Com.,	Junior Assistant
3.	Mr. L. Chandrasekaran	Lab Assistant
4.	Ms. E. H. Revathi, M. Sc.,	Lab Technician
5.	Mr. S. Ramesh,	Lab Technician
6.	Mr. K. Gowtham, B.Sc.,	Lab Technician
7.	Mr. Manikandan, B.Sc.,	Lab Technician
8.	Ms. S. Visalakshi	Office Assistant

MECHANICAL ENGINEERING

Teaching

1.	Dr. K. Palanikumar, M.E., Ph.D.,	Professor & Principal
2.	Mr. A. Srithar, M.E., MBA, Ph.D.,	Associate Professor & HOD
3.	Dr. G. Shanmuga Sundar, M.E., Ph.D.,	Associate Professor
4.	Dr. S. Murali, M.E., MBA., Ph.D.,	Associate Professor
5.	Mr. K. Velavan, M.E., <u>Ph.D.</u> ,	Associate Professor
6.	Mr. A. Ponshanmuga Kumar, M.E., <u>Ph.D.</u> ,	Associate Professor
7.	Mr. J.M. Prabhu Dass, M.Tech ., <u>Ph.D.</u> ,	Associate Professor
8.	Mr. P. Ramu, M.E., <u>Ph.D.</u> ,	Associate Professor
9.	Mr. D. Kasinathan, M.E., <u>Ph.D.</u> ,	Asst. Professor – Gr. II
10.	Mr. R. Vigneswaran, M.E., <u>Ph.D.</u> ,	Associate Professor

11.	Mr. R. Sridhar, M.E.,	Asst. Professor – Gr. II
12.	Mr. P. Nanthakumar, M.E., <u>Ph.D.</u> ,	Asst. Professor – Gr. II
13.	Mr. N. Premkumar, M.E., <u>Ph.D.</u> ,	Asst. Professor – Gr. II
14.	Mr. M. Balachandar, M.Tech., <u>Ph.D.</u> ,	Asst. Professor – Gr. III
15.	Mr. B. Karthikeyan, M.E., <u>Ph.D.</u> ,	Associate Professor
16.	Mr. R. Sangama Eswaran, M.E., <u>Ph.D.</u> ,	Asst. Professor – Gr. III
17.	Mr. Ashwin Sailesh, M.E., <u>Ph.D.</u> ,	Asst. Professor – Gr. III
18.	Mr. E. Balakrishnan, M.E., <u>Ph.D.</u> ,	Asst. Professor – Gr. III
19.	Mr. S. Meganathan, M.E.,	Asst. Professor – Gr. III

Non – Teaching

1.	Mr. T. Thangamani, ITI.,	Lab Technician
2.	Mr. D. Govindaraj, ITI.,	Welder
3.	Mr. P. Ramanna	Lab Assistant
4.	Mr. R. Nagaraj	Lab Assistant
5.	Mr. J. Rajalingam	Lab Assistant
6.	Mr. A. Sasidharan	Lab Technician
7.	Mr. Bala Prasanth Kumar	Lab Technician
8.	Mr. S. Kumaran – Plumber	Lab Technician

CIVIL

Teaching

1.	Ms. K. Ramya, M.Tech., <u>Ph.D.</u>,	HOD & Asst. Prof. – Gr. II
2.	Ms. R. M. Asha, M.E.,	Associate Professor
3.	Mr. P. Pondeepak, M.E.,	Asst. Professor – Gr. III
4.	Ms. M. Udhayanila, M.E.,	Asst. Professor – Gr. III
5.	Mr. R. Sridhar, M.E.,	Asst. Professor – Gr. III
6.	Mr. M. Murugan, M.Tech.,	Asst. Professor – Gr. III
7.	Mr. M. Kannan, M.E.	Asst. Professor – Gr. III
8.	Mr. C. Sivaguru, M.E.,	Asst. Professor – Gr. III
9.	Mr. S. Sivarama Krishnan, M.E., <u>Ph.D.</u> ,	Asst. Professor – Gr. III
10.	Mr. J. Rajesh, M.E.,	Asst. Professor – Gr. III

Non – Teaching

- | | | |
|----|----------------------------|------------------|
| 1. | Mr. P. Adinarayanan, DCE., | Lab Technician |
| 2. | Mr. E. Natarajan | Office Assistant |

MASTER OF BUSINESS ADMINISTRATION

Teaching

- | | | |
|-----|---|------------------------------|
| 1. | Dr. C.R. Senthilnathan, B.Sc., M.A., MBA., M.Phil., Ph.D., | Head & Professor |
| 2. | Dr. K. Baranidharan, MBA., Ph.D., | Professor |
| 3. | Dr. V. Selvakumar, B.E., M.B.A., M.Phil., Ph.D., | Associate Professor |
| 4. | Dr. S. Helen Roselin Gracy, M.B.A., M.Phil., Ph.D., | Associate Professor – Gr II |
| 5. | Mr. R. Udhayasankar, M.Com., M.Phil., M.Ed., M.B.A., <u>Ph.D.</u> , | Associate Professor – Gr. II |
| 6. | Mr. P. Sridharan, M.B.A., M.Phil. | Asst. Professor – Gr. II |
| 7. | Dr. P. S. Immaculate, M.B.A., M.Phil., Ph.D., | Asst. Professor – Gr. III |
| 8. | Mr. R. Sathishkumar, M.B.A., | Asst. Professor – Gr. III |
| 9. | Ms.V.Jhansi MBA | Asst. Professor – Gr. III |
| 10. | Ms T.Ilakkiya MBA, (SET) PGDLL, (Ph.D) | Asst. Professor – Gr. III |

Non-teaching

- | | | |
|----|--------------------------|---------------|
| 1. | Ms. H. Bharathi, B.Com., | Jr. Assistant |
|----|--------------------------|---------------|

M.E. INDUSTRIAL SAFETY ENGINEERING

- | | | |
|----|---|---------------------|
| 1. | Dr. M. Mareeswaran, M.E. Ph.D, | Associate Professor |
| 2. | Mr. S. Balasubramani, M.E. | Assistant Professor |
| 3. | Mr. R. Arunkumar, M.E. , <u>Ph.D.</u> , | Assistant Professor |

LIBRARY

Librarian

- | | | |
|----|---|---|
| 1. | Dr. T.N.M. Tharinni Mai, M.A. M.L.I.S., MBA, M.Phil, Ph.D., | Senior Librarian &
Associate Professor |
|----|---|---|

Non-Teaching

- | | | |
|----|--------------------------------------|---------------------|
| 1. | Ms.S.Kavitha, M.Com., MLIS., | Assistant Librarian |
| 2. | Ms.A.Pappi, M.A., BLIS., | Asst Librarian |
| 3. | Mr.K.PK.Mohan Muthukumar M.A.,MLIS., | Jr. Asst |

PHYSICAL DIRECTOR

- | | | |
|----|---|--------------------|
| 1. | Dr. P. Ranjith, M.P.Ed., M.Phil, Ph.D., | Physical Director |
| 2. | Mr. A. Vembu | Sports coordinator |

ADMINISTRATIVE STAFF

- | | | |
|-----|----------------------------------|--------------------|
| 1. | Mr. S. Ramaraj, M.A., | Manager |
| 2. | Mr. V. Avudainayagam, D. Pharm., | S.G. Assistant |
| 3. | Ms. S. Kalaivani, M.Com., | Assistant |
| 4. | Ms. G. Mahalakshmi, B.Com., | Jr. Assistant |
| 5. | Ms. B. Shoba, B.B.A., | Jr. Assistant |
| 6. | Ms. Uma Padmanaban, B.Com., | Accountant |
| 7. | Mr. S. Arul | Office Assistant |
| 8. | Mr. R. Nakkeeran | Office Assistant |
| 9. | Ms. Priya | Jr. Assistant |
| 10. | Ms. M. Kamakshi Sankari | Office Assistant |
| 11. | Mr. B. Murugaiyan, B.Com., MBA | Accounts Assistant |
| 12. | Ms. K. Esther Charles, B.Com., | Accounts Assistant |
| 13. | Ms. Gayathri Jeyaraj | Office Assistant |



Team Work is our Manthra

STUDENT ASSOCIATIONS

The college provides ample avenues for developing technical skills, updating knowledge, personality development and service to the society through the following Associations and Societies. There is a staff advisor to guide the students in the smooth and effective functioning of the Associations.

1. Association of Electronics and Communication Engineering
2. Association of Mechanical Engineering
3. Association of Electrical and Electronics Engineering
4. Association of Computer Science and Engineering
5. Association of Information Technology
6. Association of Science and Humanities
7. Association of Management Studies
8. Association of Civil Engineering
9. Computer Society of India - Student Chapter
10. IEEE - Student Chapter
11. ISTE - Student Chapter
12. SAE Collegiate Club
13. IETE
14. ICI
15. IEDC
16. ED CELL
17. Placement and Training Cell
18. Sports
19. NSS
20. NCC
21. Youth Red Cross
22. Alumni Association

ASSOCIATION OF ELECTRONICS & COMMUNICATION ENGINEERING



The association was started in the academic year 2009-10. Guest Lectures on various topics are arranged regularly. A National level technical paper presentation contest, workshop and quiz program are the regular features. PRAESTANTIA “is conducted every year in August / September. Every academic year, the association arranges for educational tours and industrial visits to develop the industrial knowledge of the students.

ASSOCIATION OF MECHANICAL ENGINEERING

The Mechanical Engineering Association was formed during the academic year 2012-2013 and since its inception, periodical meetings, student seminars and guest lectures have been the regular features. Every year, the association conducts atleast one technical seminar every fortnight with special lectures on the topics most relevant to the curriculum for the benefit of the students. The association organises “MESSI”, an All India Technical Symposium, every year. The association has ambitious plans to include interaction with industries in a broader way, such as, sponsoring students in special seminars, research and development activities, which will ultimately improve the institution - industry relationship remarkably.



ASSOCIATION OF ELECTRICAL AND ELECTRONICS ENGINEERING



In order to develop professional ethics and to build rapport with experienced engineers, the Department of Electrical and Electronics Engineering has its association. In addition to the regular activities like guest lectures by eminent professionals, arranging technical visits, seminars and symposiums, it has been organising State level and National level paper presentation and seminars on latest electrical and electronics

engineering topics, under the banner of “WARRO S” every academic year. Industrial tours to provide industrial exposure to students and staff are arranged regularly.

ASSOCIATION OF COMPUTER SCIENCE AND ENGINEERING

The Association is intended to inculcate the technical passion and mould the budding technocrats. “SINTACS” - a national level technical symposium is conducted, bringing students from other engineering colleges, invoking the technical extravaganza. Frequent guest lecturers from various IT oriented companies create awareness among the student population. Visits to large scale industries emboss orientation between the students and industry professionals. Educational tours in and out the state nourishes practical knowledge. The above activities are highly emphasized by this ambitious association in order to make the students update with the state-of the art technology and to improvise on their technical skill set. The association organizes short term courses which bring the students in contact with the parallel fields of their curriculum like networking, hardware and software concepts.



ASSOCIATION OF INFORMATION TECHNOLOGY

This association is functioning under the name “Dreadnought”. Every year, a national level technical symposium is conducted and many institutions throughout the state are showing overwhelming response. The association conducts other than the national level technical symposium, special seminars and workshops in a big manner regularly.



ASSOCIATION OF CIVIL ENGINEERING

Civil Engineering Association was formed during the academic year 2014-2015. The premier branch of Engineering has been organizing a National level technical symposium “SHRUSTI” every year by inviting eminent and experienced resource persons from industries as well as educational institutions to help the student community at large. Guest lectures, seminars and curriculum related competitions are regular features of the association.



ASSOCIATION OF SCIENCE AND HUMANITIES



This association “SIT SCIHUM” primarily fulfils the aspirations and development of the first year engineering students. National level paper presentation and student seminar is arranged every year for better interaction and exchange of ideas among the first year students. Apart from this, the association is active throughout the year with frequent organization of special lectures by eminent personalities and various co-curricular competitions. The enthusiasm and team spirit of the young students in organizing various activities is outstanding.

ASSOCIATION OF MANAGEMENT STUDIES

The Association of Management Studies comprising mainly of MBA students, periodically conducts seminars, workshops and guest lectures. It also arranges special lecture programmes, educational and industrial visits, paper presentations and other managerial endeavors. It aims at imparting practical skills through frequent interaction with practicing managers and entrepreneurial development programmes. MANFEST, the National Level Meet is conducted for the managerial students every year successfully.



COMPUTER SOCIETY OF INDIA (CSI)



CSI forms a link between the computer related departments of our college and outside industry. Recent developments in IT fields are updated through regular seminars. Course orientation programs for the staff are conducted through this chapter. It has about 1000 students who study computer related courses and are provided with maximum opportunities and channelized to their fields of interest.

INSTITUTE OF ELECTRICAL & ELECTRONICS ENGINEERS (IEEE)

It is the oldest and the largest technical society in the world, having its head quarters in United States of America. A student branch of IEEE functions in our college with students from EEE, ECE & ICE Departments as members. This chapter conducts periodical technical seminars and conferences with the interaction of eminent personalities from leading industries & institutions. The student members are also taken for industrial visits to make them understand the latest trends in their technical fields. It provides them with the best technical magazines, proceedings, transactions, journals etc., published by IEEE, USA. It enables the student members to take part in seminars & conferences conducted by IEEE Student branches of other reputed institutions and to interact with other IEEE members all over the world.



INDIAN SOCIETY FOR TECHNICAL EDUCATION (ISTE)



ISTE plays a great role in enhancing the status of Engineering teachers and students and fulfilling their professional needs. It is ably supported by the Ministry of HRD, AICTE, State Governments and many International agencies in organizing a variety of programmes to develop the competency of Engineering teachers. ISTE association awards best outgoing student award every year.

SAE - CLUB



This Club was established in the academic year 2015 - 2016. Our SAE Club is one of the largest of all the SAE Clubs in the Southern India Section and in the entire country. Other than responding to the prestigious activities of the SAE, our club conducts significant events every year.

INSTITUTE OF ELECTRONICS & TELECOMMUNICATION ENGINEERS (IETE)

IETE, established in 1953 is India's leading recognised technical professional society. It has over 45,000 members spread all over India and in few countries abroad. It provides leadership in a number of scientific and technical areas of direct importance to national development and economy. The basic objective of our IETE chapter is to facilitate the exchange of information and ideas on the advancements in Electronics & Communication Engineering through special lectures, seminars and workshops.



ICI- INDIAN CONCRETE INSTITUTE

Indian Concrete Institute (ICI) is the premier professional body for concrete technology with above 12,000 members with 34 centres spread across India. It has on its fold the captains of Construction Industry, building material manufacturers, Leading Consultants & Civil Engineers, Contractors, Academicians and Educational Institutions. In the year 2016, Sri Sairam Institute of Technology has become a life time member in Indian Concrete Institute. Indian Concrete Institute is one of the leading professional bodies in India. It is dedicated to the cause of disseminating knowledge on concrete, to promote concrete Technology and Construction.



INNOVATION AND ENTREPRENEURSHIP DEVELOPMENT CENTRE (IEDC)

The Innovation and Entrepreneurship Development Centre (IEDC) is a unique centre functioning in the Institute to promote and encourage young and budding entrepreneurial aspirants to showcase their innovative talents in the form of student projects. The outcome of these projects is aimed to bring new products to the market or to develop new methodologies so as to generate/ manufacture existing products in a more cost effective and environment friendly way. The centre is sponsored by the Department of Science and Technology,

Government of India, wherein every year, five best student projects are selected and awarded Rs. 1 lakh for bringing out the project in the form of a new product. The objective of establishing an IEDC is to set up an institutional mechanism to create self employment opportunities and to convert "job-seekers" into "job-generators". Apart from the above, various training programmes like Entrepreneurship Awareness Programmes (EACs), Entrepreneurship Development Programmes (EDPs) and Faculty Development Programmes (FDPs) are also conducted under the flagship of Entrepreneurship Development Institute of India to foster the entrepreneurial culture among the faculty and students.



SSIT- IIC (INSTITUTION'S INNOVATION COUNCIL)

SSIT- IIC has established with approval from ministry of education (MOE) aims) to encourage the creative energy of our student population to work on new ideas and innovation and promote them to create start-ups and entrepreneurial ventures at campus.



IIC will focus on creating complete ecosystem which will foster the culture of Innovation across all educational institutions from ideas generation to pre-incubation, incubation and graduating from the incubator as successful start-ups. IIC will also work on designing ranking system to identify institutions in the forefront of innovation.

IIC will actively engage various central and state agencies to ensure that dedicated budget is allocated for innovation related activities.

Major Functions:

- Students/Faculty associated with IICs will have exclusive opportunity to participate in various Innovation related initiative and competitions organized by MOE's Innovation Cell.
- Win exciting prizes/Certificates every EDP activities.
- Meet/Interact renowned Business Leaders and top-notch academicians.
- Opportunity to nurture and prototype new ideas.
- Mentoring by industry Professionals.
- Experiment with new technologies.
- Visit companies and places and see new culture of Entrepreneurship.

ENTREPRENEUR DEVELOPMENT CELL (ED CELL)

ED cell is regularly conducting entrepreneurial awareness and development programmes for all Engineering, Management and Computer Application Students. Stalwarts from industries are invited to motivate and guide students to develop the entrepreneurial skills.

TRAINING CUM PLACEMENT CELL

Training and Placement Cell is an integral part of our institution. The institute has provided complete infrastructure for the effective functioning of the cell. The cell is sensitized to function all through the year towards generating placement and training opportunities for the students. Training activities are organized throughout the year as an effort towards preparing the prospective students for the campus selection programmes. Reputed industrial houses across the country visit our institute regularly for the campus recruitment programmes. Our pioneering efforts have borne fruits in achieving academic-industrial rapport and we are proud that our students are absorbed by leading giants in the industrial firmament. The placement cell coordinates quite well with the corporate sector and provides well-developed infrastructure to facilitate the campus selection programmes. The cell is designed to function with a high degree of professionalism. It provides almost instantaneous data to the corporate sector with regard to the candidates available for consideration towards placement in accordance with the preserved requirements. Indeed, we have been appreciated more often by the industrial houses for this special features embedded in our work philosophy.

To coordinate the placement activities, the college has a separate placement cell. The placement cell manages its activities collectively by the students and all the heads of the department. The placement coordinators of all the departments involve themselves in all the activities conducted by the Placement cell for updation. The Placement cell has adopted an effective communication system to keep the students informed about potential job opportunities and guide them from time to time.

NOTABLE FEATURES

1. More than 90% placement in the last four years
2. Placed hugely in reputed software industry
3. Higher studies in India and abroad
4. Enhanced avenues and opportunities
5. Accredited by TCS

SPORTS ACTIVITIES

Sports activities are conducted throughout the year to keep the students not only mentally but also physically active. Sai-Leo trophy - Volley ball tournament, Sai Ram Trophy - Cricket Tournament, Leo trophy - Throw ball tournament and South India Level Chess tournament are the regular features of our sports activities. Ample facilities for both indoor and outdoor sports activities are available in the campus. Founder's Trophy, an open tournament in cricket at National level is the newly added event in the packed sports activities.

NATIONAL SERVICE SCHEME (NSS)

The primary objective of the NSS is to inculcate personality and leadership qualities among the students through community service. The NSS unit started functioning in our college in the year 1998 and is involved actively in various programmes. Organizing eye camp, dental camp and blood donation camps, tree planting, helping tribal children, first-aid courses, etc., are some of the outstanding and regular programs of the NSS unit. Besides, special camps at selected villages, distribution of sewing machines and tricycles for physically challenged are also some of the exemplary services done by our unit.



NATIONAL CADET CORPS (NCC)



To develop the qualities of character, courage, discipline, leadership, spirit of adventure and sportsmanship among the youth, there is an NCC Senior Division - 1 (TN) Medical Unit. Cadets are given severe training in Foot Drill, Weapon Training and Air Craft Technology. Our students are encouraged and motivated to take up a career in Armed forces by getting a suitable environment.

YOUTH RED CROSS

An active unit of Youth Red Cross is functioning in the institution. The volunteers are regularly participating in social awareness programmes and competitions conducted by various YRC Units and Anna University apart from our own regular programmes. Red Ribbon Club of our institution functions actively by arranging social awareness programmes and special lectures.



ALUMNI ASSOCIATION

Alumni Meet is arranged every year after annual Convocation. Indeed it is another big celebration. Our Alumni feel proud to be a part of Sri Sai Ram family. Apart from exchanging pleasantries with their teachers and classmates, they provide information regarding their placement and latest trends in their chosen field. Placement opportunities are conveyed to our alumni through their email I.D. Some of our Alumni pursuing higher education in USA, UK, Australia and other Countries, present seminars to our students and inspire them.

STUDENT'S CLUB

1. Agriculture & Farming
2. Automobile Club
3. Code Club
4. Cyber Club
5. Disaster Management & Safety Club
6. ECO and Swacch Bharath
7. Energy Efficiency Club
8. English Language & Literature club
9. Foreign Language Club
10. Fine arts Association
11. Health & Yoga Club
12. M-apps Club

13. Math Club
14. Photography Club
15. Robotics Club
16. Rotaract Club
17. Science club
18. Skill development Club
19. Sai Muthamizh Mandram
20. Young Indian Club
21. Red Ribbon Club

STUDENT'S CELL

1. Entrepreneurship Cell
2. Higher Studies Bureau
3. NCC
4. NSS
5. Women's Forum
6. YRC
7. IPR

GEMS OF SAI RAM UNIVERSITY RANK HOLDERS

SL.NO.	NAME OF THE STUDENT	DEPT.	RANK
2011 BATCH			
1.	R. UMADEVI	MBA	1ST GOLD MEDAL
2.	S. RAMYA	MBA	22
3.	M. SHANMUGA BALAGAN	MBA	31
4.	P. SASIKALA	MBA	33
5.	B. LOKESH	MBA	35
6.	M. AISHWARYA	MBA	36
7.	P. R. PRIYAMVADHA	MBA	40
8.	RAMITHA COENGHA	MBA	43
9.	D. LAKSHMI	MBA	47
10.	R. BALAJI	MBA	50
2012 BATCH			
11.	M. YAKSHANA	ECE	12
12.	J. LYNETTE MARIA	ECE	40
13.	V. SARANYA	CSE	14
14.	R. KHAISER JEHAN	CSE	19
15.	K. VIDHYA	EEE	34
16.	S. SAHANA	EEE	41

17.	R. NARMADHA	EEE	49
18.	K. R. AISHWARYA	IT	48
19.	M. MAGALA	MBA	14
20.	P. HEMA PRIYA	MBA	18
21.	D. MANORANJANI	MBA	21
22.	R. SINDHUJA	MBA	28
23.	V. SAVITHA	MBA	30
24.	V. MEENA	MBA	30
25.	P. PREM ANAND	MBA	31
26.	B. SUGANYA	MBA	39
27.	V. GAYATHRI	MBA	47
28.	S. GAYATHRI	MBA	48
29.	P. SINDUJA	MBA	50
2013 BATCH			
30	DIVYA NATARAJAN	EEE	7
31	GAYATHRI R	IT	11
32	ARUNAPRIYA V	ECE	15
33	KARTHIKA P	EEE	20
34	HASIN M	CSE	30
35	PADMAVATHY A	ECE	30
36	GEETHA S	EEE	31
37	ARUNA D	CSE	32

38	RADHIKALAKSHMI A	CSE	33
39	SATHVI S	CSE	36
40	SUBASHINI K	MBA	36
41	VINOTHINI A	MBA	37
42	GOWRI SANKAR A	EEE	38
43	SHILPA JAIN N	CSE	42
44	RAGUNATH R	ECE	43
45	ANANTHY C R	IT	43
46	KARTHIK RAMAKRISHNAN	IT	44
47	SHARMILA S	MBA	45
48	VIVEK M	IT	46
49	PREMALATHA V	ECE	47
50	ELUMALAI S	ECE	48
51	MOHANA PRIYA S	IT	50

2014 BATCH

52	ASHWIN V	CSE	7
53	JAGANATH R M	CSE	10
54	ABHEEK KUMAR SRIVASTAVA	CSE	10
55	DIVYA S	IT	14
56	KARUNYA T	IT	16
57	PRIYANKA P	IT	17
58	ADIN SHIRLY P	ECE	21
59	ALAMELU R	EEE	22

60	SOWNDARYA K	IT	22
61	VISHNUPRIYA P T	CSE	25
62	JAYASUDHA K R	MBA	28
63	APARNA T	CSE	30
64	KING PRAKATHEESH C	IT	30
65	BADHRINATH S	CSE	33
66	ARAVIND KUMAR S	IT	37
67	JAYALAKSHMI V	ECE	38
68	SUMITHA U	CSE	39
69	PADMAPRIYA P T	ECE	39
70	KEARTHIKA B	ECE	40
71	NIRESHKUMAR K	ECE	42
72	POOJA TRIPATHI	MBA	42
73	HARISH P	IT	43
74	RANJANI SURESH	IT	43
75	PUNITHA N	CSE	47
76	SELVALAKSHMI I	EEE	48
77	SIVASHANKARI S	EEE	48
78	DEVI S	IT	48
79	SOWMYALAKSHMI A	EEE	49
80	SHARMILAJASMINE A	CSE	50
81	VIDHYA K	IT	50
82	SUMAN KUMARI	MBA	50

2015 BATCH

83	SWEATHADEVI G.	ECE	1 GOLD
84	MITHUN. S	MECH	3
85	JEYASUBHA. J	ECE	6
86	KARTHICA. C	EEE	6
87	SIVARANJANI. I .T	CSE	7
88	SANGEETHA NANDHINI. D	ECE	7
89	PRIYA. V	IT	9
90	VARATHARAJAN. S	EEE	9
91	NANDHINI. MA.	EEE	10
92	DIVYA. V	EEE	11
93	KALYANI. K	CSE	13
94	RAMYA. V	CSE	18
95	MARAGATHAM.R	IT	18
96	JEGANNATHAN.K	MECH	21
97	PRASHANTH.G	MECH	21
98	SANDHYA.V	CSE	22
99	SARANYA.P	CSE	23
100	SULAIHA JASMIN.M	ECE	24
101	DIVYA KUMARI.S	EEE	26
102	SAIROOPA.S	EEE	27
103	AKSHAYA.U	CSE	27

104	GOHILA. B	EEE	29
105	SOWMYA.P	IT	29
106	SAKTHI SARANYA.S	ECE	31
107	VALLIAMMAI.R	EEE	32
108	PRIYANGA. M.V.	CSE	32
109	SAI BARATH SUNDAR	EEE	33
110	DEEPIKA MAHADEVAN	CSE	33
111	P.DHANESWAR.G	ECE	34
112	ILAKKIYA.T	MBA	34
113	SAI SHYAM MANOHAR.M	EEE	35
114	NIROSHINI RAMANI.J	CSE	35
115	MADHUMATHI.B	CSE	36
116	AISHWARYA.A	ECE	36
117	LALITH VIGNESH.E	CSE	36
118	PRIYADHARSHINI.U	ECE	40
119	UDHAYANITHI.P	CSE	42
120	SRIHARANI.M	EEE	45
121	SANJANA.V	EEE	46
122	SAIPRIYA.G	CSE	47
123	BHARATHI.R	CSE	49
124	VIJAYALAKSHMI.A	ECE	50
125	MOUNIKA.G	ECE	50

2016 BATCH

126	EDWIN V JERRY	MECH	5
127	AKSHAYA J	IT	7
128	LAKSHMI PRASAD S	MECH	8
129	SHANMUGA PRIYA S	ECE	9
130	SARADHA DEVI P	MBA	10
131	SWATHI R	EEE	11
132	AMARNATH C	MECH	11
133	DHIVYA MARGERET S	EEE	14
134	YAMINI G C	MBA	16
135	SATHYA PIRIYA C	CSE	17
136	SHUBHANGI	EEE	20
137	RUBHAA T	EEE	20
138	MONICA S	IT	21
139	PRAVEEN KUMAR M	MECH	22
140	NIRANJANA R	ECE	22
141	PRIYADHARSHINI R	MBA	23
142	BADRINARAYANAN S	MECH	23
143	NARAYANAN V	MECH	24
144	PREETHI D	CSE	25
145	CYNTHIA R	CSE	27
146	NASLIN PAVITHRA G	CSE	28
147	HARISH T	EEE	29

148	CHARI MAITALI RANGANATHAN	MBA	30
149	SOBANA S	ECE	31
150	SWETHA L	EEE	33
151	SUPRIYA @ SIVAMAHESHWARI S	EEE	33
152	VENKATESH R	MECH	34
153	RISHIKESH KV	MECH	37
154	ABINAYA S	IT	38
155	SOWMIYA S	CSE	39
156	KRISHNAVENI S	EEE	41
157	VARALAKSHMI C	EEE	41
158	DEEKSHA DOBRIYAL	EEE	42
159	SHANMUGA SOUNDARYA V	CSE	43
160	VAITHEESWARAN R	EEE	43
161	KAVYA N	EEE	43
162	MAHA LAKSHMI P	MBA	43
163	ARCHANA N	IT	46
164	PASUPATHINATH R	EEE	46
165	MONICA C	EEE	46
166	SESHADRI NS	CSE	47
167	PRIYADHARSHINI V	IT	47
168	JAYAPREETHI S	EEE	47
169	SOWMYA DEVI R	ECE	47
170	JEEVARATHINAM M	CSE	48
171	APARNA R	IT	48

172	ANUSHA R	CSE	49
173	PAVITTHRA I	IT	49
174	SHANMUGAM P	IT	49
175	MANOJ KUMAR U	MECH	49
176	SARUMATHY S	CSE	50
177	MECANEL SEELAN D	IT	50
178	SRUTHI R	EEE	50
2017 BATCH			
179	MADHUMIDHA L	IT	5
180	KEERTHANA S	EEE	10
181	RAGHUL S	CSE	11
182	PAVITHRA D	MBA	11
183	ELAKIYA S	IT	12
184	KAYALVIZHI R	IT	12
185	MALINI M	CIVIL	13
186	NIVETHA M	EEE	13
187	SUMATHI R	EEE	13
188	MITHRA S	CSE	13
189	RAJASEKAR D	MECH	16
190	MADHAN R	MECH	17
191	PRIYANGA I	CIVIL	18
192	KRUTHIKA M	CSE	20
193	VARSHA G	CSE	20
194	DIVYALAKSHMI N	IT	20

195	ABINAYA M	IT	20
196	ABHISHEK S	MECH	20
197	ASHLY CHINNU VARGHESE	IT	22
198	SHARMILA S	CSE	23
199	BHARGAVI S	EEE	24
200	JITHIN J SANKAR	MECH	24
201	RAJITH RAHUL K	MECH	27
202	ARVINDH R	EEE	28
203	SHALU C	ECE	29
204	SANJU S	CSE	30
205	ANISH KUMAR SINGH	CSE	31
206	BHUVANESWARI R	IT	31
207	HARSHA VARDHINI R	CSE	32
208	NIVEDHA S	IT	32
209	SUSHMITHA MARY A	MBA	32
210	SARAN PRABU V	MECH	33
211	DIVYA R	EEE	34
212	SUBASRI R	EEE	36
213	VINOTH H	CSE	36
214	KUMUTHAVALLI S	EEE	37
215	GAJA LAKSHMI G	IT	37
216	MANASA B	EEE	39
217	ASHRITHA SRIDHAR	CSE	39
218	AISHWARYA RAJARAM	CSE	40
219	GAYATHIRI K M	CSE	40

220	OOVIYA A	CSE	41
221	PRITHIPA V	CSE	41
222	NISHANTH I	MECH	41
223	GRANDHE VENKATA KARTHIK	CIVIL	42
224	ARAVIND V	EEE	42
225	SASI REKHA K	IT	42
226	DIVYA N	IT	42
227	BALAJI SRINIVAS V	MECH	43
228	MOHANA VALLI S	MBA	43
229	KIRUTHIKA E	CSE	44
230	MEENAKSHI S	ECE	44
231	DURGADEVI D	IT	44
232	SNEHA D	ECE	45
233	SUBATHRA A	IT	45
234	KAVERY A	IT	45
235	DEVIKA R	EEE	46
236	SANDHYA G	ECE	46
237	RAGAVI S	IT	46
238	SUGANTHI R	ECE	48
239	THARANI L	CSE	50
2018 BATCH			
240	RAJALAKSHMI N	EEE	3
241	SITHARA V R	ECE	4
242	MADHURAMBIGA B	IT	6

243	SAI SHWETA S	ECE	7
244	NIRMALRAJ M	CSE	11
245	PRAGATI K M	EEE	12
246	NAVANEETH M	EEE	14
247	NAVANEETH P	CSE	18
248	KARTHIK A	EEE	18
249	SHABANA A S	IT	18
250	HEMA MAALEENI A	Civil	20
251	NITHESH M	Mech	21
252	BALAMANIKANDAN N	IT	21
253	SUMATHI V	ECE	22
254	SHACHIN SHIBI R	EEE	23
255	KRISHNA KUMAR R	EEE	23
256	VISALAKSHI A	EEE	24
257	ABINAYA A	IT	24
258	KALASAVAHINI K	IT	24
259	NISHA M	ECE	25
260	NIKITHA L	Mech	28
261	SANJANA S	ECE	29
262	CHITHRA V	ECE	29
263	RAM MUKILAN C	Mech	29
264	NARAYANA M S	Mech	32
265	MANIKANDAN B	Mech	33
266	HEEMAHINDUJA J	CSE	34
267	JAYAPRIYA R	ECE	34
268	MITHUN SUNDHAR B	Mech	34
269	LOKESWARI U	IT	34

270	PRIYADHARSHINI V	MBA	34
271	ASHIKAA LAKSHMI B	CSE	35
272	SAI GANAPATHY S	EEE	36
273	NIRANJANA S (1997-05-23)	IT	36
274	HEMAMALINI B	IT	38
275	VANDHANA H	Civil	39
276	KAYALVIZHI K	Civil	39
277	VIKRANT SHARMA	CSE	41
278	AKASH R	EEE	41
279	SHANMATHY GAVYA K	IT	41
280	SINDHUJA S	IT	42
281	SANGEETHA M P	IT	43
282	GAJA LAKSHMI G	MBA	44
283	SARASWATHI R	Civil	45
284	KRISHNA KANTH M K	CSE	45
285	VIGNESH U	EEE	45
286	ISHWARYA LAKSHMI C	IT	45
287	YUVASRI V	CSE	46
288	ANUSHA R	EEE	46
289	SARAVANAPRAKASH G	Mech	46
290	ARVINDH M	Mech	46
291	DINESH B	IT	46
292	KALAIARASI R	CSE	47
293	MOHANA PRIYA K	IT	47
294	RAJAKUMARAN V	Mech	48
295	ABHIRAMI S	IT	48
296	SRINIVAS KANNAN C	Mech	49

297	BUELA G	IT	49
298	NIVETHITHA P	EEE	50
299	SANJEEVIRAM N	Mech	50
2019 BATCH			
300	OVIYA A	CIVIL	11
301	SHALINI K S	CIVIL	14
302	AARTHI T	CSE	23
303	AMMU SHIRI K	EEE	3
304	PRATHIBA R	EEE	5
305	ABHILASH R	ECE	13
306	KEERTHANA ASOKAN	IT	23
307	KRITHIGA C	MBA	12
308	JAYARANJANI J	MBA	15
2020 BATCH			
309.	AUROVINDHYA S	CSE	21
310.	JAYANTHI V	EEE	15
311.	NANDHINEE S	EEE	25
312.	GARLAPATI SREEJA	ECE	23
313.	GOWTHAM KUMAR K	MECH	4
314.	KAVYA R	IT	5
315.	SUDARSAN SUNDARARAJAN	IT	8
316.	NITHIYA SRI T	IT	15
317.	AKSHAYA R	IT	23
318.	ANCILIN SHARMILA C	MBA	17



INNOVATION & ENTREPRENEURSHIP DEVELOPMENT

Dr. APJ Abdul Kalam Innovation Ecosystems

is an initiative to encourage the spirit of innovation amongst the budding engineers of the country.

The Innovation Award is a National Level Project Competition for engineering students which will recognize and reward students for their ideas and innovation in science and technology across five domains...



Agriculture



Energy



Water &
Environment



Manufacturing &
Technology



Infrastructure

Cash Awards are Presented



Leo Muthu Merit Scholarship is named after our beloved Founder Chairman Shri. MJF. Lion. Leo Muthu, a visionary entrepreneur, with a strong sense of social commitment. The Scholarship was launched as a CSR initiative of the Sairam Group with the aim of empowering deserving students with education helping them to make a difference to their families and society at large. Leo Muthu scholarship is for aspiring meritorious students from the economically weaker sections of society - irrespective of caste, creed, religion or race.

Marks in +2 (Maths, Physics & Chemistry)	Scholarships*
Centum in all Subjects	₹ 1,00,000/-
Centum in any 2 Subjects	₹ 50,000/-
Centum in 1 Subject & Total 585 +	₹ 25,000/-
PCM with total 580 & Above	₹ 10,000/-
PCM with total 570-579	₹ 5,000/-
CBSE - PCM (290 & above)	₹ 50,000/-
CBSE - PCM (285 - 289)	₹ 25,000/-
CBSE - PCM (275 - 284)	₹ 10,000/-

*Applicable for First year admissions through TNEA

MERIT SCHOLARSHIPS AND AWARDS BY THE BENEVOLENT MANAGEMENT

☞ Every year, more than ₹ 50,00,000/- is awarded as scholarship to the meritorious students of all the UG and PG courses of all the years. Details :

Merit Scholarship for II Year

- CGPA 9.500 & Above - Full Tuition Fees waiver
- CGPA 9.250 to 9.499 - ₹ 25,000/-
- CGPA 9.000 to 9.249 - ₹ 15,000/-
- CGPA 8.750 to 8.999 - ₹ 10,000/-
- CGPA 8.500 to 8.749 - ₹ 5,000/-

Merit Scholarship for III Year

- CGPA 9.250 & Above - Full Tuition Fees waiver
- CGPA 9.000 to 9.249 - ₹ 25,000/-
- CGPA 8.750 to 8.999 - ₹ 10,000/-
- CGPA 8.500 to 8.749 - ₹ 5,000/-

Merit Scholarship for IV Year

- CGPA 9.251 & Above - Full Tuition Fees waiver
- CGPA 9.001 to 9.250 - ₹ 10,000/-
- CGPA 8.760 to 9.000 - ₹ 5,000/-

☞ Gold Plaque to University Rank holders.

☞ Scholarships for the deserving but financially backward.

☞ Awards to consistent achievers in academics, cultural, sports and other competitions.

☞ Best out going student awards.

☞ Awards to students who excel in project works.

☞ Sponsorship for higher studies.

☞ Sponsorship for attending international conferences and workshops.

☞ Best Girl Student Award to girl students from all the branches of UG & PG.

☞ 50% fund for paper presentations in International Conference.

☞ Awards to teachers.

☞ Special cash awards and gifts to teachers for producing 100% results.

☞ Cash Awards for staff marriage and functions

☞ Special Cash Awards for the members of the staff of various departments for producing University Ranks.

GENERAL RULES

1. Strict discipline should be maintained within the premises of the institution. Indiscipline, misconduct, disobedience or any other irregularity will render a student liable for fine, suspension or immediate dismissal from the institution.
2. The lecturers and physical directors are authorised to check any misconduct of the students within the campus.
3. Implicit obedience to orders of the staff is demanded from every student.
4. Students attending meetings and functions within or outside the campus should maintain perfect order and discipline.
5. A student suspended thrice will be dismissed immediately without any enquiry.
6. Visitors will not be allowed to contact a student during class hours. However, under unavoidable circumstances, they will be permitted to meet the student with prior permission from the concerned authority.
7. Students should get permission before entering into staff room or office or laboratory.
8. Students will be held responsible for any tool or apparatus placed in their charge and the furniture they use. In case of damage or loss, they will be held financially responsible. Any damage or breakage should be made good by the concerned student immediately when called for.
9. Students are advised to take care of their valuables (such as calculator, watch, purse and other things) at their own risk.
10.
 - (i) Ragging is considered as a crime.
 - (ii) Any student found involved in such a barbaric act will be dismissed immediately without any enquiry.
 - (iii) Simultaneously, a complaint will be made to the nearest police station for further action.
 - (iv) It may lead to a fine of upto Rs. 10,000 and 2 years rigorous imprisonment.
 - (v) Once the complaint is received then it will be the duty of the accused to prove his/her innocence.
11. Two wheelers and Four wheelers are strictly prohibited inside the campus.
12. Use of Cellular Phones, Walkman, Pen-drive, i-pod, Laptop, SIM card, Memory Card & other musical instruments are strictly prohibited while travelling in the college bus and inside the campus. However, students can use the required electronic devices for academic purposes (Project / Research / Presentation) with prior permission from the HOD / Warden (Applicable for Hostellers).
13. Students should maintain silence, decency and decorum always.

CODES FOR CLASSROOM DISCIPLINE

1. Students are required to be punctual and regular to their classes.
2. Students should not loiter around in the verandah or corridor during class hours.
3. Students are expected to be in their respective classes atleast 5 minutes before the classes commence.
4. During class hours, students should remain inside their class rooms.
5. Late comers should get permission for entering the class. However, admission to such candidates will be purely subject to the approval of the concerned faculty.
6. Regular late comers will not be allowed to attend the classes without permission from the concerned authority.
7. No student should leave the hall without the permission from the faculty.
8. Students will not be allowed to come out of a lecture hall during or in between two class hours without any valid reason and prior permission.
9. Students are required to attend the classes with text books, note books, calculator, instrument box etc. as prescribed by the faculty.
10. In the laboratories no student will be permitted to do a fresh experiment or work until the record of his / her previous work is checked by the faculty-in-charge.
11. Habitual neglect of class work and home work will be deemed as breach of discipline and may render a student to be sent out of class.
12. No student should leave the lecture hall during class hours for paying the fees or to get correction in the lab records or to borrow a book from the library.
13. During the free hours, the students may go either to the library or to the playground without disturbance to others.
14. Students shall leave the lecture hall/lab only with the permission of the concerned faculty or after the class is dispersed.
15. Every faculty-in-charge of a class is authorised to check any misconduct of the students and may require a student or students to withdraw from his/her classroom and shall report the matter to the Principal.
16. Disobedience to the order of a faculty will be deemed as breach of discipline.
17. Attendance is a must for sports hour, seminar or library hour. It will also be included while calculating the percentage of attendance.

Discipline of the highest order is expected from all the students. Any student who violates any of the rules and regulations of the institution shall be deemed to have committed breach of discipline and the Principal is the authority to impose any one or any combination of the following punishments.

1. Loss of attendance
2. Refusal to issue attendance certificate and / or conduct certificate, course completion certificate.
3. Suspension
4. Expulsion from the institution.

The Principal may alter or amend these rules or add further rules from time to time for the smooth functioning of the institution.

DRESS CODE

1. Students should wear clean and decent dress. Wearing Jeans, T. Shirts, Black Colour Shirts and Jeans type cotton formal pants are strictly prohibited inside the campus.
2. Students should come daily in formals to the college. Boys should tuck-in their shirts and wear only black leather shoes and leather belt while they are inside the campus.
3. Girls should wear only churidhars with dupatta both sides pinned up. Wearing half-sarees, middies, short sleeves, short & tight churidhars, tight tops, tight pants, leggings and jeans are strictly prohibited inside the campus.
4. Students should wear the respective uniforms to attend their practical classes.
5. Students are advised not to wear loose-fitting shirts or pants while doing workshop / laboratory practicals.
6. Students should compulsorily wear their I.D. cards with sling in the campus, class rooms and also in the college bus, failing which stern action will be taken.

ATTENDANCE AND LEAVE

1. Students are expected to be regular and punctual to their classes.
2. Late comers will not be permitted to enter the lecture hall during a class hour. However, they will be allowed to enter the lecture hall in between two class hours.
3. Late comers will not be given attendance for that particular hour.
4. A student absent for one hour will be treated as absent for that complete session (Forenoon / Afternoon).
5. Students will not be allowed to take leave without prior permission from the HOD.
6. Students have to submit the leave letter in the prescribed form.
7. Students will not be allowed to take leave for more than 6 days per semester and 10 days in a year. Those who exceed the limits without valid reason will be fined Rs. 100 per day.

8. Students will not be given attendance if they do not pay the fees, if any, within the due date.
9. Attendance will be given only from the date on which the arrears (Fees / dues if any) are cleared.
10. Every student is expected to have a minimum of 75% attendance in each and every theory subject and minimum of 90% attendance in practical classes.
11. On no account, the students who fall short of attendance will be allowed to write the University Exams.
12. A student who does not follow the instructions of a faculty during class hours will be treated as absent for that particular hour.
13. Leave will not be granted on the re-opening day of a term and on examination days except for valid reasons.
14. Special classes will also be treated as regular classes and attendance to a special class is a must.
15. If any student is found absent for a special class, he will loose attendance for the next day.
16. Leave letter should be submitted to the class coordinator in advance with genuine reasons. Under unavoidable circumstances the leave letter should be sent to the Principal on the first day of absence if a student wishes to take leave for more than two days continuously. Otherwise leave may not be granted.
17. A student who is absent without leave letter for over 10 days at a stretch will be liable to removal of his / her name from the roll.
18. Attendance for tests, model exams, special classes, seminars, association meetings and industrial visits are compulsory.
19. Students will not be allowed to leave the campus before the closing hours without any valid reason and prior permission from the HOD.
20. Medical certificate will not be accepted without valid reason. It will be purely subject to the approval of the HOD.
21. Attendance for the last hour (including practical) will be taken only about 10 minutes before the closing time 4.00 p.m.
22. A student who is absent for the closing hour (last hour on a day or the last period) will be treated as absent for the whole day.
23. Any student who is absent without leave letter will be liable to pay a fine of Rs.50/- per day.
24. Any student who attends the college without ID or Bus Pass is liable to pay a fine of Rs.50/-
25. **Any student who wants transfer from this institution to other institution during the I year or II year has to intimate this to the college authorities before three months.** If not, the student will be asked to pay the entire college fees meant for the next year to the institution.

ASSESSMENT TESTS AND AWARD OF INTERNAL MARKS

1. 100% attendance is recommended for class tests, Assessment Tests and Model examinations.
2. Students will not be allowed to take leave during tests. However, for genuine reasons, he / she may be allowed to take up the test on any other day with prior permission from the concerned HOD and Principal.
3. Students who absent themselves for the tests without any valid reason and prior permission from the concerned HOD and the Principal, will not be permitted to take up the next Assessment examinations.
4. Internal marks will be calculated based on the Assessment tests.
5. Students are expected to perform well in the three Assessment examinations as their internal marks will be strictly awarded in accordance with their performance in the Assessment tests.
6. Students who do not score more than 50% marks in any one of the examinations will be required to write the retest and attend the college for coaching classes (4 PM to 6 PM and during study holidays).
7. Immediately after every Assessment test, the marks scored by the students will be entered in the Anna University Web Portal and this can be viewed by the students.
8. The Internal marks will be calculated for 20 which will be the average of the mentioned above 3 examinations (Not the best of two from the three examinations). For the 2020 Autonomous regulations the internal marks will be calculated for 40.
9. Students who do not perform well for sufficient internal marks will be recommended for class tests to ensure better performance in the subsequent Assessment tests so that their internal marks can be improved.
10. If a student is found guilty of malpractice during the tests or model examinations or university examinations, proper disciplinary action shall be initiated.

