Curriculum, Syllabus and Couse Structure

for

Under Graduate Degree Programme

in

Engineering & Technology

Regulation

BASIC SCIENCE & HUMANITIES

GIET MAIN CAMPUS AUTONOMOUS, GUNUPUR

VISION

To foster prosperity through technological development by means of Education, Innovation and Collaborative Research and emerge as a premier Technical Institution.

MISSION

To provide quality education of international standards for producing technocrats and future leaders in disciplined and conducive environment as an integral part of our social commitment to promote education in eastern India.

GOALS:

To foster excellence in teaching, research, scholarship and science to prepare students with attitude / skills and values of the lifelong learning with leadership skill to be distinctly different and useful in global society.

COMMITMENT:

For promotion of learning by students and faculty, teaching, transformation of knowledge and research and creation of new knowledge.

College Profile

Gandhi Institute of Engineering & Technology was established at Gunupur, the tribal hinter land of India, two decades ago, i.e. 1997, under the aegis of Vidya Bharati Educational Trust with the approval of AICTE for 200 B. Tech. students with four branches. Today it is the flagship of the famous Gandhi Group of Institutions with a sprawling and colorful campus, an international ambience spread over 43 acres of land with magnificent buildings, state of the art laboratories and workshop, consisting of the biggest library of the state. The campus houses around 4000 students, 900 employees in its hostels, professor quarters, employee residences, etc.

Consequent upon its excellence in performance, students from 12 East Indian states and 7 Asian Nations flung every year to the campus, being attracted with the high quality education offered by the famous faculty members, who are responsible for rich university results and consistently high record of placements. The campus is vibrant with a 24 hours open library, enviable computer centre, organization of national, international seminars, workshops, high level of researches resulting in prestigious publications and patents. Hence we have been getting NAAC “A” Grade from UGC twice with 3.20 / 3.28 CGPA. NBA accreditation has been available to us for 4 times since last 11 years. As on date, GIET, Gunupur is the most sought after engineering college of the State of Odisha, and in recognition of its high academic standard it has been declared as an Autonomous College by the UGC in 2017.

GIET Gunupur has acted as a growth engine for the area where thousands of engineers have been produced, who have spread over 46 Nations of the world and have pumped in Dollars, Pounds, Yen etc. to Gunupur thereby making Gunupur richer. It has provided direct employment to 900 employees and indirect employment to 10,000 people of the State.

FOREWORD

Gandhi Group of Institutions, Gunupur was started its tryst with excellence with a modest number of two hundred students in 1997 in Gunupur. Today, a sprawling sixty-two acres of lush green campus with state-of-the-art facilities for academic as well as other co-curricular and extracurricular activities is a result of that never ending journey on the path of excellence which has transformed a remote place like Gunupur into an educational hub. However, the most satisfying sign is the success story of our vibrant and energetic batches of students who have added new milestones of achievement each year surpassing the record of previous achievers by scaling newer zeniths and challenging the next generation to tame stiffer heights, attracting students from all the corners of the country and abroad to pursue various under graduate and post graduate courses like B.Tech, M. Tech, MBA, M.Sc., BBA, B. Sc (Ag.), etc. On such a dynamic campus where each moment is enriched with unfathomable potentials, and every step matters, obviously enough each student needs an unambiguous guide which would work as a ready reference on matters ranging from academic affairs to everyday DOs and DONOTs of discipline. The Students' Handbook sets to serve this purpose by providing a set of rules for campus ethics and giving information about the resources available at GGI, Gunupur.

A Student Handbook is an official notification of its policies, rules, regulations and standards of conduct. The student is responsible for knowledge of these policies, rules, regulations and standards of conduct; enrollment is considered as acceptance of all conditions specified in this handbook. The Handbook for Students is designed to orient you to be an excellent technocrat with Gandhian values. It contains information on the academic, social, and personal development opportunities available to you and the many resources to help you find advice and make good choices. The Handbook can be your guide to academic requirements, our residential system, and the many activities that take place outside the classroom. It attempts to clarify the values and standards GIET holds over the last 20-odd years of its journey with the motto of **GIET: EXCELLENCE – OUR ESSENCE**.

GIET Main Campus Autonomous, GUNUPUR

14.3 Health
14.4 Dispensary
14.5 Maintenance
14.6 Examination
14.7 Scholarship / Welfare Fund
14.8 Library
14.9 Attendance / Form Fill Up / Registration / Mid Sem Marks / Student
14.10 Admission Section
14.11 Card issue & Renewal of I Cards
14.12 Welfare of Foreign National Students
14.13 Recruitment
14.14 Bus
14.15 Placement
14.16 Guest House Accommodation
14.17 Higher Authorities and their contact no.