WARD & MENTORING SYSTEM

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COUNSELLING AND PROGRESS REPORT OF THE STUDENTS

1. Students will be divided into groups and each group consisting of 15 to 20 students, will be placed under the guidance of a faculty, who will be their mentor.
2. The Mentor will be monitoring the ward's progress in studies, regularity in attendance, conduct, participation in co-curricular and extra curricular activities and health condition as well.
3. A personal file is maintained for each student to record his/her progress in studies, attendance and other aspects.
4. All leave applications should be sent only through the student's mentor.
5. The students may approach their mentor freely for guidance and advice anytime and the contact number of the mentor will be given to the students.
6. The mentors will counsel their wards periodically for the betterment of their wards in all fronts. A motherly care will be shown by the mentor in counselling and monitoring their wards.
7. Irrespective of the problems (financial, health issues and psychological), each student will be treated with utmost care, affection and attention.
8. The mentor will constantly keep in touch with the wards' parents / guardians for updation of the ward's progress.
9. Progress report of every student will be sent to his/her parents or guardian at the end of each test and the model examination indicating the marks the student has secured in the examination.
10. If a student is found short of attendance and irregular to classes, reports will be sent to his / her parents or guardian.
11. Parents or guardians who wish to know the progress of his/her son or daughter will be provided the same on request.
12. Parents / Guardians are requested to meet the mentors frequently to know the performance and progress of the wards.
13. Parents / Guardians may call the mentor at anytime to clarify any information if they wish to know or inform.
14. Our ward and mentoring system will ensure the students feel at home and build a perennial relationship between the ward and the mentor which will ultimately lead to the better progress of the students in their personal and professional lives which we have been witnessing for so many years.

CENTRAL LIBRARY

A capacious central library with extensive reading facilities is available for the use of staff and students. All students and staff are members of the library and are entitled to borrow books.

The library and the reading room will be kept open on all working days. It has about 70,000 volumes related to all branches of Engineering, Computer Science, Management, English, Mathematics, Physics, Chemistry, General Studies apart from Journals, Magazines and Newspapers.

It not only subscribes to National & International Journals, but also has CDs and DVDs which can be viewed in a separate audio visual centre.

RULES AND REGULATIONS OF THE CENTRAL LIBRARY

1. The library and reading room will be kept open to the students and staff from 8.30 a.m. to 6.00 p.m. on all working days.
2. Students may enter the library and select the books or magazines of their choice on all working days.
3. Strict Silence should be maintained in the library.
4. Students should leave their belongings in the Pigeon Rack.
5. On receiving a book, the student should examine the condition of the book. If there is any damage, it should be brought to the notice of the librarian. Otherwise, the student will be held responsible for the damage.
6. A Student will be allowed to keep a book for 14 days from the date of issue. It may be renewed for a further period of 14 days.
7. If the book is retained beyond the due date without renewing, a fine of 50 paise per day will be collected up to 15 days from the due date. After that Re. 1/- per day will be collected.
8. No reference book shall be lent.
9. In the case of books lost either by the staff or students, the book should be replaced at once with the latest editions of such books by them. When such books are not available with the book sellers or publishers or out of print, double the cost of the book will be collected from the borrowers.

10. Every member is expected to handle the books and magazines of the library with care.
11. User should not make any writings, markings, scribbling or underlining in the library books.
12. The librarian is empowered to send out any student who misbehaves in the library.
13. Students will not be allowed to borrow books from the library till the fine (if any) is paid or replacement (if any) is effected as the case may be.

LIBRARY CARD

To enable the members in borrowing books from the library, bar-coded ID cards are issued. UG students can borrow two books and PG students can borrow four books at a time.

1. The students are advised to keep ID cards safe.
2. In case of loss of a library card, the same should immediately be brought to the notice of the librarian.
3. Duplicate ID card can be obtained against a payment of Rs. 100/-
4. Duplicate ID card will normally be issued only after 30 days from the day on which the loss is reported.
5. Only the card holders are entitled to borrow books from the library.
6. The owner of the ID card will be responsible for the book borrowed against it.
7. 'No-dues' certificate will be issued only after ascertaining the surrender of ID Card to the librarian within the due date.

LIBRARY TIMINGS

- | | | | |
|----|-----------------------------|---|---------------------------|
| 1. | Working Hours | : | 8.30 a.m. to 6.00 p.m. |
| 2. | Issue of ID Cards | : | 1 st Semester |
| 3. | Issue of books | : | 10.40 a.m. to 4.00 p.m. |
| 4. | Return of books | : | 9.00 a.m. to 12.00 noon |
| 5. | Return of ID Cards | : | End of the course |
| 6. | Issue of No due certificate | : | End of the final semester |

SAIRAM HOSTELS

Separate hostels for Men and Women are available with independent mess facilities. Both the hostels are administered by the Deputy Wardens under the guidance of the Chief Warden.

Chief Warden

Principal

Deputy Warden

Mr. V. Balaji

HOSTEL RULES AND REGULATIONS

1. Students will be provided accommodation after paying the full fees.
2. Students admitted to the Hostel should consider it as their home.
3. The wards should strictly follow the rules and regulations laid by the management from time to time.
4. Any report should be made to the Deputy Warden only.
5. Wards should wear proper dress to enter the mess hall.
6. Students should follow the mess timings. On no account food will be provided for the late comers.
7. Students should take care of their properties at their own risk.
8. Each hostel student will be given 3 visitors pass.
9. Visitors pass should be used genuinely by the hostellers.
10. Students should take leave with the permission of the Dy.Warden. If not, they will be liable to pay a fine of Rs.50/- per day.
11. No refund is permitted if a student is expelled from the hostel on disciplinary grounds.
12. Refund is not permitted if the student withdraws from his/her studies due to any reason during the middle of the academic year .

TRANSPORT FACILITIES

ROUTE NO. 1 to 12 TAMBARAM TO COLLEGE

T 03	TAMBARAM	:	08.20 a.m.
	SAIRAM CAMPUS	:	08.40 a.m.

ROUTE NO. 13 KRISHNA NAGAR - I TO COLLEGE

K 37	KRISHNA NAGAR (Mudichur)	:	08.00 a.m.
L 02	LAKSHMIPURAM SERVICE ROAD	:	08.08 a.m.
	SAIRAM CAMPUS	:	08.40 a.m.

ROUTE NO. 14 KONE KRISHNA TO COLLEGE

K 28	KONE KRISHNA	:	08.05 a.m.
	SAIRAM CAMPUS	:	08.40 a.m.

ROUTE NO. 15 RAJAKILPAKKAM TO COLLEGE

R 02	RAJAKILPAKKAM	:	07.35 a.m.
M 11	MAHALAKSHMI NAGAR	:	07.38 a.m.
C 02	CAMP ROAD	:	07.42 a.m.
S 11	SELAIYUR	:	07.44 a.m.
A 04	ADHI NAGAR	:	07.45 a.m.
C 19	CONVENT SCHOOL	:	07.49 a.m.
	SAIRAM CAMPUS	:	08.40 a.m.

ROUTE NO. 16 NGO COLONY TO COLLEGE

B 14	BRINTHAVANAM NAGAR	:	07.20 a.m.
K 06	KAKKAN BRIDGE	:	07.25 a.m.

B 12	BLUE BIKES (NGO COLONY)	:	07.28 a.m.
N 01	NGO COLONY	:	07.30 a.m.
M 72	MOUNT STATION	:	07.33 a.m.
H 10	HDFC BANK (ADAMBAKKAM)	:	07.35 a.m.
J 03	JAYALAKSHMI THEATRE (HERITAGE)	:	07.37 a.m.
T 03	TAMBARAM	:	08.15 a.m.
	SAIRAM CAMPUS	:	08.40 a.m.

ROUTE NO. 17 ADAMBAKKAM TO COLLEGE

G 03	GANESH TEMPLE	:	07.25 a.m.
A 03	ADAMBAKKAM (PS)	:	07.30 a.m.
J 03	JAYALAKSHMI THEATER (HERITAGE)	:	07.33 a.m.
T 02	T. G. NAGAR SUBWAY	:	07.35 a.m.
T 03	TAMBARAM	:	08.10 a.m.
	SAIRAM CAMPUS	:	08.40 a.m.

ROUTE NO. 18 THARAMANI RAILYWAY STATION TO COLLEGE

T 43	THARAMANI RAILWAY STATION	:	07.05 a.m.
K 50	KANTHANCHAVADI	:	07.10 a.m.
P 31	PERUNGUDI	:	07.15 a.m.
T 30	THORAIPAKKAM	:	07.17 a.m.
M 33	METTUKUPPAM	:	07.20 a.m.
P 01	P.T.C. QUATERS	:	07.23 a.m.
K 17	KARAPAKKAM	:	07.25 a.m.
S 17	SHOLINGANALLUR	:	07.30 a.m.
P 28	PERUMBAKKAM	:	07.35 a.m.
P 45	PUDHU NAGAR	:	07.38 a.m.
S 08	SANTHOSHPURAM	:	07.45 a.m.
S 12	SEMBAKKAM	:	07.48 a.m.
	SAI RAM CAMPUS	:	08.40 a.m.

ROUTE NO.19 NANGANALLUR TO COLLEGE

M 75	MUVARASANPATTU KULAM	:	07.40 a.m.
M 77	MUVARASANPATTU POLICE BOOTH	:	07.43 a.m.

M 76	MUVARASANPATTU PERIYAR SILAI	:	07.45 a.m.
J 09	J.K. MAHAL (Nanganallur)	:	07.48 a.m.
H 12	HINDU COLONY IIIrd CROSS (Nanganallur)	:	07.50 a.m.
V 16	VELAN THEATRE	:	07.52 a.m.
P 18	PARK @ NANGANALLUR	:	07.55 a.m.
J 14	JAIGOPAL SCHOOL	:	07.56 a.m.
P 08	PALAVANTHANGAL SUBWAY	:	08.00 a.m.
	SAIRAM CAMPUS	:	08.40 a.m.

ROUTE NO.20 MADURANTHAKAM TO COLLEGE

M 39	MADURANTHAKAM B.S.	:	06.40 a.m.
C 28	CHENGALPET BYPASS	:	07.15 a.m.
J 12	J.S.P. HOSPITAL (Chengalpet)	:	07.20 a.m.
S 26	SRINIVASAPURAM	:	07.55 a.m.
	SAIRAM CAMPUS	:	08.40 a.m.

ROUTE NO. 21 ACHARAPAKKAM TO COLLEGE

A 36	ACHARAPAKKAM	:	06.45 a.m.
M 38	MELMARUVATHUR	:	06.50 a.m.
S 55	SOTHUPAKKAM	:	06.52 a.m.
S 56	SILAVATTAM	:	07.00 a.m.
I 10	IYYANAR KOIL (Madurantakam)	:	07.03 a.m.
K 63	KARUNGUZHI	:	07.05 a.m.
M 80	MELAVVALAMPETTAI	:	07.10 a.m.
K 52	KALLAPERANPURAM	:	07.15 a.m.
P 79	PADALAM	:	07.20 a.m.
P 56	PUKATHURAI KOOT ROAD	:	07.23 a.m.
M 81	MAMANDUR	:	07.27 a.m.
	SAIRAM CAMPUS	:	08.40 a.m.

ROUTE NO. 22 KALPAKKAM TO COLLEGE

K 53	KALPAKKAM BUS STOP	:	06.20 a.m.
S 45	SADRAS (Kalpakkam)	:	06.30 a.m.
A 62	ANUPURAM (Kalpakkam)	:	06.40 a.m.

T 32	THIRUKAZHUKUNDRAM B.S.	:	07.00 a.m.
T 48	THIRUPORUR KOOT ROAD	:	07.20 a.m.
	SAIRAM CAMPUS	:	08.40 a.m.

ROUTE NO. 23 MADIPAKKAM-II TO COLLEGE

M 09	MADIPAKKAM (B.S.)	:	07.25 a.m.
P 36	PONNIYAMMAN KOIL	:	07.30 a.m.
I 14	IYAPPAN KOIL (MADIPAKKAM)	:	07.32 a.m.
M 08	MADIPAKKAM (AXIS BANK)	:	07.35 a.m.
K 23	KEELKATTALAI	:	07.40 a.m.
T 03	TAMBARAM	:	08.10 a.m.
	SAIRAM CAMPUS	:	08.40 a.m.

ROUTE NO. 24 MADIPAKKAM-I (VIA PALLAVARAM BYPASS) TO COLLEGE

R 06	RAM NAGAR	:	07.25 a.m.
S 02	SADHASIVA NAGAR	:	07.27 a.m.
B 03	BALAYA GARDEN (PETROL BUNK)	:	07.29 a.m.
P 36	PONNIAMMAN KOIL	:	07.32 a.m.
M 08	MADIPAKKAM (AXIS BANK)	:	07.35 a.m.
E 10	EACHANKADU (Keelkattalai)	:	07.45 a.m.
T 03	TAMBARAM	:	08.05 a.m.
	SAIRAM CAMPUS	:	08.40 a.m.

ROUTE NO. 26 CHINMAYA NAGAR TO COLLEGE

C 09	CHINMAYA NAGAR B.S.	:	07.25 a.m.
S 03	SAI NAGAR (VADAPALANI)	:	07.30 a.m.
N 05	NATESAN NAGAR	:	07.32 a.m.
E 03	ELANGO NAGAR	:	07.35 a.m.
A 02	AAVICHI SCHOOL	:	07.37 a.m.
V 03	VADAPALANI BUS STAND	:	07.38 a.m.
V 04	VADAPALANI SIVAN KOIL	:	07.39 a.m.
K 19	KASI THEATRE	:	07.45 a.m.
E 11	EKKADUTHANGAL	:	07.55 a.m.
T 03	TAMBARAM	:	08.05 a.m.
	SAIRAM CAMPUS	:	08.40 a.m.

ROUTE NO.27 MANDAVELI TO COLLEGE

M 15	MANDAVELI (DEPOT)	:	07.15 a.m.
R 03	RAJA ANNAMALAIPURAM	:	07.17 a.m.
K 07	KALIAPPA HOSPITAL (Billroth)	:	07.19 a.m.
A 05	ADYAR GATE HOTEL	:	07.23 a.m.
K 32	KOTTURPURAM	:	07.28 a.m.
A 20	ANNA UNIVERSITY	:	07.30 a.m.
G 16	GUINDY SUBWAY	:	07.32 a.m.
T 03	TAMBARAM	:	08.05 a.m.
	SAIRAM CAMPUS	:	08.40 a.m.

ROUTE NO.28 T. NAGAR TO COLLEGE

P 41	POSTAL COLONY (B.S.)	:	07.05 a.m.
T 10	THAMBIAH REDDY ROAD	:	07.07 a.m.
P 16	PANAGAL PARK	:	07.15 a.m.
V 01	V.N.ROAD	:	07.17 a.m.
T 03	TAMBARAM	:	08.05 a.m.
	SAIRAM CAMPUS	:	08.40 a.m.

ROUTE NO.29 INJAMBAKKAM TO COLLEGE

I 19	INJAMBAKKAM	:	07.00 a.m.
V 24	VETTUVANKANE	:	07.05 a.m.
N 11	NEELANKARAI	:	07.07 a.m.
P 06	PALAVAKKAM	:	07.10 a.m.
V 02	VAALMEEKI NAGAR	:	07.25 a.m.
M17	MARUTHEESHWARAR TEMPLE	:	07.27 a.m.
T 21	THIRUVANMIYUR SOUTH AVENUE	:	07.29 a.m.
M 07	MADHYA KAILASH	:	07.40 a.m.
T 03	TAMBARAM	:	08.05 a.m.
	SAIRAM CAMPUS	:	08.40 a.m.

ROUTE NO. 30 VELACHERY (CHECKPOST) TO COLLEGE

V 14	VELACHERY (CHECKPOST)	:	07.05 a.m.
V 53	VELACHERY ERIKARAI	:	07.10 a.m.

V 54	VELACHERY GRT	:	07.12 a.m.
V 55	VELACHERY WATER TANK	:	07.15 a.m.
V 20	VIJAYA NAGAR (B.S.)	:	07.20 a.m.
T 03	TAMBARAM	:	08.05 a.m.
	SAIRAM CAMPUS	:	08.40 a.m.

ROUTE NO. 31 CHROMPET - IV TO COLLEGE

C 13	CHROMPET (B.S.)	:	08.07 a.m.
R 08	RAMAR KOIL SANATORIUM	:	08.10 a.m.
T 03	TAMBARAM	:	08.15 a.m.
	SAIRAM CAMPUS	:	08.40 a.m.

ROUTE NO. 32 VIRUGAMBAKKAM TO COLLEGE

V 21	VIRUGAMBAKKAM (CHURCH)	:	07.20 a.m.
A 09	ALWAR THIRUNAGAR (B.S.)	:	07.23 a.m.
K 25	KESAVARTHANI (B.S.)	:	07.25 a.m.
V 06	VALASARAVAKKAM MARKET	:	07.29 a.m.
M 22	METRO NAGAR - Valasaravakkam	:	07.30 a.m.
G 02	GANESH NAGAR - Valasaravakkam	:	07.37 a.m.
	SAIRAM CAMPUS	:	08.40 a.m.

ROUTE NO.33 KALLIKUPPAM (AVADI) TO COLLEGE

K 49	KALLIKUPPAM (AVADI)	:	07.00 a.m.
P 48	PUTHUR	:	07.10 a.m.
O 06	ORAKADAM (AVADI)	:	07.15 a.m.
S 30	SINGAPORE COMPLEX (AVADI)	:	07.17 a.m.
S 41	STEDFORD HOSPITAL (Ambattur)	:	07.20 a.m.
A 34	AVADI CHECK POST	:	07.35 a.m.
P 91	PATTABHIRAM GANDHI NAGAR	:	07.50 a.m.
	SAIRAM CAMPUS	:	08.40 a.m.

ROUTE NO. 34 THALAKUPPAM (THIRUVOTTIYUR) TO COLLEGE

T 42	THALAKUPPAM (Thiruvottiyur)	:	06.10 a.m.
W 07	WATER TANK (Thalakuppam)	:	06.15 a.m.

E 13	E.B. CAMP B.S. (Thalakuppam)	:	06.20 a.m.
B 18	BURMA NAGAR (Thalakuppam)	:	06.25 a.m.
E 06	ERNAVOUR	:	06.35 a.m.
V 41	VIMCO NAGAR	:	06.38 a.m.
A 30	AZAX (THIRUVOTTIYUR)	:	06.40 a.m.
P 25	PERIYAR NAGAR (Thiruvottiyur)	:	06.43 a.m.
T 24	THIRUVOTTIYUR (B.S.)	:	06.45 a.m.
T 07	THERADI (Thiruvottiyur)	:	06.47 a.m.
L 01	L.M. KOVIL (THIRUVOTTIYUR)	:	06.50 a.m.
	SAIRAM CAMPUS	:	08.40 a.m.

ROUTE NO. 36 NESAPAKKAM TO COLLEGE

P 34	PONDICHERY GUEST HOUSE	:	07.15 a.m.
N 08	NESAPAKKAM (B.S.)	:	07.20 a.m.
M 01	M.G.R. NAGAR (B.S.)	:	07.23 a.m.
K 02	K.K.NAGAR (ROUNTANNA)	:	07.25 a.m.
A 37	AJANTHA BUS STOP	:	07.35 a.m.
D 06	DATA UDIPI HOTEL	:	07.37 a.m.
T 03	TAMBARAM	:	08.05 a.m.
	SAIRAM CAMPUS	:	08.40 a.m.

ROUTE NO. 37 DOVETON TO COLLEGE

P 75	PATTALAM	:	06.45 a.m.
D 08	DOVETON CAFÉ	:	06.50 a.m.
P 66	PURASAWAKKAM TANK	:	07.00 a.m.
K 65	KELLYS	:	07.10 a.m.
K 92	KILPAUK MUMMY DADDY	:	07.12 a.m.
K 66	KILPAUK GARDEN BUS STOP	:	07.15 a.m.
N 28	NEW AVADI ROAD ANTONS SHOP	:	07.18 a.m.
N 29	NEW AVADI ROAD (Life Line Hospital)	:	07.20 a.m.
P 92	PACHAYAPPAS COLLEGE	:	07.22 a.m.
A 68	AMINJIKARAI HOT CHIPS	:	07.23 a.m.
M 57	MADURAVOYAL BY-PASS	:	07.30 a.m.
	SAIRAM CAMPUS	:	08.40 a.m.

ROUTE NO. 38 GOLDEN FLATS TO COLLEGE

P 61	PARK ROAD (GOLDEN FLATS)	:	07.00 a.m.
W 06	WAVES SIGNAL	:	07.02 a.m.
G 23	GOLDERN FLATS	:	07.05 a.m.
P 73	PANNEER NAGAR	:	07.07 a.m.
C 27	CHURCH (GOLDEN FLATS)	:	07.10 a.m.
A 60	AMBEDKAR GROUND	:	07.12 a.m.
V 35	VELAMMAL SCHOOL	:	07.14 a.m.
A 63	AXIS BANK (J.J.NAGAR)	:	07.16 a.m.
	SAIRAM CAMPUS	:	08.40 a.m.

ROUTE NO. 39 PAMMAL TO COLLEGE

S 35	SANKAR NAGAR (PAMMAL)	:	07.40 a.m.
P 14	PAMMAL RETTAI PILLAIYAR KOIL	:	07.45 a.m.
A 38	ANAGAPUTHUR SCHOOL	:	07.50 a.m.
A 39	AMMAN KOIL (ANAGAPUTHUR)	:	07.52 a.m.
A14	ANAGAPUTHUR B.S.	:	07.55 a.m.
M 78	METRO CITY (KUNDRATHUR)	:	08.00 a.m.
A 43	ANDAL KUPPAM (PAMMAL)	:	08.05 a.m.
	SAIRAM CAMPUS	:	08.40 a.m.

ROUTE NO. 40 LIGHT HOUSE TO COLLEGE

L 04	LIGHT HOUSE (MARINA)	:	07.10 a.m.
G 09	GOSHA HOSPITAL	:	07.13 a.m.
R 10	RATNA CAFÉ	:	07.14 a.m.
T 26	TRIPPLICANE HIGH ROAD	:	07.15 a.m.
I 01	ICE HOUSE	:	07.16 a.m.
T 03	TAMBARAM	:	08.05 a.m.
	SAIRAM CAMPUS	:	08.40 a.m.

ROUTE NO. 41, 42, 43 CHROMPET TO COLLEGE

C 13	CHROMPET	:	08.05 a.m.
T 03	TAMBARAM	:	08.20 a.m.
	SAIRAM CAMPUS	:	08.40 a.m.

ROUTE NO. 44 METTUPALAYAM - I TO COLLEGE

G 10	GOVINDAN ROAD	:	07.10 a.m.
S 25	SRINIVASA THEATRE	:	07.13 a.m.
K 22	KAVERY NAGAR	:	07.16 a.m.
C 01	C.I.T. NAGAR	:	07.20 a.m.
T 13	TODHUNTER NAGAR	:	07.30 a.m.
P 15	PANAGAL MALIGAI	:	07.33 a.m.
C 10	CHINNAMALAI	:	07.35 a.m.
T 03	TAMBARAM	:	08.05 a.m.
	SAIRAM CAMPUS	:	08.40 a.m.

ROUTE NO : 45 GUDUVANCHERY TO COLLEGE

G 13	GUDUVANCHERY (B.S.)	:	07.55 a.m.
U 01	URAPAKKAM (B.S.)	:	08.00 a.m.
U 02	URAPAKKAM (SCHOOL STOP)	:	08.05 a.m.
	SAIRAM CAMPUS	:	08.40 a.m.

ROUTE NO. 46 ANNA ARCH TO COLLEGE

A 40	13TH AVENUE (ANNA ARCH)	:	06.45 a.m.
A 41	2ND AVENUE (ANNA ARCH)	:	07.00 a.m.
B 09	BLUE STAR HI-STYLE (ANNA ARCH)	:	07.02 a.m.
S 09	SARAVANA BHAVAN HOTEL (ANNA ARCH)	:	07.05 a.m.
I 15	IYYPPAN KOIL (ANNA ARCH)	:	07.07 a.m.
A 18	ANNA NAGAR (ROUNTANA)	:	07.08 a.m.
S 36	SANTHI COLONY	:	07.10 a.m.
A 16	ANNA ARCH (B.S)	:	07.13 a.m.
N 13	NSK NAGAR	:	07.15 a.m.
P 57	PANCHALI AMMAN KOIL	:	07.17 a.m.
V 28	VIJAYA BANK (ANNA ARCH)	:	07.19 a.m.
A 42	ARUMBAKKAM B.S.	:	07.20 a.m.
N 15	NERKUNDRAM MOSQUE	:	07.27 a.m.
M 55	MADURAVOYAL ERIKKARAI	:	07.29 a.m.
V 34	VANAGARAM	:	07.32 a.m.
	SAIRAM CAMPUS	:	08.40 a.m.

ROUTE NO.47 KEELKATTALAI - I TO COLLEGE

B 04	BATHALA VIGNESHWARA KOIL	:	07.35 a.m.
M 10	MADIPAKKAM KUTT ROAD	:	07.38 a.m.
G 17	GANESH NAGAR (KEELKATTALAI)	:	07.40 a.m.
K 23	KEELKATTALAI	:	07.43 a.m.
T 03	TAMBARAM	:	08.05 a.m.
	SAIRAM CAMPUS	:	08.40 a.m.

ROUTE NO. 48 KOLATHUR TO COLLEGE

A 53	AGARAM MURUGAR KOIL (Periyar Nagar)	:	06.50 a.m.
T 46	THIRUVALLUVAR MANDAPAM	:	06.52 a.m.
P 80	PERIYAR NAGAR MARKET	:	06.53 a.m.
M 66	M.G.R. SILAI (Retteri)	:	06.55 a.m.
W 08	WELDING SHOP (Retteri)	:	06.57 a.m.
K 68	KOLATHUR	:	07.00 a.m.
K 80	KOLATHUR MOHAMBIGAI KOIL	:	07.02 a.m.
	SAIRAM CAMPUS	:	08.40 a.m.

ROUTE NO.49 SAMIYAR MADAM (FIVE LIGHTS) TO COLLEGE

S 05	SAMIYAR MADAM	:	07.15 a.m.
F 01	FIVE LIGHTS	:	07.20 a.m.
A 29	AYODYA MANDAPAM	:	07.25 a.m.
P 41	POSTAL COLONY (B.S.)	:	07.28 a.m.
B 10	BLUE TANK (West Mambalam)	:	07.29 a.m.
E 11	EKKATTUTHANGAL	:	07.30 a.m.
O 07	OLYMPIA	:	07.32 a.m.
M 20	MEENAMBAKKAM (Near to Join College)	:	07.40 a.m.
T 03	TAMBARAM	:	08.15 a.m.
	SAIRAM CAMPUS	:	08.40 a.m.

ROUTE NO. 50 PALAVAKKAM TO COLLEGE

P 81	PERIYAR SIGNAL (Palavakkam)	:	07.15 a.m.
K 31	KOTTIVAKKAM	:	07.20 a.m.
T 20	THIRUVANMIYUR R.T.O.	:	07.25 a.m.
T 49	THIRUVANMIYUR (B.S.)	:	07.30 a.m.

T 50	THARAMANI	:	07.35 a.m.
T 51	THARAMANI PILLAIYAR KOIL	:	07.38 a.m.
B 17	BABY NAGAR	:	07.40 a.m.
V 20	VIJAYA NAGAR (B.S.)	:	07.45 a.m.
T 03	TAMBARAM	:	08.05 a.m.
	SAIRAM CAMPUS	:	08.40 a.m.

ROUTE NO. 51 BALAJI NAGAR TO COLLEGE

K 04	K.V. II (Balaji Nagar)	:	07.20 a.m.
H 01	HANSA GARDEN	:	07.22 a.m.
S 27	SUDARSHAN NAGAR (CAMP ROAD)	:	07.23 a.m.
A 17	ANNA NAGAR (MADAMPAKKAM)	:	07.25 a.m.
K 36	KOZHIPPANNAI (MADAMPAKKAM)	:	07.26 a.m.
A 01	A.L.S NAGAR	:	07.28 a.m.
Y 01	YESHWANTH NAGAR	:	07.30 a.m.
P 05	PADMAVATHI NAGAR	:	07.31 a.m.
B 07	BHARATH ENGG.COLLEGE	:	07.32 a.m.
I 07	INDRA NAGAR Camp Road	:	07.33 a.m.
E 07	EX-SERVICEMEN ENCLAVE	:	07.35 a.m.
A 12	AMBETHKAR NAGAR (CAMP ROAD)	:	07.37 a.m.
	SAIRAM CAMPUS	:	08.40 a.m.

ROUTE NO. 52 INDIRA NAGAR TO COLLEGE

I 06	INDIRA NAGAR WATER TANK	:	07.10 a.m.
T 05	TANISHQ JEWELLERY(M.G. ROAD)	:	07.13 a.m.
V 11	VANNANDURAI (ANNAI TOWERS)	:	07.15 a.m.
B 06	BESANT NAGAR (OPP.MAHARAJA STORES)	:	07.18 a.m.
D 01	DAMODARAPURAM	:	07.20 a.m.
A 06	ADYAR TELEPHONE EXCH.	:	07.22 a.m.
R 09	RAMKAY TVS (ADYAR SIGNAL)	:	07.25 a.m.
G 06	GODREJ (SARADA AGENCY)	:	07.27 a.m.
K 42	KUN HYUNDAI	:	07.28 a.m.
I 03	IIT (IN GATE)	:	07.32 a.m.
A 08	ALANDUR (SUBWAY)	:	07.38 a.m.

T 03 TAMBARAM : 08.05 a.m.
SAIRAM CAMPUS : 08.40 a.m.

ROUTE NO. 53 AGARAM THEN TO COLLEGE

A 31 AGARAM THEN : 07.25 a.m.
P 82 PADUVANCHERI : 07.30 a.m.
K 84 KASPAPURAM : 07.35 a.m.
M 36 MAPPEDU (AGARAM) : 07.40 a.m.
I 07 INDIRA NAGAR (CAMP ROAD) : 07.47 a.m.
C 20 CHRISTIAN COLLEGE : 07.50 a.m.
T 03 TAMBARAM : 08.10 a.m.
SAIRAM CAMPUS : 08.40 a.m.

ROUTE NO. 54 BHARATHI NAGAR TO COLLEGE

B 08 BHARATHI NAGAR (MUDICHUR ROAD) : 08.05 a.m.
V 22 VETRI NAGAR (MUDICHUR ROAD) : 08.10 a.m.
SAIRAM CAMPUS : 08.40 a.m.

ROUTE NO. 55 CHENGALPET TO COLLEGE

C 03 CHENGALPET SAKTHI NAGAR : 07.10 a.m.
V 45 VALLAM - CGL : 07.15 a.m.
R 22 RATTINANKINARU : 07.20 a.m.
G 26 GANESH BHAVAN (CGL) : 07.25 a.m.
N 09 NEW BUS STAND (CHENGALPET) : 07.27 a.m.
C 26 CHENGALPET OLD BUS STAND : 07.30 a.m.
M 68 MAHINDRA CITY : 07.35 a.m.
G 13 GUDUVANCHERY (B.S.) : 07.50 a.m.
SAIRAM CAMPUS : 08.40 a.m.

ROUTE NO. 56 CHENGALPET ITI TO COLLEGE

I 13 ITI (CHENGALPET) : 07.00 a.m.
V 44 VENPAKKAM - CGL : 07.05 a.m.
C 07 CHENGALPET (G.H.) : 07.10 a.m.
R 22 RATTINAKINARU : 07.12 a.m.

G 26	GANESH BHAVAN (CHENGALPET)	:	07.13 a.m.
T 44	THIRUMALAI THEATRE (CHENGALPET)	:	07.14 a.m.
J 12	JSP HOSPITAL	:	07.15 a.m.
N 09	NEW BUS STAND (CGL)	:	07.17 a.m.
C 26	CHENGALPET OLD BUS STAND	:	07.20 a.m.
M 68	MAHINDRA CITY	:	07.25 a.m.
	SAIRAM CAMPUS	:	08.40 a.m.

ROUTE NO.57 THIRUVOTTIYUR TO COLLEGE

L 01	L. M. KOIL (Thiruvottiyur)	:	06.40 a.m.
S 15	SHANMUGAM PARK	:	06.43 a.m.
R 33	RAJA KADAI	:	06.45 a.m.
T 12	THANGAL (Thiruvottiyur)	:	06.47 a.m.
T 25	TOLGATE	:	06.50 a.m.
K 20	KASIMEDU	:	06.55 a.m.
K 09	KALMANDAPAM	:	07.00 a.m.
R 18	ROYAPURAM MARKET	:	07.02 a.m.
C 16	CLIVE BATTERY	:	07.03 a.m.
B 05	BEACH STATION	:	07.04 a.m.
P 20	PARRIS	:	07.05 a.m.
	SAIRAM CAMPUS	:	08.40 a.m.

ROUTE NO.58 MARAIMALAI NAGAR TO COLLEGE

M 03	MARAIMALAI NAGAR BUS STAND	:	07.30 a.m.
K 21	KATTANGULATHUR	:	07.35 a.m.
S 34	S.R.M. COLLEGE	:	07.37 a.m.
G 13	GUDUVANCHERY (B.S.)	:	07.45 a.m.
	SAIRAM CAMPUS	:	08.40 a.m.

ROUTE NO.59 PALLIKARANAI TO COLLEGE

J 05	JERUSALAM COLLEGE	:	07.25 a.m.
N 04	NARAYANAPURAM	:	07.28 a.m.
P 12	PALLIKARANAI GANESH NAGAR	:	07.30 a.m.
P 11	PALLIKARANAI (B.S.)	:	07.33 a.m.

O 01	OIL COMPANY (PALLIKARNAI)	:	07.35 a.m.
P 83	PALLIKARANAI HIGH SCHOOL	:	07.40 a.m.
J 15	JEYACHANDRAN TEXTILES (MEDAVAKKAM)	:	07.43 a.m.
M 19	MEDAVAKKAM (B.S.)	:	07.45 a.m.
V 25	VIJAYA NAGARAM (MEDAVAKKAM)	:	07.50 a.m.
T 03	TAMBARAM	:	08.05 a.m.
	SAIRAM CAMPUS	:	08.40 a.m.

ROUTE NO.60 PORUR TO COLLEGE

P 38	PORUR	:	07.20 a.m.
P 93	PORUR POLICE BOOTH	:	07.21 a.m.
S 16	SHELL BUNK (PORUR)	:	07.22 a.m.
M 30	MUGALIVAKKAM (S & S COMPANY)	:	07.24 a.m.
M 27	MOON LIGHT	:	07.25 a.m.
M 13	MANAPAKKAM	:	07.28 a.m.
N 27	NANDAMBAKKAM	:	07.30 a.m.
P 94	PORUR SANGEETHA HOTEL	:	07.32 a.m.
B 11	BUTT ROAD	:	07.35 a.m.
G 15	GUINDY (AZARKHANA)	:	07.40 a.m.
	SAIRAM CAMPUS	:	08.40 a.m.

ROUTE NO.61 KODUNGAIYUR TO COLLEGE

A 59	AMBEDKAR COLLEGE	:	06.25 a.m.
K 67	KODUNGAIYUR MKB NAGAR	:	06.35 a.m.
M 73	MULLAI NAGAR (Kodungaiyur)	:	06.40 a.m.
K 64	KANNADASAN NAGAR	:	06.42 a.m.
K 93	KODUNGAIYUR MUTHAMIZH NAGAR	:	06.45 a.m.
S 60	SIDCO COLONY	:	06.47 a.m.
M 53	M. R. NAGAR	:	06.50 a.m.
E 12	ERUKANCHERRY	:	07.00 a.m.
	SAIRAM CAMPUS	:	08.40 a.m.

ROUTE NO.62 LIBERTY - II TO COLLEGE

K 75	KODAMBAKKAM	:	07.20 a.m.
L 03	LIBERTY	:	07.22 a.m.
V 38	VASANTHA BHVAN (Kodambakkam)	:	07.23 a.m.
P 43	POWER HOUSE	:	07.25 a.m.
S 05	SAMIYAR MADAM	:	07.26 a.m.
A 25	ASHOK PILLAR	:	07.27 a.m.
T 03	TAMBARAM	:	08.20 a.m.
	SAIRAM CAMPUS	:	08.40 a.m.

ROUTE NO.63 KORATTUR TO COLLEGE

K 69	KORATTUR	:	07.00 a.m.
L 10	LUCAS TVS	:	07.05 a.m.
W05	WHEELS INDIA (KORATTUR)	:	07.06 a.m.
T 39	THIRUMANGALAM	:	07.10 a.m.
C 24	CPW QUARTERS	:	07.15 a.m.
K 70	KOYAMBEDU SIGNAL	:	07.18 a.m.
R 28	ROHINI THEATRE (KOYAMBEDU)	:	07.20 a.m.
N 21	NERKUNDRAM	:	07.22 a.m.
M 54	MADURAVOYAL	:	07.27 a.m.
M 67	MADURAVOYAL MURUGAN KOIL ARCH	:	07.29 a.m.
M 56	MADURAVOYAL MARKET	:	07.30 a.m.
M 57	MADURAVOYAL BYPASS	:	07.35 a.m.
	SAIRAM CAMPUS	:	08.40 a.m.

ROUTE NO.64 PERUNGALATHUR TO COLLEGE

P 30	PERUNGALATHUR GST ROAD	:	08.10 a.m.
E 05	ERIKARAI PERUNGALATHUR	:	08.15 a.m.
	SAIRAM CAMPUS	:	08.40 a.m.

ROUTE NO.65 IRUMBULIYUR TO COLLEGE

V 09	VANDALUR GATE	:	08.00 a.m.
E 04	ERANIYAMMAN KOIL	:	08.03 a.m.
E 05	ERIKARAI (Perungalathur)	:	08.05 a.m.
I 09	IRUMBULIYUR (B.S)	:	08.10 a.m.
	SAIRAM CAMPUS	:	08.40 a.m.

ROUTE NO.66 VYASARPADI TO COLLEGE

V 43	VYASARPADI	:	06.50 a.m.
J 08	JEEVA STATION	:	06.52 a.m.
G 25	GANESAPURAM	:	06.54 a.m.
A 52	ATTU THOTTY	:	06.56 a.m.
O 08	OTTERI	:	07.02 a.m.
T 37	T.B. HOSPITAL (AYNAVARAM)	:	07.04 a.m.
N 22	NOOR HOTEL (AYNAVARAM)	:	07.06 a.m.
J 06	JOINT OFFICE	:	07.10 a.m.
R 32	RAILWAY QUARTERS (ICF)	:	07.20 a.m.
I 02	ICF	:	07.25 a.m.
V 40	VILLIVAKKAM	:	07.30 a.m.
R 28	ROHINI THEATRE (Koyambedu)	:	07.40 a.m.
V 52	VANAGARAM TOLLGATE	:	07.50 a.m.
	SAIRAM CAMPUS	:	08.40 a.m.

ROUTE NO. 67 HASTHINAPURAM-I TO COLLEGE

H 02	HASTHINAPURAM	:	07.51 a.m.
G 04	GAYATHRI NAGAR WATER TANK	:	07.52 a.m.
A 13	AMMAN KOVIL (HASTHINAPURAM)	:	07.53 a.m.
K 41	KUMARAN KUNDRAM	:	07.55 a.m.
R 13	ROJA DEPARTMENTAL STORE -NEHRU NGR	:	07.58 a.m.
N 06	NEAR BRIDGE (MIET)	:	08.00 a.m.
T 03	TAMBARAM	:	08.10 a.m.
	SAIRAM CAMPUS	:	08.40 a.m.

ROUTE NO.68 KANCHEEPURAM - II TO COLLEGE

K 54	KANCHEEPURAM BUS STAND	:	06.50 a.m.
K 12	KANCHEEPURAM MOONGIL MANDABAM	:	06.53 a.m.
K 57	KANCHEEPURAM RANGASAMI KULAM	:	06.58 a.m.
K 13	KANCHEEPURAM PERMUAL KOIL	:	07.03 a.m.
K 58	KANCHEEPURAM TOLLGATE	:	07.10 a.m.
S 54	SASTHRI NAGAR (KPM)	:	07.13 a.m.
K 59	KANCHEEPURAM PERIYAR NAGAR	:	07.16 a.m.
K 81	KANCHEEPURAM PACHAIPPAS COLLEGE	:	07.18 a.m.
K 73	KANCHEEPURAM KANNIGAPURAM	:	07.20 a.m.
E 02	EKANAMPET (KANCHEEPURAM)	:	07.25 a.m.
R 05	RAJAMPETTAI	:	07.28 a.m.
	SAIRAM CAMPUS	:	08.40 a.m.

ROUTE NO. 69 VANUVAMPET TO COLLEGE

V 13	VANUVAMPET (CHURCH)	:	07.32 a.m.
S 57	SARAVANA HOTEL (NANGANALLUR)	:	07.34 a.m.
C 08	CHIDAMBARAM STORE (NANGANALLUR)	:	07.35 a.m.
R 14	ROJA MEDICAL	:	07.37 a.m.
P 08	PALAVANTHANGAL SUBWAY	:	07.40 a.m.
	SAIRAM CAMPUS	:	08.40 a.m.

ROUTE NO. 70 HASTHINAPURAM-II TO COLLEGE

H 02	HASTHINAPURAM	:	08.00 a.m.
T 06	TB HOSPITAL SANATORIUM	:	08.05 a.m.
M 21	MEPZ	:	08.07 a.m.
T 03	TAMBARAM	:	08.20 a.m.
	SAIRAM CAMPUS	:	08.40 a.m.

ROUTE NO. 71 WALLTAX ROAD TO COLLEGE

W 03	WALLTAX ROAD	:	07.00 a.m.
E 09	ELEPHANT GATE	:	07.04 a.m.
C 05	CENTRAL STATION	:	07.05 a.m.
E 14	EVEREST HOTEL (EGMORE)	:	07.10 a.m.

E 01	EGMORE	:	07.15 a.m.
J 13	JUSTICE QUARTERS	:	07.17 a.m.
E 08	EYE HOSPITAL (EGMORE)	:	07.20 a.m.
K 16	KANNIMARA	:	07.22 a.m.
V 37	VANAVIL	:	07.30 a.m.
T 08	TEYNAMPET	:	07.32 a.m.
S 19	SIET	:	07.35 a.m.
S 04	SAIDAPET	:	07.40 a.m.
	SAIRAM CAMPUS	:	08.40 a.m.

ROUTE NO. 72 ZAM BAZAAR TO COLLEGE

Z 01	ZAM BAZAAR	:	07.05 a.m.
A 33	AMEER MAHAL	:	07.07 a.m.
R 15	ROYAPETTAH HOSPITAL	:	07.08 a.m.
R 16	ROYAPETTAH POLICE STATION	:	07.10 a.m.
A 07	AJANTHA HOTEL	:	07.12 a.m.
S 31	SANTHOME	:	07.15 a.m.
I 08	I.O.B. STOP - MYLAPORE	:	07.17 a.m.
S 32	SANGEETHA HOTEL - SANTHOME	:	07.20 a.m.
M 35	M.R.C. MILK BOOTH	:	07.25 a.m.
M 48	M.R.C. NAGAR	:	07.27 a.m.
R 35	RANI MEYAMMAI SCHOOL (MANDAVELI)	:	07.30 a.m.
S 33	SATHYA STUDIO	:	07.32 a.m.
T 03	TAMBARAM	:	08.10 a.m.
	SAIRAM CAMPUS	:	08.40 a.m.

ROUTE NO. 73 MUDICHUR TO COLLEGE

P 29	PERUNGALATHUR - OLD	:	08.04 a.m.
P 04	PADMAVATHY KALYANA MANDAPAM	:	08.05 a.m.
B 08	BHARATHI NAGAR (MUDICHUR ROAD)	:	08.06 a.m.
	SAIRAM CAMPUS	:	08.40 a.m.

ROUTE NO. 74 KOYEMBEDU TO COLLEGE

V 39	VIJAYAKANTH MANDAPAM	:	07.10 a.m.
C 17	CMBT	:	07.15 a.m.
M 25	MMDA	:	07.17 a.m.
T 14	THIRU NAGAR	:	07.20 a.m.
O 05	OPP. TO SRM (VADAPALANI)	:	07.22 a.m.
S 14	SENTHIL TOWERS (ASHOK NGR)	:	07.28 a.m.
A 23	ASHOK NAGAR - Canara Bank	:	07.30 a.m.
	SAIRAM CAMPUS	:	08.40 a.m.

ROUTE NO. 75 K.K.NAGAR TO COLLEGE

K 03	K.K.NAGAR AAVIN BOOTH (Near Saravana Bhavan)	:	07.20 a.m.
S 23	SIVAN PARK	:	07.22 a.m.
C 14	CHURCH (Kamarajar Salai)	:	07.24 a.m.
V 17	VELANKANNI SCHOOL (KK NGR)	:	07.25 a.m.
A 10	AMBAL NAGAR	:	07.30 a.m.
T 03	TAMBARAM	:	08.10 a.m.
	SAIRAM CAMPUS	:	08.40 a.m.

ROUTE NO. 76 AIRPORT TO COLLEGE

A 54	AIRPORT	:	08.00 a.m.
P 09	PALLAVARAM	:	08.05 a.m.
P 10	PALLAVARAM SIGNAL	:	08.08 a.m.
T 03	TAMBARAM	:	08.20 a.m.
	SAIRAM CAMPUS	:	08.40 a.m.

ROUTE NO. 77 LIBERTY - I TO COLLEGE

N 07	NELSON MANICKAM ROAD	:	06.50 a.m.
M 18	METHA NAGAR	:	06.55 a.m.
C 12	CHOOOLAIMEDU	:	07.00 a.m.
S 28	STERLING ROAD	:	07.02 a.m.
L 08	LOYOLA COLLEGE	:	07.04 a.m.
V 07	VALLUVARKOTTAM	:	07.08 a.m.
P 27	PERIYAR ROAD	:	07.10 a.m.

P 43	POWER HOUSE	:	07.15 a.m.
T 03	TAMBARAM	:	07.55 a.m.
	SAIRAM CAMPUS	:	08.40 a.m.

ROUTE NO. 78 ANAKAPUTHUR via PALLAVARAM TO COLLEGE

A 14	ANAKAPUTHUR B.S.	:	07.40 a.m.
A 39	AMMAN KOIL (ANAKAPUTHUR)	:	07.42 a.m.
A 38	ANAKAPUTHUR SCHOOL STOP	:	07.44 a.m.
A 11	ARUNMATHI THEATRE	:	07.46 a.m.
I 12	INDIAN BANK (PAMMAL)	:	07.48 a.m.
K 38	KRISHNA NGR (PAMMAL)	:	08.00 a.m.
M 32	MUTHAMIZH NAGAR	:	08.02 a.m.
A 45	ATTU THOTTY (PALLAVARAM)	:	08.05 a.m.
	SAIRAM CAMPUS	:	08.40 a.m.

ROUTE NO. 79 THIRUVALLUR TO COLLEGE

T 19	THIRUVALLUR B.S.	:	06.50 a.m.
P 78	POST OFFICE (Thiruvallur)	:	07.00 a.m.
T 52	THIRUVALLUR OIL MILL	:	07.02 a.m.
O 04	ONDIKUPPAM	:	07.05 a.m.
A 21	ARANVAYAL	:	07.08 a.m.
M 14	MANAVALA NAGAR	:	07.10 a.m.
V 18	VELLA VEDU	:	07.25 a.m.
T 17	THIRUMAZHISAI	:	07.30 a.m.
N 26	NAZARATHPET	:	07.35 a.m.
	SAIRAM CAMPUS	:	08.40 a.m.

ROUTE NO.80 MADHAVARAM MILK COLONY TO COLLEGE

M 44	MADHAVARAM MMC	:	06.20 a.m.
M 45	MADHAVARAM MAIN GATE	:	06.22 a.m.
A 44	ARUL NAGAR	:	06.25 a.m.
T 33	THAPAL PETTI (MADHAVARAM)	:	06.30 a.m.
P 67	PERAMBUR	:	06.40 a.m.
P 65	PERAMBUR MARKET	:	06.42 a.m.

B 13	B. B. ROAD (PERAMBUR)	:	06.44 a.m.
P 63	PERAMBUR RAILWAY STATION	:	06.46 a.m.
P 62	PERAMBUR CHURCH	:	06.48 a.m.
G 22	GANDHI SALAI PERAMBUR	:	06.50 a.m.
P 64	PERAMBUR VENUS	:	06.52 a.m.
	SAIRAM CAMPUS	:	08.40 a.m.

ROUTE NO. 81 SITHALAPAKKAM TO COLLEGE

S 06	SANKARAPURAM	:	07.35 a.m.
I 16	INDIRA NAGAR (SITHALAPAKKAM)	:	07.37 a.m.
S 37	SITHALAPAKKAM BUS STOP	:	07.39 a.m.
J 02	JAYA NAGAR (SITHALAPAKKAM)	:	07.40 a.m.
S 21	SITHALAPAKKAM KUTT ROAD	:	07.42 a.m.
K 61	KANNI KOIL	:	07.52 a.m.
H 05	HOUSING BOARD (SITHALAPAKKAM)	:	07.55 a.m.
N 17	NOOTHANCHERRY	:	07.58 a.m.
M 46	MADAMBAKKAM SIVAN KOIL	:	08.05 a.m.
	SAIRAM CAMPUS	:	08.40 a.m.

ROUTE NO.82 PORUR ROUNDTANA TO COLLEGE

P 39	PORUR ROUNDTANA	:	07.35 a.m.
P 84	PORUR E.B.	:	07.38 a.m.
V 46	VIGNESHWARA NAGAR (PORUR)	:	07.40 a.m.
M 06	MADANANTHAPURAM-PORUR	:	07.45 a.m.
M 60	MOULIVAKKAM (BAIKADAI)	:	07.50 a.m.
G 05	GERUGAMBAKKAM B.S.	:	07.55 a.m.
K 43	KUNDRATHUR	:	08.00 a.m.
	SAIRAM CAMPUS	:	08.40 a.m.

ROUTE NO.83 POZHICALUR TO COLLEGE

P 32	POZHICALUR (B.S.)	:	07.30 a.m.
S 50	SIVAN KOIL (POZHICALUR)	:	07.35 a.m.
V 19	VENKATESHWARA NAGAR	:	07.40 a.m.
P 90	PAMMAL INDANE GAS COMPANY	:	07.45 a.m.
	SAIRAM CAMPUS	:	08.40 a.m.

ROUTE NO.84 ERANIAMMAN KOIL TO COLLEGE

E 04	ERANIAMMAN KOIL (VANDALUR)	:	08.00 a.m.
E 05	ERIKARAI (PERUNGALATHUR)	:	08.15 a.m.
	SAIRAM CAMPUS	:	08.40 a.m.

ROUTE NO.86 KANCHEEPURAM - I TO COLLEGE

K 54	KANCHEEPURAM BUS STOP	:	06.55 a.m.
K 82	KPM POOKADAI SATHIRAM	:	07.05 a.m.
K 94	KPM KAMMALVAR STREET	:	07.10 a.m.
K 78	KPM NEW RAILWAY STATION	:	07.15 a.m.
K 95	KPM INDIRA NAGAR	:	07.20 a.m.
K 77	KPM MEENAKSHI HOSPITAL	:	07.25 a.m.
K 79	KPM RAJAKULAM	:	07.35 a.m.
K 96	KPM PILLAI CHATHIRAM	:	07.40 a.m.
K 97	KPM SENTHAMANGALAM	:	07.45 a.m.
S 53	SUNGUVARCHATHIRAM B.S.	:	07.50 a.m.
S 52	SRIPERUMBATHUR RAJIVGANDHI MEMORIAL	:	08.00 a.m.
A 67	AMARAMEDU	:	08.10 a.m.
N 25	NALLUR	:	08.15 a.m.
S 43	SOMANGALAM SCHOOL	:	08.20 a.m.
	SAIRAM CAMPUS	:	08.40 a.m.

ROUTE NO.88 URAPAKKAM TO COLLEGE

U 02	URAPAKKAM (SCHOOL STOP)	:	07.45 a.m.
	SAIRAM CAMPUS	:	08.40 a.m.

ROUTE NO.89 NEW COLLEGE TO COLLEGE

V 56	VIVEKANANDAR ILLAM	:	07.10 a.m.
M 24	MIRSAHIBET MARKET	:	07.15 a.m.
N 10	NEW COLLEGE B.S.	:	07.25 a.m.
C 15	CHURCH PARK CONVENT	:	07.26 a.m.
T 23	THOUSAND LIGHTS	:	07.28 a.m.
D 02	DMS	:	07.30 a.m.
S 04	SAIDAPET	:	07.40 a.m.
	SAIRAM CAMPUS	:	08.40 a.m.

ROUTE NO.90 MOOLAKADAI TO COLLEGE

S 49	SHARMA NAGAR (KODUNGAIYUR)	:	06.50 a.m.
E 12	ERUKANCHERY	:	06.52 a.m.
M 58	MOOLAKADAI	:	06.55 a.m.
M 83	MOOLAKADAI KANAGAMASATHIRAM	:	07.00 a.m.
M 50	MADHAVARAM ROUNDTANA	:	07.02 a.m.
R 39	RETTERI RTO BUS STOP	:	07.05 a.m.
R 34	RELIANCE (RETTERI)	:	07.12 a.m.
S 13	SENTHIL NAGAR (RETTERI)	:	07.15 a.m.
L 10	LUCAS TVS	:	07.20 a.m.
B 15	BRITANIA	:	07.25 a.m.
A 58	AMBATTUR ESTATE	:	07.30 a.m.
	SAIRAM CAMPUS	:	08.40 a.m.

ROUTE NO.91 THIRUPORUR TO COLLEGE

T 34	THIRUPORUR	:	07.05 a.m.
K 46	KELAMBAKKAM	:	07.20 a.m.
K 62	KELAMBAKKAM HOSPITAL (CHETTINAD)	:	07.22 a.m.
P 47	PUDHUPAKKAM	:	07.25 a.m.
M 85	MAMBAKKAM	:	07.30 a.m.
K 47	KANDIGAI	:	07.35 a.m.
T 27	TAGORE ENGG. COLLEGE	:	07.38 a.m.
V 29	VENKAMPAKKAM	:	07.40 a.m.
K 48	KOLAPAKKAM	:	07.45 a.m.
V 10	VANDALUR ZOO	:	07.48 a.m.
	SAIRAM CAMPUS	:	08.40 a.m.

ROUTE NO.92 THIRUNINDRAVUR TO COLLEGE

A 28	AVADI MARKET	:	07.25 a.m.
R 21	RAM RATHNA THEATRE	:	07.27 a.m.
A 32	ANJANEYAR KOVIL (THIRUNINRAVUR)	:	07.32 a.m.
S 29	SHEIK – KAD	:	07.35 a.m.
H 11	HINDU COLLEGE (AVADI)	:	07.37 a.m.
P 51	PATTABIRAM	:	07.40 a.m.
P 74	PATTABIRAM RAILWAY GATE	:	07.42 a.m.

J 11	JAYA COLLEGE (AVADI)	:	07.45 a.m.
T 28	THIRUNINDRAVUR (AVADI)	:	07.47 a.m.
	SAIRAM CAMPUS	:	08.40 a.m.

ROUTE NO. 93 MAHARANI THEATRE TO COLLEGE

G 12	GROSS ROAD	:	06.43 a.m.
L 13	LAKSHMI AMMAN KOIL (TONDIARPET)	:	06.45 a.m.
T 11	TONDIARPET DEPOT	:	06.47 a.m.
A 64	APOLLO HOSPITAL (TONDIARPET)	:	06.49 a.m.
P 76	POLICE STATION (TONDIARPET)	:	06.50 a.m.
M 12	MAHARANI THEATRE	:	06.54 a.m.
C 04	CEMENT ROAD (ROYAPURAM)	:	06.57 a.m.
M 23	MINT	:	07.00 a.m.
S 58	STANLEY HOSPITAL	:	07.03 a.m.
A 22	ARTS COLLEGE (ROYAPURAM)	:	07.04 a.m.
M 69	MANNADI	:	07.05 a.m.
B 16	BROADWAY	:	07.07 a.m.
M 71	MOUNT ROAD (SHANTHI THEATRE)	:	07.10 a.m.
S 59	SATHYAMOORTHY BHAVAN	:	07.15 a.m.
	SAIRAM CAMPUS	:	08.40 a.m.

ROUTE NO. 94 KILPAUK TO COLLEGE

K 66	KILPAUK GARDEN B.S.	:	07.00 a.m.
K 85	KILPAUK GARDEN POOKADAI	:	07.05 a.m.
V 51	VINAYAGAR TEMPLE (KILPAUK GARDEN)	:	07.07 a.m.
K 86	KALLARAI (KILPAUK GARDEN)	:	07.10 a.m.
C 11	CHINTHAMANI B.S.	:	07.15 a.m.
R 32	RAILWAY QUARTERS ICF	:	07.20 a.m.
N 02	NATHAMUNI THEATRE	:	07.25 a.m.
A 51	ANNA NAGAR WEST DEPOT	:	07.32 a.m.
P 88	PARK ROAD SIGNAL	:	07.40 a.m.
V 35	VELAMMAL SCHOOL	:	07.45 a.m.
A 49	AMBATTUR BY PASS	:	07.48 a.m.
V 52	VANAGARAM (TOLL GATE)	:	07.50 a.m.
	SAIRAM CAMPUS	:	08.40 a.m.

ROUTE NO. 95 KANCHEEPURAM - III TO COLLEGE

K 11	KANCHIPURAM HOUSING BOARD(B.S)	:	06.40 a.m.
K 55	KANCHEEPURAM COLLECTOR OFFICE	:	06.42 a.m.
K 56	KPM METTU THERU	:	06.45 a.m.
K 57	KPM RENGASAWAMY KULAM	:	06.50 a.m.
K 14	KPM POLICE STATION	:	06.52 a.m.
K 58	KPM TOLLGATE	:	07.00 a.m.
K 81	KPM PACHAIYAPPAS COLLEGE	:	07.05 a.m.
A 46	AYYAMPET (KPM)	:	07.10 a.m.
E 02	EKANAMPET (KPM)	:	07.12 a.m.
R 05	RAJAMPET (KPM)	:	07.15 a.m.
	SAIRAM CAMPUS	:	08.40 a.m.

ROUTE NO. 96 MEDAVAKKAM - I TO COLLEGE

I 04	ICICI BANK (MEDAVAKKAM)	:	07.40 a.m.
R 37	RANGANATHAPURAM (MEDAVAKKAM)	:	07.45 a.m.
K 29	KOOT ROAD - MEDAVAKKAM	:	07.47 a.m.
K 10	KAMARAJAPURAM	:	07.50 a.m.
R 02	RAJAKILPAKKAM	:	07.53 a.m.
T 03	TAMBARAM	:	08.20 a.m.
	SAIRAM CAMPUS	:	08.40 a.m.

ROUTE NO. 97 CITLAPAKKAM TO COLLEGE

M 37	MIT BRIDGE	:	08.05 a.m.
P 53	PARK STOP - CITLAPAKKAM	:	08.08 a.m.
C 06	CITLAPAKKAM	:	08.12 a.m.
M 21	MEPZ	:	08.15 a.m.
T 03	TAMBARAM	:	08.20 a.m.
	SAIRAM CAMPUS	:	08.40 a.m.

ROUTE NO. 98 VELACHERY via VANUVAMPET TO COLLEGE

V 47	VELACHERY (TANSI NAGAR)	:	07.20 a.m.
V 20	VIJAYA NAGAR (B.S.)	:	07.25 a.m.
R 01	RAILWAY STATION (VELACHERY)	:	07.30 a.m.
V 48	VELACHERY SUNSHINE SCHOOL	:	07.35 a.m.
V 49	VELACHERY SAKTHIVEL TRADERS	:	07.38 a.m.
A 65	ADAMBAKKAM JAIN KOIL	:	07.40 a.m.
T 03	TAMBARAM	:	08.10 a.m.
	SAIRAM CAMPUS	:	08.40 a.m.

ROUTE NO. 99 KEELKATTALAI - II TO COLLEGE

P 55	PUZHITHIVAKKAM (Reliance Fresh)	:	07.30 a.m.
O 02	OIL MILL STOP	:	07.35 a.m.
A 61	ANJANEYAR KOIL (Nanganallur)	:	07.38 a.m.
T 29	THILLAI GANGA NAGAR BAKERY	:	07.40 a.m.
S 51	SPENCER SHOP (T.G. Nagar)	:	07.43 a.m.
T 02	T. G. SUBWAY	:	07.45 a.m.
A 35	ALANTHUR DEPOT	:	07.47 a.m.
T 03	TAMBARAM	:	08.05 a.m.
	SAIRAM CAMPUS	:	08.40 a.m.

ROUTE NO. 100 PARVATHY NAGAR TO COLLEGE

M 79	MADHANAPURAM (Mudichur)	:	08.02 a.m.
P 52	PARVATHY NAGAR - MUDICHUR	:	08.05 a.m.
P 04	PADMAVATHY KALYANAMANDAPAM	:	08.07 a.m.
B 08	BHARATHI NAGAR (MUDICHUR ROAD)	:	08.10 a.m.
	SAI RAM CAMPUS	:	08.40 a.m.

ROUTE NO. 101 KUTCHERY ROAD TO COLLEGE

N 24	NAGESWARA PARK	:	06.55 a.m.
L 12	LUZ CHURCH ROAD	:	07.00a.m.
A 57	ALWARPET ANJANEYAR KOIL	:	07.05 a.m.
S 07	SANSKRIT COLLEGE	:	07.08 a.m.
L 07	LUZ BUS STOP	:	07.12 a.m.
V 26	VINAYAKAR KOIL (SANTHOME)	:	07.13 a.m.

K 44	KUTCHERY ROAD	:	07.16 a.m.
M 49	MORE SHOP (M.R.C. ROAD)	:	07.18 a.m.
S 46	SANTHOME CHURCH	:	07.20 a.m.
T 03	TAMBARAM	:	08.10 a.m.
	SAIRAM CAMPUS	:	08.40 a.m.

ROUTE NO. 102 LAKSHMIPURAM TO COLLEGE

L 02	LAKSHMIPURAM SERVICE ROAD	:	08.04 a.m.
K 39	KULAM (MUDICHUR ROAD)	:	08.05 a.m.
	SAIRAM CAMPUS	:	08.40 a.m.

ROUTE NO. 103 KRISHNA NAGAR - II TO COLLEGE

K 37	KRISHNA NAGAR (MUDICHUR ROAD)	:	08.00 a.m.
L 02	LAKSHMIPURAM SERVICE ROAD	:	08.08 a.m.
	SAIRAM CAMPUS	:	08.40 a.m.

ROUTE NO. 104 S.P. KOIL TO COLLEGE

S 20	S.P. KOIL	:	07.30 a.m.
K 87	KELAKARANAI	:	07.32 a.m.
S 38	S.P. KOIL FORD	:	07.35 a.m.
M 03	MARAMALAI NAGAR BUS STOP	:	07.40 a.m.
G 14	GUDUVANCHERRY E.B.	:	07.45 a.m.
	SAIRAM CAMPUS	:	08.40 a.m.

ROUTE NO. 105 THIRUMALAI NAGAR TO COLLEGE

T 36	THIRUMALAI NAGAR (HASTINAPURAM)	:	07.55 a.m.
H 02	HASTHINAPURAM	:	08.10 a.m.
N 19	NEHRU NAGAR (HASTHINAPURAM)	:	08.18 a.m.
T 03	TAMBARAM	:	08.23 a.m.
	SAIRAM CAMPUS	:	08.40 a.m.

ROUTE NO. 106 KOVILAMBAKKAM TO COLLEGE

V 31	VELLA KALLU	:	07.30 a.m.
K 33	KOVILAMBAKKAM	:	07.35 a.m.
E 10	EACHANKADU (Keelkattalai)	:	07.40 a.m.

P 59	PETROL BUNK (PALLAVARAM BYPASS)	:	07.45 a.m.
V 32	VELS COLLEGE	:	07.47 a.m.
S 61	SANITORIUM SIGNAL	:	07.55 a.m.
	SAIRAM CAMPUS	:	08.40 a.m.

ROUTE NO. 107 MANALI BUS TERMINAL TO COLLEGE

M 61	MANALI INDIAN BANK	:	06.10 a.m.
M 62	MANALI MARKET	:	06.12 a.m.
M 63	MMDA (MATTHUR)	:	06.16 a.m.
A 44	ARULNAGAR	:	06.25 a.m.
T 33	THAPALPETTI (MADHAVARAM)	:	06.30 a.m.
M 58	MOOLAKADAI	:	06.35 a.m.
P 70	PERAMBUR SIMPSON	:	06.37 a.m.
T 40	THIRU – VI – KA BUS STAND	:	06.45 a.m.
R 29	RAMNAGAR (PERAMBUR)	:	06.50 a.m.
K 71	KOLATHUR CHURCH	:	06.52 a.m.
M 64	MOOKAMBIKAI COMPLEX	:	06.55 a.m.
D 07	DONBOSCO SCHOOL (PERAMBUR)	:	07.00 a.m.
R 34	RELIANCE RETTERI	:	07.10 a.m.
S 13	SENTHIL NAGAR (Retteri)	:	07.15 a.m.
D 09	DR HOSPITAL	:	07.17 a.m.
	SAIRAM CAMPUS	:	08.40 a.m.

ROUTE NO. 108 MEDAVAKKAM - II TO COLLEGE

G 11	GOWRIWAKKAM	:	07.35 a.m.
S 12	SEMBAKKAM	:	07.40 a.m.
M 11	MAHALAKSHMI NAGAR	:	07.43 a.m.
C 02	CAMP ROAD	:	07.45 a.m.
C 19	CONVENT SCHOOL	:	07.47 a.m.
C 20	CHRISTIAN COLLEGE	:	07.50 a.m.
	SAIRAM CAMPUS	:	08.40 a.m.

ROUTE NO. 109 MEDAVAKKAM - III TO COLLEGE

M 19	MEDAVAKKAM	:	07.40 a.m.
V 25	VIJAY NAGARAM (Medavakkam)	:	07.45 a.m.
S 08	SANTHOSHPURAM	:	07.50 a.m.
G 11	GOWRIVAKKAM	:	07.55 a.m.
C 02	CAMP ROAD	:	08.00 a.m.
	SAIRAM CAMPUS	:	08.40 a.m.

ROUTE NO. 110 & 111 CHROMPET V & VI TO COLLEGE

C 13	CHROMPET (B.S.)	:	08.07 a.m.
T 03	TAMBARAM	:	08.15 a.m.
	SAIRAM CAMPUS	:	08.40 a.m.

ROUTE NO. 112 MANNIVAKKAM TO COLLEGE

M 16	MANNIVAKKAM	:	07.45 a.m.
M 51	MANNIVAKKAM KOOT ROAD	:	07.50 a.m.
N 20	NATESAN SCHOOL (MANNIVAKKAM)	:	07.52 a.m.
L 09	LAKSHMI NAGAR	:	07.54 a.m.
M 29	MUDICHUR	:	07.55 a.m.
	SAIRAM CAMPUS	:	08.40 a.m.

ROUTE NO. 114 RAMACHANDRA MEDICAL COLLEGE TO COLLEGE

R 07	RAMACHANDRA MEDICAL COLLEGE	:	07.35 a.m.
I 11	IYYAPPANTHANGAL	:	07.40 a.m.
K 88	KATTUPAKKAM (B.S.)	:	07.42 a.m.
K 40	KUMANANCHAVADI	:	07.45 a.m.
G 28	GANGAI AMMAN KOIL	:	07.48 a.m.
M 05	MAANGADU	:	07.50 a.m.
K 43	KUNDRATHUR	:	07.52 a.m.
	SAIRAM CAMPUS	:	08.40 a.m.

ROUTE NO. 115 MUTHAPUDUPET TO COLLEGE

M 52	MUTHUPUDUPET	:	07.05 a.m.
C 22	CRPF	:	07.10 a.m.
H 09	HVF HOSPITAL	:	07.15 a.m.

H 08	HVF SBI BANK	:	07.20 a.m.
H 07	HVF ARCH	:	07.25 a.m.
H 06	HVF ESTATE	:	07.30 a.m.
A 55	AJAY STADIUM	:	07.32 a.m.
A 27	AVADI (B.S.)	:	07.35 a.m.
A 34	AVADI CHECK POST	:	07.38 a.m.
R 21	RAMRATHINA THERE	:	07.40 a.m.
A 28	AVADI MARKET	:	07.42 a.m.
P 49	PANDIYAN RICE MILL	:	07.45 a.m.
G 18	GOVARDANAGIRI	:	07.48 a.m.
P 50	PARUTHIPATTU	:	07.50 a.m.
S 47	SENNER KUPPAM	:	07.55 a.m.
	SAIRAM CAMPUS	:	08.40 a.m.

ROUTE NO. 116 OMR TO COLLEGE

C 29	CHETTINAD HOSPITAL (OMR)	:	06.50 a.m.
P 68	PADUR	:	07.00 a.m.
S 42	SIRUCHERI	:	07.05 a.m.
N 23	NAVALUR	:	07.07 a.m.
C 25	CHEMMANCHERY	:	07.10 a.m.
K 91	KUMARAN NAGAR (CHEMMANCHERY)	:	07.12 a.m.
P 69	PONNIAMMAN KOIL (CHEMMANCHERY)	:	07.15 a.m.
I 17	INFOSYS (SHOLINGANALLUR)	:	07.20 a.m.
P 28	PERUMBAKKAM	:	07.30 a.m.
V 50	VIDYAA SCHOOL (PUDHU NAGAR)	:	07.35 a.m.
C 19	CONVENT SCHOOL	:	07.50 a.m.
	SAIRAM CAMPUS	:	08.40 a.m.

ROUTE NO. 117 WALAJABAD TO COLLEGE

W 01	WALAJABAD	:	07.10 a.m.
V 30	VARANAVASI	:	07.15 a.m.
P 17	PANRUTI	:	07.20 a.m.
O 09	ORAKADAM (WALAJABAD)	:	07.30 a.m.
P 02	PADAPPAI	:	07.40 a.m.

M 51	MANNIVAKKAM KUTT ROAD	:	07.55 a.m.
	SAIRAM CAMPUS	:	08.40 a.m.

ROUTE NO. 118 THIRUVERKADU TO COLLEGE

T 47	THIRUVERKADU	:	07.15 a.m.
V 33	VELAPPAN CHAVADI	:	07.30 a.m.
S 10	SAVITHA MEDICAL COLLEGE	:	07.35 a.m.
S 48	SENNER KUPPAM BRIDGE	:	07.40 a.m.
R 31	R. R. B. ENERGY COMPANY	:	07.42 a.m.
P 77	POONAMALLEE BYPASS BRIDGE	:	07.50 a.m.
	SAIRAM CAMPUS	:	08.40 a.m.

ROUTE NO. 119 M.I.T. GATE TO COLLEGE

M 02	M I T GATE	:	08.05 a.m.
S 18	SIDDHA HOSPITAL (MEPZ)	:	08.10 a.m.
	SAIRAM CAMPUS	:	08.40 a.m.

ROUTE NO. 120 REDHILLS TO COLLEGE

G 24	GANDHI NAGAR (REDHILLS)	:	06.30 a.m.
R 30	REDHILLS	:	06.40 a.m.
K 72	KAVANGARAI (Redhills)	:	06.50 a.m.
P 71	PUZHAL	:	06.55 a.m.
P 72	PUZHAL CAMP	:	07.00 a.m.
S 44	SURAPET	:	07.10 a.m.
K 49	KALLIKUPPAM	:	07.15 a.m.
S 30	SINGAPORE COMPLEX (Avadi)	:	07.20 a.m.
V 42	VIVEKANANDA SCHOOL (Ambattur)	:	07.23 a.m.
R 19	RAGHAVENDRA KOVIL	:	07.25 a.m.
T 18	THIRUMULLAIVOYAL	:	07.28 a.m.
V 23	VAISHNAVI NAGAR	:	07.30 a.m.
M 65	MURUGAPPA POLYTECHNIC	:	07.32 a.m.
	SAIRAM CAMPUS	:	08.40 a.m.

ROUTE NO. 121 MADAMBAKKAM TO COLLEGE

S 27	SUDARSHAN NAGAR (CAMP ROAD)	:	07.30 a.m.
H 01	HANSA GARDEN	:	07.35 a.m.
J 10	JAINS APARTMENT	:	07.37 a.m.
K 04	K.V.- II (BALAJI NAGAR)	:	07.40 a.m.
	SAIRAM CAMPUS	:	08.40 a.m.

ROUTE NO. 122 ANNA NAGAR WEST TO COLLEGE

A 51	ANNA NAGAR WEST (Depot)	:	07.20 a.m.
G 27	GANGA SWEETS (Anna Nagar)	:	07.25 a.m.
P 61	PARK ROAD (GOLD FLATS ANNA NAGAR)	:	07.27 a.m.
C 23	COLLECTOR NAGAR	:	07.32 a.m.
M 59	MURUGAPPA NAGAR	:	07.33 a.m.
V 36	VAVIN	:	07.35 a.m.
J 07	J.J. NAGAR WATER TANK	:	07.36 a.m.
I 18	INDIAN PETROL BUNK (Anna Nagar)	:	07.42 a.m.
M 82	MOGAPPAIR STATE BANK	:	07.45 a.m.
A 49	AMBATTUR BYPASS	:	07.50 a.m.
T 03	TAMBARAM	:	08.00 a.m.
	SAIRAM CAMPUS	:	08.40 a.m.

ROUTE NO. 123 KAMATCHI HOSPITAL TO COLLEGE

K 83	KAMATCHI HOSPITAL	:	07.40 a.m.
P 85	PALLIKARANAI (VINAYAGAPURAM)	:	07.42 a.m.
E 10	ECHANKADU (KEELKATTALAI)	:	07.43 a.m.
V 32	VELS COLLEGE	:	07.45 a.m.
S 18	SIDDHA HOSPITAL (MEPZ)	:	08.00 a.m.
	SAIRAM CAMPUS	:	08.40 a.m.

ROUTE NO. 124 POONDY BAZAAR TO COLLEGE

N 18	NATIONAL SCHOOL	:	07.55 a.m.
P 35	POONDY BAZZAR	:	08.00 a.m.
	SAIRAM CAMPUS	:	08.40 a.m.

ROUTE NO. 125 VALASARAVAKKAM TO COLLEGE

L 11	LAKSHMI NAGAR (PORUR)	:	07.25 a.m.
K 74	KARAMPAKKAM (PORUR)	:	07.27 a.m.
P 86	PANNICHERY	:	07.35 a.m.
K 34	KOVUR	:	07.40 a.m.
K 89	KOVUR EB OFFICE	:	07.42 a.m.
M 84	MUNDRAMKATTALAI	:	07.45 a.m.
K 43	KUNDRATHUR (BUS STOP)	:	07.55 a.m.
	SAIRAM CAMPUS	:	08.40 a.m.

ROUTE NO. 126 KANDIGAI POLICE QUARTERS TO COLLEGE

K 90	KANDIGAI POLICE QUARTERS	:	07.50 a.m.
K 47	KANDIGAI	:	07.55 a.m.
R 38	RATHNAMANGALAM	:	08.00 a.m.
K 48	KOLAPAKKAM	:	08.07 a.m.
V 10	VANDALUR ZOO	:	08.15 a.m.
	SAIRAM CAMPUS	:	08.40 a.m.

ROUTE NO. 127 PAMMAL TO COLLEGE

P 14	PAMMAL (RETTAI PILLIYAR KOVIL)	:	07.50 a.m.
P 33	POZHICHALLUR KOOT ROAD	:	07.52 a.m.
N 30	NAGALKENE MGR SILAI	:	08.03 a.m.
N 31	NAGALKENE PETROL BUNK	:	08.05 a.m.
T 45	THIRUNEERMALAI	:	08.08 a.m.
	SAIRAM CAMPUS	:	08.40 a.m.

ROUTE NO. 128 MAPPEDU TO COLLEGE

M 36	MAPPEDU	:	07.45 a.m.
T 31	THIRUVANCHERRY	:	07.50 a.m.
L 14	LAKSHMI AMMAL COLLEGE	:	07.52 a.m.
B 07	BHARATH ENGG COLLEGE	:	07.55 a.m.

I 07	INDRA NAGAR (CAMP ROAD)	:	07.57 a.m.
C 02	CAMP ROAD	:	07.59 a.m.
	SAIRAM CAMPUS	:	08.40 a.m.

ROUTE NO. 129 KUNDRATHUR TO COLLEGE

E 15	ESWARAN KOIL (KUNDRATHUR)	:	08.10 a.m.
P 87	PETROL BUNK (SERUGALATHUR)	:	08.15 a.m.
A 66	ANJUKA NAGAR (B.S.)	:	08.20 a.m.
S 43	SOMANGALAM MELATHUR SCHOOL	:	08.30 a.m.
	SAIRAM CAMPUS	:	08.40 a.m.

Apart from the above mentioned route buses, 25 additional buses are also operated as per the requirements covering different routes.

SUPPORTING FACILITIES

1. Airport : Meenambakkam (Chennai)
15 kms from our campus
2. Bus Route : 18H, Tambarm to Naduveerapattu
18S, Tambaram to Somamangalam
55B, Tambaram to Dharkast
3. Railway Station : Tambaram
4. Post Office : Dharkast, 600 044.
5. Telegraph Office : Pallavaram / Chrompet / Tambaram West
6. Bank Branch Offices : **Central Bank of India at College Campus,**
ATM Centre in the College Campus
Central Bank of India, T.Nagar,
Lakshmi Vilas Bank, Tambaram
State Bank of India, Tambaram
State Bank of India, Somangalam,
Indian Bank, Tambaram
Indian Overseas Bank, Tambaram
Canara Bank, Tambaram
Tamilnadu Mercantile Bank, Tambaram.
7. Courier Service : Franch Express, Phone : 22260095, ST Courier
Professional Courier
8. Hospital Services : Annai Arul Hospital, Tambaram
Hindu Mission Hospital, Tambaram Ph : 22262244
Philips Hospital, Tambaram Ph : 22266569
Deepam Hospital, Tambaram Ph : 22265248
A.G. Hospital, Tambaram Ph : 22266550
Sri Sai Ram Hospital, Tambaram,
Ph : 22413707/22413684
Kasthuri Hospital, Tambaram, Ph : 22263752
and Ambulance Facility at the campus.
9. Taxi & Travel Services : Roja Travels Ph : 22265369
Balaji Tourists, T.Nagar, Ph : 28224444 / 28223737
10. Police Station : Kundrathoor, Ph : 24780039
11. Kishkinta Amusement Park : Ph : 22267244 (Meetings, Parties and Entertainment)
12. Boarding & Lodging : Radisson Blu - Ph : 2275 1089
Hotel Henkala - Ph : 22266278 / 22266367 / 22266500

HEALTH CENTRE SRI SAI RAM HOSPITAL

West Tambaram, Chennai - 600 045.

Medicine Bank and First - Aid Clinic are available in the college campus.

SRI SAI RAM INSTITUTE OF TECHNOLOGY / CONTACT DETAILS

Our institution is located in sylvan surroundings of constructed area of 83,050 sq.m. and boasting of Leo Farm House which has rare species of plants including a big herbal garden.

The institution is situated nearer to the well known Amusement Park, “Kishkintha” famous for recreational games and water sports in Chennai Kuttralam. Arignar Anna Zoo, the biggest Zoological Park in Asia situated at Vandalur, is only ten kilometers away from the College. Queensland, situated in the Bangalore High Road, a Centre for recreation with “ Cable Car” facilities, is also close to our institution.

TELEPHONE NUMBERS

Institution	:	(044) 2251 2111 / 2251 2333
Fax	:	(044) 2251 2323
Administrative Office	:	(044) 4226 7777
Principal	:	044-2251 2444
Boys' Hostel	:	2251 2211 / 2233
Girls' Hostel	:	2251 2266 / 2277
Hostel Fax	:	(044) 2251 2345
E-mail	:	info@sairamit.edu.in
Sri Sairaj Printers	:	(044) 2251 2240

COMMITTEES

The following committees headed by the Principal are constituted to ensure the smooth and effective functioning of the college in the respective operations.

1. DISCIPLINE COMMITTEE

The CEO
Secretary
Principal
Head of all the Departments

Mr. B. Karthikeyan, Mech
Ms. V. Ramya, S & H

2. CALENDAR COMMITTEE

Dr. K.Palanikumar - Principal
Dr. G. Thamaraiselvi, ECE
Dr. B. Sreedevi, CSE
Mr. S. Ramaraj, Manager
Ms. K. Poornima Varalakshmi, S & H
Ms. P. Yamini, S & H

4. LIBRARY COMMITTEE

Dr. T.N.M. Tharanni Mai,
Senior Librarian, Co-ordinator
Ms. S. Kavitha, Assistant Librarian
Head of All Departments
Ms. P. Subha, IT
Ms. K. Sangeetha, ECE
Mr. R. Arun Kumar, Mech
Ms. M. Subashini, CSE
Ms. N. Shanthi, EEE
Ms. P. S. Immaculate, MBA
Ms. T. Flora, S & H
Student Representatives

3. TIME TABLE COMMITTEE

Dr. G. Thamaraiselvi, ECE
Dr. V. Brindhadevi, IT
Dr. V. Selvakumar, MBA
Ms. K. Ramya, Civil
Ms. D. Pushgara Rani, ECE
Ms. S. Ananthi, CSE
Ms. R. Jegatha, IT
Ms. E. Maheshwari, EEE
Mr. P. Rathnavel, EEE

5. MAGAZINE & NEWSLETTER COMMITTEE

Dr. K. Palanikumar, Principal
Mr. S. Ramaraj, Manager
Ms. K. PoornimaVaralakshmi, S & H
Ms. P. Yamini, S & H
Ms. D. Beenadevi, S & H
Mr. S. Ramesh Kumar, S & H

Ms. S. SweetlineShamini, ECE
Ms. P. Subha, IT
Dr. M. Pachhaimmal @ Priya, CSE
Mr. S. Meganathan, Mech
Ms. R. Kiruthiga, EEE
Mr. S. Vasanth Kumar, MBA

6. STAFF SEMINAR COMMITTEE

Dr. S. Rathika, S & H
Ms. A. Ponmalar, IT
Ms. A. Sasikala, EEE
Ms. Lakshmi Devi, ECE
Ms. G. Valarmathi, ECE
Ms. R. Asha, Civil
Mr. P. Suthahar, IT
Mr. S. Balasubramani, Mech

7. STUDENT WELFARE & COUNSELING COMMITTEE

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Dr. G. ThamaraiSelvi, ECE
Mr. A. Srithar, Mech
Dr. B. Sreedevi, CSE
Mr. A. Anbazhagan, EEE
Dr. V. Brindhadevi, IT
Ms. K. Ramya, Civil
Mr. V. Selvakumar, MBA
Mr. V. Balaji, S&H
Dr. A.M. Sameeullah, CSE
Ms. M. Shanthi, EEE

Ms. K. Anuratha, IT
Mr. K. Velavan, Mech
Ms. K. Sivasankari, ECE

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Dr. T.N.M. Tharini Mai, Library
Mr. A. Joseph Thomas Rajan, S & H
Ms. R. Kiruthika, S & H
Mr. P. Ashok, CSE
Mr. S. Surendranath, EEE
Mr. R. Arun Kumar, Mech
Mr. G. Saravanan, ECE
Ms. M. Bharathi, CSE
Ms. R. Shobana Lakshmi, IT
Ms. S. Deivanayagi, ECE
Mr. S. Ramaraj, Manager
Mr. R. Udhayasankar, MBA
Mr. M. Murugan, Civil

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Ms. G. Vinithra, CSE
Ms. A. Ponmalar, IT
Ms. S. Helen RoselinGracy, MBA
Ms. S. Sumathi, S & H
Ms. V. Avudayanayagam, Office - S.G. Asst

Dr. Pachiammal @ Priya, CSE
Mr. P. Suthahar, IT

10. YRC (YOUTH RED CROSS)

Mr. P. Rathnavel,EEE
Mr. G. Ilamurugan, CSE
Mr. S. Prasath Kumar, ECE
Mr. R. Sridhar, Civil
Mr. P. Pondeepak, Civil
Ms. P. Leela Jancy, IT
Mr. B.Karthikeyan, MECH

11. NSS

Dr. K. Baranidharan, MBA
Dr. D. Gokula Krishnan, IT
Dr. G. Saravanan, ECE
Mr. S. Meganathan, Mech
Mr. D. Muralidharan, S & H

12. NCC

Mr. Lt. M. Veerasundaram, Co-ordinator
Mr. E. Vishwanathn, S & H
Mr. B. Karthikeyan, Mech
Dr. T.N.M. Tharinni Mai, Sr. Librarian

13. ATTENDANCE COMMITTEE

Mr. A. Srithar, Mech
Dr. C.R. Senthilnathan, MBA
Dr. K.C. Suresh, CSE

Ms. R. Jegatha, IT
Dr. G. Prakash, EEE
Mr. R. Dhanasekar, EEE
Mr. L. Vijayaraja, EEE
Mr. A. Ravindran, ECE
Ms. C. Rekha, IT
Dr. G. ShanmugaSundar, Mech
Ms. R. Asha, Civil
Dr. DaisyIn Anbu Sujitha, S & H

14. TRANSPORT COMMITTEE

Mr. A. Anbazhagan, EEE
Mr. GnanaPrakash, IT
Mr. A. Ponshanmuga Kumar, Mech
Mr. S. Prasath Kumar, ECE
Ms. S. Madhu Priya, CSE
Ms. V. Avudainayagi, S & H
Mr. P. Saravanan, ECE
Mr. R. Nakeeran

15. HOSTEL COMMITTEE

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Mr. V. Balaji, S & H
Ms. K. Rekha, EEE
Mr. C. Srinivasan, IT
Dr. T. Muthamizhan, EEE

16. ENGLISH & TAMIL LITERARY ASSOCIATION

Ms. K. PoornimaVaralakshmi, S & H
Ms. V. Ramya, S & H
Mr. D. Muralidharan, S & H
Mr. T. Suthahar, IT

17. CANTEEN COMMITTEE

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Mr. A. Srithar, Mech
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Mr. A. Joseph Thomas Rajan, S & H
Mr. P. Suthahar, IT
Mr. S. Prasath Kumar, IT
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Mr. P. Annadurai, CSE
Ms. D. Roopa, CSE
Ms. R. Anitha,EEE

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Dr. G. Prakash, EEE
Mr. V. Selvakumar, MBA
Mr. M. GnanaPrakash, IT
Dr. V. Yuvaraj, S & H
Ms. P. Kavitha, CSE
Dr. S. Rajarajan, ECE

Dr. G. Thamaraiselvi, ECE
Dr. B. Sreedevi, CSE
Dr. K. Baranidharan, MBA
Ms. P. Leela Jancy, IT
Ms. S. Deivanayagai, ECE
Ms. A. Sasikala, EEE
Ms. B. Anusha, S & H

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Mr. R. Dhanasekar, EEE
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Mr. A. Ravindran, ECE
Mr. S. Prasath Kumar, ECE
Mr. T. Selva Ganapathy, IT
Mr. Ashwin Sailesh, Mech
Mr. A. Joseph Thomas Rajan, S & H
Ms. I. Jemina, S & H

20. ISO COMMITTEE

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Mr. V. Balaji, S & H
Ms. G. Valarmathi, ECE - Co-ordinator
Ms. V. Subashini, ECE - Co-ordinator
Mr. N. Oral Roberts, ECE
Ms. A. Sasikala, EEE
Ms. R. Anitha, EEE
Mr. A. PonShanmuga Kumar, Mech

Dr. S. M. Lalitha, S & H
Ms. V. Avudainayaki, S & H
Ms. S. Sujeetha, IT
Ms. C.Rekha, IT
Mr. P. Pon Deepak, Civil
Ms. P. Suganthi, CSE
Ms. P. S. Immaculate, MBA

21. INFORMATION AND PUBLICITY COMMITTEE

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Mr. A. Joseph Thomas Rajan, S & H
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Ms. S. Madhupriya, CSE
Ms. S. Sivaramakrishnan, Civil
Mr. P. Rayavel, CSE
Ms. C. Rekha, IT
Ms. J.M. Prabhu Dass, Mech
Ms. D. Beena Devi, S & H

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Dr. S. Rajarajan, ECE
Dr. B. Sreedevi, CSE
Dr. D. Muruga Radhadevi, IT
Dr. G. Saravanan, ECE
Dr. S. Rathika, S & H
Ms. C. Deepa, S & H
Mr. A. Anbazhagan, EEE

Mr. R. Dhanasekar, EEE
Dr. Su. Suganthi, ECE
Ms. P. Sharmila, IT
Mr. N. Oral Roberts, ECE

23. CSI CHAPTER COMMITTEE

Dr. K. Palanikumar, Principal
Dr. B. Sreedevi, CSE
Dr. V. Brindhadevi, IT
Ms. LeelaJancy, IT
Mr. T. Selvaganapath, IT
Dr. M. Pachaiyammal @ Priya, CSE

24. IETE CHAPTER COMMITTEE

Dr. G. ThamaraiSelvi, ECE
Ms. P. Leela Jancy, IT
Ms. A. Ponmalar, IT
Ms. S. Sujeetha, IT
Dr. P. Saravanan, IT

25. ENVIRONMENTAL CLUB

Dr. K. Palanikumar, Principal
Dr. G. Prakash, EEE
Ms. D. Rajalakshmi, CSE
Ms. K. Anuratha, IT
Mr. C. Sivaguru, Civil
Ms. R. Asha, Civil
Mr. D. Kasinathan, Mech
Dr. T. Arivazhagan, S & H

Ms. Y. Sherlin Nisha, S & H

26. IEDC

Dr. K. Palanikumar, Principal
Dr. S. Rajarajan, ECE
Dr. G. ShanmugaSundar, Mech
Dr. P. Saravanan, IT
Mr. L. Vijayaraja, EEE
Dr. K. C. Suresh, CSE
Mr. P. Pondeepak, Civil

27. PLACEMENT CELL

Dr. K. Palanikumar, Principal
Mr. T. Prabahar Godwin James, CSE
Dr. D. Gokula Krishnan, IT
Mr. S. Prasath Kumar, ECE
Mr. R. Srithar, Civil
Mr. N. Oral Roberts, ECE
Mr. G. Ilamurugan, CSE
Dr. G. Prakash, EEE
Mr. R. Sangama Eswaran, Mech
Ms. V. Subhashini, ECE
Ms. K. Sivasankari, ECE
Ms. M. Bharathi, CSE
Ms. R. Anitha, EEE
Ms. S. Sujeetha, IT
Mr. J. M. Prabhudass, Mech
Mr. B.Karthikeyan, Mech

28. INDUSTRY INSTITUTE INTERACTION CELL

Dr. K. Palanikumar, Principal
Dr. S. Rajarajan, ECE
Mr. M. Mareeswaran, Mech
Mr. G. Saravanan, ECE
Mr. G. Dilip Kumar, Civil
Mr. P. Ashok, CSE
Mr. P. Rathnavel, EEE
Mr. P. Suthahar, IT
Dr. P. Saravanan, IT

29. ALUMNI ASSOCIATION

Dr. G. Prakash, EEE
Mr. M. Mareeswaran, Mech
Ms. G. P. Bharathi, ECE
Ms. K. Sumathi, ECE
Mr. P. Ashok, CSE
Mr. S. Surendranath, ECE
Ms. C. Rekha, IT
Mr. P. Pondeepak, Civil
Ms. K. Ezhilmathi, S & H

30. WOMEN'S EMPOWERMENT CELL

Dr. G. Thamarai Selvi, ECE
Dr. B. Sreedevi, CSE
Dr. V. Brindhadevi, IT
Ms. K. Ramya, Civil

Ms. B. Shoba, Jr. Assistant
Dr. S.M. Lalitha, S & H
Ms. B. Anusha, S & H
Ms. S. Helen Roselin Gracy, MBA
Ms. M. Bharathi, CSE

31. ISTE CHAPTER

Dr. K. Palanikumar, Principal
Dr. G. Saravanan, ECE
Dr. T. Arivazhagan, S & H
Dr. V. Yuvaraj, S & H
Mr. R. Sridhar, Mech
Ms. J. Gayathri, IT
Mr. J. Rajesh, Civil

32. IEI CHAPTER

Ms. P. Illakkiya, IT
Ms.P. Sharmila, IT
Ms. R. Anitha, EEE
Mr. P. Rajeshwari, ECE
Ms. M. Subhashini, CSE
Mr. C. Achuthan, Civil

Mr. R. Sridhar, Mech

33. SAE

Mr. J. M. Prabhu Dass, Mech
Mr. B. Karthikeyan, Mech
Mr. S. Meganathan, Mech
Mr. Ashwin Sailesh, Mech
Mr. M. Balachandar, Mech

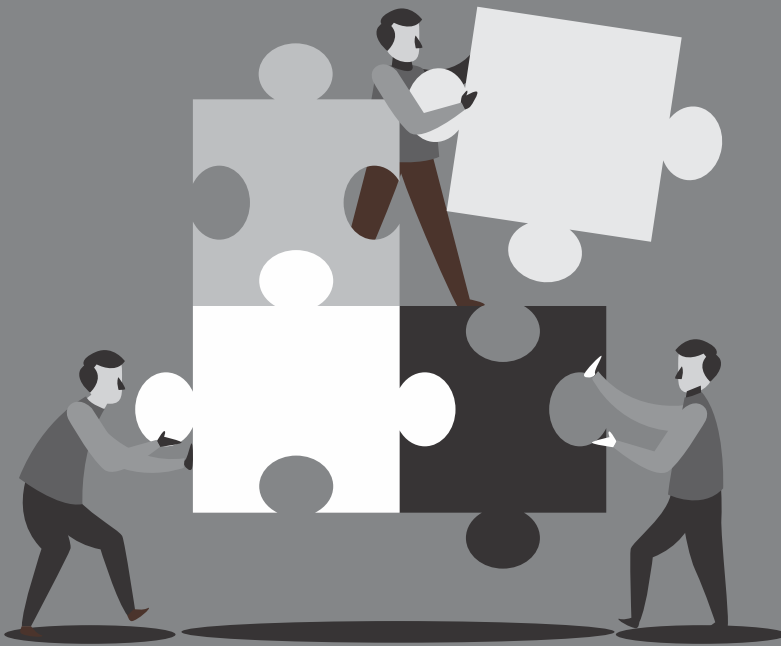
34. SIESRP

Dr. B. Sreedevi
Dr. V. Brindha Devi
Mr. P. Rayavel
Ms. G. Vinithra
Ms. M.Priya
Ms. P. Sharmila
Mr. M. Gnanaprakash
+ Students of IT and CSE

35. UBA

Mr. A. Ponshanmuga Kumar, MECH
Mr. D. Muralidharan, S & H
+ Students Co-ordinators





Enjoy & Experience

*The Bliss of Growth,
The Glory of Action
and the Splendour of Beauty
through Hardwork & Teamspirit.*

Plan well

Progress well

Have a good academic year !