ANNEXTURE-

1.0 INTRODUCTION

Gandhi Group of Institutions, Gunupur is one of the best Premier Technical Institutions of India. The Institute import boasts of 10 undergraduate, 6 M Tech, MBA, M.Sc. and BBA courses with a total sanctioned intake of more than 4500 students.

GIET is an ISO 9001-2000 Certified Institution.

Quality is never an accident; it is a relentless pursuit of excellence. Our motto "EXCELLENCE - OUR ESSENCE", tells it all. Our Endeavour to offer quality education is endorsed by none other than the National Board of Accreditation, New Delhi (AICTE) as well as NAAC Bengalore (UGC). GGI, Gunupur became the proud recipient of the second highest CGPA of 3.20 out of the 4 point grade system by NAAC in the national level. GGI, Gunupur has been empowered to offer the following degrees to its students:

⇒ B. Tech: Biotechnology, Electronics & Communication Engineering, Electronics & Instrumentation Engineering, Mechanical Engineering, Computer Science & Engineering, Information Technology, Chemical Engineering, Electrical Engineering, Civil Engineering & Electrical and Electronics Engineering.

⇒ M. Tech: Computer Science & Engineering, Electronics & Communication Engineering, Power Electronics, Machine Design, Thermal Engineering & Structural Engineering.

⇒ Master Degrees: Master in Business Administration (MBA), M. Sc. Biotechnology, M. Sc. Industrial Biotechnology, M. Sc. Bioinformatics, M. Sc. Mathematics, M.Sc. Physics, M.Ss. Chemistry, M. Sc. Computer Sciences, & M. Sc. Electronics. & BBA.

A sprawling lush green campus with adequate infrastructure for both curricular as well as co-curricular activities is the special attraction of the Institution. An air conditioned 24 hours library with a large number of books and journals, opened round the clock with wi-fi campus, huge array of softwares are ready for the relentless pursuit of academic excellence by our students and faculty members.

GIET, GIMS and GICS are approved by All India Council for Technical Education (AICTE), Ministry of HRD, Govt. of India, recognized by Govt. of Orissa and affiliated to Biju Patnaik University of Technology (BPUT), Rourkela from academic session 2003-04. M.Sc. courses are approved by Govt. of Odisha and affiliated to Berhampur University, Berhampur.

2.0 ACADEMIC MATTERS

2.1 B. TECH. ADMISSION PROCEDURE

Admission to B. Tech. programme in GIET is done as per the AICTE, Govt. of Odisha and BPUT guidelines. As per the instructions of the Supreme Court of India to AICTE, each admission is to be done through Entrance Exam. Two types of seats are available at GIET: STATE QUOTA SEATS (85%) and NRI QUOTA SEATS (15%).

Minimum Eligibility for B. Tech.:

- A pass in +2 Science with Mathematics, Physics & Chemistry / Biology / Biotechnology / Computer Science
- A minimum of 45% (Aggregate) in Physics, Mathematics & Chemistry /Biology /Biotechnology /Computer Science is a must.

For admission into 1st year B.Tech programme a student has to appear Joint Entrance Examination (JEE-Main) conducted by CBSE. For details see www.jeemain.nic.in. As it stands now Govt. of Odisha is not going to conduct OJEE, hence JEE (Main) entrance is the only roadway to take admission into 1st year B.Tech Programmes offered by us.

Exams shall be held online or offline as per the choice of the student. JEE (Main) authorities shall publish two merit lists. One all India merit list the other for Odisha state candidates only. 70% of the seats shall be filled up in Govt. of Odisha counseling, taking students from the Odisha merit list. Around 25% of the seats shall be open for all India merit list, where students of Odisha and pan India can compete.

In order to be considered for admission in GIET, Gunupur, with a valid JEE (Main) rank, under the NRI quota and Balance seat category, one has to send a State Bank of India A/C payee demand draft for Rs. 500/- in favour of -GIET, Gunupur, towards the cost of prospectus and application form. The filled in application form along with photo copies of certificates are to be sent by Registered post to:

The Dean Administration, Gandhi Institute of Engineering and Technology

Post: GUNUPUR-765022, Dist.: Rayagada (Odisha), India

2.2 Academic Calendar

GIET MAIN CAMPUS AUTONOMOUS, GUNUPUR
ACADEMIC CALENDAR FOR 2018-2019 (ODD SEMESTER)

2.3 RULES

ODD SEMESTER ACTIVITIES	1ST SEMESTER	3RD SEMESTER	5TH SEMESTER	7TH SEMESTER
Stating Date of Instruction	28-07-2018	02-07-2018	02-07-2018	02-07-2018
Registration without fine	------	02-07-2018 to 07-07-2018	02-07-2018 to 07-07-2018	02-07-2018 to 07-07-2018
Registration (Fine of 500/-)	----------	09-07-2018 to 11-07-2018	09-07-2018 to 11-07-2018	09-07-2018 to 11-07-2018
Registration (Fine of 1000/-)	------	12-07-2018 to 16-07-2018	12-07-2018 to 16-07-2018	12-07-2018 to 16-07-2018
Class Test-1	17-09-2018 to 19-09-2018	09-08-2018 to 11/08/2018	09-08-2018 to 11/08/2018	09-08-2018 to 11/08/2018
Last date of Evaluation of Class Test-1	24-09-2018	16-08-2018	16-08-2018	16-08-2018
Displaying of internal marks and Sending to parents	25-09-2018	17-08-2018	17-08-2018	17-08-2018
Class Test-11	29-10-2018 to 31-10-2018	17-09-2018 to 19-09-2018	17-09-2018 to 19-09-2018	17-09-2018 to 19-09-2018
Last date of Evaluation of Class Test-11	05-11-2018	24-09-2018	24-09-2018	24-09-2018
Displaying of internal marks and Sending to parents	06-11-2018	25-09-2018	25-09-2018	25-09-2018
Lab Viva voce	26-11-2018 to 01-12-2018	26-11-2018 to 01-12-2018	05-11-2018 to 10-11-2018	05-11-2018 to 10-11-2018
Closing Date of Instruction	01-12-2018	01-12-2018	10-11-2018	10-11-2018
Sending of Internal Marks	05-12-2018	05-12-2018	15-11-2018	15-11-2018
End semester Examination	08-12-2018 to 22-12-2018	08-12-2018 to 22-12-2018	As per BPUT Schedule	As per BPUT Schedule
Commencement of Even Semester Classes	03-01-2019	03-01-2019	Day After Completion of Semester Exam	Day After Completion of Semester Exam
Semester Break	23-12-2018 to 02-01-2019	23-12-2018 to 02-01-2019	23-12-2018 to 02-01-2019	23-12-2018 to 02-01-2019
Publication of Results	08-01-2019	08-01-2019	-------	----------

1. A student needs to attend a minimum of 80% of classes in Theory and Practical separately to make him/her eligible for appearing midsem/Sem.examinationes.
2. Attendance is to be counted from the date of commencement of classes of the respective courses irrespective of the reporting date of the individual students.
3. The rule is irrevocable and under no circumstance a student can claim exemption from attending classes. *In case of certain emergencies, a student has to take prior permission from the concerned authority for remaining absent from the class. The decision of the authority is final and binding on these matters.*

2.3.1 Class Room Manners

1. Students should be polite, dignified, neat and obedient.
2. Students are expected to be seated in the Lecture hall five minutes before the commencement of the class.
3. Students should stand up as a mark of respect when a faculty enters or leaves the classroom.
4. Students should maintain discipline & silence inside the lecture hall / drawing hall / labs / workshops.
5. Student's movement outside the classroom in between the lecture class is strictly prohibited.
6. Students should bring their own calculators, drawing instruments, charts, data book etc., whenever needed.
7. Students are expected to take care of their belongings.
8. Students are instructed not to bring any valuable items to the college.
9. Using MOBILE / WALKMAN / CAMERA inside the college campus is strictly prohibited.
10. Avoid chewing bubble gum, chocolate inside the class room during lecture hour.
11. Students should wear their own lab coats and bring observation notebooks to the laboratory classes regularly.
12. Record of Experiments done in a particular class should be submitted in the next lab class.
13. Students who do not submit the record note in time will not be allowed to do the next experiments and will not be given attendance for that laboratory class.
14. Students will not be allowed to leave the laboratory until they complete the experiment.

2.4 B. TECH. FIRST YEAR SYLLABI (Autonomous Batch 2017)

GIET, Gunupur follows a Semester pattern and the whole B. Tech. programme is of 4 years (i.e. 8 Semesters) and each year consists of two semesters. As such the B. Tech. First year comprises of 1st Semester and 2nd Semester and the syllabi for these two Semesters are common for all students of first year and certain subjects are studies in alternate semesters:

- Physics/Chemistry (Alternate Semester)
- BEE/BEEE (Alternate Semester)
- BME/BTD (Alternate Semester)
- Mathematics I (1ST SEMESTER, common to all)
- Mathematics II (2ND SEMESTER, common to all)
- Communicative English and Soft skills (1ST SEMESTER, common to all)
- Communicative English and technical cmmunication (2ND SEMESTER, common to all)