**Wish you a fabulous and meaningful
Academic Year 2020- 2021.**

JUNE 2020

ACADEMIC CALENDAR 2020-2021

1	MON	
2	TUE	
3	WED	FDP - IT / ECE
4	THU	
5	FRI	WEBINAR - S & H
6	SAT	WEBINAR - MECH & EEE
7	SUN	Holiday - WEBINAR EEE
8	MON	
9	TUE	
10	WED	
11	THU	
12	FRI	FDP - MECH
13	SAT	WEBINAR - EEE & ECE
14	SUN	Holiday
15	MON	FDP - MECH & ECE
16	TUE	MBA - 10TH INTERNATIONAL ONLINE CONFERENCE
17	WED	
18	THU	
19	FRI	SCIENCE CLUB - LECTURE
20	SAT	WEBINAR - EEE & WEBINAR - ISTE/IEEE
21	SUN	Holiday
22	MON	FDP - ECE
23	TUE	WEBINAR - EEE
24	WED	
25	THU	
26	FRI	ORIENTATION PROGRAMME - CIVIL
27	SAT	INDUSTRIAL LECTURE SERIES - IT & CSE
28	SUN	
29	MON	
30	TUE	
30	30	

The whole purpose of education is to turn mirrors into windows.

JULY 2020

1	WED	
2	THU	
3	FRI	
4	SAT	
5	SUN	
6	MON	
7	TUE	
8	WED	
9	THU	
10	FRI	
11	SAT	
12	SUN	
13	MON	
14	TUE	
15	WED	
16	THU	
17	FRI	
18	SAT	WEBINAR - MECH
19	SUN	
20	MON	INTERNATIONAL FDP - S & H
21	TUE	
22	WED	
23	THU	
24	FRI	
25	SAT	INDUSTRIAL LECTURE SERIES - IT & CSE
26	SUN	
27	MON	
28	TUE	
29	WED	
30	THU	WEBINAR - MECH
31	FRI	

The important thing in education is not to stop questioning.

AUGUST 2020

1	SAT	WEBINAR - MECH
2	SUN	Holiday
3	MON	
4	TUE	
5	WED	
6	THU	
7	FRI	
8	SAT	CEO CONCLAVE - MBA
9	SUN	Holiday
10	MON	
11	TUE	
12	WED	
13	THU	
14	FRI	
15	SAT	
16	SUN	Holiday
17	MON	
18	TUE	
19	WED	
20	THU	
21	FRI	
22	SAT	Virtual Industrial Visit - IT & Skill Enhancement Training - CSE
23	SUN	Holiday
24	MON	
25	TUE	
26	WED	
27	THU	
28	FRI	
29	SAT	WEBINAR - MBA
30	SUN	Holiday
31	MON	

Education is simply the soul of a society as it passes from one generation to another.

SEPTEMBER 2020

1	TUE	
2	WED	
3	THU	
4	FRI	
5	SAT	
6	SUN	Holiday
7	MON	
8	TUE	
9	WED	
10	THU	
11	FRI	
12	SAT	WEBINAR - MBA
13	SUN	Holiday
14	MON	AICTE SPONSORED STTP - MECH
15	TUE	
16	WED	
17	THU	
18	FRI	
19	SAT	WEBINAR - MBA
20	SUN	Holiday
21	MON	
22	TUE	
23	WED	
24	THU	
25	FRI	
26	SAT	Virtual Industrial Visit - IT & CSE
27	SUN	Deepvali Holiday
28	MON	
29	TUE	
30	WED	FDP - CSE
	30	

What sculpture is to a block of marble, education is to the human soul.

OCTOBER 2020

1	THU	
2	FRI	
3	SAT	WEBINAR - ECE
4	SUN	Holiday
5	MON	WEBINAR - ECE
6	TUE	
7	WED	
8	THU	WEBINAR - ECE
9	FRI	GUEST LECTURE - IT
10	SAT	WEBINAR - ECE
11	SUN	Holiday
12	MON	WEBINAR - MECH
13	TUE	GUEST LECTURE - IT
14	WED	
15	THU	
16	FRI	
17	SAT	
18	SUN	Holiday
19	MON	
20	TUE	WEBINAR - MBA
21	WED	
22	THU	
23	FRI	Industry Connect Event - CSE
24	SAT	Virtual Industrial Visit - IT & CSE
25	SUN	Holiday
26	MON	
27	TUE	
28	WED	Project Review - CSE
29	THU	
30	FRI	
31	SAT	

A mind stretched by new ideas, may never return to its original dimensions and always set for research.

NOVEMBER 2020

1	SUN	Holiday
2	MON	
3	TUE	
4	WED	
5	THU	
6	FRI	
7	SAT	WEBINAR SERIES - EEE
8	SUN	Holiday
9	MON	WEBINAR - MBA
10	TUE	WEBINAR - EEE
11	WED	WEBINAR - MBA
12	THU	
13	FRI	
14	SAT	
15	SUN	Holiday
16	MON	WEBINAR - EEE
17	TUE	
18	WED	
19	THU	ICMSD 2020 - MECH (International Conference)
20	FRI	
21	SAT	
22	SUN	Holiday
23	MON	
24	TUE	
25	WED	
26	THU	
27	FRI	
28	SAT	Virtual Industrial Visit - IT
29	SUN	Holiday
30	MON	WEBINAR - ECE
	30	

Education is not only a ladder of opportunity, but it is an investment for our future and a tool to preserve culture.

DECEMBER 2020

1	TUE	
2	WED	WEBINAR - CIVIL
3	THU	
4	FRI	
5	SAT	WEBINAR - CIVIL
6	SUN	Holiday
7	MON	
8	TUE	
9	WED	
10	THU	
11	FRI	WEBINAR - CIVIL & EEE
12	SAT	
13	SUN	Holiday
14	MON	WEBINAR - EEE
15	TUE	WEBINAR - EEE
16	WED	
17	THU	WEBINAR - EEE
18	FRI	WEBINAR - EEE
19	SAT	WEBINAR - IT
20	SUN	Holiday
21	MON	ORIENTATION SESSION ON NATIONAL EDUCATIONAL POLICY
22	TUE	
23	WED	
24	THU	YOUNG ENTREPRENEUR - IT
25	FRI	
26	SAT	Virtual Industrial Visit - IT
27	SUN	Holiday
28	MON	
29	TUE	
30	WED	WEBINAR - CIVIL
31	THU	

Reading maketh a full man; Conference a wise man; Writing an exact man.

JANUARY 2021

1	FRI	
2	SAT	
3	SUN	Holiday
4	MON	
5	TUE	
6	WED	
7	THU	WEBINAR - MECH
8	FRI	
9	SAT	
10	SUN	Holiday
11	MON	
12	TUE	
13	WED	
14	THU	
15	FRI	
16	SAT	
17	SUN	Holiday
18	MON	
19	TUE	
20	WED	
21	THU	
22	FRI	
23	SAT	Virtual Industrial Visit - IT
24	SUN	Holiday
25	MON	
26	TUE	
27	WED	WEBINAR - MBA
28	THU	
29	FRI	
30	SAT	
31	SUN	Holiday

Education is a progressive discovery of one's own ignorance.

FEBRUARY 2021

1	MON	WEBINAR - MECH
2	TUE	
3	WED	
4	THU	
5	FRI	
6	SAT	
7	SUN	Holiday
8	MON	
9	TUE	
10	WED	
11	THU	
12	FRI	
13	SAT	
14	SUN	Holiday
15	MON	
16	TUE	
17	WED	
18	THU	
19	FRI	
20	SAT	
21	SUN	Holiday
22	MON	
23	TUE	
24	WED	
25	THU	
26	FRI	WEBINAR - EEE
27	SAT	Virtual Industrial Visit - IT
28	SUN	Holiday

Learning is not attained by chance; it must be sought for with ardor and attended to with diligence.

MARCH 2021

1	MON	
2	TUE	
3	WED	
4	THU	UNION BUDGET ANALYSIS - MBA
5	FRI	
6	SAT	
7	SUN	Holiday
8	MON	
9	TUE	
10	WED	
11	THU	
12	FRI	
13	SAT	
14	SUN	Holiday
15	MON	
16	TUE	
17	WED	
18	THU	
19	FRI	
20	SAT	Knowledge Sharing Session - IT
21	SUN	Holiday
22	MON	
23	TUE	
24	WED	Technical Discussion Session - IT
25	THU	
26	FRI	
27	SAT	
28	SUN	Holiday
29	MON	WEBINAR - IT
30	TUE	
31	WED	

Anyone who has never made a mistake has never tried anything new.

APRIL 2021

1	THU	
2	FRI	Founder's Day & International Workshop - IT
3	SAT	
4	SUN	Holiday
5	MON	SEMINAR - IT
6	TUE	
7	WED	
8	THU	
9	FRI	
10	SAT	
11	SUN	Holiday
12	MON	
13	TUE	
14	WED	
15	THU	WEBINAR - MECH
16	FRI	
17	SAT	
18	SUN	Holiday
19	MON	WEBINAR - MECH
20	TUE	
21	WED	THIRD NATIONAL CONFERENCE - EEE
22	THU	
23	FRI	
24	SAT	Virtual Industrial Visit - IT
25	SUN	Holiday
26	MON	
27	TUE	
28	WED	
29	THU	
30	FRI	

Education is the passport to the future, for tomorrow belongs to those who prepare for it today.

MAY 2021

1	SAT	
2	SUN	Holiday
3	MON	
4	TUE	
5	WED	
6	THU	
7	FRI	
8	SAT	
9	SUN	Holiday
10	MON	
11	TUE	
12	WED	
13	THU	
14	FRI	
15	SAT	
16	SUN	Holiday
17	MON	
18	TUE	
19	WED	
20	THU	
21	FRI	
22	SAT	
23	SUN	Holiday
24	MON	
25	TUE	
26	WED	
27	THU	
28	FRI	
29	SAT	
30	SUN	Holiday
31	MON	

Real knowledge is to share the same and to serve the fellow beings by the same.

2020

JANUARY 2020						
S	M	T	W	T	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

FEBRUARY 2020						
S	M	T	W	T	F	S
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2	3	4	5	6	7	8
9	10	11	12	13	14	15
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MARCH 2020						
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22	23	24	25	26	27	28
29	30	31				

APRIL 2020						
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12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30		

MAY 2020						
S	M	T	W	T	F	S
31					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30

JUNE 2020						
S	M	T	W	T	F	S
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7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30				

JULY 2020						
S	M	T	W	T	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

AUGUST 2020						
S	M	T	W	T	F	S
30	31					1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29

SEPTEMBER 2020						
S	M	T	W	T	F	S
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30			

OCTOBER 2020						
S	M	T	W	T	F	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

NOVEMBER 2020						
S	M	T	W	T	F	S
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8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30					

DECEMBER 2020						
S	M	T	W	T	F	S
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

2021

JANUARY 2021						
S	M	T	W	T	F	S
31					1	2
3	4	5	6	7	8	9
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17	18	19	20	21	22	23
24	25	26	27	28	29	30

FEBRUARY 2021						
S	M	T	W	T	F	S
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14	15	16	17	18	19	20
21	22	23	24	25	26	27
28						

MARCH 2021						
S	M	T	W	T	F	S
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21	22	23	24	25	26	27
28	29	30	31			

APRIL 2021						
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MAY 2021						
S	M	T	W	T	F	S
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23	24	25	26	27	28	29

JUNE 2021						
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13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30			

JULY 2021						
S	M	T	W	T	F	S
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4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

AUGUST 2021						
S	M	T	W	T	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

SEPTEMBER 2021						
S	M	T	W	T	F	S
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5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30		

OCTOBER 2021						
S	M	T	W	T	F	S
31					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30

NOVEMBER 2021						
S	M	T	W	T	F	S
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30				

DECEMBER 2021						
S	M	T	W	T	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

TIME TABLE

I & IV Year

Year

Semester

PERIODS DAYS	1 9.10 to 10.00	2 10.00 to 10.50	10.50 to 11.05	3 11.05 to 11.55	11.55 to 12.35	4 12.35 to 1.15	5 1.15 to 2.05	6 2.05 to 2.55	2.55 to 3.10	7 3.10 to 4.00
Monday			B R E A K		L U N C H B R E A K				B R E A K	
Tuesday										
Wednesday										
Thursday										
Friday										

Success is the sum of small efforts, repeated day-in and day-out.

TIME TABLE

I & IV Year

Year

Semester

PERIODS DAYS	1 9.10 to 10.00	2 10.00 to 10.50	10.50 to 11.05	3 11.05 to 11.55	11.55 to 12.35	4 12.35 to 1.15	5 1.15 to 2.05	6 2.05 to 2.55	2.55 to 3.10	7 3.10 to 4.00
Monday			B R E A K		L U N C H B R E A K				B R E A K	
Tuesday										
Wednesday										
Thursday										
Friday										

To succeed in life, you need two things: ignorance and confidence

TIME TABLE

II & III Year

Year

Semester

PERIODS DAYS	1 9.10 to 10.00	2 10.00 to 10.50	10.50 to 11.05	3 11.05 to 11.55	4 11.55 to 12.35	12.35 to 1.15	5 1.15 to 2.05	6 2.05 to 2.55	2.55 to 3.10	7 3.10 to 4.00
Monday			B R E A K			L U N C H B R E A K			B R E A K	
Tuesday										
Wednesday										
Thursday										
Friday										

Not he who has much is rich, but he who gives much.

TIME TABLE

II & III Year

Year

Semester

PERIODS DAYS	1 9.10 to 10.00	2 10.00 to 10.50	10.50 to 11.05	3 11.05 to 11.55	4 11.55 to 12.35	12.35 to 1.15	5 1.15 to 2.05	6 2.05 to 2.55	2.55 to 3.10	7 3.10 to 4.00
Monday			B R E A K			L U N C H B R E A K			B R E A K	
Tuesday										
Wednesday										
Thursday										
Friday										

Success usually comes to those who are too busy to be looking for it.

ODD SEMESTER

Goals :
.....
.....

Plans:
.....
.....

Action Done :
.....
.....
.....

Achievements :
.....
.....

EVEN SEMESTER

Goals :
.....
.....

Plans: _____
.....
.....
.....

Action Done :
.....
.....
.....
.....

Achievements :
.....
.....

REGULATIONS 2020

CHOICE BASED CREDIT SYSTEM

COMMON TO ALL B.E. / B.TECH. FULL TIME PROGRAMMES

This regulation is applicable to the students admitted to B.E./B.Tech programmes at Sri Sai Ram Engineering College (Autonomous) from the academic year 2020- 2021 onwards.

1. PRELIMINARY DEFINITIONS AND NOMENCLATURE

In these Regulations, unless the context otherwise requires:

- I) **“University”** means ANNA UNIVERSITY, CHENNAI.
- II) **“Programme”** means a degree programme that is B.E./B.Tech degree programmes.
- III) **“Specialization/Branch/Discipline”** means specialization or branch of B.E./B.Tech. degree programme, like Mechanical Engineering, Information Technology, etc.
- IV) **“Course/Subject”** means a theory or practical subject that is normally studied in a semester, like Mathematics, Physics, etc.
- V) **“Chairman”** means the Head of the Department of the Board concerned.
- VI) **“Head of the Institution”** means the Principal of the College/Institution.
- VII) **“Head of the Department”** means head of the Department concerned.
- VIII) **“Dean-Academics”** means the authority of the college who is responsible for all the Academic activities for the implementation of relevant rules and Regulations.
- IX) **“Controller of Examinations”** means the authority of the College, who is responsible for all activities of the Examinations Centre.
- X) **“College”** means Sri Sai Ram Engineering College (Autonomous).
- XI) **“TAP”** means Training and Placement cell of the college.
- XII) **“Regulation”** means a manuscript that contains the principles and standards designed to control or govern the conduct or provide direction at a more detailed level.
- XIII) **“DAB”** represents Department Advisory Board.
- XIV) **“PAC”** represents the Programme Assessment Committee.
- XV) **“Choice Based Credit System (CBCS)”**: The CBCS provides choice for students to select from the prescribed courses (elective or soft skill courses).

- XVI) **“Credit”**: A unit by which the course work is measured. It determines the number of hours of instructions required per week. One credit is equivalent to one hour of teaching (lecture or tutorial) or two hours of practical work/field work per week.
- XVII) **“Grade Point”**: It is a numerical weight allotted to each letter grade on a 10 Point scale.
- XVIII) **“Placement Grade Point Average (PGPA)”**: It is a measure of overall cumulative performance of a student over 1 to 7 semesters in his/her TAP courses. The PGPA is the ratio of total credit points secured by a student in various TAP courses in 1 to 7 semesters and the sum of the total credits of all TP courses.
- XVIII) **“Grade Point Average (GPA)”**: It is a measure of performance of work done in a semester. It is the ratio of total credit points secured by a student in various courses registered in a semester and the total course credits taken during that semester.
- XIX) **“Cumulative Grade Point Average (CGPA)”**: It is a measure of overall cumulative performance of a student over all semesters. The CGPA is the ratio of total credit points secured by a student in various courses in all semesters and the sum of the total credits of all courses in all the semesters.

2. ADMISSION ELIGIBILITY CRITERIA

2.1 First Semester Admission

Candidates seeking admission to the first semester of the eight semester B.E. / B.Tech. degree programme:

- (i) Should have passed the Higher Secondary Examinations of (10+2) Curriculum (Academic Stream) prescribed by the Government of Tamil Nadu and AICTE or authority accepted by the Syndicate of Anna University as equivalent thereto. They should also satisfy other eligibility rules as prescribed by the Anna University and Directorate of Technical Education, Government of Tamil Nadu, Chennai from time to time.

(OR)

- (ii) Should have passed the Higher Secondary Examination of Vocational stream (Vocational groups in Engineering / Technology) as prescribed by the Government of Tamil Nadu.

2.2 Lateral entry Admission

- (i) The candidates who possess the Diploma in Engineering / Technology awarded by the State Board of Technical Education, Tamilnadu or its equivalent are eligible to apply for Lateral entry admission to the third semester of B.E. / B.Tech. in the branch corresponding to the branch of study.

(OR)

- (ii) The candidates who possess the Degree in Science (B.Sc.,) (10+2+3 stream) with Mathematics as a subject at the B.Sc. Levels are eligible to apply for Lateral entry admission to the third semester of B.E./B.Tech.

Such candidates shall undergo two additional Engineering subject(s) in the third and fourth semesters as prescribed by Board of Studies.

3. UG PROGRAMMES OFFERED

The following Programmes and Branches of study approved by Anna University, Chennai and All India Council for Technical Education, New Delhi, are offered by the College.

TABLE 1 : LIST OF UG PROGRAMS OFFERED

Faculty of Engineering and Technology			
S.No	Code	Programme	Branch
1.	CE	B.E.	Civil Engineering
2.	CS	B.E.	Computer Science and Engineering
3.	EC	B.E.	Electronics and Communication Engineering
4.	EE	B.E.	Electrical and Electronics Engineering
5.	EI	B.E	Electronics and Instrumentation Engineering
6.	IC	B.E	Instrumentation and Control Engineering
7.	ME	B.E.	Mechanical Engineering
8.	PR	B.E	Production Engineering
9.	AI	B.Tech	Artificial Intelligence and Data Science
10.	CB	B.Tech	Computer Science and Business Systems
11.	IT	B. Tech	Information Technology

4. STRUCTURE OF PROGRAMMES

4.1 Categorization of Courses

Every B.E. / B. Tech. Programme will have a curriculum with syllabi consisting of theory and practical courses that shall be categorized as follows:

- a. i. **Humanities and Social Sciences (HS)** courses include Technical English, Engineering Ethics and Human Values, Communication skills, Environmental Science and Engineering.
- ii. **Basic Sciences (BS)** courses include Mathematics, Physics, Chemistry, etc.
- b. i. **Engineering Sciences (ES)** courses include Engineering practices, Engineering Graphics, Basics of Electrical / Electronics / Mechanical / Computer Engineering, Instrumentation etc.
- ii. **Programme Core (PC)** courses include the core courses relevant to the chosen specialization/branch.
- iii. **Programme Laboratory (PL)** This includes practical courses relevant to the chosen specialization/branch.
- iv. **Programme Core with Laboratory Component (PW)** Courses include the core courses with laboratory component relevant to the chosen specialization / branch.
- v. **Professional Elective (PE)** courses include the elective courses relevant to the chosen specialization/branch.
- vi. **Open Elective (OE)** courses include the courses from other branches which a student can choose from the list specified in the curriculum of the students B.E./B.Tech programmes.
- vii. **Project (P)** Courses that includes a prototype development/ case study, Industrial based topics in the chosen field of specialization.
- viii. **Talent Enhancement Courses (TE)** include Live-in Lab project work (Creative, Core skill Design, Innovative Projects) and/or Internship (by AICTE – Internship, Internshala etc.), Seminar, Case Study and Industrial/Practical Training.
- ix. **Skill Enhancement Courses (TP):** Professional Practices, Industry Skill Enabling training & tests like GEO, English Etiquette, ELQ, NTT, Icebreaker, Code Mantra, GEN Z, R Learning, C-BYTS, AMCAT etc.
- x. **Mandatory Non-credit Courses (MNC)** exposes the students to courses such as Value Education, Yoga, Constitution of India, Essence of Indian Knowledge Traditional, Pedagogy Studies, Stress Management and Personality Development through Life Enlightenment Skills.

4.2 Personality and Character Development

All students shall enroll, on admission, in any one of the personality and character development programmes which are listed below. The students shall undergo training for the specified number of hours as specified in the relevant programmes (50/100 hours and/or attend a camp as applicable). The

training shall include classes on hygiene and health awareness and also training in first-aid too.

- 4.2 (a) **National Cadet Corps (NCC)** will have about 20 parades.
- (b) **National Service Scheme (NSS)** will have social service activities in and around the College / Institution.
- (c) **National Sports Organization (NSO)** will have sports, Games, Drills and Physical exercises.
- (d) **Youth Red Cross (YRC)** will have activities related to social services in and around College/Institutions. While the training activities will normally be during weekends, the camp will normally be during vacation period.

(e) Sustainable Development Goals – Activity Programme Points

In line with AICTE activity point programme, the following activities are included to the students and they need to fulfill the requirements for getting their degree. These activities may be carried out by the students in teams. AICTE recommends 300 to 400 hrs of activity during the entire programme of study. Hence, a student shall perform the activity for a duration of 75 to 100hrs in a year (2 semesters). Here 40-45hrs is considered as 1 week. This activity has to be carried under the nomenclature SAIRAM – SAP (Sairam SDG Action Program)

These activities may be coordinated by NSS/NCC/YRC/Sports coordinator or by the TAP Cell of the institute.

Following are the suggestive activity as listed by AICTE:

1. Prepare and implement a plan to create local job opportunities.
2. Prepare and implement a plan to improve education quality in villages.
3. Prepare an actionable Detailed Project Report (DPR) for doubling the village Income.
4. Developing a sustainable water management system.
5. Prepare and implement a plan to improve health parameters of villagers.
6. Developing and implementing low cost sanitation facilities.
7. Prepare and implement a plan to promote local tourism through innovative approaches.
8. Implement/develop technology solutions which will improve quality of life.
9. Prepare and implement solutions for energy conservation.
10. Prepare and implement a plan to skill village youth and provide employment.
11. Develop localized techniques for reduction in construction cost.

12. Prepare and implement a plan of sustainable growth of the village.
13. Setting up an information imparting club for women leading to contribution in social and economic issues.
14. Developing and managing an efficient garbage disposal system.
15. Contribution to any national level initiative of Government of India, For Eg Digital India/Skill India/Swachh Bharat Internship etc.,

(f) Club Activities

Every student who is admitted to the UG programme shall join in the club activities as per their choice. It is mandatory for the student to enroll themselves in at least two clubs. Activities they perform in their club carries weightage in their continuous assessment during their first year of study.

Technical Related Clubs	Service Oriented Clubs	Skill Building Clubs	Hobbies Related Clubs
Code Club	ECO and Swachh Bharat Club	English Language & Literature club	Tamil Ilakkiya Mandram
Robotics Club	Rotaract Club	Foreign Language Club	Fine Arts Club
Cyber Club	Young Indian	Skill development Club	Photography Club
M-apps Club	Health & Yoga Club		Agriculture & Farming Club
Automobile Club	Disaster Management & Safety Club		
Energy Efficiency Club	Red Ribbon Club		
Math Club			
Science Club			

Apart from the above, the students shall enroll for Professional Societies as per their choice and branch of study.

(g) Green Campus: The institute is committed to contribute towards the implementation of Green Campus as part of SDG. Under this scheme, two major activities have to be adhered by the students. Every student who is admitted to this institute will volunteer himself/herself in these two activities (i) Waste management (ii) Rain water harvesting.

4.3 Mandatory Three Week Induction Programme

The students immediately after admission should undergo a mandatory three week induction programme comprising of yoga class, nurturing various human traits like trust, commitment, gratitude, care, humanity, responsibility, dedication, respect, self confidence, creativity, gratitude, happiness,

affection etc., universal human values, proficiency modules, lectures by eminent people, visits to local areas and familiarization to department/branch and innovations immediately after admission.

4.4 Number of courses per semester

The curriculum in each semester shall normally have a blend of theory courses, theory with lab components not exceeding 7 and Laboratory courses and Employability Enhancement Course(s) not exceeding 5. Each Employability Enhancement Course may have credits assigned as per clause 4.5. However, the total number of courses per semester shall not exceed 12.

4.5 Credit Assignment

Each course is assigned certain number of credits based on the following :

CONTACT PERIOD PER WEEK	CREDITS
One Lecture Period	1
One Tutorial Period	1
Two Laboratory Periods	1
Two TEC Periods - courses like Seminar / Project Work / Case study / etc.	1

4.6. Industrial Training/Internship

The students shall undergo Industrial training for a period as specified in the Curriculum (vide clause 4.6.1) during summer / winter vacation. In this case the training has to be undergone continuously for the entire period.

The students shall undergo Internship at Research organization / University after due approval from the Dean (Academics) for the period prescribed in the curriculum during summer / winter vacation, in lieu of Industrial training.

4.6.1 Internship duration and academic credentials

The following framework is proposed to give academic credit for the internship undergone by the students as part of the programme.

- A mandatory 3 credits of Internship may be counted for the award of the degree.

- 1 credit is equivalent to a minimum 15 days of internship.
- Internships may be full-time or part-time; they are full-time in the summer vacation and part-time during the academic session.

4.6.2 Training and Placement credentials

All the students joining the institute shall undergo training to enhance their industry readiness skill. This activity is taken care of by the Training and Placement cell (TAP) of the institute. Under this category every student shall have a minimum of exclusive 30hrs of training per semester to keep them industry ready at the end of the programme of study. This training starts from the 1st semester and it continues till the end of 7th semester. The students will be evaluated through online tests in every semester and their grades will be awarded according to their performance in the test. Based on the performance in these tests each student will be awarded the Placement Grade Point Average (PGPA). Thus a student can earn 1 credit every semester upto 7th semester (A total of 7 credits).

4.7. Industrial Visit

Every student is required to go for at least one Industrial Visit every year starting from the second year of the Programme. The Heads of Departments shall ensure that necessary arrangements are made in this regard.

4.8 Online Courses

Students may be permitted to do online courses in the approved agencies (Specified in clause 4.8 (a)). The list of agencies may be approved in the respective board of studies (which are provided with a certificate) with the recommendations of respective DAB. Students shall do a minimum of two online courses during the entire period of their studies, to qualify for the award of degree. The online course of 45 hours shall be considered as equivalent to a 3 credits course. This online course can be considered as equivalent to one elective course. The online course will be considered as equivalent for an elective course only. In case of credits earned through online mode from any institution approved by appropriate authorities of the college, the credits may be transferred after due approval of the Dean Academics.

- (a) List of approved agencies to undergo online courses is approved and available with Dean Academics. MOOC and SWAYAM courses are the approved agencies by AICTE. Students are encouraged to enroll in these agencies for their on-line course with prior permission.

4.9 Project Work

Every student shall do a project in the field of his/her interest in guidance with a faculty of his/her department as part of his/her fulfillment of getting the degree. The project work shall be carried out in house or in any industry.

(a) In-house projects

For in-house projects the student shall normally start the work in the VII semester and complete it in VIII semester. A faculty will be assigned to each project and named as the guide. For UG programmes, students not exceeding 4 will form the group to do the project work.

(b) Field projects

For students who wish to do industry/field projects:

In addition to clause 4.9(a), the students who satisfy the following conditions are permitted to carry out their project work as field projects.

There shall be an external guide (person working in the chosen industry/company) in addition to the guide assigned in the institute.

4.10 Medium of Instruction

The medium of instruction is ENGLISH for all courses, examinations, seminar presentations and project / thesis / dissertation reports (except foreign language courses).

The blend of all the above different courses, Co-curricular and extra-curricular activities shall be so designed that, the students at the end of the programme would have been trained not only for his/her relevant professional field but also would have developed as a socially conscious human professional.

5. DURATION OF THE PROGRAMME

5.1 A student is ordinarily expected to complete the B.E. / B.Tech. Programme in 8 semesters (four academic years) but in any case not more than 14 Semesters for HSC (or equivalent) candidates and not more than 12 semesters for Lateral Entry Candidates.

5.2 Each semester shall normally consist of 75 working days or 540 periods of 50 minutes each. The Head of the Institution shall ensure that every teacher imparts instruction as per the number of periods specified in the syllabus and that the teacher teaches the full content of the specified syllabus for the course being taught.

5.3 The Head of the Institution may conduct additional classes for improvement, special coaching, conduct of model tests etc., over and above the specified periods.

But for the purpose of calculation of attendance requirement for writing the end semester examinations (as per clause 6) by the students, the following method shall be used.

Percentage of Attendance :

$$\frac{\text{Total no.of periods attended in all the courses per semester}}{\text{of periods per week as prescribed in the curriculum taken together for all courses of the semester X 15}} \times 100$$

The End Semester Examination will ordinarily follow immediately after the last working day of the semester commencing from I semester as per the academic schedule prescribed from time to time.

5.4 The total period for completion of the programme reckoned from the commencement of the first semester to which the candidate was admitted shall not exceed the maximum period specified in clause 5.1 irrespective of the period of break of study (vide clause 18) in order that he/she may be eligible for the award of the degree (vide clause 16).

6. COURSE REGISTRATION

The courses that a student registers in a semester (vide clause 6.6.2), includes

- I. Courses of the current semester (including Mandatory non-credit courses)
- ii. Course(s) in which he/she has not been permitted to appear for the end semester examinations for want of the minimum required attendance, if such courses are offered in that semester (vide clause 7.3)
- iii. Course(s) in which he/ she has failed and required to reappear for the end semester examinations, carrying forward the continuous assessment marks earned in the last attempt.
- iv. Course(s) in which he/ she has failed and required to reappear for the Continuous Assessment Tests and the End Semester Examination, if such courses are offered in that semester.
- v. Professional or Open elective course(s) opted by the students in lieu of courses in which he/she has failed, if the courses are offered in that semester or the same elective course chosen earlier by the student.
- vi. The student shall register for the project work in the VII and VIII semester, provided he / she proposes the title for the project. Students who wish to register for a field project shall register and complete the theory courses listed in the eighth semester during their sixth and seventh semesters in addition to their regular courses pertaining to the respective semesters subject to the fulfilment of the following conditions.

- (i) The student should not have any backlog of arrear courses.
 - (ii) The student should have a CGPA of 7.5 and above
- vii. Any other course(s) the student wishes to register as per norms (vide clause 4.6 , 4.8 and 4.9).

6.1 Faculty Mentor Assignment: Each student, on admission shall be assigned to a Faculty Mentor (vide clause 8) who shall advise and counsel the student about the details of the academic programme and the choice of courses considering the student's academic background and career objectives.

6.2 Course Registration Confirmation: Every student shall enrol for the course of the succeeding semester before the end of the current semester. However, the student shall confirm the enrolment by registering for the courses within the first five working days after the commencement of the concerned semester.

6.3 Elective Course Minimum Strength: Elective courses shall be offered by the department unless a minimum of 10 students register for that course, subject to the approval of the Head of the Department.

6.4 Course Enrolment Rules: After registering for a course, a student shall attend the classes, satisfy the attendance requirements, earn Continuous Assessment marks and appear for the End Semester Examinations.

6.4.1 Each student on admission shall register for all the courses prescribed in the curriculum for the first semester of study.

6.4.2 The enrollment for all the courses of Semester II will commence 10 working days prior to the last working day of Semester I. The student shall confirm the enrolment by registering for the courses within the first five working days after the commencement of Semester II.

6.4.3 The enrolment for the courses of the Semesters III to VIII will commence 10 working days prior to the last working day of the preceding semester. The student shall enrol for the courses with the guidance of the student's Faculty Mentor. If the student wishes, the student may drop or add courses (vide clause 6.6) within five working days after the commencement of the concerned semester and complete the registration process duly authorized by the Faculty Mentor.

6.4.4 After a student completes EIGHTH semester, if he/she has to complete ONE or TWO or THREE course(s) (maximum 3 only) only of any semester, for completing the program within 4 years, he/she will be permitted to appear for a special examination (conducted within a month after

the announcement of eighth semester results) for those courses, carrying forward continuous assessment marks of the last attempt, for fulfilling the requirements.

- 6.4.5. Students having a total of 30 and above credits as their (backlog) arrear courses are not permitted to register for the subsequent semester.

6.5 Registration for Reappearance

- 6.5.1 If a student fails to secure a pass in any course(s), he/she has to register for reappearance for those courses in a subsequent semester, till he/she secures a pass in such courses. In such a case he/she can carry forward the continuous assessment marks earned in the last attempt, or can avail the option of reappearing in Continuous Assessment Tests for improving the continuous Assessment marks and appear for the end semester exam. This is subject to the fulfillment of clause 14.3. However, the attendance requirement is not compulsory for such courses.
- 6.5.2 If the theory course, in which a student has failed is a professional elective/ open elective, either he/she may register for the same elective course, or any other professional elective/open elective respectively if offered in that semester. In such a case he/she can carry forward the continuous assessment marks earned in the last attempt if the student registers for the same elective course else student has to attend the newly opted course and obtain the continuous assessment marks for the new elective. This is subject to the fulfilment of clause 14.3.
- 6.5.3 If a student fails to secure a pass in any mandatory non-credit course(s), he/she has to register for reappearance for that course in the subsequent semester.
- 6.5.4 If a student is prevented from writing end semester examination of a course due to lack of attendance, the student has to register for that course again, when offered next, attend the classes and fulfil the attendance requirements as per clause 7. If the course, in which the student has lack of attendance, is a Professional Elective or an Open Elective, the student may register for the same or any other Professional Elective or Open Elective course respectively in the subsequent semesters when offered next.

6.6 Flexibility to Add or Drop Courses

- 6.6.1 A student has to earn the total number of credits specified in the curriculum of the respective Programme of study in order to be eligible to obtain the degree. However, if a student wishes, then he/she is also permitted to register for courses offered in a higher semester, in advance,

to earn more than the total number of credits prescribed in the current semester in the curriculum of the student's programme (subject to maximum of 36 credits) with the approval of Dean- Academics.

- 6.6.2 Similarly, a student has the option of dropping current semester courses limited to 2 courses, subject to a maximum of 6 credits. However, he/she has to undergo these dropped courses in the subsequent semester when offered next, to fulfil the requirements of the degree programme.
- 6.6.3 The student shall register for the project work in the VII and VIII semesters.
- 6.6.4 The student shall register for the Innovative design project in the VI semester.

7. ATTENDANCE REQUIREMENTS FOR COMPLETION OF THE SEMESTER

- 7.1 A Candidate who has fulfilled the following conditions shall be deemed to have satisfied the requirements for completion of a semester.

Ideally every student is expected to attend all classes of all the courses and secure 100% attendance.

However, he/she shall secure not less than 80% (after rounding off to the nearest integer) of overall attendance as calculated as per clause 5.3.

- 7.2 However, a candidate who secures overall attendance between 65% and 80% in the current semester due to medical reasons (prolonged hospitalization / accident / specific illness) / Participation in Sports events may be permitted to appear for the current semester examinations subject to the condition that the candidate shall submit the medical certificate / sports participation certificate attested by the Dean - Academics. The same shall be forwarded to the Controller of Examinations for record purposes. This concession can be availed only for any two semesters during the entire course of the study.
- 7.3 Candidates who secure less than 65% overall attendance and candidates who do not satisfy the clause 7.1 and 7.2 shall not be permitted to write the End Semester Examination at the end of the semester and not permitted to move to the next semester. They are required to repeat the incomplete semester in the next academic year, as per the norms prescribed.
- 7.4 A student who has not satisfied the attendance requirement as per clauses from 7.1 to 7.3 & 5.3, but having at least 50% of attendance in every course of that semester can appeal to the Head of the Institution or his nominee, for proceeding to the next higher semester. The Head of the Institution will appoint a committee for examining these appeals. Based on the recommendations of the committee, the Head of the Institution will take a final decision on the appeal by the student.

8 FACULTY MENTOR AND CLASS ADVISOR

8.1 Faculty Mentor

To help the students in planning their courses of study and for general advice on the academic programme, the Head of the Department will attach a certain number of students to a teacher of the Department who shall function as Faculty Mentor for those students throughout their period of study. The Faculty Advisor shall advise the students in registering and reappearances registering of courses, authorize the process, monitor their attendance and progress and counsel them periodically. The Faculty Mentor also discusses with or informs the parents about the progress / performance of the students concerned.

The responsibilities for the faculty advisor shall be:

- To inform the students about the various facilities and activities available to enhance their curricular and co-curricular activities.
- To guide the student on enrollment and registration of the courses.
- To authorize the final registration of the courses at the beginning of each semester.
- To monitor the academic and general performance of the students including attendance and to counsel them accordingly.

8.2 Class Coordinator

There shall be a class coordinator for each class. He / She will be appointed by the HoD of the department concerned. The class coordinator is the ex-officio member of the class committee. The responsibilities for the class coordinator shall be:

- To act as the channel of communication between the HoD and the students of the respective class.
- To collect and maintain various statistical details of students.
- To help the chairperson of the class committee in planning and conduct of the class committee meetings.
- To monitor the academic performance of the students including attendance and to inform the class committee.
- To attend to the students' welfare activities like awards, medals, scholarships and industrial visits.

9 CLASS COMMITTEE

- 9.1 Every class shall have a class committee consisting of teachers of the class concerned, student representatives (usually 2 boys and 2 girls) and a chairperson who is not teaching the class. It is like the 'Quality Circle' (more commonly used in industries) with the overall goal of improving the teaching-learning process. The functions of the class committee include
- Solving problems experienced by students in the classroom and in the laboratories.
 - Clarifying the regulations of the degree programme and the details of rules therein particularly (clause 5 and 7) which should be displayed on college and Department Notice-Board.
 - Informing the student representatives, the academic schedule including the dates of assessments and the syllabus coverage for each assessment.
 - Informing the student representatives the details of Regulations regarding weightage used for each assessment. In the case of practical courses (laboratory / drawing / project work / seminar etc.) the breakup of marks for each experiment / exercise / module of work, should be clearly discussed in the class committee meeting and informed to the students.
 - Analyzing the performance of the students of the class after each test and finding the ways and means of solving problems, if any.
 - Identifying the slow learners, if any, and requesting the teachers concerned to provide some additional help or guidance or coaching to such slow learners.
- 9.2 The class committee for a class under a particular branch is normally constituted by the Head of the Department. However, if the students of different branches are mixed in a class (like the first semester which is generally common to all branches), the class committee is to be constituted by the Head of the Institution.
- 9.3 The class committee shall be constituted within the first week of each semester.
- 9.4 The Chairperson of the class committee may invite the Class adviser(s) and the Head of the Department to the class committee meeting. The Head of the Institution may participate in any class committee of the institution.
- 9.5 The chairperson is required to prepare the minutes of every meeting, submit the same to Head of the Institution within two days of the meeting and arrange to circulate it among the students and teachers concerned. If there are some points in the minutes requiring action by the management, the same shall be brought to the notice of the Management by the Head of the Institution.

9.6 The first meeting of the class committee shall be held within one week from the date of commencement of the semester, in order to inform the students about the nature and weightage of assessments within the framework of the Regulations. Two or three subsequent meetings may be held in a semester at suitable intervals.

The Class Committee Chairperson shall put on the Notice Board the cumulative attendance particulars of each student at the end of every such meeting to enable the students to know their attendance details to satisfy the clause 7 of this Regulation.

During these meetings the student members representing the entire class, shall meaningfully interact and express the opinions and suggestions of the other students of the class in order to improve the effectiveness of the teaching-learning process.

10 COURSE COMMITTEE FOR COMMON COURSES

Each common theory course offered to more than one discipline or group, shall have a “Course Committee” comprising all the teachers teaching the common course with one of them nominated as Course Coordinator. The nomination of the Course Coordinator shall be made by the Head of the Department / Head of the Institution depending upon whether all the teachers teaching the common course belong to a single department or to several departments.

The 'Course committee' shall meet in order to arrive at a common scheme of evaluation for the test and shall ensure a uniform evaluation of the tests. Wherever feasible, the course committee may also prepare a common question paper for the internal assessment test(s).

10.1 For course material repository, one of the Course Coordinators may be designated as Course Moderator, to check and validate the materials submitted by the Course Content Creators and Course Coordinators.

11 SYSTEM OF EXAMINATION

11.1 Performance in each course of study shall be evaluated based on

- (i) Continuous Assessment Test (CAT) throughout the semester and
- (ii) End Semester Examination (ESE) at the end of the semester.

11.2 Each course, Theory, practical and theory with practical (including project work & viva voce Examinations) shall be evaluated for a maximum of 100marks as shown below.

ASSESSMENT WEIGHTAGE TABULATION

S.No.	Category of Course	Continuous Assessment Test	End Semester Examination
1	Theory Courses	40 Marks	60 Marks
2	Laboratory Courses	50 Marks	50 Marks
3	Theory with Laboratory Courses	50 Marks	50 Marks
4	Project Work	50 Marks	50 Marks
5	Other Courses (TE, TP Courses)	100 Marks	-

- 11.3 The End Semester Examination (theory, practical and theory with practical) of 3 hours duration shall ordinarily be conducted between October and December during the odd semesters and between April and June during the even semesters.
- 11.4 The End Semester Examination for project work shall consist of evaluation of the final report submitted by the student or students of the project group (of not exceeding 4 students) by an external examiner and an internal examiner, followed by a viva-voce examination conducted separately for each student by a committee consisting of the external examiner, the supervisor of the project group and an internal examiner.
- 11.5 For the ESE in both theory and practical courses including project work, wherever necessary the internal and external examiners shall be appointed by the Controller of Examinations.
- 11.6 Theory with Lab Components
All the courses under this category will have two components basically Theory with five Units of the syllabus. Additionally experiments ranging from 6 to 10 related to the course objective of the syllabus.

12. PROCEDURE FOR AWARDING MARKS FOR INTERNAL ASSESSMENT

For all theory courses (including project work) the continuous assessment shall be for a maximum of 40 marks. The above continuous assessment shall be awarded as per the procedure given below:

12.1 (a) Theory Courses

For the courses offered during the 1st Year (first and second semesters), the CAT shall be done as follows:

There will be three Periodical Tests conducted at regular intervals for a maximum marks of 100

each. At the end of the course, it will be added to the CAT with equal weightage and will be calculated for 25 marks.

There will be a **SAIRAM-SAP** based assessment for every student and their score will be added to the CAT with a weightage of 15 marks.

The **SAIRAM-SAP** consists of

- (i) Skill rack session on specific programming language/skills conducted periodically as per the time table framed in the beginning of every semester. The performance in the skill rack will be evaluated at the end of the semester.
- (ii) For every course the faculty handling the course shall give any of the following viz., Assignment / model building / business plan / proof of concept / quiz / role based activity / or any other as relevant to the course or as specified by the respective BoS. The faculty shall evaluate the work done by the student and it will be added to CAT.

For the courses offered during 2nd to 4th Year (third to eighth semesters), the CAT shall be done as follows.

There will be three Periodical Tests conducted at regular intervals for a maximum mark of each 100. At the end of the course, it will be added to the CAT with equal weightage and will be calculated for 20 marks.

There will be a **SAIRAM-SAP** based assessment for every student and their score will be added to the CAT with a weightage of 20 marks.

The **SAIRAM-SAP** consists of

- (I) Skill rack session on specific programming language/skills conducted periodically as per the time table framed in the beginning of every semester. The performance in the skill rack will be evaluated at the end of the semester.
- (ii) For every course the faculty handling the course shall give any of the following viz., Assignment / model building / business plan / proof of concept / quiz / role based activity / or any other as relevant to the course or as specified by the respective BoS. The faculty shall evaluate the work done by the student and it will be added to CAT.
- (iii) There will be an MCQ based test conducted once in a semester as per the time table framed at the beginning of every semester. The performance in the MCQ will be evaluated and added to the CAT at the end of the semester.