UG In BASIC SCIENCE & HUMANITIES

I SEMESTER [FIRST YEAR]

Sl. No.	Course Category	Course Code	Course Title	L	T	P	Credits	QP
THEORY								
1	BS	BBSBS1010	Engineering Mathematics-I	3	1	0	4	A
2	BS	BBSBS1021	Engineering Physics	3	0	0	3	A
		BBSBS1022	Engineering Chemistry					
3	ES	BBSES1031	Basics of Mechanics	3	0	0	3	A
		BBSES1032	Basics of Thermodynamics					
4	ES	BBSES1041	Basics of Electronics	3	0	0	3	A
		BBSES1042	Basics of Electrical Engineering					
5	ES	BBSES1050	Programming for Problem Solving	3	0	0	3	A
6	HS	BBSHS1060	Communicative English and Soft Skills	2	0	0	2	A
PRACTICAL / SESSIONAL								
7	BS	BBSBS1121	Engineering Physics Laboratory	0	0	2	1	
		BBSBS1122	Engineering Chemistry Laboratory					
8	ES	BBSES1141	Basics of Electronics Laboratory	0	0	2	1	
		BBSES1142	Basics of Electrical Engineering Laboratory					
9	ES	BBSES1150	Programming for Problem Solving Laboratory	0	0	2	1	
10	HS	BBSHS1160	Communicative English and Soft Skills Laboratory	0	0	2	1	
11	ES	BBSES1171	Engineering Drawing	0	0	2	1	
		BBSES1172	Engineering Workshop					
12	MC	BBSHS1180	NSS	-	-	2	0	
TOTAL				**17**	**1**	**12**	**23**	

UG IN BASIC SCIENCE & HUMANITIES

II SEMESTER [FIRST YEAR]

Sl. No.	Course Category	Course Code	Course Title	L	T	P	C	QP
THEORY								
1	BS	BBSBS2010	Engineering Mathematics-II	3	1	0	4	A
2	BS	BBSBS1021	Engineering Physics	3	0	0	3	A
		BBSBS1022	Engineering Chemistry					
3	ES	BBSES1031	Basics of Mechanics	3	0	0	3	A
		BBSES1032	Basics of Thermodynamics					
4	ES	BBSES1041	Basics of Electronics	3	0	0	3	A
		BBSES1042	Basics of Electrical Engineering					
5	ES	BBSES2050	Data Structure using 'C++'	3	0	0	3	A
6	HS	BBSHS2060	Communicative English & Technical Communication	2	0	0	2	A
PRACTICAL / SESSIONAL								
7	BS	BBSBS1121	Engineering Physics Laboratory	0	0	2	1	
		BBSBS1122	Engineering Chemistry Laboratory					
8	ES	BBSES1141	Basics of Electronics Laboratory	0	0	2	1	
		BBSES1142	Basics of Electrical Engineering Laboratory					
9	ES	BBSES2150	Data Structures using 'C++' Laboratory	0	0	2	1	
10	HS	BBSHS2160	Communicative English & Technical Communication Laboratory	0	0	2	1	
11	ES	BBSES1171	Engineering Drawing	0	0	2	1	
		BBSES1172	Engineering Workshop					
12	MC	BBSHS2180	YOGA	-	-	2	0	
TOTAL				**17**	**1**	**12**	**23**	

Title of the subject						
Subject Code	**Engineering Mathematics - I**	**L**	**T**	**P**	**C**	**QP**
BBSBS 1010		**3**	**1**	**0**	**4**	**A**

Pre –Requisite: Fundamental of calculus

Course Educational Objective

CEO1: To find critical points, and use them to locate maxima and minima

CEO2: To provide the standard methods for solving differential equations

CEO3: To study Fourier series and to express a function in Fourier series

CEO4: To use matrices, determinants and techniques for solving systems of linear equations in the different areas of Linear Algebra.

Course Outcome-Towards the end of the course student will be able to :

CO1: Implement the engineering problems using the concept of Partial differentiation and series and to understand its application.

CO2: Solve the initial value and boundary value problem of ODE related to Electrical circuit.

CO3: Execute the technique of Fourier series for applying in Engineering applications.

CO4: Find the Eigen value and vector of a matrix by using properties of linear algebra

COs	**CO-PO & PSO Mapping**														
	PROGRAMME OUTCOMES												**PSOs**		
COs	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3
CO1	1	2													
CO2	2	3													
CO3	1	3													
CO4	2	3													
Avg.	1.5	2.75													

SYLLABUS

UNIT-I MULTI-VARIABLE CALCULUS (13 Hours)

Partial differentiation, Euler's theorem, Total derivative, Taylor's theorem for function of two variable (without proof), Maxima and Minima for function of two variables, Differentiation under integral sign (Leibnitz rule).

UNIT- II (12 Hours)

DIFFERENTIAL EQUATIONS-I

Ordinary differential Equations: First order and first degree differential equations and their method of solving, Application to Electrical circuits and heat conduction.

DIFFERENTIAL EQUATIONS-II

Linear differential equations of higher order and their different methods of solutions (operator methods). Second order linear differential equations and their solutions: Euler Cauchy equation, solution by undermined coefficient method and variation of parameters. Simple application to electrical circuits.

UNIT -III (10 Hours)

Fourier series, Fourier expansion of functions of arbitrary period, Even and odd functions, Half Range Expansion.

UNIT -IV LINEAR ALGEBRA: (15 Hours)

Matrices, Types of matrices, Rank of matrix, Eigen values and Eigen vectors, Cayley – Hamilton theorem (without proof), system of linear equations, Orthogonal matrices, Complex matrices, Herrmitian and skew-Herrmitian matrices, Unitary matrices, similarity of matrices. Quadratic forms and Canonical forms.

Prescribed Books:

1. *Advanced Engineering Mathematics by E. Kreyszig, Tenth Edition, Willey*
2. *Differential Calculus by Santi Narayan and Mittal, S.Chand Publications*

Reference:-

1. *Higher Engineering Mathematics by BS Grewal : Khanna Publishers, New Delhi.*
2. *Higher Engineering Mathematics by B.V.Ramana, McGraw Hills Education*
3. *Advanced Engineer methods by N. P. Bali & Manish Goyal.*

Title of the subject						
Subject Code	**Engineering Physics**	**L**	**T**	**P**	**C**	**QP**
BBSBS 1021		**3**	**0**	**0**	**3**	**A**

Prerequisites: Knowledge in +2 Physics and Mathematics

Course Educational Objectives:

CEO1: Providing fundamental knowledge about the oscillations and waves

CEO2: To familiar with structure and properties of materials.

CEO3: Providing knowledge of mathematical concepts to solve electromagnetic problems and fundamental information about Quantum mechanics with applications.

Course Outcome: Towards the end of the course, the students will be able to

CO1: Understand and analyze the concept of oscillation and wave mechanics.

CO2: Describe the principle of lasing and optoelectronics devices in communication system..

CO3: Explain the ideas of crystal structure, crystal diffraction and classification of materials.

CO4: Interpret the fundamentals of electromagnetism and deduce the electromagnetic wave equations.

CO5: Express the basics of quantum mechanics and illustrate the quantum mechanical problems.

COs	**CO-PO & PSO Mapping**														
	PROGRAMME OUTCOMES												**PSOs**		
COs	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3
CO1	3	2													
CO2	1	2													
CO3	1	2													
CO4	2	2													
CO5	2	2													
Avg.	1.8	2													

SYLLABUS

UNIT: 01 **(12 Hours)**

Interaction of Wave and Matter

Simple Harmonic Oscillator, Damped harmonic oscillator and Forced harmonic oscillator, and coupled oscillator, Waves and its Characteristics, Superposition of Waves, Interference by division of wavefront (Bi-prism experiment) and division of amplitude (Newton's Ring experiment). Introduction to Diffraction, types of diffraction.LASER, spontaneous & stimulated emission, Einstein's relation, Ruby Laser and He-Ne Laser, Semiconductor laser, application of Laser. Optical fiber, Acceptance angle, Numerical aperture, Skip distance, Step index and Graded index fibers, Attenuations in optical fibers, applications of optical fiber in communication systems.

UNIT: 02 **(12 Hours)**

Physics of Materials

Introductions to materials, Crystallography, Crystal structure, crystal direction and plane, Miller indices, Inter planar spacings, Reciprocal Lattice and its characteristics, Reciprocal Lattice of SC, FCC and BCC, Brillouin Zone, Bragg's law. Energy bands in solids (conduction band, valence band and Fermi level), Classification of materials on the basis of band theory. Magnetic properties of Materials & their applications. Nano materials and applications (particulates, thin films, nano structures, etc.)

UNIT: 03 **(10 Hour)**

Electromagnetic theory and wave

Review of grad, divergence and curl, Gauss divergence theorem and Stoke's theorem (no derivations), fundamental laws of electrostatics, magneto-statics and electromagnetism, displacement current and conduction current, Maxwell's equations. Electromagnetic wave and its characteristics, electromagnetic wave equation for free space and in charge free conducting medium, electromagnetic energy, Poynting vector and Poynting theorem.