12.1 (b) Laboratory Courses

The maximum marks for Internal Assessment shall be 50 in case of practical courses. Every practical exercise / experiment shall be evaluated based on conduct of experiment / exercise, observations / records maintained and viva-voce.

The criterion for arriving at the Internal Assessment marks of 50 is as follows:

20 marks shall be awarded for successful completion of all the prescribed exercises /experiments done in the Laboratory and 30 marks for the two cycle tests.

12.1 (c) Theory Courses With Laboratory Component

For CAT: If there is a theory course with Laboratory component, there shall be three assessments for the theory portions. In addition after the 3rd test there will be a laboratory component test. The marks obtained from the 3 theory tests will be added and weighted to 10 marks. The marks obtained from the laboratory test will be weighted to 20 marks. The sum of these marks of all four assessments tests will be rounded to the nearest integer.

There will be a **SAIRAM-SAP** based assessment for every student and their score will be added to the CAT with a weightage of 20 marks.

The Sairam-SAP consists of

- (I) Skill rack session on specific programming language/skills conducted periodically as per the time table framed in the beginning of every semester. The performance in the skill rack will be evaluated at the end of the semester.
- (ii) For every course the faculty handling the course shall give any of the following viz., Assignment / model building / business plan / proof of concept / quiz / role based activity / or any other as relevant to the course or as specified by the respective BoS. The faculty shall evaluate the work done by the student and it will be added to CAT.
- (iii) There will be an MCQ based test conducted once in a semester as per the time table framed at the beginning of every semester. The performance in the MCQ will be evaluated and added to the CAT at the end of the semester.

For ESE: The procedure for ESE for TWL courses is similar to other theory courses. The marks obtained by the student will be weighted for 50%.

12.1 (d) Mandatory Non-credit Courses

For every Mandatory Non-credit Courses, there will be three continuous assessments carrying equal marks which include tests/assignments/ seminars etc. The total marks obtained in all the three assessments put together shall be proportionately reduced for 100 marks and rounded to the nearest integer. Students securing more than 50% will be declared as “**SATISFACTORY (Eligible)**”.

12.2 Project Work

Project work may be allotted to a single student or to a group of students not exceeding 4 per group.

The Head of the Department concern shall constitute a review committee for project work for each branch of study. There shall be three reviews during the semester by the review committee. The student shall make a presentation on the progress made by him / her before the committee. The total marks obtained in the three reviews shall be reduced for 50 marks and rounded to the nearest integer (as per the scheme given in 12.2.1).

12.2.1 The thesis and its evaluation shall carry a maximum of 25 marks. The thesis shall be submitted as per the approved guidelines as given by Board of Studies. The oral viva-voce examination shall carry 25 marks. Marks are awarded to each student of the project group based on the individual performance in the viva-voce examination.

Internal (50 Marks)			End Semester Examinations (50 Marks)				
Review	Review	Review	Thesis Submission/ Evaluation (25)			Viva-voce (25)	
I	II	III	Supervisor	Internal	External	Internal	External
10	15	25	5	10	10	10	15

12.2.2 If a candidate fails to submit the project report on or before the specified deadline, he/she is deemed to have failed in the Project Work and shall re-enroll for the same in a subsequent semester.

12.3 OTHER TALENT ENHANCEMENT COURSES

12.3.1 The Industrial / Practical Training, Summer Project, Internship, shall carry 100 marks and

shall be evaluated through internal assessment only. At the end of Industrial / Practical training / internship / Summer Project, the candidate shall submit a certificate from the organization where he / she has undergone training and a brief report. The evaluation will be made based on this report and a Viva-Voce Examination, conducted internally by a three member Departmental Committee constituted by the Head of the Institution. The certificates (issued by the organization) submitted by the students shall be attached to the mark list sent by the Head of the Institution to the Controller of Examinations. The assessment shall consider 50 marks for the certificate, 20 marks for the report, 20 marks for the presentation and 10 marks for the interactions. There shall be one Faculty in charge for the above Assessment for each class. The Faculty in Charge shall consolidate the assessment details and submit to the COE through HoD.

12.3.2 The TE courses mentioned in 2nd Semester and under Live-in Lab category shall carry 100 marks and shall be evaluated through internal assessment only. The evaluation will be done continuously based on 4 reviews (0th review to 3rd review) and a final review with oral Viva-Voce Examination, conducted internally by a three member Departmental Committee constituted by the Head of the Institution. The weightage of marks assessment for reviews allotted as per the following table.

TABLE 6: ASSESSMENT WEIGHTAGE FOR TE COURSES

REVIEWS	0	1	2	3	Final Review
WEIGHTAGE	10%	20%	25%	15%	30%

12.3.3 The TP courses, starting from Semester 1 to 7, shall carry 100 marks evaluated through internal assessments only. The evaluation is based on two or three online tests and quizzes, conducted by Training and Placement Cell (TAP) of the institute. The students will be graded based on the marks obtained through these examinations. These grades will be accumulated as PGPA of the respective student, which will be useful for the students' career option.

12.4 Assessment For Online Courses

Students may be permitted to credit TWO online courses (which is provided with certificate) subject to a maximum of three credits. The approved list of online courses will be provided by the Office of the Dean Academics from time to time. This online course of 3 credits can be considered to be equivalent of attending one elective course. The student needs to obtain certification or credit to become eligible for the award of degree.

12.5. Internal marks approved by the Head of the Institution shall be intimated to the students by the respective HoDs within 5 days from the last working day.

12.6 Attendance Record

Every teacher is required to maintain an 'ATTENDANCE AND ASSESSMENT RECORD' which consists of attendance marked in each lecture or practical or project work class, the test marks and the record of class work (topic covered), separately for each course. This should be submitted to the Head of the department periodically (at least three times in a semester) for checking the syllabus coverage and the records of test marks and attendance. The Head of the department will put his signature and date after due verification. At the end of the semester, the record should be verified by the Head of the Institution who will keep this document in safe custody (for five years). The University or any inspection team appointed by the University may verify the records of attendance and assessment of both current and previous semesters. The inspection team appointed by the Principal may verify the records of attendance and assessment of both current and previous semesters.

13 REQUIREMENTS FOR APPEARING FOR UNIVERSITY EXAMINATIONS

A candidate shall normally be permitted to appear for the ESE for all the courses registered in the current semester (vide clause 6) if he/she has satisfied the semester completion requirements (subject to Clause 7).

Registration is mandatory for current semester examinations as well as for arrear examinations, failing which the candidate will not be permitted to move to the higher semester.

A candidate who has already appeared for any subject in a semester and passed the examination is not entitled to reappear in the same subject for improvement of grades.

If a student indulges in malpractice in any of the end semester / internal examinations, he / she shall be liable for punitive action as prescribed by the college from time to time.

14 PASSING REQUIREMENTS

14.1 A candidate who secures not less than 50% of total marks prescribed for the course [Internal Assessment + End semester University Examinations] with a minimum of 50% of the marks prescribed for the end-semester University Examination, shall be declared to have passed the course and acquired the relevant number of credits. This is applicable for both theory and practical courses (including project

work) as mentioned below:

PASS PERCENTAGE CRITERIA

	CAT minimum	ESE minimum	Overall Passing
Theory	NIL	45% (27 out of 60 marks)	50 % in CAT and ESE together
Practical	NIL	50% (25 out of 50 marks)	50 % in CAT and ESE together
Project	NIL	50% (25 out of 50 marks)	50 % in CAT and ESE together
Theory with Laboratory component	NIL	50% (25 out of 50 marks)	50 % in CAT and ESE together

- 14.2** If a candidate fails to secure a pass in a particular course, it is mandatory that he/she shall register and reappear for the examination for that course during the subsequent semester when examination is conducted for that course. He/she should continue to register and reappear for the examinations in the failed subjects till he / she secures a pass.
- 14.3** The internal assessment marks obtained by the candidate in the first appearance shall be retained and considered valid for next three attempts. From fourth attempt onwards, the candidate shall be declared to have passed the examination if he/she secures a minimum of 50% marks prescribed for the end semester examinations alone.
- 14.4** The passing requirement for the courses which are assessed only through purely internal assessments (EEC courses except project work), is 50% of the internal assessment (continuous assessment) marks only.
- 14.5** A student can apply for review of the result in any subject(s), he / she can submit a challenge / review applications to the COE office along with the payment of prescribed fees. A committee consisting of the Head of the Department, concerned course instructor and a subject expert (Internal / External) nominated by the HoD will review and give its recommendations to the COE. If the student secures any change in the grade the review fees will be refunded. Review is not permitted for laboratory course(s) and project work.

15. AWARD OF LETTER GRADES

All assessments of a course will be evaluated on an absolute marks basis. However, for the purpose of reporting the performance of a candidate, letter grades, each carrying certain number of points, will be awarded as per the range of total marks (out of 100) obtained by the candidate in each subject as detailed

below:

GRADE POINTS

Letter Grade	Grade Points	Marks Range
O (Outstanding)	10	91 - 100
A + (Excellent)	9	81 - 90
A (Very Good)	8	71 - 80
B + (Good)	7	61 - 70
B (Average)	6	50 - 60
RA (Fail/Reappear)	0	<50
SA (Shortage of Attendance)	0	
W (Withdrawal)	0	
WH (Withheld)	0	

A student is deemed to have passed and acquired the corresponding credits in a particular course if he/she obtains any one of the following grades: **“O”, “A+”, “A”, “B+”, “B”**.

‘SA’ denotes shortage of attendance (as per clause 7.3) and hence prevention from writing the end semester examinations. ‘SA’ will appear only in the result sheet.

“RA” denotes that the student has failed to pass in that course. **“W”** denotes **withdrawal** from the exam for the particular course. The grades RA and W will figure both in the Marks Sheet as well as in the Result Sheet. In both cases the student has to earn Continuous Assessment marks and appear for the End Semester Examinations.

If the grade W is given to the course, the attendance requirement need not be satisfied. If the grade RA is given to a core **theory course**, the attendance requirement need not be satisfied, but if the grade RA is given to a **Laboratory Course/ Project work / Seminar and any other TE course**, the attendance requirements (vide clause 7) should be satisfied.

For the extra-curricular activities such as National Cadet Corps (NCC)/ National Service Scheme (NSS) / National Sports Organisation(NSO) / Youth Red Cross(YRC)/Unnat Bhaart Abhiyan (UBA), a satisfactory / not satisfactory grading will appear in the mark sheet. Every student shall put in a minimum

of 75% attendance in the training and attend the camp compulsorily. The training and camp shall be completed during the first year of the programme. However, for valid reasons, the Head of the Institution may permit a student to complete this requirement in the second year. **A satisfactory grade in the above co-curricular activities is compulsory for the award of degree.**

15.1 Grade sheet

After results are declared, Grade Sheets will be issued to each student which will contain the following details:

- The college in which the candidate has studied
- The list of courses enrolled during the semester and the grade scored.
- The Grade Point Average (GPA) for the semester and
- The Cumulative Grade Point Average (CGPA) of all courses enrolled from first semester onwards.

GPA for a semester is the ratio of the sum of the products of the number of credits for courses acquired and the corresponding points to the sum of the number of credits for the courses acquired in the semester.

CGPA will be calculated in a similar manner, considering all the courses registered from first semester. RA grades will be excluded for calculating GPA and CGPA.

$$\text{GPA / CGPA} = \frac{\sum_{i=1}^n C_i GP_i}{\sum_{i=1}^n C_i}$$

where C_i is the number of Credits assigned to the course

GP_i is the point corresponding to the grade obtained for each course n is number of all courses successfully cleared during the particular semester in the case of GPA and number of all courses successfully cleared during all the semesters in the case of CGPA.

15.2 Eligibility for the Award of the Degree

A student shall be declared to be eligible for the award of the B.E./B.Tech. Degree provided the student has

- I. Successfully gained the required number of total credits as specified in the curriculum corresponding to the student's programme within the stipulated time.
- ii. Successfully completed the programme requirements, appeared for the End-Semester examinations and passed all the courses prescribed in all the 8 semesters within a maximum period of 7 years and 6 years in the case of Lateral Entry) reckoned from the commencement of the first (third in the case of Lateral Entry) semester to which the candidate was admitted.
- iii. Successfully passed any additional courses prescribed by the Dean (Academics) whenever readmitted under regulations R-2020 (vide clause 18.3)
- iv. Successfully completed the NCC / NSS / NSO / YRC / UBA requirements.
- v. No disciplinary action pending against the student.
- vi. The award of Degree must have been approved by the authorized body of the university.

16 CLASSIFICATION OF THE DEGREE AWARDED

16.1.1 B.E./B.Tech (Honours)

A Student can opt for B.E./B.Tech (Honours) at the end of the fourth semester of B.E./B.Tech. programme subject to the conditions prescribed by the Academic Council from time to time. In addition to the requirements specified for First Class with Distinction (vide clause 16.1.2), B.E./B.Tech. (Honours) students must earn a minimum of 20 additional (Professional Elective Category) credits.

16.1.2 First Class with Distinction

A student who satisfies the following conditions shall be declared to have passed the examination in First class with Distinction:

- Should have passed the examination in all the courses of all the eight semesters and 6 semesters in the case of Lateral Entry) in the student's First Appearance within five years and Four years in the case of Lateral Entry). Withdrawal from examination (vide Clause 17) will not be considered as an appearance.
- Should have secured a CGPA of not less than 8.50.
- One year authorized break of study (if availed of) is included in the five years and four years in the case of lateral entry) for award of First class with Distinction.
- Should NOT have been prevented from writing end semester examinations due to lack of attendance

in any of the courses.

16.1.3 First Class

A student who satisfies the following conditions shall be declared to have passed the examination in **First class**:

- Should have passed the examination in all the courses of all eight semesters and 6 semesters in the case of Lateral Entry) within Six years.
- One year authorized break of study (if availed of) or prevention from writing the End Semester examination due to lack of attendance (if applicable) is included in the duration of six years and five years in the case of lateral entry) for award of First class
- Should have secured a CGPA of not less than 7.00.

16.1.4 Second Class

- All other students (not covered in clauses 16.2.1 and 16.2.2) who qualify for the award of the degree (vide Clause 16.1) shall be declared to have passed the examination in **Second Class**.
- A candidate who is absent in end semester examination in a course / project work after having registered for the same shall be considered to have appeared in that examination for the purpose of classification. (Subject to clause 17 and 18).

16.2 Photocopy / Review

A candidate can apply for a photocopy of his/her semester examination answer paper in a theory course, within 2 weeks from the declaration of results, on payment of a prescribed fee through proper application to the Controller of Examinations through the Head of Institutions. The answer script is to be valued and justified by a faculty member, who handled the subject and recommended for review with breakup of marks for each question. Based on the recommendation, the candidate can register for the review through proper application to the Controller of Examinations. The Controller of Examinations will arrange for the review and the results will be intimated to the candidate concerned through the Head of the Institutions. Review is not permitted for practical courses and for project work.

A candidate can apply for review of answer scripts for not exceeding 5 subjects at a time.

17 PROVISION FOR WITHDRAWAL FROM END-SEMESTER EXAMINATION

- 17.1 A student may, for valid reasons, (medically unfit / unexpected family situations / sports approved by Director, Physical Education and HOD) be granted permission to withdraw from appearing for the end-semester examination in any course or courses in ANYONE of the semester examinations during the entire duration of the degree programme. The application shall be sent to Dean (Academics), through the Head of the Department with required documents.
- 17.2 Withdrawal application is valid ONLY if the student is otherwise eligible to write the examination (Clause 7) and if it is made within TEN days prior to the commencement of the END SEMESTER examination in that course or courses and recommended by the Head of The Department.
- 17.2.1 Notwithstanding the requirement of mandatory 10 days notice, applications for withdrawal for special cases under extraordinary conditions will be considered on the merit of the case.
- 17.3 In case of withdrawal from a course / courses (Clause 13) the course will figure both in the Marks Sheet as well as in Result Sheet. Withdrawal essentially requires the student to re-register for the course/courses and attend the supplementary or the end semester examination in the subsequent semester, when the examination is conducted.
- The student has to register for the course, fulfill the attendance requirements (vide clause 7), earn continuous assessment marks and attend the end semester examination. However, withdrawal shall not be construed as an appearance for the eligibility of a candidate for First Class with Distinction and for First Class.
- Withdrawal is permitted for the end semester examinations in the final semester only if the period of study the student concerned does not exceed 5 years as per clause 16.2.1.

18. PROVISION FOR AUTHORISED BREAK OF STUDY

- 18.1 A student is permitted to go on break of study for a maximum period of one year as a single spell.
- 18.2 Break of Study shall be granted only once for valid reasons for a maximum of one year during the entire period of study of the degree programme. However, in an extraordinary situation the candidate may apply for additional break of study not exceeding another one year by paying

prescribed fee for break of study. If a candidate intends to temporarily discontinue the programme in the middle of the semester for valid reasons, and to rejoin the programme in a subsequent year, permission may be granted based on the merits of the case provided he / she applies to the Dean (Academics), but not later than the last date for registering for the end semester examination of the semester in question, through Head of The Department stating the reasons therefore and the probable date of rejoining the programme.

- 18.3 The Student permitted to rejoin the programme after break of study / prevention due to lack of attendance / more than 10 number of arrears, shall be governed by the Curriculum and Regulations in force at the time of rejoining. The students rejoining in new Regulations shall apply to the Dean (Academics) in the prescribed format through Head of the Institution duly forwarded by Head of the Department at the beginning of the readmitted semester itself for prescribing additional courses, if any, from any semester of the regulations in-force, so as to bridge the curriculum in-force and the old curriculum.
- 18.4 The authorized break of study would not be counted towards the duration specified for passing all the courses for the purpose of classification (vide Clause 16.1).
- 18.5 The total period for completion of the Programme reckoned from, the commencement of the first semester to which the candidate was admitted shall not exceed the maximum period specified in clause 5.1 irrespective of the period of break of study in order that he/she may be eligible for the award of the degree.
- 18.6 If any student is prevented for want of required attendance, the period of prevention shall not be considered as authorized 'Break of Study' (Clause 18.1)

19. DISCIPLINE

- 19.1 Every student is required to observe disciplined and decorous behavior both inside and outside the college and not to indulge in any activity which will tend to bring down the prestige of the College. The Head of Institution shall constitute a disciplinary committee consisting of Head of Institution, Two Heads of Department of which one should be from the faculty of the student, to enquire into acts of indiscipline.
- 19.2 If a student indulges in malpractice in any of the END SEMESTER / internal examination he / she shall be liable for punitive action as prescribed by the COLLEGE from time to time.

20. REVISION OF REGULATIONS, CURRICULUM AND SYLLABI

The College may from time to time revise, amend or change the Regulations, Curriculum, Syllabus and Scheme of examinations through the Academic Council.

All the Best...



It's all about character

*Watch your thoughts,
they become words.*

*Watch your words,
they become actions.*

*Watch your actions,
they become habits.*

*Watch your habits,
they become character.*

Watch your character,

It becomes your destiny!

Yesterday is history

Tomorrow is a mystery

Today is a gift

That's why we call it the present

You only live once

But if you work it right, once is enough

Our Recruiters



and many more...

Academic Year 2020-21 *at a Happy glance!*

College Day &
Culturals 2020



**1.2.1.1 - Number of Programmes in which
CBCS/ Elective course system implemented**

ANNA UNIVERSITY, CHENNAI
AFFILIATED INSTITUTIONS
B.E. COMPUTER SCIENCE AND ENGINEERING
REGULATIONS – 2017
CHOICE BASED CREDIT SYSTEM

PROGRAM EDUCATIONAL OBJECTIVES (PEOs):

1. To enable graduates to pursue higher education and research, or have a successful career in industries associated with Computer Science and Engineering, or as entrepreneurs. To ensure that graduates will have the ability and attitude to adapt to emerging technological changes.

PROGRAM OUTCOMES POs:

Engineering Graduates will be able to:

1. **Engineering knowledge:** Apply the knowledge of mathematics, science, engineering fundamentals and an engineering specialization to the solution of complex engineering problems.
2. **Problem analysis:** Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.
3. **Design/development of solutions:** Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.
4. **Conduct investigations of complex problems:** Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.
5. **Modern tool usage:** Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.
6. **The engineer and society:** Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.
7. **Environment and sustainability:** Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.
8. **Ethics:** Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.
9. **Individual and team work:** Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.
10. **Communication:** Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.

11. **Project management and finance:** Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.
12. **Life-long learning:** Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.

PROGRAM SPECIFIC OBJECTIVES (PSOs)

To analyze, design and develop computing solutions by applying foundational concepts of Computer Science and Engineering.

To apply software engineering principles and practices for developing quality software for scientific and business applications.

To adapt to emerging Information and Communication Technologies (ICT) to innovate ideas and solutions to existing/novel problems.

Mapping of POs/PSOs to PEOs

Contribution	1: Reasonable	2: Significant	3: Strong
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	PEOs	
POs	1. Graduates will pursue higher education and research, or have a successful career in industries associated with Computer Science and Engineering, or as entrepreneurs.	2. Graduates will have the ability and attitude to adapt to emerging technological changes.
1. Engineering knowledge: Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.	3	1
2. Problem analysis: Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.	3	1
3. Design/development of solutions: Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.	3	2
4. Conduct investigations of complex problems: Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.	3	2
5. Modern tool usage: Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.	2	3
6. The engineer and society: Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.	2	2

7. Environment and sustainability: Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.	2	1
8. Ethics: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.	3	1
9. Individual and team work: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.	3	2
10. Communication: Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.	3	2
11. Project management and finance: Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.	2	2
12. Life-long learning: Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.	1	3

PSOs		
1. Analyze, design and develop computing solutions by applying foundational concepts of computer science and engineering.	3	1
2. Apply software engineering principles and practices for developing quality software for scientific and business applications.	3	1
3. Adapt to emerging information and communication technologies (ICT) to innovate ideas and solutions to existing/novel problems.	1	3

PROFESSIONAL ELECTIVES

SEM	COURSE TITLE	PROGRAMME OUTCOME (PO)											
		1	2	3	4	5	6	7	8	9	10	11	12
VI	Data Warehousing and Data Mining	√	√	√									
	Software Testing	√	√	√		√				√	√		
	Embedded Systems	√	√	√									
	Agile Methodologies	√	√	√									
	Graph Theory and Applications- Intellectual Property Rights	√	√	√			√	√	√	√	√	√	√
	Digital Signal Processing	√	√	√									
VII	Big Data Analytics	√	√	√		√				√	√		
	Machine Learning Techniques	√	√	√		√				√	√		
	Computer Graphics and Multimedia	√	√	√									
	Software Project Management	√	√	√			√		√	√	√	√	√
	Internet of Things	√	√	√									
	Service Oriented Architecture	√	√	√									
	Total Quality Management	√	√	√									√
	Multi-core Architectures and Programming	√	√	√									
	Human Computer Interaction	√	√	√									
	C# and .Net Programming	√	√	√		√				√	√		
	Wireless Adhoc and Sensor Networks	√	√	√									
	Advanced Topics on Databases	√	√	√									
	Foundation Skills in Integrated Product Development	√	√	√									
	Human Rights	√	√	√									
	Disaster Management	√	√	√				√					
VIII	Digital Image Processing	√	√	√									
	Social Network Analysis	√	√	√									
	Information Security	√	√	√					√				
	Software Defined Networks	√	√	√									
	Cyber Forensics	√	√	√					√				
	Soft Computing	√	√	√									
	Professional Ethics in Engineering						√	√	√	√	√		√
	Information Retrieval Techniques	√	√	√									
	Green Computing	√	√	√									
	GPU Architecture and Programming	√	√	√									
	Natural Language Processing	√	√	√									
	Parallel Algorithms	√	√	√									
	Speech Processing	√	√	√									
Fundamentals of Nano Science	√	√	√										

ANNA UNIVERSITY, CHENNAI
AFFILIATED INSTITUTIONS
B.TECH INFORMATION TECHNOLOGY
REGULATIONS – 2017
CHOICE BASED CREDIT SYSTEM

PROGRAM EDUCATIONAL OBJECTIVES (PEOs)

1. To ensure graduates will be proficient in utilizing the fundamental knowledge of basic sciences, mathematics and Information Technology for the applications relevant to various streams of Engineering and Technology.
2. To enrich graduates with the core competencies necessary for applying knowledge of computers and telecommunications equipment to store, retrieve, transmit, manipulate and analyze data in the context of business enterprise.
3. To enable graduates to think logically, pursue lifelong learning and will have the capacity to understand technical issues related to computing systems and to design optimal solutions.
4. To enable graduates to develop hardware and software systems by understanding the importance of social, business and environmental needs in the human context.
5. To enable graduates to gain employment in organizations and establish themselves as professionals by applying their technical skills to solve real world problems and meet the diversified needs of industry, academia and research.

PROGRAM OUTCOMES (POs)

ENGINEERING GRADUATES WILL BE ABLE TO:

1. **Engineering knowledge:** Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.
2. **Problem analysis:** Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.
3. **Design/development of solutions:** Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.
4. **Conduct investigations of complex problems:** Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.
5. **Modern tool usage:** Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.
6. **The engineer and society:** Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.

7. **Environment and sustainability:** Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.
8. **Ethics:** Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.
9. **Individual and team work:** Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.
10. **Communication:** Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.
11. **Project management and finance:** Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.
12. **Life-long learning:** Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.

PROGRAM SPECIFIC OBJECTIVES (PSOs)

1. To create, select, and apply appropriate techniques, resources, modern engineering and IT tools including prediction and modelling to complex engineering activities with an understanding of the limitations.
2. To manage complex IT projects with consideration of the human, financial, ethical and environmental factors and an understanding of risk management processes, and operational and policy implications.

MAPPING OF PROGRAMME EDUCATIONAL OBJECTIVES WITH PROGRAMME OUTCOMES

A broad relation between the programme objective and the outcomes is given in the following table

PROGRAMME EDUCATIONAL OBJECTIVES	PROGRAMME OUTCOMES											
	A	B	C	D	E	F	G	H	I	J	K	L
1	3	2										
2	3	3	1	1								2
3			3			1						3
4			3		1	2	3	1				
5				3				1	1	2	2	1

MAPPING OF PROGRAM SPECIFIC OBJECTIVES WITH PROGRAMME OUTCOMES

A broad relation between the Program Specific Objectives and the outcomes is given in the following table

PROGRAM SPECIFIC OBJECTIVES	PROGRAMME OUTCOMES											
	A	B	C	D	E	F	G	H	I	J	K	L
1	3	2			3				2	2		
2				3			3	3			3	

Contribution

1: Reasonable

2: Significant

3: Strong

**PROFESSIONAL ELECTIVES (PE)
SEMESTER VI
ELECTIVE - I**

Sl. No	COURSE TITLE	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
1.	Software Testing	2	2		3								
2.	Graph Theory and Applications	3	3	2	3								
3.	Digital Signal Processing	3	3	3	3		2	2					
4.	Information Storage and Management	3	3										
5.	Agile Methodologies	3				3				3	3	3	
6.	Embedded Systems	2	2	3			2	3					
7.	Intellectual Property Rights								3		3	3	
8.													

ELECTIVE - II

Sl. No	COURSE TITLE	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
1.	Web Development Frameworks	2		3		3							
2.	Machine Learning Techniques	3	3	3	2		2						
3.	Formal Languages and Automata Theory	3	3	3	3		2						
4.	Internet of Things	2		2		3	3	3					
5.	Software Project Management	2	2	2						3	3	3	
6.	Service Oriented Architecture	3	3	3			2	2					
7.	Total Quality Management								3	2	3	3	3
8.													

ELECTIVE - III

Sl. No	COURSE TITLE	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
1.	Human Computer Interaction	3	3	3	2		3						
2.	C# and .Net Programming	2		3		3							
3.	Wireless Ad hoc and Sensor Networks	3	3	3									
4.	Foundation Skills in Integrated Product Development	3	3	3	2		2	2				3	
5.	Advanced Topics on Databases	3	3	3	2								
6.	Disaster Management	2	2	2			3	3					

ELECTIVE - IV

Sl. No	COURSE TITLE	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
1.	Social Network Analysis	3	3	3	3								
2.	Soft Computing	2	3	3	3								
3.	Cyber Forensics	3	3	3	3								
4.	Information Security	3	3	3	3								
5.	Digital Image Processing	3	3	3	3								
6.	Network Management	2	3	3	3								
7.	Professional Ethics in Engineering								3				3

ELECTIVE - V

Sl. No	COURSE TITLE	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
1.	Information Retrieval Techniques	3	3	3									
2.	Green Computing	3	3	3			3	3					
3.	Natural Language Processing	3	3	3	3								
4.	Speech Processing	3	3	3	3								
5.	Web Design and Management	3		3									
6.	Electronic Commerce	3	1	1								3	3
7.	Fundamentals of Nano Science	3	3	3									

ANNA UNIVERSITY, CHENNAI
AFFILIATED INSTITUTIONS
B.E. MECHANICAL ENGINEERING
REGULATIONS – 2017
CHOICE BASED CREDIT SYSTEM

PROGRAMME EDUCATIONAL OBJECTIVES:

Bachelor of Mechanical Engineering curriculum is designed to impart Knowledge, Skill and Attitude on the graduates to

1. Have a successful career in Mechanical Engineering and allied industries.
2. Have expertise in the areas of Design, Thermal, Materials and Manufacturing.
3. Contribute towards technological development through academic research and industrial practices.
4. Practice their profession with good communication, leadership, ethics and social responsibility.
5. Graduates will adapt to evolving technologies through life-long learning.

PROGRAMME OUTCOMES

1. An ability to apply knowledge of mathematics and engineering sciences to develop mathematical models for industrial problems.
2. An ability to identify, formulates, and solve complex engineering problems. with high degree of competence.
3. An ability to design and conduct experiments, as well as to analyze and interpret data obtained through those experiments.
4. An ability to design mechanical systems, component, or a process to meet desired needs within the realistic constraints such as environmental, social, political and economic sustainability.
5. An ability to use modern tools, software and equipment to analyze multidisciplinary problems.
6. An ability to demonstrate on professional and ethical responsibilities.
7. An ability to communicate, write reports and express research findings in a scientific community.
8. An ability to adapt quickly to the global changes and contemporary practices.
9. An ability to engage in life-long learning.

PEO / PO Mapping

Programme Educational Objectives	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9
I	✓	✓	✓	✓	✓	✓	✓	✓	✓
II	✓	✓	✓		✓			✓	
III		✓		✓	✓	✓		✓	
IV					✓	✓	✓		✓
V		✓	✓	✓	✓				✓

PROFESSIONAL CORE (PC)

SL. NO.	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
1.	ME8391	Engineering Thermodynamics	PC	5	3	2	0	4
2.	ME8351	Manufacturing Technology - I	PC	3	3	0	0	3
3.	ME8361	Manufacturing Technology Laboratory - I	PC	4	0	0	4	2
4.	ME8381	Computer Aided Machine Drawing	PC	4	0	0	4	2
5.	ME8492	Kinematics of Machinery	PC	3	3	0	0	3
6.	ME8451	Manufacturing Technology– II	PC	3	3	0	0	3
7.	ME8491	Engineering Metallurgy	PC	3	3	0	0	3
8.	ME8493	Thermal Engineering- I	PC	3	3	0	0	3
9.	ME8462	Manufacturing Technology Laboratory–II	PC	4	0	0	4	2
10.	ME8595	Thermal Engineering- II	PC	3	3	0	0	3
11.	ME8593	Design of Machine Elements	PC	3	3	0	0	3
12.	ME8501	Metrology and Measurements	PC	3	3	0	0	3
13.	ME8594	Dynamics of Machines	PC	4	4	0	0	4
14.	ME8511	Kinematics and Dynamics Laboratory	PC	4	0	0	4	2
15.	ME8512	Thermal Engineering Laboratory	PC	4	0	0	4	2
16.	ME8513	Metrology and Measurements Laboratory	PC	4	0	0	4	2
17.	ME8651	Design of Transmission Systems	PC	3	3	0	0	3
18.	ME8691	Computer Aided Design and Manufacturing	PC	3	3	0	0	3
19.	ME8693	Heat and Mass Transfer	PC	5	3	2	0	4
20.	ME8692	Finite Element Analysis	PC	3	3	0	0	3
21.	ME8694	Hydraulics and Pneumatics	PC	3	3	0	0	3
22.	ME8681	C.A.D. / C.A.M. Laboratory	PC	4	0	0	4	2
23.	ME8682	Design and Fabrication Project	PC	4	0	0	4	2
24.	ME8792	Power Plant Engineering	PC	3	3	0	0	3
25.	ME8791	Mechatronics	PC	3	3	0	0	3
26.	ME8793	Process Planning and Cost Estimation	PC	3	3	0	0	3
27.	ME8711	Simulation and Analysis Laboratory	PC	4	0	0	4	2
28.	ME8781	Mechatronics Laboratory	PC	4	0	0	4	2

PROFESSIONAL ELECTIVES FOR B.E. MECHANICAL ENGINEERING

SEMESTER VI, ELECTIVE I

SL. NO.	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
1.	ME8091	Automobile Engineering	PE	3	3	0	0	3
2.	PR8592	Welding Technology	PE	3	3	0	0	3
3.	ME8096	Gas Dynamics and Jet Propulsion	PE	3	3	0	0	3
4.	GE8075	Intellectual Property Rights	PE	3	3	0	0	3
5.	GE8073	Fundamentals of Nano Science	PE	3	3	0	0	3

SEMESTER VII, ELECTIVE II

SL. NO.	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
1.	ME8071	Refrigeration and Air conditioning	PE	3	3	0	0	3
2.	ME8072	Renewable Sources of Energy	PE	3	3	0	0	3
3.	ME8098	Quality Control and Reliability Engineering	PE	3	3	0	0	3
4.	ME8073	Unconventional Machining Processes	PE	3	3	0	0	3
5.	MG8491	Operations Research	PE	3	3	0	0	3
6.	MF8071	Additive Manufacturing	PE	3	3	0	0	3
7.	GE8077	Total Quality Management	PE	3	3	0	0	3

SEMESTER VII, ELECTIVE III

SL. NO.	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
1.	ME8099	Robotics	PE	3	3	0	0	3
2.	ME8095	Design of Jigs, Fixtures and Press Tools	PE	3	3	0	0	3
3.	ME8093	Computational Fluid Dynamics	PE	3	3	0	0	3
4.	ME8097	Non Destructive Testing and Evaluation	PE	3	3	0	0	3
5.	ME8092	Composite Materials and Mechanics	PE	3	3	0	0	3
6.	GE8072	Foundation Skills in Integrated Product Development	PE	3	3	0	0	3
7.	GE8074	Human Rights	PE	3	3	0	0	3
8.	GE8071	Disaster Management	PE	3	3	0	0	3

SEMESTER VIII, ELECTIVE IV

SL. NO.	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
1.	IE8693	Production Planning and Control	PE	3	3	0	0	3
2.	MG8091	Entrepreneurship Development	PE	3	3	0	0	3
3.	ME8094	Computer Integrated Manufacturing Systems	PE	3	3	0	0	3
4.	ME8074	Vibration and Noise Control	PE	3	3	0	0	3
5.	EE8091	Micro Electro Mechanical Systems	PE	3	3	0	0	3
6.	GE8076	Professional Ethics in Engineering	PE	3	3	0	0	3

EMPLOYABILITY ENHANCEMENT COURSES (EEC)

SL. NO.	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
1.	HS8381	Interpersonal Skills/Listening &	EEC	4	0	0	4	2
2.	ME8712	Technical Seminar	EEC	2	0	0	2	1
3.	ME8811	Project Work	EEC	20	0	0	20	12
4.	HS8461	Advanced Reading and Writing	EEC	2	0	0	2	1
5.	ME8682	Design and Fabrication Project	EEC	4	0	0	4	2
6.	HS8581	Professional Communication	EEC	2	0	0	2	1

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PROGRAMME EDUCATIONAL OBJECTIVES:

- PEO1: To enable graduates to pursue research, or have a successful career in academia or industries associated with Electronics and Communication Engineering, or as entrepreneurs.
- PEO2: To provide students with strong foundational concepts and also advanced techniques and tools in order to enable them to build solutions or systems of varying complexity.
- PEO3: To prepare students to critically analyze existing literature in an area of specialization and ethically develop innovative and research oriented methodologies to solve the problems identified.

PROGRAMME OUTCOMES:

Engineering Graduates will be able to:

1. **Engineering knowledge:** Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.
2. **Problem analysis:** Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.
3. **Design/development of solutions:** Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.
4. **Conduct investigations of complex problems:** Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.
5. **Modern tool usage:** Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.
6. **The engineer and society:** Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.
7. **Environment and sustainability:** Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.

8. **Ethics:** Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.
9. **Individual and team work:** Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.
10. **Communication:** Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.
11. **Project management and finance:** Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.
12. **Life-long learning:** Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.

PROGRAM SPECIFIC OBJECTIVES (PSOs)

1. To analyze, design and develop solutions by applying foundational concepts of electronics and communication engineering.
2. To apply design principles and best practices for developing quality products for scientific and business applications.
3. To adapt to emerging information and communication technologies (ICT) to innovate ideas and solutions to existing/novel problems.

Contribution

1: Reasonable

2: Significant

3: Strong

MAPPING OF PROGRAMME EDUCATIONAL OBJECTIVES WITH PROGRAMME OUTCOMES

A broad relation between the programme objective and the outcomes is given in the following table

PROGRAMME EDUCATIONAL OBJECTIVES	PROGRAMME OUTCOMES											
	A	B	C	D	E	F	G	H	I	J	K	L
1	3	3	2	3	2	1	1	2	1	1	3	1
2	3	3	3	3	3	1	1	1	1	1	1	2
3	3	3	3	3	3	2	2	3	1	2	2	2

MAPPING OF PROGRAM SPECIFIC OBJECTIVES WITH PROGRAMME OUTCOMES

A broad relation between the Program Specific Objectives and the outcomes is given in the following table

PROGRAM SPECIFIC OBJECTIVES	PROGRAMME OUTCOMES											
	A	B	C	D	E	F	G	H	I	J	K	L
1	3	3	2	3	2	1	1	1	1	1	1	2
2	3	3	3	3	3	2	2	3	1	3	3	3
3	3	3	3	3	3	3	3	2	1	1	1	3

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MAPPING OF COURSE OUTCOMES WITH PROGRAMME OUTCOMES:

A broad relation between the Course Outcomes and Programme Outcomes is given in the following table

COURSE OUTCOMES		PROGRAMME OUTCOMES												
Sem	Course Name	a	b	c	d	e	f	g	h	i	j	k	l	
I	Communicative English						√	√	√	√	√	√		
	Engineering Mathematics – I	√	√	√	√							√	√	
	Engineering Physics	√	√	√	√							√	√	
	Engineering Chemistry	√	√	√	√							√	√	
	Problem Solving and Python Programming	√	√	√	√	√						√	√	
	Engineering Graphics	√										√	√	√
	Problem Solving and Python Programming Laboratory	√	√	√	√	√							√	√
	Physics and Chemistry Laboratory	√	√	√	√								√	√
II	Technical English					√	√	√	√	√	√	√	√	
	Engineering Mathematics – II	√	√	√	√							√	√	
	Physics for Electronics Engineering	√	√	√	√							√	√	
	Basic Electrical and Instrumentation Engineering	√	√	√	√	√	√					√	√	
	Circuit Analysis	√	√	√	√	√	√					√	√	
	Electronic Devices	√	√	√	√	√	√					√	√	
	Circuits and Devices Laboratory	√	√	√	√	√						√	√	
	Engineering Practices Laboratory	√	√	√	√	√						√	√	
III	Linear Algebra and Partial Differential Equations	√	√	√	√	√						√	√	
	Fundamentals of Data Structures In C	√	√	√	√	√	√					√	√	
	Electronic Circuits- I	√	√	√	√	√	√					√	√	
	Signals and Systems	√	√	√	√	√	√					√	√	
	Digital Electronics	√	√	√	√	√	√					√	√	
	Control System Engineering	√	√	√	√	√	√					√	√	
	Fundamentals of Data Structures in C Laboratory	√	√	√	√	√	√					√	√	
	Analog and Digital Circuits Laboratory	√	√	√	√	√	√					√	√	
	Interpersonal Skills/Listening &Speaking						√		√	√	√	√	√	
IV	Probability and Random Processes	√	√	√	√	√						√	√	
	Electronic Circuits II	√	√	√	√	√	√					√	√	
	Communication Theory	√	√	√	√	√	√					√	√	
	Electromagnetic Fields	√	√	√	√	√	√					√	√	
	Linear Integrated Circuits	√	√	√	√	√	√					√	√	
	Environmental Science and Engineering	√	√		√		√	√	√			√	√	
	Circuits Design and Simulation Laboratory	√	√	√	√	√	√					√	√	

COURSE OUTCOMES		PROGRAMME OUTCOMES											
Sem	Course Name	a	b	c	d	e	f	g	h	i	j	k	l
	Linear Integrated Circuits Laboratory	√	√	√	√	√	√					√	√
V	Digital Communication	√	√	√	√	√	√					√	√
	Discrete-Time Signal Processing	√	√	√	√	√	√					√	√
	Computer Architecture and Organization	√	√	√	√		√					√	√
	Communication Networks	√	√	√	√	√	√					√	√
	Professional Elective I												
	Open Elective I												
	Digital Signal Processing Laboratory	√	√	√	√	√	√					√	√
	Communication Systems Laboratory	√	√	√	√	√	√					√	√
	Networks Laboratory	√	√	√	√	√	√					√	√
VI	Microprocessors and Microcontrollers	√	√	√	√	√	√					√	√
	VLSI Design	√	√	√	√	√	√					√	√
	Wireless Communication	√	√	√	√	√	√					√	√
	Principles of Management						√	√	√		√	√	√
	Transmission Lines and RF Systems	√	√	√	√	√	√					√	√
	Professional Elective -II												
	Microprocessors and Microcontrollers Laboratory	√	√	√	√	√	√					√	√
	VLSI Design Laboratory	√	√	√	√	√	√					√	√
	Technical Seminar		√		√	√	√		√	√	√	√	√
VII	Antennas and Microwave Engineering	√	√	√	√	√	√					√	√
	Optical Communication	√	√	√	√		√					√	√
	Embedded and Real Time Systems	√	√	√	√	√	√					√	√
	Ad hoc and Wireless Sensor Networks	√	√	√	√	√	√					√	√
	Professional Elective -III												
	Open Elective - II												
	Embedded Laboratory	√	√	√	√	√	√					√	√
	Advanced Communication Laboratory	√	√	√	√	√	√					√	√
VIII	Professional Elective - IV												
	Professional Elective - V												
	Project Work	√	√	√	√	√	√		√	√	√	√	√

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I - VIII SEMESTERS CURRICULA AND SYLLABI

SEMESTER I

Sl. No	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
THEORY								
1.	HS8151	Communicative English	HS	4	4	0	0	4
2.	MA8151	Engineering Mathematics - I	BS	4	4	0	0	4
3.	PH8151	Engineering Physics	BS	3	3	0	0	3
4.	CY8151	Engineering Chemistry	BS	3	3	0	0	3
5.	GE8151	Problem Solving and Python Programming	ES	3	3	0	0	3
6.	GE8152	Engineering Graphics	ES	6	2	0	4	4
PRACTICALS								
7.	GE8161	Problem Solving and Python Programming Laboratory	ES	4	0	0	4	2
8.	BS8161	Physics and Chemistry Laboratory	BS	4	0	0	4	2
TOTAL				31	19	0	12	25

SEMESTER II

Sl. No	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
THEORY								
1.	HS8251	Technical English	HS	4	4	0	0	4
2.	MA8251	Engineering Mathematics - II	BS	4	4	0	0	4
3.	PH8253	Physics for Electronics Engineering	BS	3	3	0	0	3
4.	BE8254	Basic Electrical and Instrumentation Engineering	ES	3	3	0	0	3
5.	EC8251	Circuit Analysis	PC	4	4	0	0	4
6.	EC8252	Electronic Devices	PC	3	3	0	0	3
PRACTICALS								
7.	EC8261	Circuits and Devices Laboratory	PC	4	0	0	4	2
8.	GE8261	Engineering Practices Laboratory	ES	4	0	0	4	2
TOTAL				29	21	0	8	25

SEMESTER III

Sl. No	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
THEORY								
1.	MA8352	Linear Algebra and Partial Differential Equations	BS	4	4	0	0	4
2.	EC8393	Fundamentals of Data Structures In C	ES	3	3	0	0	3
3.	EC8351	Electronic Circuits- I	PC	3	3	0	0	3
4.	EC8352	Signals and Systems	PC	4	4	0	0	4
5.	EC8392	Digital Electronics	PC	3	3	0	0	3
6.	EC8391	Control Systems Engineering	PC	3	3	0	0	3
PRACTICALS								
7.	EC8381	Fundamentals of Data Structures in C Laboratory	ES	4	0	0	4	2
8.	EC8361	Analog and Digital Circuits Laboratory	PC	4	0	0	4	2
9.	HS8381	Interpersonal Skills/Listening &Speaking	EEC	2	0	0	2	1
TOTAL				30	20	0	10	25

SEMESTER IV

Sl. No	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
THEORY								
1.	MA8451	Probability and Random Processes	BS	4	4	0	0	4
2.	EC8452	Electronic Circuits II	PC	3	3	0	0	3
3.	EC8491	Communication Theory	PC	3	3	0	0	3
4.	EC8451	Electromagnetic Fields	PC	4	4	0	0	4
5.	EC8453	Linear Integrated Circuits	PC	3	3	0	0	3
6.	GE8291	Environmental Science and Engineering	HS	3	3	0	0	3
PRACTICALS								
7.	EC8461	Circuits Design and Simulation Laboratory	PC	4	0	0	4	2
8.	EC8462	Linear Integrated Circuits Laboratory	PC	4	0	0	4	2
TOTAL				28	20	0	8	24

SEMESTER V

Sl. No	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
THEORY								
1.	EC8501	Digital Communication	PC	3	3	0	0	3
2.	EC8553	Discrete-Time Signal Processing	PC	4	4	0	0	4
3.	EC8552	Computer Architecture and Organization	PC	3	3	0	0	3
4.	EC8551	Communication Networks	PC	3	3	0	0	3
5.		Professional Elective I	PE	3	3	0	0	3
6.		Open Elective I	OE	3	3	0	0	3
PRACTICALS								
7.	EC8562	Digital Signal Processing Laboratory	PC	4	0	0	4	2
8.	EC8561	Communication Systems Laboratory	PC	4	0	0	4	2
9.	EC8563	Communication Networks Laboratory	PC	4	0	0	4	2
TOTAL				31	19	0	12	25