UNIT: 04 **(12 Hours)**

Quantum Mechanics

Introduction to dual nature: Black body radiation, photoelectric effect, Compton effect (qualitative idea only), de-Broglie's hypothesis, Heisenberg's uncertainty principle and its application to non-existence of electron inside the nucleus and ground state energy of one dimensional harmonic scillator, Basic postulates of Quantum Mechanics, Wave function and its characteristics, probability ensity , normalization, eigen values, eigen functions and expectation values, Schrödinger's equation (time dependent and time independent). Application of Schrödinger equation to one dimensional potential well, potential step and potential barrier (qualitative ideas).

Text Books:

1. *Engineering Physics by D. K. Bhattacharya and Poonam Tanden, Oxford University Press.*
2. *Engineering Physics, H K Malik and A K Singh, Tata McGraw Hill, MGH.*

Reference Books:

1. *Materials Science & Engg., V. Raghvan, Prentice Hall of India.*
2. *Concepts of Modern Physics, A. Beiser, S. Mahajan, S.R. Choudhary, Tata McGraw Hill.*
3. *Lasers & Optical engineering, P Dass, Narosa Publishers, Springer Publisher.*
4. *Engineering Physics by B. B. Swain and P. K. Jena, Kitab Mahal,Cuttack*
5. *Quantum Mechanics by SatyaPrakash, Kitab Mohal, etc. Kedar Nath Ram Nath Publisher*

Title of the subject						
Subject Code	**Engineering Chemistry**	**L**	**T**	**P**	**C**	**QP**
BBSBS 1022		**3**			**3**	**A**

Course Educational Objectives

CEO1: To impart the knowledge of application of chemical sciences in the field of engineering

CEO2: To focus on microscopic chemistry in terms of atomic and molecular levels.

CEO3: The course aims at elucidating principles of applied chemistry in water treatment.

CEO4: To give detailed account about the reactivity of metals w.r.t prevention of corrosion.

CEO5: To enlighten the students with the applications of polymers.

Course Outcomes

Towards the end of this course, the students will be able to;

CO1: **Analyze** microscopic chemistry in terms of atomic and molecular orbital and **Explain** the ranges of the electromagnetic spectrum by electronic transition

CO2: **Identify** water treatment techniques for domestic and industrial purposes

CO3: **Compare** types of corrosion, and it's control measures.

CO4: **Understand** various types of polymers, their preparation along with applications

COs	**CO-PO & PSO Mapping**														
	PROGRAMME OUTCOMES												**PSOs**		
COs	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3
CO1	2	2													
CO2	3	1					1								
CO3	3	1										1			
CO4	2	1					1								
Avg.	2.5	1.25					1					1			

SYLLABUS

UNIT-1 ATOMIC AND MOLECULAR STRUCTURE (13 Hours)

Schrodinger's wave equation(no derivation), Significance of wave functions, Particle in a box, Application for conjugated molecule, Molecular Orbital theory and Energy level diagram for Diatomic molecules, Spectroscopic techniques and applications: Electronics spectroscopy, Vibrational and rotational spectroscopy of diatomic molecules.

UNIT-2 WATER CHEMISTRY (13 Hours)

Types of Hardness, Determination of Hardness by EDTA method, Treatment of water for Domestic use, Water softening processes Lime-soda process, Ion Exchange method, Boiler feed water, Scale and Sludge, Caustic embrittlement, Carbonate and phosphate conditioning, Colloidal conditioning, Calgon conditioning.

UNIT-3 CORROSION (10Hours)

Thermodynamic functions: Entropy, Free energy, Relation between E.M.F and free energy, The Nernst's equation and application, Definition of corrosion, Types of corrosion: Dry corrosion and wet corrosion, Galvanic corrosion, Concentration cell corrosion, Factors influencing corrosion, Corrosion control: Cathodic protection (Sacrificial anodic protection and Impressed current cathodic protection), Inhibitors, Protective coatings: Galvanization and Tinning.

UNIT-4 POLYMER CHEMISTRY (12 Hours)

Introduction, polymer, Classification of polymers, Plastics: Thermosetting and thermo plastic, PVC, PE, PS, PMMA, PTFE, Bakelite,Nylon-6,6,Nylon-6, Fiber reinforced plastic.*ADD-ON COURSES: Conducting Polymer (Polyaniline, Polyacetylene), Bio-Degradable and Non-Bio Degradable polymer, Nano composite.

Text Books:

1. *Engineering chemistry by Jain & Jain, Dhanpat Rai publishing company (p) Ltd.*

Reference books:

1. *A Text Book of Engineering Chemistry by S.S.Dara, S Chand Publishers.*
2. *A Text Book of Engineering Chemistry by SashiChawla, Dhanpat Rai Publishing house.*
3. *Text Book of Engineering Chemistry, 2nd edition, by R.Gopalan, D.Venkapaya & Sulochana Nagarajan, Vikas Publishing House Pvt. Ltd.*
4. *B. Tech Chemistry- I and II by P. K. Kar, S. Dash, B. Mishra kalyani publishers.*
5. *Physical Chemistry By P.W Atkins*
6. *Engineering Chemistry(NPTEL Web Book) by B . L Tembe, Kamaluddin and M.S. Krishna*
7. *Fundamentals of Molecular spectroscopy By C . N Banwell8. University chemistry by B.H. Mahan*

Title of the subject						
Subject Code	**Basics Of Mechanics**	**L**	**T**	**P**	**C**	**QP**
BBSES 1031		**3**	**0**	**0**	**3**	**A**

Pre Requisite: Physics and Mathematics

Course Educational Objective

CEO1: To apply the established engineering method to complex engineering problem.

CEO2: To understand the vectorial and scalar representation of forces and moments.

CEO3: To evaluate the different forces exhibit in truss member.

CEO4: To obtain the knowledge on kinematics and kinetics of particle to analyze simple and practical problems

Course outcomes: At the end of the course, the student will be able to:

CO1: **Determine** the resultant force and moment for given force system.

CO2: **Evaluate** the forces in members of trusses, frames and problems related to friction.

CO3: **Analyze** the properties of surface in relation to centroid and moment of inertia

CO4: **Adapt** the laws of motion, kinematics of motion and their interrelationship

COs	**CO-PO & PSO Mapping**													
	PROGRAMME OUTCOMES												**PSOs**	
COs	1	2	3	4	5	6	7	8	9	10	11	12	1	2
CO1	3	2												
CO2	3	3												
CO3	3	3												
CO4	3	3												

SYLLABUS

UNIT:1 **[16 Hours]**

STATICS OF PARTICLES

Fundamental concepts and principles of engineering mechanics. Resolution of forces Resultant of several concurrent forces Free body diagram. Principles of transmissibility. Moment of a force Varignon's theorem Equivalent system of forces Types of supports and corresponding reactions.

UNIT:2 **[12 Hours]**

ANALYSIS OF TRUSSES AND FRICTION

Introduction to Truss Analysis of Trusses Method of joints, Method of sections. Laws of Friction Angle of Friction Angle of Repose Ladder and Wedge Friction

UNIT:3 **[12 Hours]**

PROPERTIES OF SURFACES

Determination of first moment area of plane figures by integration – Determination of centroid of composite figures by using standard formula.Determination of second moment area of plane figures by integration Parallel and perpendicular axis theorems Determination of area moment of inertia of composite figures by using standard formula Polar moment of inertia Radius of gyration.

UNIT:4 **[10 Hours]**

DYNAMICS OF PARTICLES

Rectilinear motion: uniform velocity and uniformly accelerated motion Newton second law D'Alembert's principle and its applications work and energy equation Impulse and Momentum Impact of elastic bodies.

Teaching Methods: Chalk& Board

Text Books:

1. Timoshenko, and Young, "Engineering Mechanics", Tata Mc Graw Hill Book
2. S. S. Bhavikatti, "Engineering Mechanics", New Age International

Ref. Books:

1. Dr. Bansal.R.K, & Sanjay Bansal, "A Text book of Engineering Mechanics", Lakshmi publications.
2. A.K.Tayal, "Engineering Mechanics Statics And Dynamics", Umesh Publications
3. Rajasekaran.S, & Sankarasubramanian.G, "Engineering Mechanics", Vikas Publishing House Pvt Ltd, 2011
4. Engineering Mechanics, (3ed edition) by Statics and Dynamics K.Vijaya Kumar Reddy and J Suresh Kumar, BS Publications.

Title of the subject						
Subject Code	**Basics of Thermodynamics**	**L**	**T**	**P**	**C**	**QP**
BBSES 1032		**3**	**0**	**0**	**3**	**A**

Pre Requisite: Physics, Chemistry and Mathematics

Course Educational Objective

CEO1: Learn to classify the fundamentals of thermodynamics like pressure, temperature etc.

CEO2: Apply principle and law of thermodynamics to analysis of different systems

CEO3: Become aware of relevance of environmental and social issues on the analysis process of systems.

CEO4: To understand the basics of properties of pure substance like steam and its conditions and Application of Thermodynamics in engineering practices

Course Outcome

CO1: Explain the basic concepts of system, control volume, thermodynamic properties, thermodynamic equilibrium, temperature, work and heat energy.

CO2: Apply the laws of thermodynamics to refrigerators, heat engines, heat pumps compressors and nozzles etc.