SEMESTER VI

Sl. No	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
THEORY								
1.	EC8691	Microprocessors and Microcontrollers	PC	3	3	0	0	3
2.	EC8095	VLSI Design	PC	3	3	0	0	3
3.	EC8652	Wireless Communication	PC	3	3	0	0	3
4.	MG8591	Principles of Management	HS	3	3	0	0	3
5.	EC8651	Transmission Lines and RF Systems	PC	3	3	0	0	3
6.		Professional Elective -II	PE	3	3	0	0	3
PRACTICALS								
7.	EC8681	Microprocessors and Microcontrollers Laboratory	PC	4	0	0	4	2
8.	EC8661	VLSI Design Laboratory	PC	4	0	0	4	2
9.	EC8611	Technical Seminar	EEC	2	0	0	2	1
TOTAL				28	18	0	10	23

SEMESTER VII

Sl.No	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
THEORY								
1.	EC8701	Antennas and Microwave Engineering	PC	3	3	0	0	3
2.	EC8751	Optical Communication	PC	3	3	0	0	3
3.	EC8791	Embedded and Real Time Systems	PC	3	3	0	0	3
4.	EC8702	Ad hoc and Wireless Sensor Networks	PC	3	3	0	0	3
5.		Professional Elective -III	PE	3	3	0	0	3
6.		Open Elective - II	OE	3	3	0	0	3
PRACTICALS								
7.	EC8711	Embedded Laboratory	PC	4	0	0	4	2
8.	EC8761	Advanced Communication Laboratory	PC	4	0	0	4	2
TOTAL				26	18	0	8	22

SEMESTER VIII

Sl. No	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
THEORY								
1.		Professional Elective IV	PE	3	3	0	0	3
2.		Professional Elective V	PE	3	3	0	0	3
PRACTICALS								
3.	EC8811	Project Work	EEC	20	0	0	20	10
TOTAL				26	6	0	20	16

TOTAL NO. OF CREDITS: 185

HUMANITIES AND SOCIALSCIENCES (HS)

SI.NO	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
1.	HS8151	Communicative English	HS	4	4	0	0	4
2.	HS8251	Technical English	HS	4	4	0	0	4
3.	GE8291	Environmental Science and Engineering	HS	3	3	0	0	3
4.	MG8591	Principles of Management	HS	3	3	0	0	3

BASIC SCIENCES (BS)

SI.NO	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
1.	MA8151	Engineering Mathematics I	BS	4	4	0	0	4
2.	PH8151	Engineering Physics	BS	3	3	0	0	3
3.	CY8151	Engineering Chemistry	BS	3	3	0	0	3
4.	BS8161	Physics and Chemistry Laboratory	BS	4	0	0	4	2
5.	MA8251	Engineering Mathematics II	BS	4	4	0	0	4
6.	PH8253	Physics for Electronics Engineering	BS	3	3	0	0	3
7.	MA8352	Linear Algebra and Partial Differential Equations	BS	4	4	0	0	4
8.	MA8451	Probability and Random Processes	BS	4	4	0	0	4

ENGINEERING SCIENCES (ES)

SI. NO	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
1.	GE8151	Problem Solving and Python Programming	ES	3	3	0	0	3
2.	GE8152	Engineering Graphics	ES	6	2	0	4	4
3.	GE8161	Problem Solving and Python Programming Laboratory	ES	4	0	0	4	2
4.	BE8254	Basic Electrical and Instrumentation Engineering	ES	3	3	0	0	3
5.	GE8261	Engineering Practices Laboratory	ES	4	0	0	4	2
6.	EC8393	Fundamentals of Data Structures In C	ES	3	3	0	0	3
7.	EC8381	Fundamentals of Data Structures in C Laboratory	ES	4	0	0	4	2

PROFESSIONAL CORE (PC)

SI.NO	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
1.	EC8251	Circuit Analysis	PC	4	4	0	0	4
2.	EC8252	Electronic Devices	PC	3	3	0	0	3
3.	EC8261	Circuits and Devices Lab	PC	4	0	0	4	2
4.	EC8351	Electronic Circuits- I	PC	3	3	0	0	3
5.	EC8352	Signals and Systems	PC	4	4	0	0	4
6.	EC8392	Digital Electronics	PC	3	3	0	0	3
7.	EC8391	Control System Engineering	PC	3	3	0	0	3
8.	EC8361	Analog and Digital Circuits Laboratory	PC	4	0	0	4	2
9.	EC8452	Electronic Circuits II	PC	3	3	0	0	3
10.	EC8491	Communication Theory	PC	3	3	0	0	3
11.	EC8451	Electromagnetic Fields	PC	4	4	0	0	4
12.	EC8453	Linear Integrated Circuits	PC	3	3	0	0	3
13.	EC8461	Circuits Design and Simulation Laboratory	PC	4	0	0	4	2
14.	EC8462	Linear Integrated Circuits Laboratory	PC	4	0	0	4	2
15.	EC8501	Digital Communication	PC	3	3	0	0	3
16.	EC8553	Discrete-Time Signal Processing	PC	4	4	0	0	4
17.	EC8651	Transmission Lines and RF Systems	PC	3	3	0	0	3
18.	EC8552	Computer Architecture and Organization	PC	3	3	0	0	3
19.	EC8551	Communication Networks	PC	3	3	0	0	3
20.	EC8562	Digital Signal Processing Laboratory	PC	4	0	0	4	2
21.	EC8561	Communication Systems Laboratory	PC	4	0	0	4	2
22.	EC8563	Communication Networks Laboratory	PC	4	0	0	4	2
23.	EC8691	Microprocessors and Microcontrollers	PC	3	3	0	0	3
24.	EC8095	VLSI Design	PC	3	3	0	0	3
25.	EC8652	Wireless Communication	PC	3	3	0	0	3
26.	EC8661	VLSI Design	PC	4	0	0	4	2

		Laboratory						
27.	EC8681	Microprocessors and Microcontrollers Laboratory	PC	4	0	0	4	2
28.	EC8701	Antennas and Microwave Engineering	PC	3	3	0	0	3
29.	EC8751	Optical Communication	PC	3	3	0	0	3
30.	EC8791	Embedded and Real Time Systems	PC	3	3	0	0	3
31.	EC8702	Ad hoc and Wireless Sensor Networks	PC	3	3	0	0	3
32.	EC8711	Embedded Laboratory	PC	4	0	0	4	2
33.	EC8761	Advanced Communication Laboratory	PC	4	0	0	4	2

PROFESSIONAL ELECTIVES (PE)*
SEMESTER V
ELECTIVE I

Sl. No	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
1.	CS8392	Object Oriented Programming	PE	3	3	0	0	3
2.	EC8073	Medical Electronics	PE	3	3	0	0	3
3.	CS8493	Operating Systems	PE	3	3	0	0	3
4.	EC8074	Robotics and Automation	PE	3	3	0	0	3
5.	EC8075	Nano Technology and Applications	PE	3	3	0	0	3
6.	GE8074	Human Rights	PE	3	3	0	0	3
7.	GE8077	Total Quality Management	PE	3	3	0	0	3

SEMESTER VI
ELECTIVE II

Sl. No	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
1.	CS8792	Cryptography and Network Security	PE	3	3	0	0	3
2.	EC8091	<u>Advanced Digital Signal Processing</u>	PE	3	3	0	0	3
3.	EC8001	MEMS and NEMS	PE	3	3	0	0	3
4.	EC8002	Multimedia Compression and Communication	PE	3	3	0	0	3
5.	EC8003	CMOS Analog IC Design	PE	3	3	0	0	3
6.	EC8004	Wireless Networks	PE	3	3	0	0	3
7.	GE8075	Intellectual Property Rights	PE	3	3	0	0	3

SEMESTER VII
ELECTIVE III

Sl. No	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
1.	EC8092	Advanced Wireless Communication	PE	3	3	0	0	3
2.	EC8071	Cognitive Radio	PE	3	3	0	0	3
3.	GE8072	Foundation Skills in Integrated Product Development	PE	3	3	0	0	3
4.	CS8082	Machine Learning Techniques	PE	3	3	0	0	3
5.	EC8005	Electronics Packaging and Testing	PE	3	3	0	0	3
6.	EC8006	Mixed Signal IC Design	PE	3	3	0	0	3
7.	GE8071	Disaster Management	PE	3	3	0	0	3

**SEMESTER VIII
ELECTIVE IV**

SI.No	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
1.	EC8072	Electro Magnetic Interference and Compatibility	PE	3	3	0	0	3
2.	EC8007	Low power SoC Design	PE	3	3	0	0	3
3.	EC8008	Photonic Networks	PE	3	3	0	0	3
4.	EC8009	Compressive Sensing	PE	3	3	0	0	3
5.	EC8093	Digital Image Processing	PE	3	3	0	0	3
6.	GE8076	Professional Ethics in Engineering	PE	3	3	0	0	3

**SEMESTER VIII
ELECTIVE V**

SI.No	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
1.	EC8010	Video Analytics	PE	3	3	0	0	3
2.	EC8011	DSP Architecture and Programming	PE	3	3	0	0	3
3.	EC8094	Satellite Communication	PE	3	3	0	0	3
4.	CS8086	Soft Computing	PE	3	3	0	0	3
5.	IT8006	Principles of Speech Processing	PE	3	3	0	0	3
6.	GE8073	Fundamentals of Nano Science	PE	3	3	0	0	3

*Professional Electives are grouped according to elective number as was done previously.

EMPLOYABILITY ENHANCEMENT COURSES (EEC)

S.NO	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
1.	HS8381	Interpersonal Skills/Listening & Speaking	EEC	2	0	0	2	1
2.	EC8611	Technical Seminar	EEC	2	0	0	2	1
3.	EC8811	Project Work	EEC	20	0	0	20	10

SUMMARY

S.NO.	SUBJECT AREA	CREDITS AS PER SEMESTER								CREDITS TOTAL	Percentage
		I	II	III	IV	V	VI	VII	VIII		
1.	HS	4	4		3		3			14	7.56%
2.	BS	12	7	4	4					27	14.6%
3.	ES	9	5	5						19	10.27%
4.	PC		9	15	17	19	16	16		92	50%
5.	PE					3	3	3	6	15	8.10%
6.	OE					3		3		6	3.24%
7.	EEC			1			1		10	12	6.48%
	Total	25	25	25	24	25	23	22	16	185	
8.	Non Credit / Mandatory										

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CHOICE BASED CREDIT SYSTEM

Educational Objectives

Bachelor of Electrical and Electronics Engineering curriculum is designed to prepare the graduates having attitude and knowledge to

1. Have successful technical and professional careers in their chosen fields such as circuit theory, Field theory, control theory and computational platforms.
2. Engross in life long process of learning to keep themselves abreast of new developments in the field of Electronics and their applications in power engineering.

Programme Outcomes

The graduates will have the ability to

- a. Apply the Mathematical knowledge and the basics of Science and Engineering to solve the problems pertaining to Electronics and Instrumentation Engineering.
- b. Identify and formulate Electrical and Electronics Engineering problems from research literature and be able to analyze the problem using first principles of Mathematics and Engineering Sciences.
- c. Come out with solutions for the complex problems and to design system components or process that fulfill the particular needs taking into account public health and safety and the social, cultural and environmental issues.
- d. Draw well-founded conclusions applying the knowledge acquired from research and research methods including design of experiments, analysis and interpretation of data and synthesis of information and to arrive at significant conclusion.
- e. Form, select and apply relevant techniques, resources and Engineering and IT tools for Engineering activities like electronic prototyping, modeling and control of systems and also being conscious of the limitations.
- f. Understand the role and responsibility of the Professional Electrical and Electronics Engineer and to assess societal, health, safety issues based on the reasoning received from the contextual knowledge.
- g. Be aware of the impact of professional Engineering solutions in societal and environmental contexts and exhibit the knowledge and the need for Sustainable Development.
- h. Apply the principles of Professional Ethics to adhere to the norms of the engineering practice and to discharge ethical responsibilities.
- i. Function actively and efficiently as an individual or a member/leader of different teams and multidisciplinary projects.
- j. Communicate efficiently the engineering facts with a wide range of engineering community and others, to understand and prepare reports and design documents; to make effective presentations and to frame and follow instructions.
- k. Demonstrate the acquisition of the body of engineering knowledge and insight and Management Principles and to apply them as member / leader in teams and multidisciplinary environments.
- l. Recognize the need for self and life-long learning, keeping pace with technological challenges in the broadest sense.

PEO \PO	a	b	c	d	e	f	g	h	i	j	k	l
1	✓	✓	✓	✓	✓	✓	✓					✓
2	✓	✓	✓	✓	✓	✓		✓		✓		

SEMESTER	NAME OF THE SUBJECT	PROGRAM OUTCOMES												
		a	b	c	d	e	f	g	h	i	j	k	l	
	THEORY													
SEM I	Communicative English									✓	✓		✓	
	Engineering Mathematics - I	✓	✓			✓							✓	
	Engineering Physics	✓	✓	✓		✓		✓					✓	
	Engineering Chemistry	✓	✓	✓		✓							✓	
	Problem Solving and Python Programming	✓	✓	✓	✓	✓							✓	
	Engineering Graphics			✓	✓									
	PRACTICAL													
	Problem Solving and Python Programming Laboratory	✓		✓	✓	✓	✓				✓			✓
	Physics and Chemistry Laboratory	✓	✓											
	THEORY													
SEM II	Technical English									✓	✓		✓	
	Engineering Mathematics - II	✓	✓	✓		✓							✓	
	Physics For Electronics Engineering	✓	✓	✓		✓		✓					✓	
	Basic Civil and Mechanical Engineering				✓		✓							
	Circuit Theory	✓	✓	✓	✓	✓							✓	
	Environmental Science and Engineering	✓	✓			✓	✓	✓	✓				✓	
	PRACTICALS													
	Engineering Practices Laboratory	✓		✓	✓	✓	✓				✓			
	Electric Circuits Lab	✓		✓	✓	✓	✓				✓		✓	
	THEORY													
SEM III	Transforms and Partial Differential Equations	✓	✓			✓							✓	
	Digital Logic Circuits				✓	✓								
	Electromagnetic Theory	✓	✓	✓	✓	✓					✓		✓	
	Electrical Machines – I	✓	✓	✓	✓	✓					✓			

	Electron Devices and Circuits	✓	✓	✓	✓	✓							✓	
	Power Plant Engineering			✓	✓	✓		✓	✓	✓				
	PRACTICALS													
	Electronics Laboratory	✓			✓	✓						✓	✓	
	Electrical Machines Laboratory - I	✓			✓	✓						✓	✓	
	THEORY													
SEM IV	Numerical Methods	✓	✓	✓									✓	
	Electrical Machines – II	✓	✓	✓	✓	✓		✓					✓	
	Transmission and Distribution	✓	✓	✓	✓	✓		✓					✓	
	Measurements and Instrumentation	✓	✓	✓	✓	✓							✓	
	Linear Integrated Circuits and Applications	✓	✓	✓		✓								
	Control Systems	✓	✓	✓	✓	✓							✓	
	PRACTICALS													
	Electrical Machines Lab II	✓	✓	✓	✓	✓							✓	
	Linear and Digital Integrated Circuits Laboratory	✓			✓	✓						✓	✓	✓
	Technical Seminar										✓	✓	✓	
	THEORY													
SEM V	Power System Analysis	✓	✓	✓	✓	✓		✓					✓	
	Microprocessors and Microcontrollers	✓			✓	✓			✓	✓		✓	✓	
	Power Electronics	✓	✓	✓	✓	✓		✓						
	Digital Signal Processing	✓	✓	✓	✓	✓		✓					✓	
	Object Oriented Programming				✓	✓	✓						✓	
	Open Elective I													
	PRACTICALS													
	Control and Instrumentation Laboratory				✓	✓	✓	✓			✓	✓		

	Professional Communication									✓	✓	✓	
	Object Oriented Programming Laboratory			✓	✓	✓							✓
	THEORY												
SEM VI	Solid State Drives	✓	✓	✓	✓	✓		✓					
	Protection and Switchgear	✓	✓	✓	✓	✓		✓					✓
	Embedded Systems												
	Professional Elective I												
	Professional Elective II												
	PRACTICALS												
	Power Electronics and Drives Laboratory	✓		✓	✓						✓	✓	✓
	Microprocessors and Microcontrollers Laboratory	✓		✓	✓						✓	✓	✓
Mini Project	✓		✓	✓						✓	✓	✓	
	THEORY												
SEM VII	High Voltage Engineering	✓	✓	✓	✓	✓		✓					✓
	Power System Operation and Control	✓	✓	✓	✓	✓		✓					✓
	Renewable Energy Systems	✓	✓	✓	✓	✓		✓					✓
	Open Elective II												
	Professional Elective III												
	Professional Elective IV												
	PRACTICALS												
	Power System Simulation Laboratory	✓		✓	✓						✓	✓	✓
Renewable Energy Systems Laboratory	✓		✓	✓						✓	✓	✓	
SEM VIII	THEORY												
	Professional Elective V												

	Professional Elective VI												
	PRACTICALS												
	Project Work	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

. PROFESSIONAL ELECTIVE

SL.NO.	NAME OF THE SUBJECT	PROGRAM OUTCOMES											
		a	b	c	d	e	f	g	h	i	j	k	l
	THEORY												
ELECTIVE – I	Advanced Control System		✓	✓					✓	✓			
	Visual Languages and Applications	✓	✓		✓	✓							
	Design of Electrical Apparatus	✓		✓	✓	✓		✓					
	Power Systems Stability				✓	✓							
	Modern Power Converters	✓		✓	✓	✓		✓					
	Intellectual Property Rights								✓		✓		✓
ELECTIVE – II	Principles of Robotics	✓		✓		✓							
	Special Electrical Machines	✓		✓	✓	✓			✓				
	Power Quality	✓		✓	✓	✓			✓				✓
	EHVAC Transmission	✓		✓	✓	✓			✓				✓
	Communication Engineering												
ELECTIVE – III	Disaster Management	✓		✓		✓	✓					✓	✓
	Human Rights			✓	✓	✓	✓						
	Operations Research	✓	✓	✓					✓	✓			✓
	Probability and Statistics												
	Fibre Optics and Laser Instrumentation	✓	✓			✓						✓	✓
	Foundation Skills in Integrated Product Development												

ELECTIVE – IV	System Identification and Adaptive Control	✓	✓	✓		✓							
	Computer Architecture	✓		✓		✓							
	Control of Electrical Drives	✓		✓		✓			✓				✓
	VLSI Design	✓	✓	✓			✓	✓					
	Power Systems Transients		✓		✓	✓							
	Total Quality Management		✓			✓	✓	✓	✓	✓	✓		
ELECTIVE – V	Flexible AC Transmission Systems	✓	✓	✓		✓					✓		✓
	Soft Computing Techniques	✓		✓		✓							
	Power Systems Dynamics	✓		✓		✓							
	SMPS and UPS	✓		✓		✓							
	Electric Energy Generation, Utilization and Conservation	✓	✓	✓	✓	✓		✓					✓
	Professional Ethics in Engineering	✓	✓		✓			✓				✓	✓
	Principals of Management					✓	✓			✓			
ELECTIVE – VI	Energy Management and Auditing		✓			✓	✓	✓	✓	✓	✓		
	Data Structures					✓	✓			✓			
	High Voltage Direct Current Transmission	✓	✓	✓					✓	✓			✓
	Microcontroller Based System Design	✓	✓	✓					✓	✓			✓
	Smart Grid	✓	✓	✓					✓	✓			✓
	Biomedical Instrumentation	✓		✓	✓	✓	✓						
	Fundamentals of Nano Science												

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I TO VIII SEMESTERS CURRICULA & SYLLABI

SEMESTER I

S.NO.	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
THEORY								
1.	HS8151	Communicative English	HS	4	4	0	0	4
2.	MA8151	Engineering Mathematics - I	BS	4	4	0	0	4
3.	PH8151	Engineering Physics	BS	3	3	0	0	3
4.	CY8151	Engineering Chemistry	BS	3	3	0	0	3
5.	GE8151	Problem Solving and Python Programming	ES	3	3	0	0	3
6.	GE8152	Engineering Graphics	ES	6	2	0	4	4
PRACTICALS								
7.	GE8161	Problem Solving and Python Programming Laboratory	ES	4	0	0	4	2
8.	BS8161	Physics and Chemistry Laboratory	BS	4	0	0	4	2
TOTAL				31	19	0	12	25

SEMESTER II

S.NO.	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
THEORY								
1.	HS8251	Technical English	HS	4	4	0	0	4
2.	MA8251	Engineering Mathematics - II	BS	4	4	0	0	4
3.	PH8253	Physics for Electronics Engineering	BS	3	3	0	0	3
4.	BE8252	Basic Civil and Mechanical Engineering	ES	4	4	0	0	4
5.	EE8251	Circuit Theory	PC	4	2	2	0	3
6.	GE8291	Environmental Science and Engineering	HS	3	3	0	0	3
PRACTICALS								
7.	GE8261	Engineering Practices Laboratory	ES	4	0	0	4	2
8.	EE8261	Electric Circuits Laboratory	PC	4	0	0	4	2
TOTAL				30	20	2	8	25

SEMESTER III

S.NO.	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
THEORY								
1.	MA8353	Transforms and Partial Differential Equations	BS	4	4	0	0	4
2.	EE8351	Digital Logic Circuits	PC	4	2	2	0	3
3.	EE8391	Electromagnetic Theory	PC	4	2	2	0	3
4.	EE8301	Electrical Machines - I	PC	4	2	2	0	3
5.	EC8353	Electron Devices and Circuits	ES	3	3	0	0	3
6.	ME8792	Power Plant Engineering	ES	3	3	0	0	3
PRACTICALS								
7.	EC8311	Electronics Laboratory	ES	4	0	0	4	2
8.	EE8311	Electrical Machines Laboratory - I	PC	4	0	0	4	2
TOTAL				30	16	6	8	23

SEMESTER IV

S.NO.	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
THEORY								
1.	MA8491	Numerical Methods	BS	4	4	0	0	4
2.	EE8401	Electrical Machines - II	PC	4	2	2	0	3
3.	EE8402	Transmission and Distribution	PC	3	3	0	0	3
4.	EE8403	Measurements and Instrumentation	PC	3	3	0	0	3
5.	EE8451	Linear Integrated Circuits and Applications	PC	3	3	0	0	3
6.	IC8451	Control Systems	PC	5	3	2	0	4
PRACTICALS								
7.	EE8411	Electrical Machines Laboratory - II	PC	4	0	0	4	2
8.	EE8461	Linear and Digital Integrated Circuits Laboratory	PC	4	0	0	4	2
9.	EE8412	Technical Seminar	EEC	2	0	0	2	1
TOTAL				32	18	4	10	25

SEMESTER V

S.NO.	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
THEORY								
1.	EE8501	Power System Analysis	PC	3	3	0	0	3
2.	EE8551	Microprocessors and Microcontrollers	PC	3	3	0	0	3
3.	EE8552	Power Electronics	PC	3	3	0	0	3
4.	EE8591	Digital Signal Processing	PC	4	2	2	0	3
5.	CS8392	Object Oriented Programming	ES	3	3	0	0	3
6.		Open Elective I*	OE	3	3	0	0	3
PRACTICALS								
7.	EE8511	Control and Instrumentation Laboratory	PC	4	0	0	4	2
8.	HS8581	Professional Communication	EEC	2	0	0	2	1
9.	CS8383	Object Oriented Programming Laboratory	ES	4	0	0	4	2
TOTAL				29	17	2	10	23

SEMESTER VI

S.NO.	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
THEORY								
1.	EE8601	Solid State Drives	PC	3	3	0	0	3
2.	EE8602	Protection and Switchgear	PC	3	3	0	0	3
3.	EE8691	Embedded Systems	ES	3	3	0	0	3
4.		Professional Elective I	PE	3	3	0	0	3
5.		Professional Elective II	PE	3	3	0	0	3
PRACTICALS								
6.	EE8661	Power Electronics and Drives Laboratory	PC	4	0	0	4	2
7.	EE8681	Microprocessors and Microcontrollers Laboratory	PC	4	0	0	4	2
8.	EE8611	Mini Project	EEC	4	0	0	4	2
TOTAL				27	15	0	12	21

SEMESTER VII

S.NO.	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
THEORY								
1.	EE8701	High Voltage Engineering	PC	3	3	0	0	3
2.	EE8702	Power System Operation and Control	PC	3	3	0	0	3
3.	EE8703	Renewable Energy Systems	PC	3	3	0	0	3
4.		Open Elective II*	OE	3	3	0	0	3
5.		Professional Elective III	PE	3	3	0	0	3
6.		Professional Elective IV	PE	3	3	0	0	3
PRACTICALS								
7.	EE8711	Power System Simulation Laboratory	PC	4	0	0	4	2
8.	EE8712	Renewable Energy Systems Laboratory	PC	4	0	0	4	2
TOTAL				26	18	0	8	22

SEMESTER VIII

S.NO.	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
THEORY								
1.		Professional Elective V	PE	3	3	0	0	3
2.		Professional Elective VI	PE	3	3	0	0	3
PRACTICALS								
3.	EE8811	Project Work	EEC	20	0	0	20	10
TOTAL				26	6	0	20	16

TOTAL NO. OF CREDITS: 180

*Course from the curriculum of other UG Programmes.

PROFESSIONAL ELECTIVE – I (VI SEMESTER)

S.NO.	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
1.	IC8651	Advanced Control System	PE	4	2	2	0	3
2.	EE8001	Visual Languages and Applications	PE	3	3	0	0	3
3.	EE8002	Design of Electrical Apparatus	PE	3	3	0	0	3
4.	EE8003	Power Systems Stability	PE	3	3	0	0	3
5.	EE8004	Modern Power Converters	PE	3	3	0	0	3
6.	GE8075	Intellectual Property Rights	PE	3	3	0	0	3

PROFESSIONAL ELECTIVE – II (VI SEMESTER)

1.	RO8591	Principles of Robotics	PE	3	3	0	0	3
2.	EE8005	Special Electrical Machines	PE	3	3	0	0	3
3.	EE8006	Power Quality	PE	3	3	0	0	3
4.	EE8007	EHVAC Transmission	PE	3	3	0	0	3
5.	EC8395	Communication Engineering	PE	3	3	0	0	3

PROFESSIONAL ELECTIVE – III (VII SEMESTER)

1.	GE8071	Disaster Management	PE	3	3	0	0	3
2.	GE8074	Human Rights	PE	3	3	0	0	3
3.	MG8491	Operations Research	PE	3	3	0	0	3
4.	MA8391	Probability and Statistics	PE	4	4	0	0	4
5.	EI8075	Fibre Optics and Laser Instrumentation	PE	3	3	0	0	3
6.	GE8072	Foundation Skills in Integrated Product Development	PE	3	3	0	0	3

PROFESSIONAL ELECTIVE – IV (VII SEMESTER)

1.	EE8008	System Identification and Adaptive Control	PE	3	3	0	0	3
2.	CS8491	Computer Architecture	PE	3	3	0	0	3
3.	EE8009	Control of Electrical Drives	PE	3	3	0	0	3
4.	EC8095	VLSI Design	PE	3	3	0	0	3
5.	EE8010	Power Systems Transients	PE	3	3	0	0	3
6.	GE8077	Total Quality Management	PE	3	3	0	0	3

PROFESSIONAL ELECTIVE – V (VIII SEMESTER)

1.	EE8011	Flexible AC Transmission Systems	PE	3	3	0	0	3
2.	EE8012	Soft Computing Techniques	PE	3	3	0	0	3
3.	EE8013	Power Systems Dynamics	PE	3	3	0	0	3
4.	EE8014	SMPS and UPS	PE	3	3	0	0	3
5.	EE8015	Electric Energy Generation, Utilization and Conservation	PE	3	3	0	0	3
6.	GE8076	Professional Ethics in Engineering	PE	3	3	0	0	3
7.	MG8591	Principles of Management	PE	3	3	0	0	3

PROFESSIONAL ELECTIVE – VI (VIII SEMESTER)

1.	EE8016	Energy Management and Auditing	PE	3	3	0	0	3
2.	CS8391	Data Structures	PE	3	3	0	0	3
3.	EE8017	High Voltage Direct Current Transmission	PE	3	3	0	0	3
4.	EE8018	Microcontroller Based System Design	PE	3	3	0	0	3
5.	EE8019	Smart Grid	PE	3	3	0	0	3
6.	EI8073	Biomedical Instrumentation	PE	3	3	0	0	3
7.	GE8073	Fundamentals of Nano Science	PE	3	3	0	0	3

***Professional Electives are grouped according to elective number as was done previously.**

HUMANITIES AND SOCIALSCIENCES (HS)

S.No	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
1.	HS8151	Communicative English	HS	4	4	0	0	4
2.	HS8251	Technical English	HS	4	4	0	0	4
3.	GE8291	Environmental Science and Engineering	HS	3	3	0	0	3

BASIC SCIENCES (BS)

S.No	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
1.	MA8151	Engineering Mathematics I	BS	4	4	0	0	4
2.	PH8151	Engineering Physics	BS	3	3	0	0	3
3.	CY8151	Engineering Chemistry	BS	3	3	0	0	3
4.	BS8161	Physics and Chemistry Laboratory	BS	4	0	0	4	2
5.	MA8251	Engineering Mathematics II	BS	4	4	0	0	4
6.	PH8253	Physics For Electronics Engineering	BS	3	3	0	0	3
7.	MA8353	Transforms and Partial Differential Equations	BS	4	4	0	0	4
8.	MA8491	Numerical Methods	BS	4	4	0	0	4

ENGINEERING SCIENCES (ES)

S.NO	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
1.	GE8151	Problem Solving and Python programming	ES	3	3	0	0	3
2.	GE8152	Engineering Graphics	ES	6	2	0	4	4
3.	GE8161	Problem Solving and	ES		0	0	4	2

		Python programming Laboratory		4				
4.	BE8252	Basic Civil and Mechanical Engineering	ES	4	4	0	0	4
5.	GE8261	Engineering Practices Laboratory	ES	4	0	0	4	2
6.	EC8353	Electron Devices and Circuits	ES	3	3	0	0	3
7.	ME8792	Power Plant Engineering	ES	3	3	0	0	3
8.	EC8311	Electronics Laboratory	ES	4	0	0	4	2
9.	CS8392	Object Oriented Programming	ES	3	3	0	0	3
10.	CS8383	Object Oriented Programming Laboratory	ES	4	0	0	4	2
11.	EE8691	Embedded Systems	ES	3	3	0	0	3

PROFESSIONAL CORE (PC)

S.No	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
1.	EE8251	Circuit Theory	PC	4	2	2	0	3
2.	EE8261	Electric Circuits Laboratory	PC	4	0	0	4	2
3.	EE8351	Digital Logic Circuits	PC	4	2	2	0	3
4.	EE8391	Electromagnetic Theory	PC	4	2	2	0	3
5.	EE8301	Electrical Machines - I	PC	4	2	2	0	3
6.	EE8311	Electrical Machines Laboratory - I	PC	4	0	0	4	2
7.	EE8401	Electrical Machines - II	PC	4	2	2	0	3
8.	EE8402	Transmission and Distribution	PC	3	3	0	0	3
9.	EE8403	Measurements and Instrumentation	PC	3	3	0	0	3
10.	EE8451	Linear Integrated Circuits and Applications	PC	3	3	0	0	3
11.	IC8451	Control Systems	PC	5	3	2	0	4
12.	EE8411	Electrical Machines Laboratory II	PC	4	0	0	4	2

13.	EE8461	Linear and Digital Integrated Circuits Laboratory	PC	4	0	0	4	2
14.	EE8501	Power System Analysis	PC	3	3	0	0	3
15.	EE8551	Microprocessors and Microcontrollers	PC	3	3	0	0	3
16.	EE8552	Power Electronics	PC	3	3	0	0	3
17.	EE8591	Digital Signal Processing	PC	4	2	2	0	3
18.	EE8511	Control and Instrumentation Laboratory	PC	4	0	0	4	2
19.	EE8601	Solid State Drives	PC	3	3	0	0	3
20.	EE8602	Protection and Switchgear	PC	3	3	0	0	3
21.	EE8661	Power Electronics and Drives Laboratory	PC	4	0	0	4	2
22.	EE8681	Microprocessors and Microcontrollers Laboratory	PC	4	0	0	4	2
23.	EE8701	High Voltage Engineering	PC	3	3	0	0	3
24.	EE8702	Power System Operation and Control	PC	3	3	0	0	3
25.	EE8703	Renewable Energy Systems	PC	3	3	0	0	3
26.	EE8711	Power System Simulation Laboratory	PC	4	0	0	4	2
27.	EE8712	Renewable Energy Systems Laboratory	PC	4	0	0	4	2

EMPLOYABILITY ENHANCEMENT COURSES (EEC)

S.No	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
1.	EE8412	Technical seminar	EEC	2	0	0	2	1
2.	HS8581	Professional Communication	EEC	2	0	0	2	1
3.	EE8611	Mini Project	EEC	4	0	0	4	2
4.	EE8811	Project work	EEC	20	0	0	20	10

S.NO.	SUBJECT AREA	CREDITS AS PER SEMESTER								CREDITS TOTAL
		I	II	III	IV	V	VI	VII	VIII	
1.	HS	4	7	-	-	-	-	-		11
2.	BS	12	7	4	4	-	-	-		27
3.	ES	9	6	8	-	5	3	-		31
4.	PC	-	5	11	20	14	10	13	-	73
5.	PE						6	6	6	18
6.	OE					3	-	3		6
7.	EEC				1	1	2		10	14
	Total	25	25	23	25	23	21	22	16	180
	Non Credit / Mandatory	-	-	-	-	-	-	-	-	0

**SUM
MAR
Y**

		Behaviour and Effectiveness						
19.	BA5018	Organizational Theory, Design and Development	PE	3	3	0	0	3
20.	BA5019	Strategic Human Resource Management	PE	3	3	0	0	3
Stream/ Specialization : Systems Management								
21.	BA5020	Advanced Database Management System	PE	3	3	0	0	3
22.	BA5021	Datamining for Business Intelligence	PE	3	3	0	0	3
23.	BA5022	Enterprise Resource Planning	PE	3	3	0	0	3
24.	BA5023	Software Project Management and Quality	PE	3	3	0	0	3
25.	BA5024	E-Business Management	PE	3	3	0	0	3
Stream/ Specialization : Operations Management								
26.	BA5025	Logistics Management	PE	3	3	0	0	3
27.	BA5026	Materials Management	PE	3	3	0	0	3
28.	BA5027	Product Design	PE	3	3	0	0	3
29.	BA5028	Project Management	PE	3	3	0	0	3
30.	BA5029	Services Operations Management	PE	3	3	0	0	3
31.	BA5030	Supply Chain Management	PE	3	3	0	0	3

SECTORAL SPECIALIZATIONS

1. Students can take three elective subjects from two functional specializations
or
2. Students can take six elective subjects from any one sectoral specializations

SL. NO	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
Sectoral Specialization : Logistics and Supply Chain Management								
1.	BA5051	Supply Chain Concepts and Planning	PE	3	3	0	0	3
2.	BA5052	Sourcing and Supply Management	PE	3	3	0	0	3
3.	BA5053	Supply Chain Inventory Management	PE	3	3	0	0	3
4.	BA5054	Supply Chain Information System	PE	3	3	0	0	3
5.	BA5055	Warehouse Management	PE	3	3	0	0	3
6.	BA5056	Transportation and Distribution Management	PE	3	3	0	0	3
7.	BA5057	Reverse and Contract Logistics	PE	3	3	0	0	3
8.	BA5058	Air Cargo Management	PE	3	3	0	0	3
9.	BA5059	Containerization and Allied Business	PE	3	3	0	0	3
10.	BA5060	Exim Management	PE	3	3	0	0	3
11.	BA5061	Fundamentals of Shipping	PE	3	3	0	0	3
12.	BA5062	Port and Terminal Management	PE	3	3	0	0	3
Sectoral Specialization : Infrastructure and Real Estate Management								
13.	BA5063	Infrastructure Planning Scheduling and Control	PE	3	3	0	0	3
14.	BA5064	Contracts and Arbitration	PE	3	3	0	0	3
15.	BA5065	Project Management for Infrastructure	PE	3	3	0	0	3
16.	BA5066	Management of Human Resources, Safety and Quality	PE	3	3	0	0	3
17.	BA5067	Disaster Mitigation and Management	PE	3	3	0	0	3
18.	BA5068	Economics and Financial Management in Construction	PE	3	3	0	0	3
19.	BA5069	Urban Environmental Management	PE	3	3	0	0	3
20.	BA5070	Smart Materials, Techniques and Equipments for Infrastructure	PE	3	3	0	0	3
21.	BA5071	Strategic Airport Infrastructure Management	PE	3	3	0	0	3
22.	BA5072	Real Estate Marketing and Management	PE	3	3	0	0	3
23.	BA5073	Infrastructure and Real Estate Entrepreneurship	PE	3	3	0	0	3
24.	BA5074	Valuation of Real Estate and Infrastructure Assets	PE	3	3	0	0	3

EMPLOYABILITY ENHANCEMENT COURSES (EEC)

SL. NO.	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
1.	BA5111	Spoken and Written Communication #	EEC	4	0	0	4	2
2.	BA5211	Data Analysis and Business Modeling	EEC	4	0	0	4	2
3.	BA5311	Summer Training	EEC	2	0	0	2	1
4.	BA5411	Project Work	EEC	24	0	0	24	12

1.2.2.1 - How many Add on /Certificate programs are added during the year. Data requirement for year: (As per Data Template)

AMCAT

Employability Report

for Bharathkumar V

Assessment Date : 07 July 2021



A personalized guide to know your AMCAT employability scores, job fit in various roles and get tips to improve employability.



Certificate
presented to

Bharathkumar V with AMCAT ID:349190814750372
for successfully completing AMCAT on 07 July 2021

According to his/her AMCAT scores, Bharathkumar V is employable for the following job profiles/sectors and is strongly recommended to be considered for job opportunities in these profiles/sectors:

Engineering/IT Jobs

Software Engineer- IT Services

Technical Operations

Associate- ITES/BPO

Associate- ITES Operations (Hardware and Networking)

To authenticate this certificate and to access detailed scores of the candidate, please visit www.myamcat.com/talentsearch/

1. This is a computer generated certificate and does not require a signature. 2. You can quote the statements mentioned on this certificate on your resume or other public documents. The ideal way to quote is "According to my AMCAT score, I am employable for the following profiles: **Software Engineer- IT Services, Associate- ITES/BPO.**

Content

- 1 READING YOUR REPORT 
- 2 YOUR AMCAT SCORES 
- 3 MODULE FEEDBACK 
- 4 YOUR PERSONALITY 
- 5 YOUR INDUSTRY AND JOB FIT 
- 6 IMPROVE YOUR EMPLOYABILITY 
- 7 NEXT STEP 





Chapter I. READING YOUR REPORT



You must be having a lot of questions about your skills, personality and employability. **AMCAT Employability Report** will not only help answer these questions, but will become your guide for deciding next steps on your career path. It will tell you what to study, what interviews to prepare for and how to prepare. Refer to the following tips to understand how to make this report a means to get closer to your dream job.

- ❖ Start by referring to the '**YOUR AMCAT SCORE SUMMARY**' chapter of your report. This chapter has all the key highlights for you. You will get to know where you stand nationally in different AMCAT modules, a snapshot of your personality and your employability in different job profiles and sectors. The summary chapter is the key. You should understand everything in it to know where you stand in the job market. For each section in the summary chapter, we mention the chapter having additional information about the section. Wherever you are unable to understand or want more information, refer to the respective chapter.
- ❖ The chapter '**Your Profile and Industry Fit**' is very important. The following tips will help you use it to make an action plan for next few months:
 - a. For profiles where your employability is high, you should start refreshing your knowledge for an interview for them. You may soon get interview calls for these.
 - b. You might find certain profiles where you have high employability, but are not the ones that interest you or you know much about. We will seriously recommend that you explore more about these profiles, find information about them and re-evaluate your interest. These can provide you an interesting career path which you may not have considered till now.
 - c. For those profiles where your employability is medium/low but interest you, understand your skill gap and start studying to improve on these areas. You may get an interview call for some of these, but you will have to work really hard to clear the interview. To increase your chances to get interview calls in such profiles, you should improve on your skills and re-take AMCAT after three months. The modules you should concentrate on for a profile is mentioned in the **chapter V**. A better AMCAT score can improve your interview chance in these profiles.
- ❖ Finally, this report can guide you on how to improve your weak areas. Refer to **Chapter III** to know within each module, which sub-modules you need to particularly improve. Work on these. Refer to **Chapter VI** to not only get helpful references to improve your weak areas, but also get a time schedule you can use.



Your Action Plan

INTEREST		
	HIGH	MEDIUM/LOW
Employability	HIGH Prepare for interviews for these profiles. Check out references from Chapter VI.	Gather more information about profiles and re-evaluate your interest. If you find that they may interest you, start preparing for their interviews.
	MEDIUM/LOW Start working to improve on AMCAT modules required for the profile. Re-take AMCAT after three months to improve your chances of interview opportunity.	Low priority at this point.

We hope you will immediately start working on this action plan to succeed in interviews and position yourself to get interview calls for your profiles of interest. Best of luck!

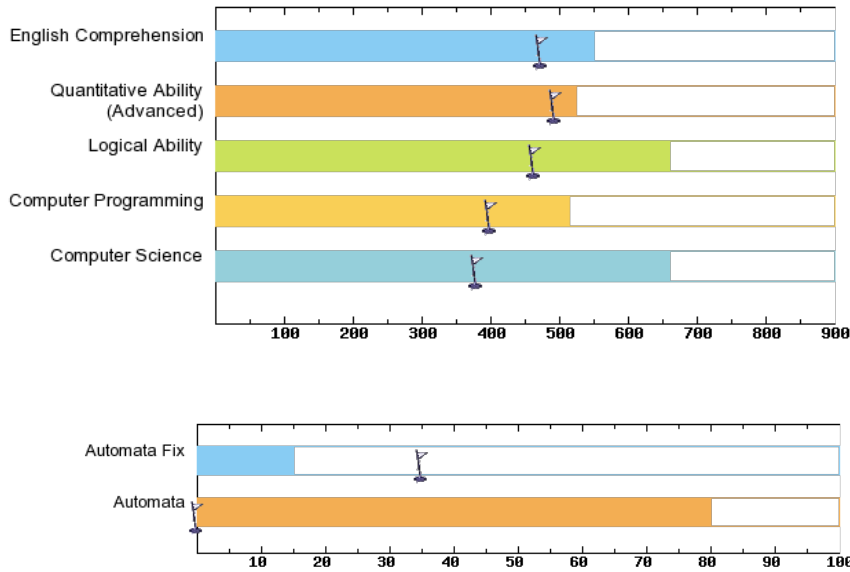


Chapter II. YOUR AMCAT SCORES

Bharathkumar V

AMCAT ID : 349190814750372

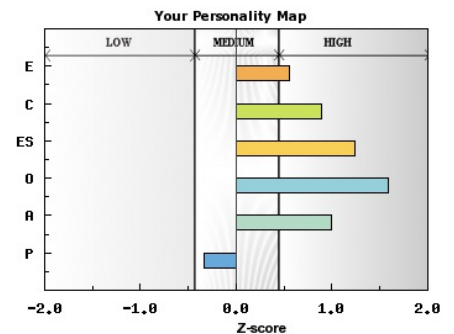
Your AMCAT Score



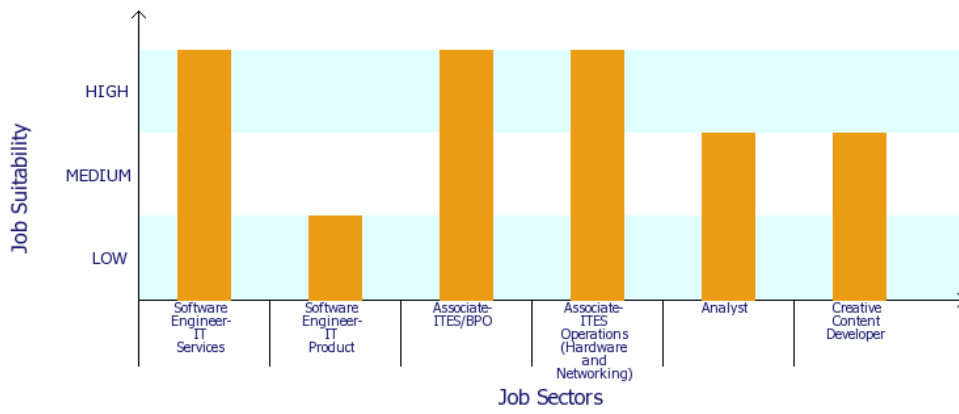
- AMCAT an intelligent adaptive test. Your AMCAT score is not equal to the number of questions answered correctly. The score is calculated by an advanced statistical engine, which takes into consideration questions difficulty, discrimination, guess probability and several other factors.
- The bar is a representation of your performance in the module. The tick in each bar represents the 50 percentile score of all candidates of your category.
- Score of one module should not be compared with the score of another, but should be compared against the 50 percentile point of that module.
- Your score is on a scale of 100 to 900 with 100 being the minimum and 900 maximum

Your Personality Scores

- **Extraversion (E)** An extroverted, talkative, socially confident person
- **Conscientiousness (C)** An organized, responsible, hardworking & achievement oriented person
- **Emotional Stability (ES)** A calm, happy, undisturbed & confident person
- **Openness To experience (O)** A broad-minded, unconventional, imaginative person with rich artistic sensitivity
- **Agreeableness (A)** A kind, sympathetic, cooperative & warm person
- **Polychronicity (P)** A multitasker



Your Job Fit





Chapter III. MODULE FEEDBACK

This Chapter provides a detailed feedback about your performance in each AMCAT module. It shall provide your AMCAT score and more importantly your AMCAT percentile, which shall tell you where you stand in the modules across all job-seekers across the Nation with similar education.

Furthermore, the chapter goes into details of which sub-module within a module did you perform well in and where you lacked. It will suggest where to put more effort and also provide tips on what kind of effort you should put in.

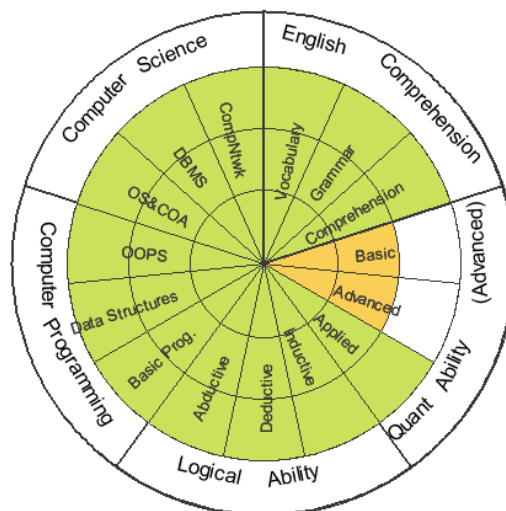
SECTION I: YOUR AMCAT REPORT CARD

Module	Score	Grade	National Percentile
English Comprehension	550	A	77%
Quantitative Ability (Advanced)	525	B	60%
Logical Ability	660	A	99%
Computer Programming	515	A	84%
Computer Science	660	A	99%
Automata	80 out of 100	Programming Ability Score: 0 out of 5 Programming Practices Score: 0 out of 4	
Automata Fix	15 out of 100		

- Overall percentile is your percentile amongst all the candidates (belonging to the same degree as yours) tested by us nationally till now. If your overall percentile for a module is NA, it means we do not calculate percentile for that module
- If your reported score is -1, it means you have attempted less than the minimum number of questions required in that section. In such a case no score is reported. A score of -2 means you did not attempt the module. NA: Not Available
- Grade Information: grade tells you where you stand amongst all the people who have taken AMCAT till now.
A: First 33% B: Second 33% C: Last 34%

SECTION II: YOUR PERFORMANCE CHAKRA

Our Performance Chakra provides you with a bird's-eye view of your performance in different sections of modules you have attempted. The three levels indicate your performance as poor, average or good.



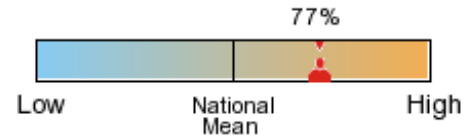
Performance Chakra: You have done really well in sub-modules marked in green, average in those in yellow and poorly in those in pink. If a section is without a color, it means you did not answer enough questions in the subsection to get an evaluation in it.



SECTION III: YOUR PERSONALIZED FEEDBACK

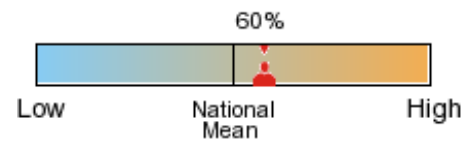
This section provides you a personalized feedback automatically generated by our artificial intelligence engine. Based on your strong and weak areas in a module, it provides you with suggestions and tips to improve yourself.

English Comprehension



Your performance in English Comprehension is amongst the top. You have exhibited a remarkable performance in the English module. Practice regularly in order to maintain this level of excellence throughout. Try to exceed your current level of performance by expanding your lexicon and learning about subtleties of this wonderful language. All the best!

Quantitative Ability (Advanced)

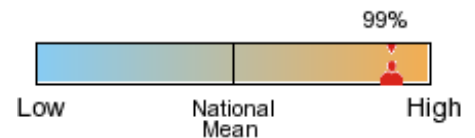


Your performance in Quantitative Ability (Advanced) is average. According to our analysis, you have mathematical bent of mind. Your basic concepts are clear in all relevant areas of Quantitative Ability. However, you need to practice questions in each topic to attain higher level of performance. You do have the potential to excel. You just need some determination and hard work. All the best!

Tips / Suggestions for You

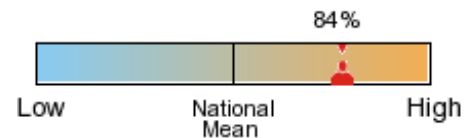
- Use your tenth standard mathematics books to understand and refresh your basic concepts.
- Always first try to solve the problem yourself. Do not look into the solution directly.

Logical Ability



Your performance in Logical Ability is very good. You are an expert in drawing inferences, spotting patterns and solving puzzles. We are sure you know that the only way to sustain and improve this ability is to regularly practice more and more difficult questions. All the best!

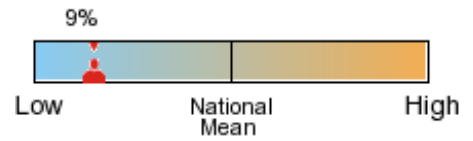
Computer Programming



Your performance in Computer Programming is very good. You have a phenomenal understanding of all the different areas of Programming and Computer Science. With your level of ability, you can afford to learn number of more programming languages and algorithms. This would also show greatly on your CV.

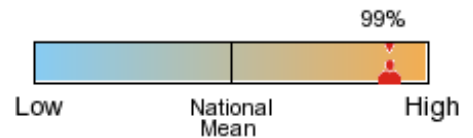


Automata Fix



Your performance in Automata Fix is not upto the mark. You need to put substantial effort into learning to read source codes and error messages and understanding what a set of coding instructions is trying to achieve. The next step is to become familiar with a programming language and its compiler. You can then start writing source codes for simple problems in the chosen language. Being able to understand and diagnose source code issues is an important part of the daily routine of a software engineer. You can learn this skill by solving simple programming problems through writing codes for them and by trying to understand the meaning of error messages that can occur when a code is compiled.

Computer Science



Your performance in Computer Science is amongst the top. Your performance has been quite impressive in all the 3 sub-modules (Operating System & Computer Architecture, DBMS and Computer Networks). Push yourself to improve further as there is always scope for improvement. Keep yourself abreast with the latest happening in IT sector to broaden your practical understanding on the subject.

SECTION IV: YOUR AUTOMATA FEEDBACK

This chapter provides you the detail of your performance in Automata modules.

Report Details

Total Problems	Total Time
2	45 mins

Scores

Total Score This is the measure of overall programming performance of the candidate.		80 out of 100
Programming Ability Score This score measures the ability to write correct, thorough and efficient code for a problem.	0 out of 5	Programming Practices Score This score measures the use of best practices in programming, program's robustness, readability, security etc.
		0 out of 4

Problem 1 Results

Scores	Code Execution Summary
Programming Ability Score N.A. Programming Practices Score N.A.	Language : PyPy3 Code Compilation : Pass Compiler Warnings Generated : No Test Cases Passed : 13/13
Test Case Execution Results(Cases Passed/ Total Cases)	Structural Vulnerabilities and Errors
Basic 10/10 They demonstrate the primary logic of the problem. They encompass situations which would be seen on an average and do not reveal situations which need extra checks/handles to be placed on the logic.	



Advanced	4/4
They contain pathological input conditions which would attempt to break codes which have incorrect / semi-correct implementations of the correct logic or incorrect / semi-correct formulation of the logic.	
Edge	1/1
They specifically confirm whether the code runs successfully on the extreme ends of the domain of inputs.	
Total	15 / 15

N.A.

Average-Case Time Complexity Detected

-5

This problem can be ideally solved in 0 time

*N represents the

*Average Case Time Complexity is the order of performance of the algorithm given a random set of inputs. This complexity is measured here using the Big-O asymptotic notation.

Execution Statistics

Time Taken to Submit (hr:min:sec)	: 00:05:56
Number of compile attempts made	: 4
Number of compilation attempts witnessing a successful compile	: 1
Number of compile attempts witnessing a time-out	: 0
Number of compile attempts witnessing runtime errors	: 0
Avg. no. of cases passed in each compile	: 25 %
Avg. time taken between each compile (hr:min:sec)	: 00:01:29

Problem 2 Results

Scores

Programming Ability Score	N.A.
Programming Practices Score	N.A.

Code Execution Summary

Language	: PyPy3
Code Compilation	: Pass
Compiler Warnings Generated	: No
Test Cases Passed	: 18/18

Test Case Execution Results(Cases Passed/ Total Cases)

Basic 10/10

They demonstrate the primary logic of the problem. They encompass situations which would be seen on an average and do not reveal situations which need extra checks/handles to be placed on the logic.

Advanced 7/7

They contain pathological input conditions which would attempt to break codes which have incorrect / semi-correct implementations of the correct logic or incorrect / semi-correct formulation of the logic.

Edge 3/3

They specifically confirm whether the code runs successfully on the extreme ends of the domain of inputs.

Total 20 / 20

Structural Vulnerabilities and Errors

N.A.

Average-Case Time Complexity Detected

-5

This problem can be ideally solved in 0 time

*N represents the

*Average Case Time Complexity is the order of performance of the algorithm given a random set of inputs. This complexity is measured here using the Big-O asymptotic notation.

Execution Statistics

Time Taken to Submit (hr:min:sec)	: 00:01:13
Number of compile attempts made	: 1
Number of compilation attempts witnessing a successful compile	: 1
Number of compile attempts witnessing a time-out	: 0
Number of compile attempts witnessing runtime errors	: 0
Avg. no. of cases passed in each compile	: 100 %
Avg. time taken between each compile (hr:min:sec)	: 00:01:13



In case of any query, feedback or suggestions please visit www.myamcat.com

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"Getting closer to your dream job"*



SECTION IV: YOUR AUTOMATA FIX FEEDBACK

This chapter provides you the detail of your performance in Automata modules.

Automata Fix Scores		15 out of 100
Syntactical Error	0 out of 100	Logical Error Correction
The candidate is expected to fix syntactical/compilation error(s) in the provided code.		The candidate is expected to fix logical inconsistencies in the provided code.
Code Reuse		0 out of 100
The candidate is expected to make use of existing functions to implement/ complete an incomplete functionality .		

Problem 1	Status: Wrong	Question Type: Logical Error Correction	Language: C
------------------	----------------------	--	--------------------

Default Source Code		Candidate Source Code	
11	else	11	else
12	{	12	{
13	current = head_ref;	13	current = head_ref;
14	while (current->next!=NULL && current->next->value < new_node->value)	14	while (current->next!=NULL && current->next->value <= new_node->value)
15	{	15	{
16	current = current->next;	16	current = current->next;
17	}	17	}
Default Source Status		Candidate Source Status	
Test Cases Passed : 0 %		Test Cases Passed : 0 %	

<input type="checkbox"/> No change	<input type="checkbox"/> New additions to code	<input type="checkbox"/> Deletions in code	<input type="checkbox"/> Existing statements edited	<input type="checkbox"/> Skipped common part
------------------------------------	--	--	---	--

Execution Statistics			
Code Compilation Passed	: Yes	Time taken to submit (hr:min:sec)	: 00:02:17
Number of compilation attempts witnessing a successful compile	: 2	Avg. no. of cases passed in each compile	: 0 %
Number of compiles attempts made	: 2	Code Length	: 32

Problem 2	Status: Wrong	Question Type: Logical Error Correction	Language: C
------------------	----------------------	--	--------------------

Default Source Code		Candidate Source Code	
24	int pop(int stack[], int top)	24	int pop(int stack[], int top)
25	{	25	{
26	top = top - 1;	26	top = top - 1;
27	if(!isEmpty(top))	27	if(isEmpty(top))
28	{	28	{
29	printf("StackEmpty");	29	printf("StackEmpty");
30	return 0;	30	return 0;
Default Source Status		Candidate Source Status	
Test Cases Passed : 50 %		Test Cases Passed : 33.33 %	

<input type="checkbox"/> No change	<input type="checkbox"/> New additions to code	<input type="checkbox"/> Deletions in code	<input type="checkbox"/> Existing statements edited	<input type="checkbox"/> Skipped common part
------------------------------------	--	--	---	--



Execution Statistics

Code Compilation Passed	: Yes	Time taken to submit (hr:min:sec)	: 00:03:21
Number of compilation attempts witnessing a successful compile	: 6	Avg. no. of cases passed in each compile	: 31.3 %
Number of compiles attempts made	: 6	Code Length	: 73

Problem 3

Status: **Wrong**

Question Type: Logical Error
Correction

Language: C

Default Source Code

Candidate Source Code

No difference

Default Source Status

Candidate Source Status

Test Cases Passed : 33.33 %

Test Cases Passed : 33.33 %

<input type="checkbox"/> No change	<input checked="" type="checkbox"/> New additions to code	<input type="checkbox"/> Deletions in code	<input type="checkbox"/> Existing statements edited	<input type="checkbox"/> Skipped common part
------------------------------------	---	--	---	--

Execution Statistics

Code Compilation Passed	: Yes	Time taken to submit (hr:min:sec)	: 00:01:52
Number of compilation attempts witnessing a successful compile	: 1	Avg. no. of cases passed in each compile	: 50 %
Number of compiles attempts made	: 1	Code Length	: 18

Problem 4

Status: **Correct**

Question Type: Logical Error
Correction

Language: C

Default Source Code

Candidate Source Code

4 if(num%2==0){	4 if(num%2==0){
5 print = 0;	5 print = 0;
6 for(i = 0 ; i < num ; i ++)	6 for(i = 0 ; i < num ; i ++)
7	7 {
8 printf("%d ",print);	8 printf("%d ",print);
9 print += 2;	9 print += 2;
10 }	10 }
11 else{	11 }
12 print = 1;	12 else{
13 for(i = 0 ; i < num ; i ++)	13 print = 1;
14	14 for(i = 0 ; i < num ; i ++)
15 printf("%d ",print);	15 {
16 print += 2;	16 printf("%d ",print);
17 }	17 print += 2;
18 }	18 }
19 }	19 }
20 }	20 }

Default Source Status

Candidate Source Status

Test Cases Passed : 16.67 %

Test Cases Passed : 100 %

<input type="checkbox"/> No change	<input checked="" type="checkbox"/> New additions to code	<input type="checkbox"/> Deletions in code	<input type="checkbox"/> Existing statements edited	<input type="checkbox"/> Skipped common part
------------------------------------	---	--	---	--

Execution Statistics

Code Compilation Passed	: Yes	Time taken to submit (hr:min:sec)	: 00:00:50
Number of compilation attempts witnessing a successful compile	: 2	Avg. no. of cases passed in each compile	: 50 %
Number of compiles attempts made	: 2	Code Length	: 21



Problem 5

Status: Wrong

Question Type: Code Reuse

Language: C

Default Source Code	Candidate Source Code
<pre> 13 int calculateGeneralLCM(int *arr, int len) 14 { 15 // write your code here and return LCM 16 17 } </pre>	<pre> 13 int calculateGeneralLCM(int *arr, int len) 14 { 15 for(int i=1;i<len;i++) 16 { 17 int r=calculateLCM(arr[0],arr[i]); 18 arr[0]=r; 19 } 20 } 21 print(arr[0]); 22 </pre>
Default Source Status	Candidate Source Status
<pre> : In function 'calculateGeneralLCM': :14:30: warning: unused parameter 'arr' [-Wunused-parameter] :14:39: warning: unused parameter 'len' [-Wunused-parameter] :17:1: error: control reaches end of non-void function [-Werror=return-type] cc1: some warnings being treated as errors **** truncated **** </pre>	<pre> :22:7: error: unknown type name 'arr' : In function 'calculateGeneralLCM': :21:1: error: control reaches end of non-void function [-Werror=return-type] cc1: some warnings being treated as errors **** truncated **** </pre>

<input type="checkbox"/> No change	<input checked="" type="checkbox"/> New additions to code	<input type="checkbox"/> Deletions in code	<input type="checkbox"/> Existing statements edited	<input type="checkbox"/> Skipped common part
------------------------------------	---	--	---	--

Execution Statistics

Code Compilation Passed : No	Time taken to submit (hr:min:sec) : 00:05:29
Number of compilation attempts witnessing a successful compile : 0	Avg. no. of cases passed in each compile : 0 %
Number of compiles attempts made : 3	Code Length : 24

Problem 6

Status: Wrong

Question Type: Code Reuse

Language: C

Default Source Code	Candidate Source Code
<pre> 1 // You can print the values to stdout for debugging 2 int* sortArray(int *arr, int len) 3 { 4 int i=0,j=0,temp=0,index=0; 5 for(i=0;i<len;i++) ... 14 } 15 } 16 } 17 return arr; 18 } 19 20 int findMinElement(int *arr1, int len1, int *arr2, int len2) 21 { 22 // write your code here 23 } </pre>	<pre> 1 // You can print the values to stdout for debugging 2 int sortArray(int *arr, int len) 3 { 4 int i=0,j=0,temp=0,index=0; 5 for(i=0;i<len;i++) ... 14 } 15 } 16 } 17 return arr[0]; 18 } 19 20 int findMinElement(int *arr1, int len1, int *arr2, int len2) 21 { 22 int r1=sortArray(arr1,len1); 23 int r2=sortArray(arr2,len2); 24 if(r1 < r2) 25 printf("%d",r1); 26 else 27 printf("%d",r2); 28 } </pre>
Default Source Status	Candidate Source Status
<pre> : In function 'sortArray': </pre>	<pre> : In function 'sortArray': </pre>

In case of any query, feedback or suggestions please visit www.myamcat.com



```
:4:24: warning: unused variable 'index' [-Wunused-variable]
: In function 'findMinElement':
:20:25: warning: unused parameter 'arr1' [-Wunused-parameter]
:20:35: warning: unused parameter 'len1' [-Wunused-parameter]
:20:46: warning: unused parameter 'arr2' [-Wunused-parameter]
***** truncated *****
```

```
:4:24: warning: unused variable 'index' [-Wunused-variable]
: In function 'findMinElement':
:28:1: error: control reaches end of non-void function [-Werror=return-type]
cc1: some warnings being treated as errors
***** truncated *****
```

<input type="checkbox"/> No change	<input checked="" type="checkbox"/> New additions to code	<input type="checkbox"/> Deletions in code	<input type="checkbox"/> Existing statements edited	<input type="checkbox"/> Skipped common part
------------------------------------	---	--	---	--

Execution Statistics

Code Compilation Passed	: No	Time taken to submit (hr:min:sec)	: 00:03:23
Number of compilation attempts witnessing a successful compile	: 0	Avg. no. of cases passed in each compile	: 0 %
Number of compiles attempts made	: 4	Code Length	: 29

Problem 7

Status: Wrong

Question Type: Syntactical Error Correction

Language: C

Default Source Code

```
1 // You can print the values to stdout for debugging
2 int calculateFactor(int inputNumber);
3 int checkGreatestFactor(int num)
4 {
5     if(num==0)
6     ...
7     return (calculateFactor(num));
8 }
9
10
11 int calculateFactor(inputNumber)
12 {
13     int i=0, maxFactor=0;
14     for(i=1;i<=inputNumber/2;i++)
15     {
16         if(inputNumber%i==0)
17             maxFactor=i;
```

Candidate Source Code

```
1 // You can print the values to stdout for debugging
2 int calculateFactor(int inputNumber)
3 int checkGreatestFactor(int num)
4 {
5     if(num==0)
6     ...
7     return (calculateFactor(num));
8 }
9
10
11 int calculateFactor(int inputNumber)
12 {
13     int i=0, maxFactor=0;
14     for(i=1;i<=inputNumber/2;i++)
15     {
16         if(inputNumber%i==0)
17             maxFactor=i;
```

Default Source Status

```
: In function 'calculateFactor':
:11:5: error: type of 'inputNumber' defaults to 'int' [-Werror=implicit-int]
:13:14: error: 'maxFactor' undeclared (first use in this function)
:13:14: note: each undeclared identifier is reported only once for each function it appears in
:14:16: error: 'inputNumber' undeclared (first use in this function)
:14:29: warning: left-hand operand of comma expression has no effect [-Wunused-value]
***** truncated *****
```

Candidate Source Status

```
: In function 'calculateFactor':
:4:1: error: expected '=', ',', '&', '&', '&', '&' or '__attribute__' before '{' token
:12:1: error: expected '=', ',', '&', '&', '&', '&', '&' or '__attribute__' before '{' token
:20:1: error: expected '{' at end of input
:2:25: warning: unused parameter 'inputNumber' [-Wunused-parameter]
:20:1: error: control reaches end of non-void function [-Werror=return-type]
***** truncated *****
```

<input type="checkbox"/> No change	<input checked="" type="checkbox"/> New additions to code	<input type="checkbox"/> Deletions in code	<input type="checkbox"/> Existing statements edited	<input type="checkbox"/> Skipped common part
------------------------------------	---	--	---	--

Execution Statistics

Code Compilation Passed	: No	Time taken to submit (hr:min:sec)	: 00:02:39
Number of compilation attempts witnessing a successful compile	: 0	Avg. no. of cases passed in each compile	: 0 %
Number of compiles attempts made	: 9	Code Length	: 20



Chapter IV. YOUR PERSONALITY

The purpose of this Chapter is to provide you an analysis of your personality and give you an insight in your behavioral aspects. The analysis done is on the basis of your responses to AMPI (Aspiring Minds Personality Inventory). AMPI is a reliable and valid personality test based on global standards.

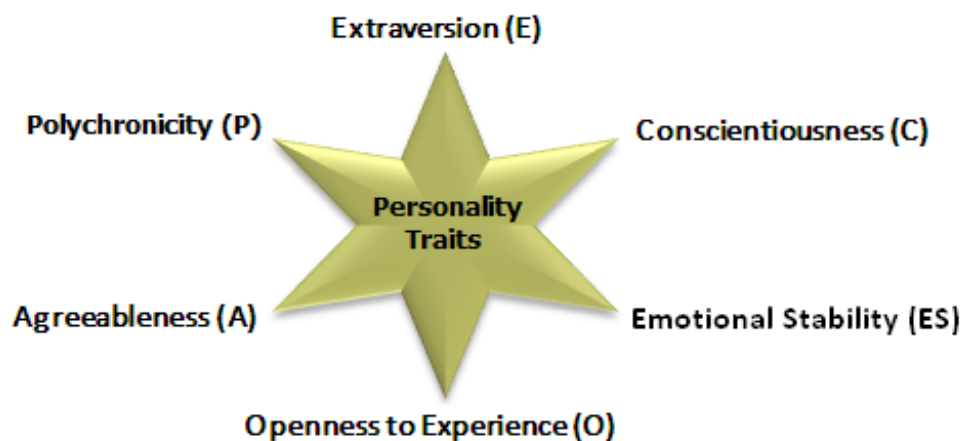
Different sub-sections of this chapter are especially designed to provide a broad view on numerous aspects related to your personality. This Chapter contains the following main sections:

- Your Personality Score
- Description of your personality
- Your Personality type.

A word of caution: Trait scores of HIGH or LOW may not be equated to being GOOD or BAD. There are no good or bad personalities. Secondly, this test or Chapter does not measure or indicate any psychological disorder or otherwise. Every individual has a unique personality and this report provides an indication of the same. Candidates with different personality combinations do well in handling different kind of situations and perform well in different jobs. There is no absolute metric personality. Lastly, this Chapter is best interpreted by a trained psychologist.

SECTION I: YOUR PERSONALITY SCORES

Your personality assessment shall be provided on the following traits:

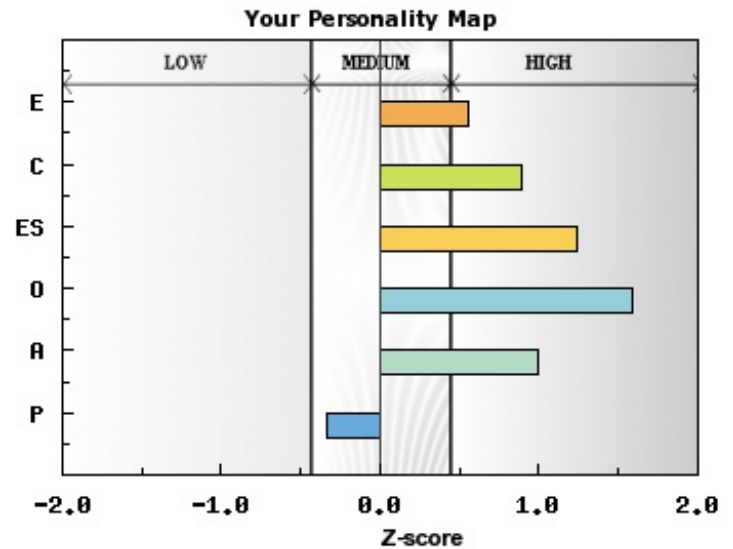


These traits are based on the Big Five Model of personality, now globally accepted as the most scientific and validated model of personality.

The table and figure below shows your Z-score and percentile in each trait. Each bar represents your Z-score in a personality trait.



Trait	Region	Percentile	Z-score
Extraversion	High	71%	0.56
Conscientiousness	High	82%	0.89
Emotional Stability	High	90%	1.24
Openness to Experience	High	95%	1.59
Agreeableness	High	84%	0.99
Polychronicity	Medium	37%	-0.34



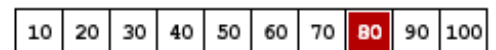
Scores and Their Interpretation:

- For each trait, you have been classified as being LOW, MEDIUM or HIGH. It should be noted that this classification is not an absolute one, but a relative one. These classifications are based on our national norms on a sample of entry-level job aspirants. For instance, a person, who is high on Extraversion, is as extraverted as the top 33% people in our norm group. He/she may not still be extraverted enough for a given role or a standard set by another individual.
- A low percentile does not mean bad performance and high percentile does not mean good performance, as there is no concept of performance in personality.
- For each trait, a Z-score is provided. The Z-score measures the number of standard deviations the score is away from mean of norm. A Z-score more than +0.44 means the candidate is in the top 33%, whereas a Z-score of less than -0.44 represents the candidate is in the lowest 33%.
- This report is best interpreted by a psychologist. The candidate is strongly advised not to take any action on the basis of this report without referring to a well-qualified psychologist.

SECTION II: DESCRIPTION OF YOUR PERSONALITY

This section provides you a detailed description of your personality traits.

Extraversion

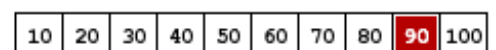


Your score indicates you are **High** on Extraversion.

Extraversion is defined as one's inclination towards the outer world. Individuals with high extraversion can be characterized as social, talkative and assertive. They like the company of people and enjoy social gatherings. They need external stimulation and get energized while interacting with people. They have lots of friends and thrive for making new social contacts. They like to work in groups and prefer to lead others.

You like to engage with the external world, be among people and interact with them. You are assertive of your view and prefer to lead rather than follow. You seek lot of excitement and like to engage in high energy and thrilling activities. You enjoy social gatherings and feel more comfortable being surrounded by people.

Conscientiousness



Your score indicates you are **High** on Conscientiousness.

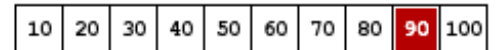
Conscientiousness has been called by some psychologists as the Will to Achieve. It is generally seen to have two components, one of striving for achievement and the other of dependability. The latter is characterized by being thorough, organized and responsible. The former is related to volitional variables such as hardwork,



perseverance and orientation towards achievement.

You are punctual, well organized and believe in self-discipline. You like everything in order and follow processes, plans and rules. You are a perfectionist, pay good attention to detail and work methodically to achieve your goals. You can be relied upon to get things done well. You are well-motivated, determined and have a good sense of direction in life.

Emotional Stability

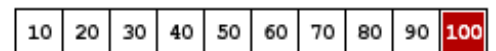


Your score indicates you are **High** on Emotional Stability.

Emotional stability refers to being in a state of psychological steadiness. Emotionally stable people are even tempered and relaxed and they tend to have higher emotional intelligence. On the other hand, people low on emotional stability are likely to experience negative emotions like anxiety, depression, embarrassment and insecurity on small stimuli from the environment. These people have a tendency to exaggerate minor mutations.

You are generally calm and free of worry. You do not get upset or frustrated by the behavior of others and are considered thick-skinned and secure. You rarely feel conscious or embarrassed in situations. You have high satisfaction level and are happy from your life. You have control over your thoughts. You are mentally tough and can handle tough situation easily.

Openness to Experience

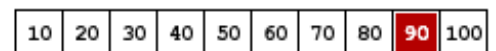


Your score indicates you are **High** on Openness to Experience.

Openness to Experience is associated with being broad-minded, unconventional, having a rich artistic sensitivity and being curious and imaginative. This has been a trait hard to identify and has been called as intellect, culture or openness to experience by various psychometricians. Open individuals are creative, willing to challenge authority and entertain new ideas. They have intuitive thinking and can adapt to change easily. They are progressive and prefer to explore new ways and ideas of doing things.

You have a strong aesthetic sense, appreciate beauty and experience varied emotions and feelings. You have broad interests, are keen to try out different things and have a rich imagination. You are highly creative and self-confident, and can visualize things easily.

Agreeableness

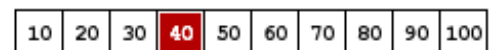


Your score indicates you are **High** on Agreeableness.

Agreeableness refers to social conformity, friendliness, compliance and altruism. Agreeable people are sympathetic to others, help others and trust others to help them too in return. They are popular amongst their colleagues and do not believe in manipulating people. Agreeable people are good for customer relationship profiles and work well in teams.

You come across as warm and compassionate. You care for others, are generous, helpful and modest. You make sure you do not hurt anyone and are trusting of others. You are straightforward, understanding and humble. You see other people as honest and trustworthy and believe in what they say.

Polychronicity





Your score indicates you are **Medium** on Polychronicity.

The Multi-tasking trait is defined as the extent to which the person prefers to engage in more than one tasks simultaneously and believes that this is a productive work style. Individuals high on this trait shall like to engage in multiple activities at a given time, whereas those low shall prefer to just do one thing at a time. This trait measures the personality disposition of a person to multi-task and does not measure the ability to do so.

You have a medium score on the multi-tasking scale. This shows that you neither have a strong preference nor dislike for performing multiple tasks simultaneously. You are neither very inclined towards doing multiple tasks at the same time, nor do you want to just handle one project at time. Whether or not you will succeed in a polychronous environment depends largely on your ability to do so.



SECTION III: YOUR PERSONALITY TYPE

Based on your personality traits, your personality type is determined as below.

You are a **"Inspirer"**

You are introspective, value-oriented, inspiring, social and extremely expressive. You have an unusually wide range of skills and talent. You are good at doing most of the things which interest you. You are a natural advocate, attracting people to yourself and you are gifted with excellent people skills, warmth, energy and positivity. Your enthusiasm lends you the ability to inspire and motivate others.

You dislike routine tasks and get easily frustrated if a project requires great deal of focus on detail and maintenance. You work best in situations where you have a lot of flexibility and are able to use your creativity and skills. You are ready to take risks. You often appear to be over positive and can appear insincere.



Chapter V. YOUR INDUSTRY AND JOB FIT

This chapter explains your job fit in various profiles in different industry sectors.

AMCAT is today used by leading corporations across the country to look for the right talent. Based on our learning's from working with these corporates, we have developed statistical models of what scores make a candidate succeed in a given job profile. Based on your AMCAT scores and our statistical model, we can predict which job profiles you best fit in. We can also find out the profiles for which you aren't currently ready and what subjects you need to study to become employable in them.

This section shall provide you information about your employability in different job profiles and what all you need to improve to become more job fit. It will also provide a glimpse in the score cut-offs for different profiles.

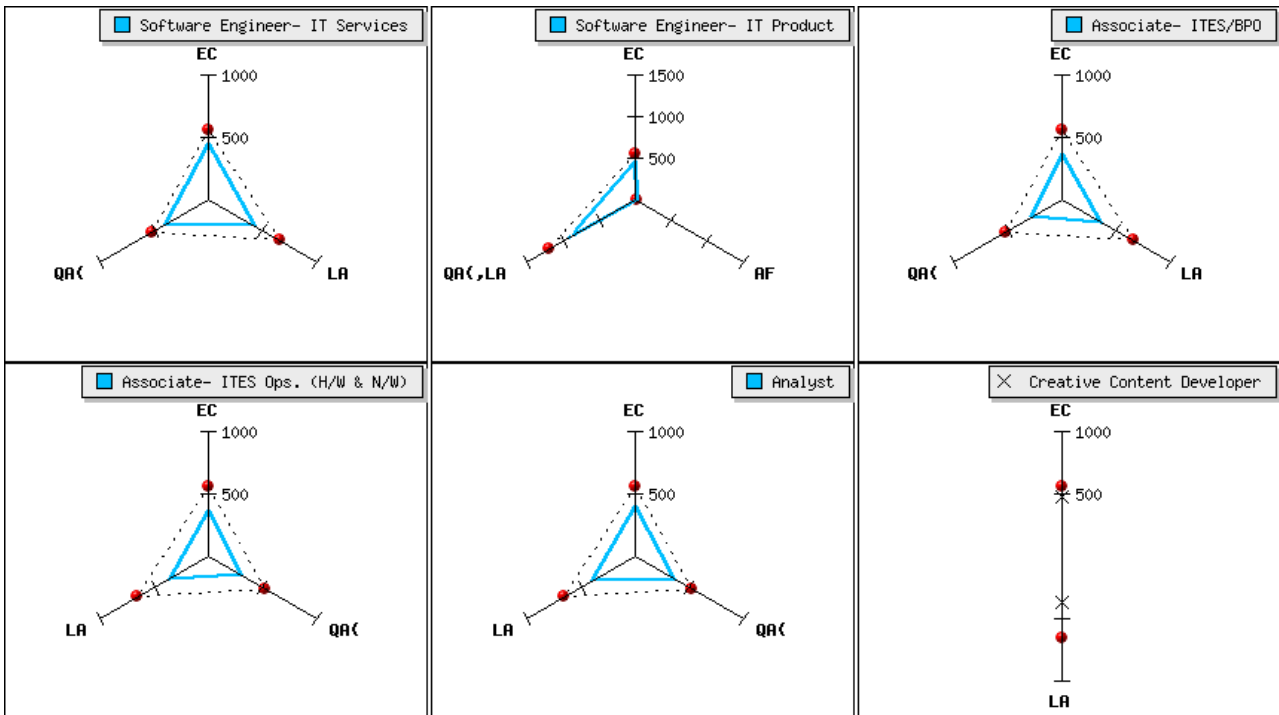
Section I: YOUR JOB FIT

Job Profile	Your chance of selection for these job profiles.	Job profile criteria and areas to work on for improving your chances
Engineering/IT Jobs		
Software Engineer- IT Services	High	These companies are basically looking for good English and Logical skills with average Quantitative ability.
Software Engineer- IT Product	Low	These companies are basically looking for good English, Programming and Logical skills with average Quantitative ability. You have to work hard in Automata Fix.
Technical Operations		
Associate- ITES/BPO	High	These companies look for candidates proficient in English with average Logical and Quantitative abilities.
Associate- ITES Operations (Hardware and Networking)	High	These companies are basically looking for candidates with good English and average Logical abilities.
Non-technical Jobs		
Analyst	Medium	These companies look for candidates having proficiency in English with good Quantitative and Reasoning abilities. You have to work hard in English Comprehension.
Creative Content Developer	Medium	These companies look for candidate with proficiency in English with good reasoning abilities. You have to work hard in English Comprehension.



Section II: SELECTION COMPARATOR

The graphs below show the minimum cut-off in each module every job profile (marked with solid blue lines). It also shows your AMCAT score, which is represented by a dot and connected through dotted lines. You can compare different job profiles cutoffs with your score to get an idea about how well or poorly you do with respect to each module for a given profile.



* For some profiles personality scores have also been considered.



We hope you have read this Chapter seriously and plan to take next steps based on your interest and employability for different job profiles. We recommend the following action plan:

INTEREST			
	HIGH	MEDIUM/LOW	
Employability	HIGH	Prepare for interviews for these profiles. Check out references from Chapter VI.	Gather more information about profiles and re-evaluate your interest. If you find that they may interest you, start preparing for their interviews.
	MEDIUM/LOW	Start working to improve on AMCAT modules required for the profile. Re-take AMCAT after three months to improve your chances of interview opportunity.	Low priority at this point.

Work hard and you will soon be able to crack a job in a profile of your interest. The next chapter will provide some tips to you to improve yourself in different modules.



Chapter VI. IMPROVE YOUR EMPLOYABILITY

To be able to improve your employability you need to concentrate on improving your weak areas while maintaining your strengths. This chapter shall guide you to resources and a plan to do this. Based on your weak areas as enumerated in Chapter III and improvement areas for specific job profiles (discussed in Chapter V), you should take next steps to improve your employability. To do this effectively you need to pick the right books/resources/training for each area and spend a balanced amount of time on across subjects.

Our intelligent feedback system, based on your weaknesses and strengths has picked material to refer to and created a study time schedule. Both when used effectively can help you improve your employability substantially.

SECTION I: REFERENCES

Based on your AMCAT report, we have picked authoritative resources to help you improve. The references are custom generated for you according to your performance in AMCAT. These resources are free to access over the internet and should come handy in your endeavor to improve your employability.

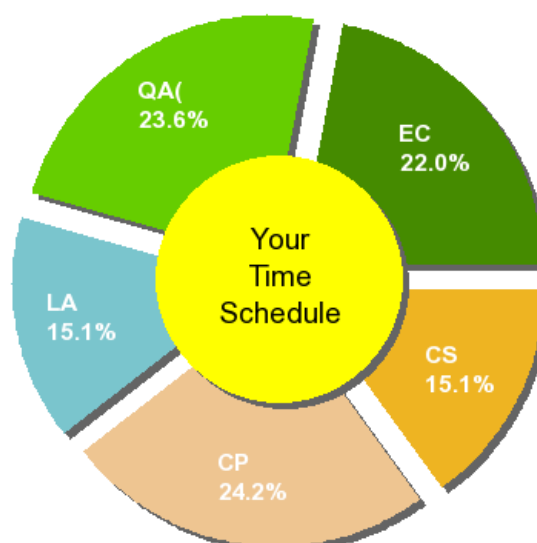
Subjects	Books/Links
Basic Mathematics	Elementary Mathematics - http://www.bymath.com/studyguide/ari/ari_topics.html
Engineering Mathematics	Permutations and Combinations - http://www.youtube.com/watch?v=Dsi7x-A89Mw Introduction to Probability - https://www.mathgoodies.com/lessons/vol6/intro_probability

SECTION II: SUGGESTED TIME SCHEDULE

Based on your performance, we have come up with a time schedule. By following this time schedule, you can ensure that you will continue to maintain your strong modules, while improve substantially in those that are lacking.

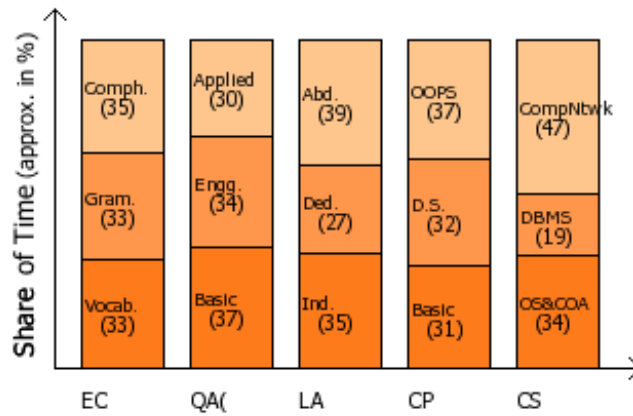
The pie chart below, tells you about how much time you should ideally be spending on different modules. Always remember, it is required to spend a fixed amount of time on all modules even though you might be strong in them. Perfection is said to come from continuous practice.

And for the modules in which you might be lagging a bit, there is always time for improvement. So just put your chin down and start working on them from today. It has to start somewhere, it has to start sometime. What better place than here, what better time than now?





We also provide you a time split for each section in the module. Based on your performance, we automatically adjust times so that you spend more time on weak sub-sections in a module and less in others. This is contrary to what students generally do! They keep doing questions which they are able to solve and do not attempt those which they find tough. To improve your weak areas, you just need to do the opposite. Spend more time preparing for weak areas, even if it takes more time to learn and practice it.



We hope that your performance analysis has helped you understand your strengths and weaknesses. Let us now understand what your next steps should be.



Chapter VII. NEXT STEP

Your AMCAT experience is still not over!

Assessment is a continuous process which does not end with just an evaluation. In fact this is just the beginning. You need to work hard to succeed in tests and interviews of companies and finally do wonders at the job.

During the next three weeks, you will be automatically enrolled in the AMCAT Job-Readiness Capsule to help you get closer to your dream company interview. We will interact with you on a regular basis via emails to guide you through the capsule and check your progress. We will send you SMSes with helpful tips, guidance and employability updates for the next 3 months. Make sure you not only read these SMSes, but also do the things they recommend. We will also guide you in making your resume and help you perform best at an interview. Make sure you regularly log into your myamcat.com account to make maximum use of these resources and tips.

Also, to make sure you receive the best job opportunities matching your profile, you need to keep your profile at myamcat.com upto date with your most recent information and contact details. Do not compromise here, lest you miss a desired interview opportunity!

We need your feedback

Throughout this report, we have provided you with feedback. We also look for your feedback!

It is our endeavor to continuously improve ourselves so that the user has a great test experience. Please contact us in case you have any feedback about the test or the test experience in general. Your valuable comments will help us in fixing the glitches, if any, in our system.

In case of any query, feedback or suggestion please log in to your myAMCAT account and fill up the form at www.myamcat.com/need-help.



Words for life

A young man asked Socrates the secret to success. Socrates told the young man to meet him near the river the next morning. They met. Socrates asked the young man to walk with him toward the river. When the water got up to their neck, Socrates took the young man by surprise and ducked him into the water. The boy struggled to get out but Socrates was strong and kept him there until the boy started turning blue. Socrates pulled his head out of the water and the first thing the young man did was to gasp and take a deep breath of air. Socrates asked, 'What did you want the most when you were there?' The boy replied, 'Air.' Socrates said, 'That is the secret to success. When you want success as badly as you wanted the air, then you will get it.' There is no other secret.

A burning desire is the starting point of all accomplishment.

Just like a small fire cannot give much heat, a weak desire cannot produce great results...

<Codemithra />TM



Explore | Expand | Enrich

eCertificate of Merit

BHARATHKUMAR V

Completed a Mini-Project on

Face Detection using AWS

A handwritten signature in blue ink, appearing to read "V. Bharath Kumar".

Managing Director, Ethnus

April 11, 2020

Completion Date

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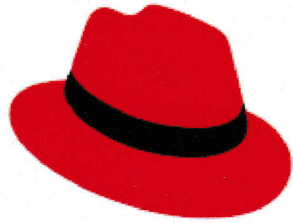
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Certificate of Completion

This is to certify that

HARINI MS

has successfully completed

Bronze Medals - 1000

on

12-Dec-2021



Verification URL: www.skillrack.com/cert/249747/PAC

**1.2.3 - Number of students enrolled in
Certificate/ Add-on programs as against the
total number of students during the year**

CERTIFICATE COURSES

AMCAT

AMCAT (Aspiring Minds Computer Adaptive Test) is an AI-based computer adaptive test which evaluates job applicants on critical areas like communication skills, logical reasoning, quantitative skills, and job-specific domain skills thus helping recruiters identify the suitability of a candidate for different job roles.

AMCAT MODULES

Each module of the AMCAT exam focuses on a particular area of interest to the recruiter. And, there are four modules in total, excluding the AMCAT personality test.

The first AMCAT module is of English and determines a candidate's communication skills. It checks how well versed a candidate is and its syllabus consists of synonym, antonyms and error identification among others.

Next is Quantitative Ability which focuses on numerical abilities.

The third AMCAT module and one of the most important modules is that of Logical Reasoning. This module tests the ability to infer things or questions objectively and then arrive at a logical solution.

The final or fourth modules is your subject based module This module tests the core knowledge of the subject.

AMCAT TEST PATTERN

AMCAT Test Pattern consists of five sections with 4 mandatory and 1 optional section.

- The mandatory section include
- Quantitative Ability
- Verbal Ability
- Logical Reasoning
- AMCAT Personality Inventory

optional section is a domain-specific test. Depending on the field of study, student can choose a domain-specific subject to demonstrate their subject expertise.

AMCAT TEST PATTERN AND DURATION

Section	Number of questions	Time duration
Quantitative Ability	16	18 mins
English Ability	18	16 mins
Logical Reasoning	14	16 mins
AMCAT Personality Inventory	90	20 mins
Domain-specific test (Select any 2 modules)	(based on modules you select)	(based on modules you select)

SKILLRACK

It is an online portal, where school/college students can improve their problem solving skills (which helps them perform well in competitive exams), and programming skills by taking various practice tests.

Both students and college/school authorities can access various actionable analytics (reports like strength and weakness) which helps them to improve their skills. Interested students can learn C, Java, Python, C++, prepare for campus interviews, and compete in contests. Automation plays the major role worldwide. Coding and testing skills are considered as the most important skills that has to be developed by every student. This platform not only improves coding skills but also logical thinking skills. The platform includes Daily challenges and Daily tests for regular coding practice. Receiving small laurels from such a top platform is a great thing.

Skill Rack makes On/Off campus recruitment simple and easy by automating the various phases in the work-flow. Hiring companies need to spend only under 10 minutes of their time till scoring and ranking of candidates through screening exams. Features like candidate registration, filtering criteria for resume screening and shortlist, authoring platform for creating custom questions and exams, automated scoring for paper and pencil tests, and real time reporting are available.

SRack Quick Score: It takes hours to manually evaluate paper and pencil screening tests. SRack Quick Score is a tool to automate the evaluation, rank the candidates instantly based on their performance in the paper and pencil tests. SRack Cloud Test Hiring companies can deliver exams on a web browser using computers. The delivery of exams can survive power or network failure and browser crash.

'Skill development Club' of Sairam Institutions organized an appreciation programme in which both students and their mentors for performing as toppers in skill rack platform have been appreciated with 'Certificates'.

JAVA PROGRAMMING

The curriculum introduces programmers to foundational concepts including methods, arrays, and lists. Object-oriented programming and design utilizing inheritance, polymorphism, and abstraction will also be covered in this principal course.

This course aims to provide beginning programmers with a basic understanding of the Java language and tools as well as object-oriented programming and design.

- Course Highlights:
- Classes, objects, methods, arrays, and lists
- Object-oriented programming and design utilizing inheritance, polymorphism, and abstraction
- The proper use of Oracle's online Java documentation
- Debugging Java programs using an IDE
- Course Learning Outcomes:
- Writing simple Object-oriented programs in Java

- Running unit tests to verify program behavior
- Effectively use Oracle's online Java documentation. An understanding of the costs and benefits of Java development

AWS

Amazon Web Services or AWS is a cloud computing platform that helps users build their applications over the cloud. It provides scalable and cost-effective cloud computing solutions to help businesses scale and grow. AWS has the largest and most dynamic community with millions of active customers and thousands of partners all around the world.

- Allows users to deploy their application in various regions globally with a few clicks.
- It is a worthwhile service as you just have to pay for the service you are using without any long-term commitments.
- Easy to manage services as you don't need to spend money on maintaining data centers.
- Allows companies and startups to use the already known operating systems, programming models, and databases.
- Offers hybrid capabilities.
- Provides the facility to easily add or remove capacity.
- It will cost you way cheaper than other private/dedicated servers.

CISCO

Cisco certification training is to enhance and increase networking knowledge in students. Most Cisco certifications cover a wide range of technologies and protocols. Earning a Cisco certification helps to learn how to install, configure, operate, and troubleshoot routed and switched networks.

- Increase of the job opportunity. Cisco career certifications serve with major roles in an effective way to the people.
- The higher amount of payments.
- Greater accessibility for students.
- Formation of a successful foundation.
- Success partnering.

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

ORIENTATION PROGRAM

Orientation programs begin before classes start, because the new students need some direction and guidance in enrolling for classes. The programme will be the stepping stone for the students to make a successful transition from school to the college environment. Through providing a comprehensive and effective orientation programme, the fully oriented students will

- recognize the skills need to success.
- be well prepared to meet the challenges of collegiate academics.
- feel confident about their future.
- understand the platform provided to them at the engineering college.
- get clarified with the expectations related to engineering college.
- have a feel of belonging to engineering college student's community.
- aware of their own responses and attitudes.

The orientation programme comprises of following stages

- Icebreaker&RoadMap
- CaseStudy
- IndustryReadiness
- GoalSetting
- Communication
- Overview of Students Performance Indicators
- FeedbackandTakeaway

PROFESSIONAL ETHICS

Professional ethics are principles that govern the behaviour of a person or group in a business environment. Like values, professional ethics provide rules on how a person should act towards other people and institutions in such an environment. Ethical principles underpin all professional codes of conduct. Ethical principles may differ depending on the profession; for example, professional ethics that relate to medical practitioners will differ from those that relate to lawyers or real estate agents. However, there are some universal ethical principles that apply across all professions, including:

- honesty
- trustworthiness
- loyalty
- respect for others
- adherence to the law
- doing good and avoiding harm to others
- accountability

KEY OBJECTIVES OF “PROFESSIONAL ETHICS” EDUCATION

- Moral awareness (proficiency in recognizing moral problems in engineering like Plagiarism and patenting)
- Convincing moral reasoning (comprehending, assessing different views)
- Moral coherence (forming consistent viewpoints based on facts)
- Moral imagination (searching beyond obvious the alternative responses to issues and being receptive to creative solutions)
- Moral communication, to express and support one's views to others

1.3.2 - Number of courses that include experiential learning through project work/field work/internship during the year

**FORMAT FOR PREPARATION OF PROJECT REPORT
FOR
B.E. / B. TECH. / B. ARCH.**

1. ARRANGEMENT OF CONTENTS:

The sequence in which the project report material should be arranged and bound should be as follows:

1. Cover Page & Title Page
2. Bonafide Certificate
3. Abstract
4. Table of Contents
5. List of Tables
6. List of Figures
7. List of Symbols, Abbreviations and Nomenclature
8. Chapters
9. Appendices
10. References

The table and figures shall be introduced in the appropriate places.

2. PAGE DIMENSION AND BINDING SPECIFICATIONS:

The dimension of the project report should be in A4 size. The project report should be bound using flexible cover of the thick white art paper. The cover should be **printed in black letters** and the text for printing should be identical.

3. PREPARATION FORMAT:

3.1 Cover Page & Title Page – A specimen copy of the Cover page & Title page of the project report are given in **Appendix 1**.

3.2 Bonafide Certificate – The Bonafide Certificate shall be in double line spacing using Font Style Times New Roman and Font Size 14, as per the format in **Appendix 2**.

The certificate shall carry the supervisor's signature and shall be followed by the supervisor's name, academic designation (not any other responsibilities of administrative nature),

department and full address of the institution where the supervisor has guided the student. The term ‘**SUPERVISOR**’ must be typed in capital letters between the supervisor’s name and academic designation.

- 3.3 Abstract** – Abstract should be one page synopsis of the project report typed double line spacing, Font Style Times New Roman and Font Size 14.
- 3.4 Table of Contents** – The table of contents should list all material following it as well as any material which precedes it. The title page and Bonafide Certificate will not find a place among the items listed in the Table of Contents but the page numbers of which are in lower case Roman letters. One and a half spacing should be adopted for typing the matter under this head. A specimen copy of the Table of Contents of the project report is given in **Appendix 3**.
- 3.5 List of Tables** – The list should use exactly the same captions as they appear above the tables in the text. One and a half spacing should be adopted for typing the matter under this head.
- 3.6 List of Figures** – The list should use exactly the same captions as they appear below the figures in the text. One and a half spacing should be adopted for typing the matter under this head.
- 3.7 List of Symbols, Abbreviations and Nomenclature** – One and a half spacing should be adopted or typing the matter under this head. Standard symbols, abbreviations etc. should be used.
- 3.8 Chapters** – The chapters may be broadly divided into 3 parts (i) Introductory chapter, (ii) Chapters developing the main theme of the project work (iii) and Conclusion.

The main text will be divided into several chapters and each chapter may be further divided into several divisions and sub-divisions.

- ❖ Each chapter should be given an appropriate title.
- ❖ Tables and figures in a chapter should be placed in the immediate vicinity of the reference where they are cited.
- ❖ Footnotes should be used sparingly. They should be typed single space and placed directly underneath in the very same page, which refers to the material they annotate.

- 3.9 Appendices** – Appendices are provided to give supplementary information, which is included in the main text may serve as a distraction and cloud the central theme.
- Appendices should be numbered using Arabic numerals, e.g. Appendix 1, Appendix 2, etc.
 - Appendices, Tables and References appearing in appendices should be numbered and referred to at appropriate places just as in the case of chapters.
 - Appendices shall carry the title of the work reported and the same title shall be made in the contents page also.

3.10 List of References –The listing of references should be typed 4 spaces below the heading “REFERENCES” in alphabetical order in single spacing left – justified. The reference material should be listed in the alphabetical order of the first author. The name of the author/authors should be immediately followed by the year and other details.

A typical illustrative list given below relates to the citation example quoted above.

REFERENCES

1. Aripnammal, S. and Natarajan, S. (1994) ‘Transport Phenomena of Sm Sel – X Asx’, Pramana – Journal of Physics Vol.42, No.1, pp.421-425.
2. Barnard, R.W. and Kellogg, C. (1980) ‘Applications of Convolution Operators to Problems in Univalent Function Theory’, Michigan Mach, J., Vol.27, pp.81–94.
3. Shin, K.G. and Mckay, N.D. (1984) ‘Open Loop Minimum Time Control of Mechanical Manipulations and its Applications’, Proc.Amer.Contr.Conf., San Diego, CA, pp. 1231-1236.

3.10.1 Table and figures - By the word Table, is meant tabulated numerical data in the body of the project report as well as in the appendices. All other non-verbal materials used in the body of the project work and appendices such as charts, graphs, maps, photographs and diagrams may be designated as figures.

4. TYPING INSTRUCTIONS:

The impression on the typed copies should be black in colour.

One and a half spacing should be used for typing the general text. The general text shall be typed in the Font style ‘Times New Roman’ and Font size 14.

* * * * *

APPENDIX 1

(A typical Specimen of Cover Page & Title Page)

TITLE OF PROJECT REPORT

<1.5 line spacing>

A PROJECT REPORT

Submitted by

<Italic>

NAME OF THE CANDIDATE(S)

in partial fulfillment for the award of the degree

of

<1.5 line spacing><Italic>

NAME OF THE DEGREE

IN

BRANCH OF STUDY

NAME OF THE COLLEGE

ANNA UNIVERSITY : CHENNAI 600 025

<1.5 line spacing>

MONTH & YEAR

SPECIMEN

**SOME PERFORMANCE ASPECTS CONSIDERATIONS OF
A CLASS OF ARTIFICIAL NEURAL NETWORK**

A PROJECT REPORT

Submitted by

SANDHYA. A

GAYATHRI.R

in partial fulfillment for the award of the degree

of

BACHELOR OF ENGINEERING

in

INSTRUMENTATION AND CONTROL ENGINEERING

XXX ENGINEERING COLLEGE, KANCHEEPURAM

ANNA UNIVERSITY:: CHENNAI 600 025

MAY 2005

APPENDIX 2

(A typical specimen of Bonafide Certificate)

ANNA UNIVERSITY : CHENNAI 600 025

BONAFIDE CERTIFICATE

Certified that this project report “.....**TITLE OF THE PROJECT**.....”

is the bonafide work of “.....**NAME OF THE CANDIDATE(S)**.....”

who carried out the project work under my supervision.

<<Signature of the Head of the Department>>

SIGNATURE

<<Name>>

HEAD OF THE DEPARTMENT

<<Department>>

<<Full address of the Dept & College >>

<<Signature of the Supervisor>>

SIGNATURE

<<Name>>

SUPERVISOR

<<Academic Designation>>

<<Department>>

<<Full address of the Dept & College >>

APPENDIX 3
 (A typical specimen of table of contents)

TABLE OF CONTENTS

CHAPTER NO.	TITLE	PAGE NO.
	ABSTRACT	iii
	LIST OF TABLE	xvi
	LIST OF FIGURES	xviii
	LIST OF SYMBOLS	xxvii
1.	INTRODUCTION	1
	1.1 GENERAL	1
	1.2	2
	1.2.1 General	5
	1.2.2	12
	1.2.2.1 General	19
	1.2.2.2	25
	1.2.2.3	29
	1.2.3	30
	1.3	45
	1.4	58
2.	LITERATURE REVIEW	69
	2.1 GENERAL	75
	2.2	99
	2.2	100

1.4.1 - Institution obtains feedback on the syllabus and its transaction at the institution from the stakeholders

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

Sl.No	Student Name	Department	YEAR	The curriculum is designed so as to enhance our employability	The courses studied by me are relevant and the contents are revised at reasonable intervals	The courses studied by me have enhanced my knowledge as well as my skills and my capabilities	The entire syllabus is completed in time	Modern teaching aids, power point presentations, web-resources, multi-media, e-content etc. are used by most of the teachers while teaching	Curriculum helps to guide the students for overall personality development of the students	Curriculum provide the students opportunities to learn and grow	The assessment and evaluation process is fair and unbiased	Curriculum covers latest developments in the subject/area of knowledge	Curriculum encourage the students to participate in extra-curricular, co-curricular activities and research projects
1	Vishvajit Viswanath	CSE	III	Agree	Not Sure	Agree	Not Sure	Agree	Agree	Agree	Not Sure	Not Sure	Not Sure
2	Shankaranarayanan R	CSE	III	Agree	Strongly Agree	Strongly Agree	Agree	Strongly Agree	Agree	Agree	Strongly Agree	Agree	Agree
3	Laxminarayanan V	CSE	III	Agree	Agree	Agree	Agree	Agree	Agree	Agree	Agree	Agree	Agree
4	Oindrilla K J	CSE	III	Agree	Not Sure	Agree	Agree	Agree	Agree	Agree	Agree	Agree	Agree
5	Priyadharsani B	CSE	III	Agree	Agree	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree	Agree	Strongly Agree
6	Rajalakshmi G	CSE	III	Agree	Not Sure	Agree	Strongly Agree	Agree	Agree	Agree	Agree	Agree	Agree
7	Shrivarshan G	CSE	III	Agree	Agree	Agree	Not Sure	Agree	Agree	Strongly Agree	Agree	Agree	Strongly Agree
8	Swetha E	CSE	III	Agree	Agree	Agree	Agree	Agree	Agree	Agree	Agree	Agree	Agree
9	Aditya.B	CSE	III	Agree	Not Sure	Agree	Not Sure	n	Agree	Agree	Agree	Agree	Agree
10	gouthaman.b	CSE	III	Agree	Agree	Agree	Agree	Agree	Agree	Agree	Agree	Agree	Agree
11	Lavanya M	CSE	III	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree
12	SANGEETHA M	CSE	III	Agree	Agree	Agree	Agree	Agree	Agree	Agree	Agree	Agree	Agree
13	VIIYASAN I	CSE	III	Agree	Agree	Agree	Agree	Agree	Agree	Agree	Agree	Agree	Agree
14	Monisha R	CSE	III	Agree	Agree	Agree	Agree	Agree	Agree	Agree	Agree	Agree	Agree
15	Tharun Ram S	CSE	III	Agree	Strongly Agree	Strongly Agree	Agree	Agree	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree
16	Ganesh T	CSE	III	Agree	Agree	Agree	Agree	Agree	Agree	Agree	Agree	Agree	Strongly Agree
17	K.Suresh	CSE	III	Agree	Agree	Agree	Agree	Agree	Agree	Agree	Agree	Agree	Agree
18	Santhosh Raj AM	CSE	III	Agree	Strongly Agree	Agree	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree	Agree	Strongly Agree	Strongly Agree
19	Rithipsai.T	CSE	III	Not Sure	Strongly Disagree	Agree	Not Sure	Agree	Strongly Disagree	Not Sure	Agree	Not Sure	Not Sure
20	Harshini. J	CSE	III	Agree	Agree	Agree	Agree	Agree	Agree	Agree	Agree	Agree	Agree
21	Rithipsai. T	CSE	III	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree
22	Balakumar C	CSE	III	Not Sure	Agree	Disagree	Agree	Not Sure	Agree	Agree	Agree	Disagree	Agree
23	Noura Fathima A	CSE	III	Agree	Agree	Agree	Strongly Agree	Agree	Agree	Agree	Agree	Agree	Agree
24	Priyadharshini K	CSE	III	Agree	Agree	Agree	Agree	Agree	Agree	Agree	Agree	Agree	Agree
25	S.Sudhakaran	CSE	III	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree
26	Punith S	CSE	III	Agree	Agree	Agree	Agree	Agree	Agree	Agree	Agree	Agree	Agree
27	Sriram A	CSE	III	Agree	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree	Agree	Strongly Agree	Strongly Agree	Strongly Agree
28	Kambala Sree Harsha	CSE	III	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree
29	Bhargavi pathuri	CSE	III	Agree	Agree	Agree	Not Sure	Agree	Agree	Agree	Agree	Agree	Agree
30	Shri Harri Priya R	CSE	III	Disagree	Disagree	Agree	Agree	Agree	Strongly Disagree	Not Sure	Agree	Strongly Disagree	Agree
31	Harini.R	CSE	III	Agree	Agree	Agree	Agree	Agree	Agree	Agree	Agree	Agree	Agree
32	Arunagiri R	CSE	III	Not Sure	Not Sure	Not Sure	Not Sure	Not Sure	Not Sure	Not Sure	Not Sure	Not Sure	Not Sure
33	Vaidheesh	CSE	III	Agree	Agree	Agree	Agree	Agree	Agree	Agree	Agree	Agree	Agree
34	Thamizharasu.E	CSE	III	Agree	Not Sure	Agree	Not Sure	Agree	Agree	Agree	Agree	Agree	Not Sure
35	B.Harish	CSE	IV	Agree	Agree	Agree	Agree	Agree	Agree	Agree	Agree	Agree	Agree
36	Manojkumar.V	CSE	IV	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree
37	Sruthi	CSE	IV	Agree	Agree	Agree	Agree	Agree	Not Sure	Agree	Agree	Agree	Agree
38	Meenambiga V	CSE	IV	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree
39	Akishga V P	CSE	IV	Strongly Agree	Strongly Agree	Agree	Agree	Agree	Agree	Agree	Agree	Agree	Agree
40	Sushma Chowdary	CSE	IV	Agree	Agree	Agree	Agree	Agree	Agree	Agree	Agree	Agree	Agree
41	S.indumathi	CSE	IV	Agree	Agree	Agree	Agree	Agree	Agree	Agree	Not Sure	Agree	Agree
42	Mageshwari D	CSE	IV	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree
43	Rajalakshmi R	CSE	IV	Agree	Agree	Agree	Agree	Agree	Agree	Strongly Agree	Agree	Agree	Strongly Agree
44	Ravi Mounika	CSE	IV	Agree	Not Sure	Agree	Agree	Not Sure	Agree	Agree	Agree	Disagree	Disagree
45	Rithika M S	CSE	IV	Agree	Agree	Agree	Agree	Agree	Agree	Agree	Agree	Agree	Agree
46	Nethra C	CSE	IV	Agree	Agree	Agree	Agree	Agree	Agree	Agree	Agree	Agree	Agree
47	M.G Tarun	CSE	IV	Agree	Agree	Agree	Agree	Agree	Agree	Agree	Agree	Agree	Agree
48	Yukesh. R	CSE	IV	Strongly Agree	Agree	Agree	Agree	Agree	Agree	Agree	Agree	Agree	Agree
49	Bharathkumar V	CSE	IV	Agree	Agree	Agree	Agree	Agree	Agree	Agree	Agree	Agree	Agree

Agree	36	28	36	30	34	34	34	35	33	30
Strongly Agree	9	12	11	12	11	11	12	11	10	14
Nuetral	0	0	0	0	0	0	0	0	0	0
Disagree	1	1	1	0	0	0	0	0	2	1
Strongly Disagree	0	1	0	0	0	2	0	0	1	0

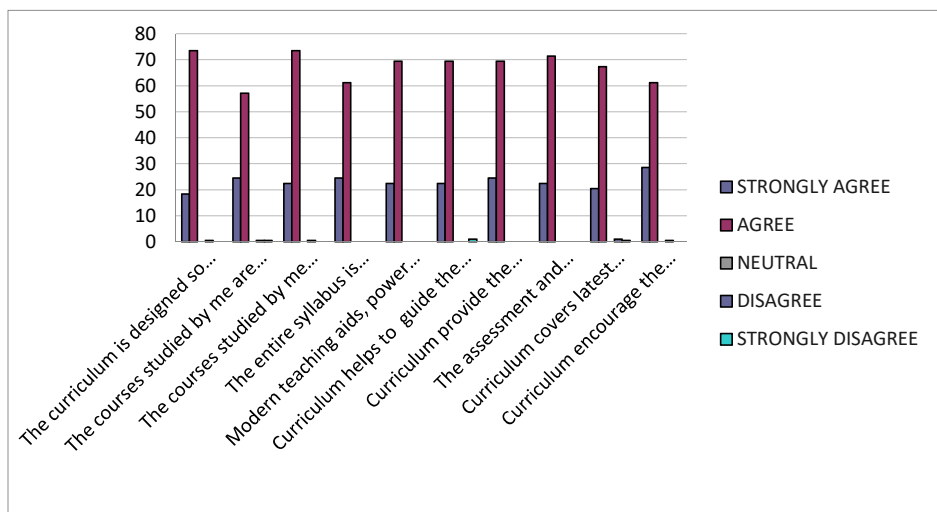
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0.5	0.5	0.5	0.0	0.0	0.0	0.0	0.0	1.0	0.5	
0.0	0.5	0.0	0.0	0.0	1.0	0.0	0.0	0.5	0.0	

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

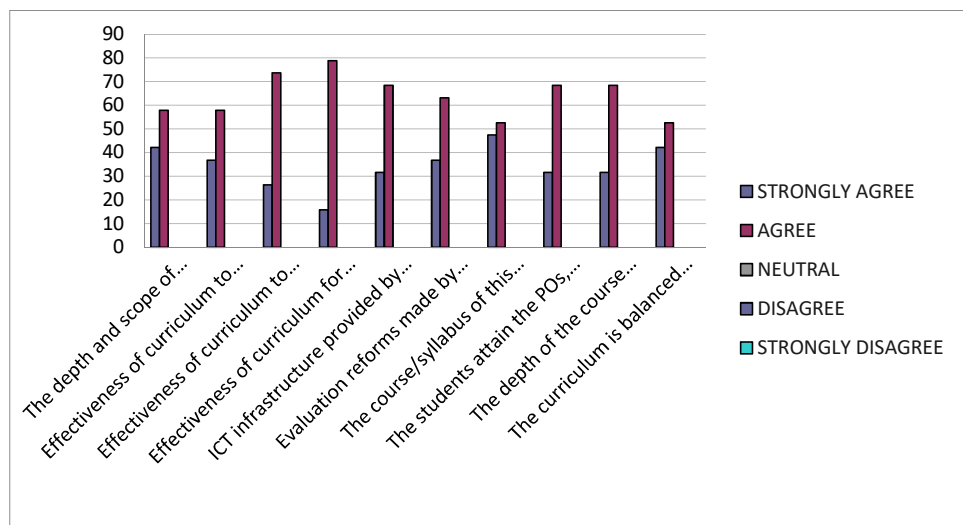
Sl.No	Faculty Name	Department	Designation	Faculty ID	The depth and scope of Curriculum	Effectiveness of curriculum to develop innovative thinking	Effectiveness of curriculum to develop skill-oriented human resources	Effectiveness of curriculum for development of entrepreneurs	ICT infrastructure provided by the college for effective curriculum delivery	Evaluation reforms made by the college in Current evaluation system	The course/syllabus of this subject has increased my knowledge and perspective in the subject area.	The students attain the POs, COs and PSO s satisfactorily.	The depth of the course content is adequate to have significant learning outcomes.	The curriculum is balanced with regard to the theoretical and practical knowledge
1	C.LEKHA	CSE	Assistant Professor	IT20CS02	Agree	Agree	Agree	Agree	Agree	Agree	Agree	Agree	Agree	Agree
2	ASWINI V	CSE	Assistant Professor	IT21CS05	Agree	Agree	Agree	Agree	Agree	Agree	Agree	Agree	Agree	Agree
3	Dr. S. Vidya	CSE	Assistant Professor		Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree
4	M.SUBASHINI	CSE	Assistant Professor	IT17CS05	Agree	Agree	Agree	Agree	Agree	Agree	Agree	Agree	Agree	Agree
5	G.MALATHI	CSE	Assistant Professor	IT21CS11	Agree	Strongly Agree	Agree	Agree	Agree	Strongly Agree	Strongly Agree	Strongly Agree	Agree	Strongly Agree
6	Kavinilavu A	CSE	Assistant Professor	IT21CS13	Agree	Agree	Agree	Agree	Agree	Agree	Agree	Agree	Agree	Agree
7	SWATHI S	CSE	Assistant Professor	IT21CS07	Agree	Strongly Agree	Agree	Agree	Agree	Agree	Agree	Agree	Agree	Agree
8	H KAVIETHA	CSE	Assistant Professor	IT20CS06	Agree	Agree	Agree	Agree	Agree	Agree	Agree	Agree	Agree	Agree
9	K.vijayalakshmi	CSE	Assistant Professor	IT21CS02	Agree	Not Sure	Agree	Not Sure	Agree	Strongly Agree	Agree	Agree	Agree	Not Sure
10	ROOPA D	CSE	Assistant Professor	IT16CS01	Agree	Agree	Agree	Agree	Strongly Agree	Agree	Agree	Agree	Agree	Agree
11	Gopinath	CSE	Assistant Professor	IT21CS12	Agree	Agree	Agree	Agree	Agree	Agree	Agree	Agree	Agree	Strongly Agree
12	S.ANANTHI	CSE	Assistant Professor	IT14CS02	Strongly Agree	Strongly Agree	Agree	Agree	Strongly Agree	Agree	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree
13	D Rajalakshmi	CSE	Assistant Professor	IT14CS03	Strongly Agree	Agree	Strongly Agree	Agree	Strongly Agree	Agree	Strongly Agree	Agree	Agree	Strongly Agree
14	P Nirmala Deve	CSE	Assistant Professor	IT21CS06	Strongly Agree	Agree	Agree	Agree	Agree	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree	Agree
15	ANNADURAI P	CSE	Assistant Professor	IT13CS01	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree	Agree	Strongly Agree	Strongly Agree
16	Udendhran	CSE	Assistant Professor	IT21CS08	Strongly Agree	Strongly Agree	Strongly Agree	Agree	Agree	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree
17	ASHOK P	CSE	Assistant Professor	IT16CS03	Strongly Agree	Agree	Agree	Agree	Agree	Agree	Strongly Agree	Agree	Agree	Agree
18	J.THIRUNAVUKKARASU	CSE	Assistant Professor	IT20CS05	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree
19	NAVEEN RAJU D	CSE	Assistant Professor	IT21CS01	Agree	Agree	Agree	Agree	Agree	Agree	Agree	Agree	Agree	Agree

Agree	11	11	14	15	13	12	10	13	13	10
Strongly Agree	8	7	5	3	6	7	9	6	6	8
Nuetral	0	0	0	0	0	0	0	0	0	0
Disagree	0	0	0	0	0	0	0	0	0	0
Strongly Disagree	0	0	0	0	0	0	0	0	0	0
	57.9	57.9	73.7	78.9	68.4	63.2	52.6	68.4	68.4	52.6
	42.1	36.8	26.3	15.8	31.6	36.8	47.4	31.6	31.6	42.1
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

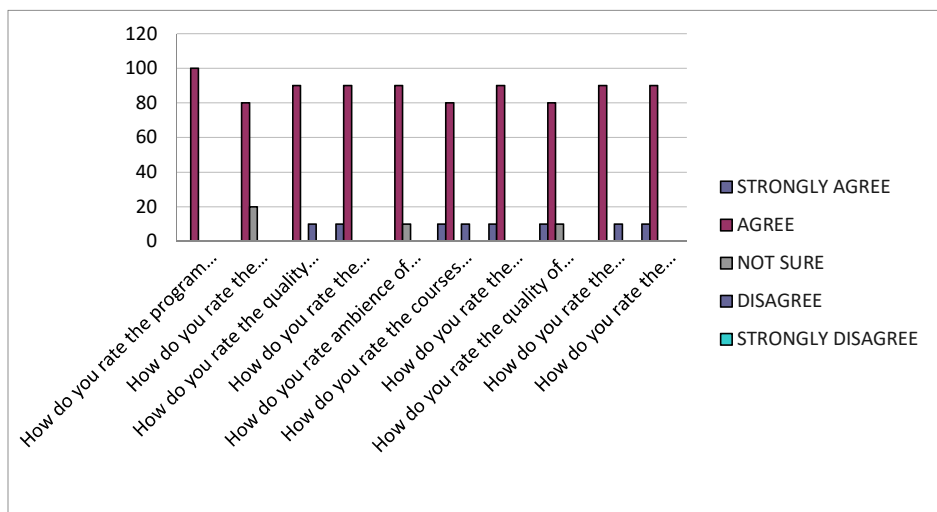
Sl.No	ANALYSIS	STRONGLY AGREE	AGREE	NEUTRAL	DISAGREE	STRONGLY DISAGREE
1	The curriculum is designed so as to enhance our employability	18.4	73.5	0	0.5	0
2	The courses studied by me are relevant and the contents are revised at reasonable intervals	24.5	57.1	0	0.5	0.5
3	The courses studied by me have enhanced my knowledge as well as my skills and my capabilities	22.4	73.5	0	0.5	0
4	The entire syllabus is completed in time	24.5	61.2	0	0	0
5	Modern teaching aids, power point presentations, web-resources, multi-media, e-content etc. are used by most of the teachers while teaching	22.4	69.4	0	0	0
6	Curriculum helps to guide the students for overall personality development of the students	22.4	69.4	0	0	1
7	Curriculum provide the students opportunities to learn and grow	24.5	69.4	0	0	0
8	The assessment and evaluation process is fair and unbiased	22.4	71.4	0	0	0
9	Curriculum covers latest developments in the subject/area of knowledge	20.4	67.3	0	1	0.5
10	Curriculum encourage the students to participate in extra-curricular, co-curricular activities and research projects	28.6	61.2	0	0.5	0



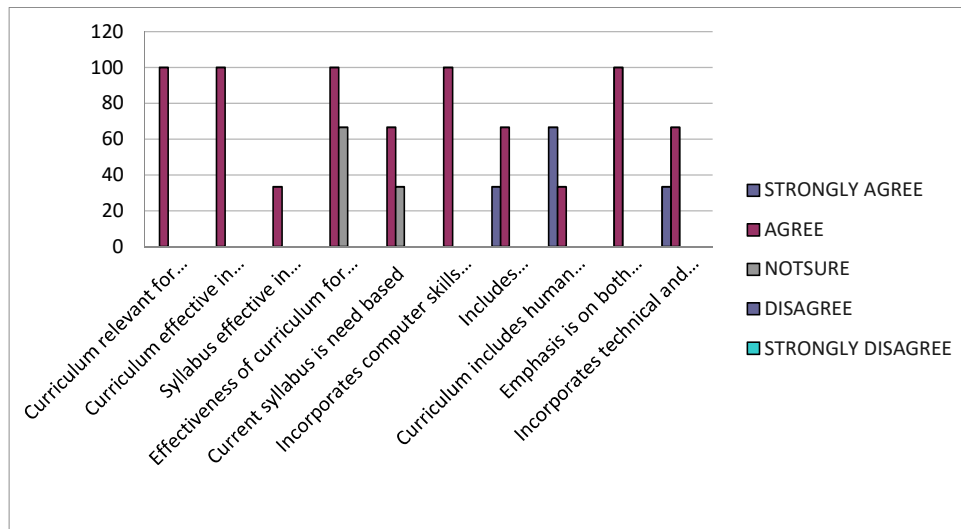
Sl.No	ANALYSIS	STRONGLY AGREE	AGREE	NEUTRAL	DISAGREE	STRONGLY DISAGREE
1	The depth and scope of Curriculum	42.1	57.9	0	0	0
2	Effectiveness of curriculum to develop innovative thinking	36.8	57.9	0	0	0
3	Effectiveness of curriculum to develop skill-oriented human resources	26.3	73.7	0	0	0
4	Effectiveness of curriculum for development of entrepreneurship	15.8	78.9	0	0	0
5	ICT infrastructure provided by the college for effective curriculum delivery	31.6	68.4	0	0	0
6	Evaluation reforms made by the college in Current evaluation system	36.8	63.2	0	0	0
7	The course/syllabus of this subject has increased my knowledge and perspective in the subject area.	47.4	52.6	0	0	0
8	The students attain the POs, COs and PSO s satisfactorily.	31.6	68.4	0	0	0
9	The depth of the course content is adequate to have significant learning outcomes.	31.6	68.4	0	0	0
10	The curriculum is balanced with regard to the theoretical and practical knowledge	42.1	52.6	0	0	0



Sl.No	ANALYSIS	STRONGLY AGREE	AGREE	NOT SURE	DISAGREE	STRONGLY DISAGREE
1	How do you rate the program that your ward is undergoing in terms of the load of the courses in different semesters?	0	100	0	0	0
2	How do you rate the availability of the Text and reference books in the Market?	0.0	80	20	0	0
3	How do you rate the quality and relevance of the courses included into the semester?	0.0	90	0	10	0
4	How do you rate the treatment of the students by the faculty irrespective of the background of the student that includes Gender, cast, community creed etc. in	10.0	90	0	0	0
5	How do you rate ambience of the university for effective delivery of the academic programs?	0.0	90	10	0	0
6	How do you rate the courses in terms of the irrelevance to the latest technologies or future technologies?	10.0	80	0	10	0
7	How do you rate the programs based on the comfort of your ward in coping with the workload?	10	90	0	0	0
8	How do you rate the quality of teaching in the College?	10	80	10	0	0
9	How do you rate the outcomes that your ward has achieved from the courses	0	90	0	10	0
10	How do you rate the transparency of the evaluation system in the College?	10	90	0	0	0



Sl.No	ANALYSIS	STRONGLY AGREE	AGREE	NOTSURE	DISAGREE	STRONGLY DISAGREE
1	Curriculum relevant for Employability	0	100	0	0	0
2	Curriculum effective in developing innovative thinking	0.0	100	0	0	0
3	Syllabus effective in developing skill oriented human resources	0.0	33.3	0	0	0
4	Effectiveness of curriculum for development of entrepreneurship	0.0	100	66.7	0	0
5	Current syllabus is need based	0.0	66.7	33.3	0	0
6	Incorporates computer skills and other soft skills needed for employment	0.0	100	0	0	0
7	Includes project/dissertation/in-plant training/field visit for real-life experiential Learning	33.3	66.7	0	0	0
8	Curriculum includes human values and ethics	66.7	33.3	0	0	0
9	Emphasis is on both fundamentals as well as latest developments	0	100	0	0	0
10	Incorporates technical and communication skills	33.3	66.7	0	0	0



1.4.2 - Feedback process of the Institution



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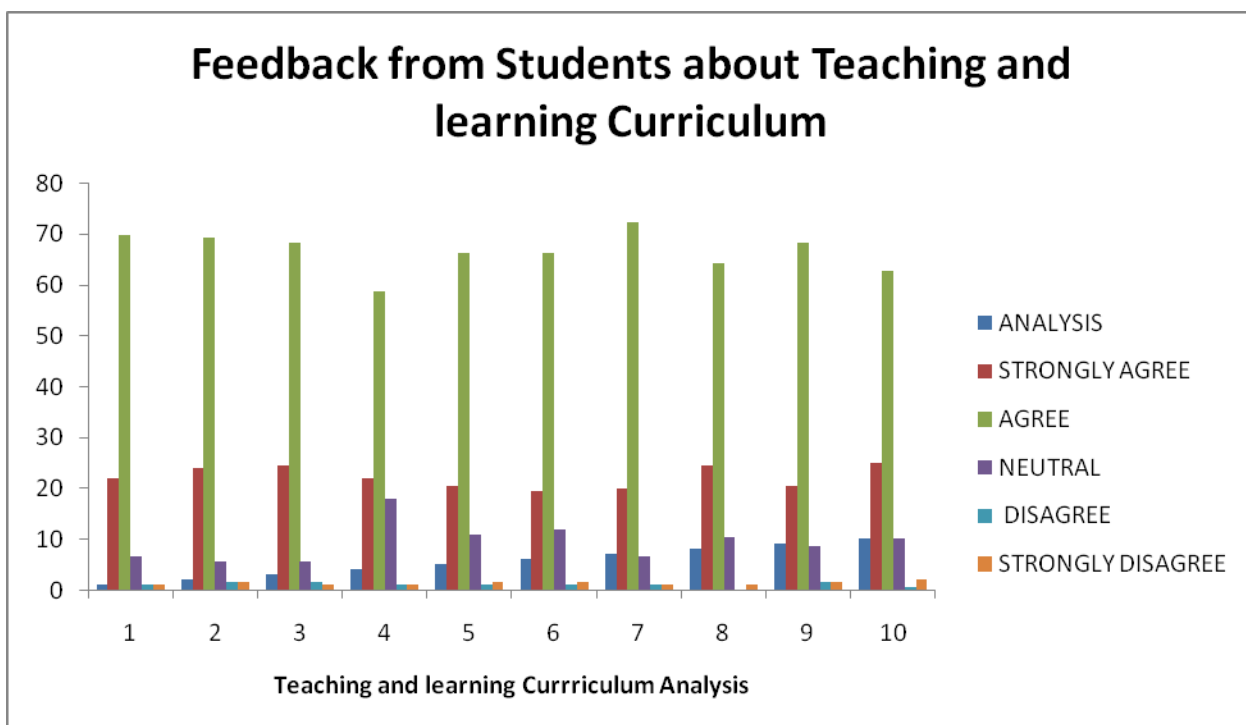
C1.4 Feedback Analyzed and Action taken report

Students Feedback:

We solicited feedback from both our undergraduate and postgraduate students. A special five-point scale on the curriculum is designed in this feedback form. Students felt that each course's objectives were clear, and that the course workload was manageable. The curriculum designed was socially relevant and appropriate for placements. Even the curriculum assists them in becoming responsible citizens.

Analysis and Evaluation:

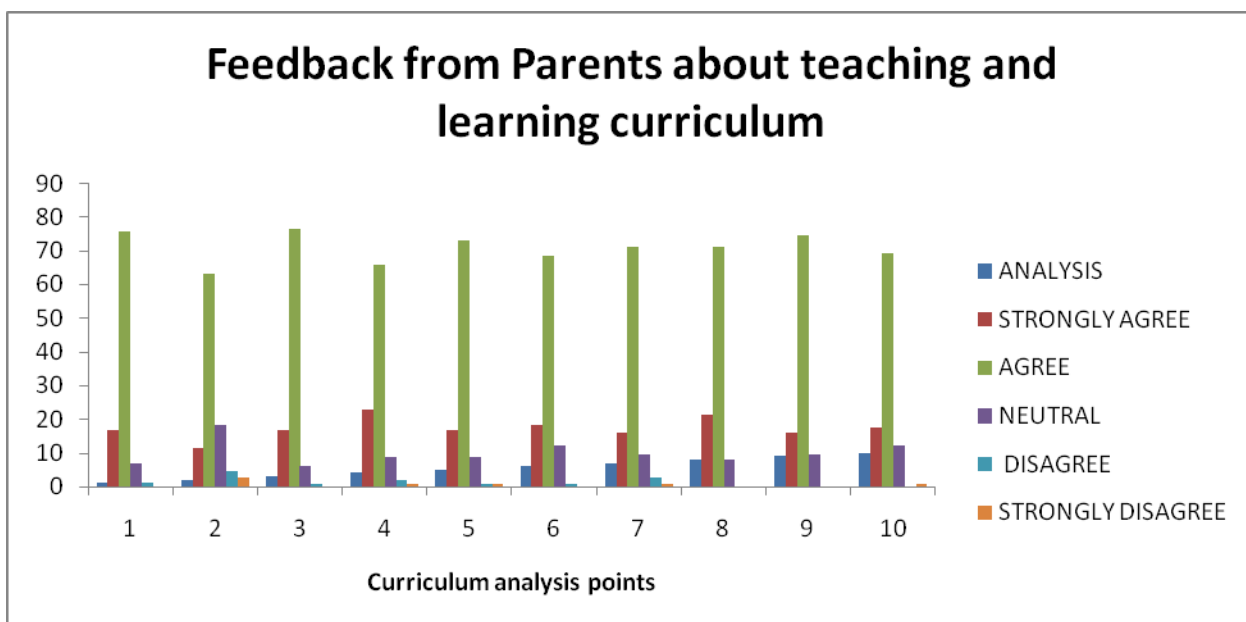
ANALYSIS	STRONGLY AGREE	AGREE	NEUTRAL	DISAGREE	STRONGLY DISAGREE
The curriculum is designed so as to enhance our employability	21.9	69.7	6.5	1	1
The courses studied by me are relevant and the contents are revised at reasonable intervals	23.9	69.2	5.5	1.5	1.5
The courses studied by me have enhanced my knowledge as well as my skills and my capabilities	24.4	68.2	5.5	1.5	1
The entire syllabus is completed in time	21.9	58.7	17.9	1	1
Modern teaching aids, power point presentations, web-resources, multi-media, e-content etc. are used by most of the teachers while teaching	20.4	66.2	10.9	1	1.5
Curriculum helps to guide the students for overall personality development of the students	19.4	66.2	11.9	1	1.5
Curriculum provide the students opportunities to learn and grow	19.9	72.1	6.5	1	1
The assessment and evaluation process is fair and unbiased	24.4	64.2	10.4	0	1
Curriculum covers latest developments in the subject/area of knowledge	20.4	68.2	8.5	1.5	1.5
Curriculum encourage the students to participate in extra-curricular, co-curricular activities and research projects	24.9	62.7	10	0.5	2



ParentFeedback:

The input from parents is gathered in order to gain a better understanding of the student's education and activities in and around the department. We have received complete feedback from parents on the current content of the syllabus, which has aided the future of the students.

ANALYSIS	STRONG LY AGREE	AGREE	NEUTRAL	DISAGREE	STRONGLY DISAGREE
Rate the program that your ward is undergoing in terms of load of the courses in different semester	16.7	75.4	7	1	0
Rate the availability of text book and reference books in the market	11.4	63.2	18.4	4.4	2.6
Rate the quality and relevance of the courses included into the semester	16.7	76.3	6.1	0.9	0
Rate the treatment of the students by the faculty irrespective of the background	22.8	65.8	8.8	1.8	0.9
Rate ambience of the university for effective delivery of the academic programs	16.7	72.8	8.8	0.9	0.9
Rate the courses in terms of the irrelevance to the latest technologies or future technologies	18.4	68.4	12.3	0.9	0
Rate the programs based on the comfort of your ward in coping with the workload?	15.8	71.1	9.6	2.6	0.9
Rate the quality of teaching in the College?	21.1	71.1	7.9	0	0
Rate the outcomes that your ward has achieved from the courses?	15.8	74.6	9.6	0	0
Rate the transparency of the evaluation system in the College?	17.5	69.3	12.3	0	0.9

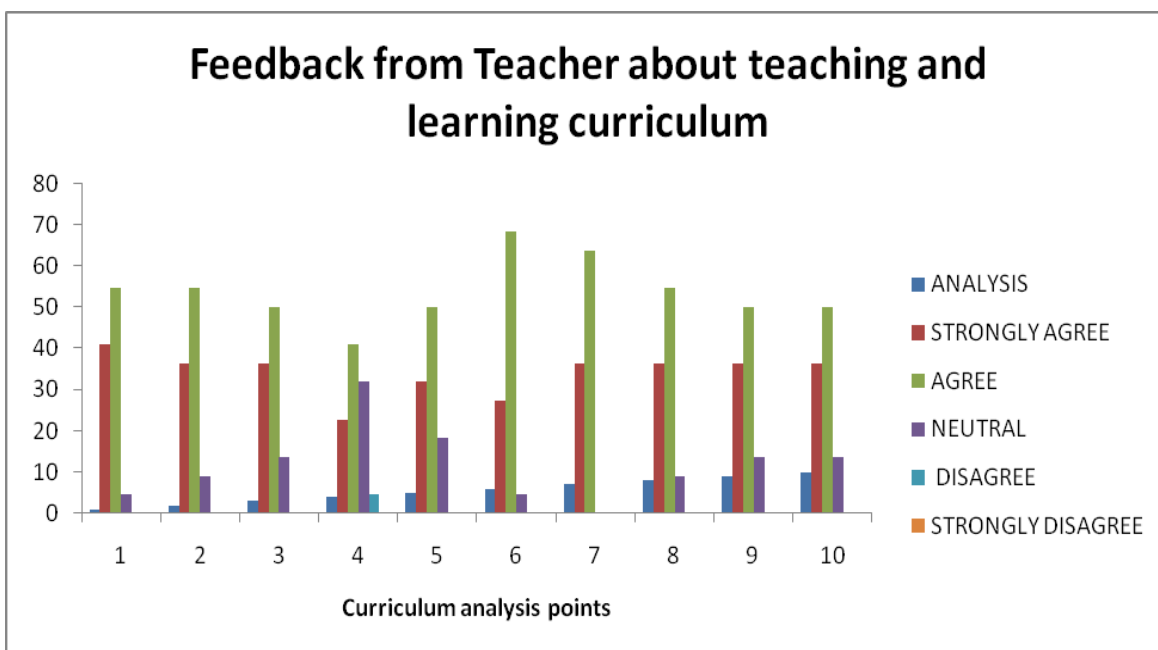


Teacher Feedback:

All of the teachers agree that the syllabi are adequate; few percentage of the teachers indicate a need for analytical abilities in the curriculum; and some of the teachers indicate a need of source materials for reading.

The component on analytical skills should be emphasized in the curriculum. Reading and source material on latest updates in the subjects should be bolstered through the departmental / central library.

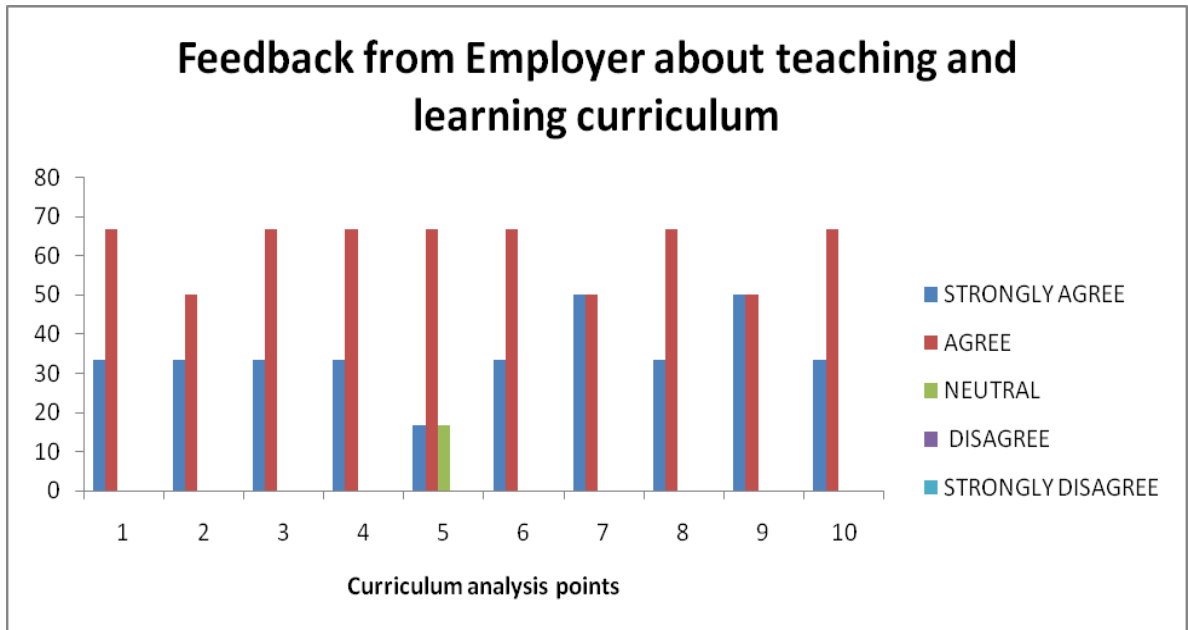
ANALYSIS	STRONGLY AGREE	AGREE	NEUTRAL	DISAGREE	STRONGLY DISAGREE
The depth and scope of Curriculum	40.9	54.5	4.5	0	0
Effectiveness of curriculum to develop innovative thinking	36.4	54.5	9.1	0	0
Effectiveness of curriculum to develop skill-oriented human resources	36.4	50	13.6	0	0
Effectiveness of curriculum for development of entrepreneurship	22.7	40.9	31.8	4.5	0
ICT infrastructure provided by the college for effective curriculum delivery	31.8	50	18.2	0	0
Evaluation reforms made by the college in Current evaluation system	27.3	68.2	4.5	0	0
The course/syllabus of this subject has increased my knowledge	36.4	63.6	0	0	0
The students attain the POs, COs and PSO s satisfactorily.	36.4	54.5	9.1	0	0
The depth of the course content is adequate to have significant learning outcomes	36.4	50	13.6	0	0
The curriculum is balanced with regard to the theoretical and practical knowledge	36.4	50	13.6	0	0



Employers Feedback:

Our employers are major stakeholders, feedback of whom gives input regarding enhancing the employability of our students. We have collected feedback from the employers where we ask our employers to comment on the curriculum. They felt that the curriculum enriches the knowledge on application of discipline subjects, principles and concepts. The curriculum is helpful to develop critical thinking ability and creativity. Stakeholders appreciated the skill enhancement introduced in the curriculum on par with the industrial requirements.

ANALYSIS	STRONGLY AGREE	AGREE	NEUTRAL	DISAGREE	STRONGLY DISAGREE
Curriculum relevant for Employability	33.3	66.7	0	0	0
Curriculum effective in developing innovative thinking	33.3	50	0	0	0
Syllabus effective in developing skill oriented human resources	33.3	66.7	0	0	0
Effectiveness of curriculum for development of entrepreneurship	33.3	66.7	0	0	0
Current syllabus is need based	16.7	66.7	16.7	0	0
Incorporates computer skills and other soft skills needed for employment	33.3	66.7	0	0	0
Includes project/dissertation/in-plant training/field visit for real-life experiential Learning	50	50	0	0	0
Curriculum includes human values and ethics	33.3	66.7	0	0	0
Emphasis is on both fundamentals as well as latest developments	50	50	0	0	0
Incorporates technical and communication skills	33.3	66.7	0	0	0



ACTION TAKEN REPORT:

1. After careful evaluation of comments from all stakeholders, the curriculum and syllabi have been refined to provide adequate knowledge for students.
2. In addition to academic knowledge, extra inputs and ideas of concepts relevant to the present job market requirement have been provided, with a special focus on hands-on industry relevant practical experience and internship/project work.
3. The institute will provide extensive exposure and practical expertise to prospective students through learning materials, lesson plans, and course notes etc.