CO3: Interpret and apply the concept of entropy to thermodynamic systems

CO4: Evaluate properties of pure substances, gases and their mixtures and to derive and apply to thermodynamic problems.

COs	**CO-PO & PSO Mapping**													
	PROGRAMME OUTCOMES												**PSOs**	
COs	1	2	3	4	5	6	7	8	9	10	11	12	1	2
CO1	3	3	2											
CO2	3	3	3											
CO3		2	2											
CO4	3	3	3											

SYLLABUS

UNIT 1 **(15 Hours)**

Basic concepts & definition, scope of thermodynamics. Macroscopic & microscopic approach. Definition of fixed mass (closed) system & control volume (open) system, isolated system. Thermodynamic properties (extensive & intensive), state & its representation on a property diagram, process and its representation, cyclic process Characteristics of properties (point & path function), reversible & irreversible process, Quasistatic Process. Thermodynamic equilibrium. Pressure, Types of pressure, Zeroth law of thermodynamics & temperature scales, calibration of thermometers. Ideal gasses & their P V T relation. Energy transfer; Work transfer(definition & calculation), different modes of work Displacement work for various process, Free expansion work, Heat transfer; modes of heat transfer, basic laws in conduction, convection & radiation.

UNIT 2 **(13 Hours)**

First law of thermodynamics, formal statement (using cyclic process) first law for processes of fixed masses (closed system) Introduction of internal energy, enthalpy as thermodynamic properties Definition of sp.heats (C_p & C_v) and their use in calculation of internal energy & enthalpy with emphasis on ideal gas. Application of first law to control volume (Steady Flow); nozzle, diffuser, compressor, turbine, throttling device.

UNIT 3 **(12 Hours)**

Second law of thermodynamics, Kelvin Planck & Clausius statements, Carnot cycle. Reversible & irreversible engines and their efficiency (Thermal and maximum Efficiency)Entropy concepts, Clausius inequality, Entropy Principle.

UNIT IV **(10 Hours)**

Properties of pure substance, P v, T s, h s diagram for steam , Steam properties, Introduction to steam table with respect to specific volume, pressure, temperature, enthalpy & entropy, Mollier Diagram. Application of thermodynamics: Steam power plant, Refrigerators and Heat Pump, I C Engines (working principle with schematic diagrams only)

Teaching Methods: Chalk& Board/ PPT/Video Lectures/Lecture by Industry Expert/MOOCS

Text Books:

1. *Engineering Thermodynamics by P.K.Nag, Publisher: TMH*
2. *Basic Engineering Thermodynamics by D S Kumar, Publisher: S K Kataria & Sons New Delhi.*

Ref. Books:

1. *Fundamental of Engineering Thermodynamics by E. Rathakrishnan, publisher. PHI*
2. *Thermodynamics: An Engineering Approach by Yunus A. Cengel, Michael A. Boles Publisher: Mcgraw Hill Education*
3. *Thermal engineering by R.K.Rajput, Laxmi Publications Pvt. Ltd.*
4. *Steam Tables in SI Units by K. Ramalingam, Scitech Publications (P) Ltd.*

Title of the subject						
Subject Code	**Basics of Electronics**	**L**	**T**	**P**	**C**	**QP**
BBSES 1041		**3**	**0**	**0**	**3**	**A**

Pre-requisites *(if any)*:

Course Educational Objectives

CEO1: Identify the basic tools and test equipment used to construct, troubleshoot, and maintain standard electronic circuits and systems.

CEO3: Explain the construction and application of standard circuit configurations and identify the component types and connections used to build functioning electronic circuits.

CEO1: Design simple combinational and sequential logic circuits

CEO4 : Identify functions of digital multimeter, cathode ray oscilloscope and transducers in the measurement of physical variables

Course Outcomes

At the end of this course students will be able to demonstrate the ability to

CO1: Recognize different components such as transistors, resistors, capacitors and diodes which fit on a small chip with each leg of the chip connecting to a point within the circuit.

CO2: Apply modern modelling software for drafting different electronic circuits.

CO3: Analyze modern electronic circuits and systems.

CO4: Formulate mathematical descriptions and procedures in designing new electronic systems and technically present

COs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	2	2	1	-	-	-	-	-	-	-	-	-
CO2	1	2	-	-	-	-	-	-	-	-	-	-
CO3	1	2	-	-	-	-	-	-	-	-	-	-
CO4	1	2	3	-	-	-	-	-	-	-	-	-
Avg.	1.25	2	2	-	-	-	-	-	-	-	-	-

UNIT-1

Semiconductor Devices:- Classification of material, Energy band diagram, properties of semiconductors, Types of semiconductors, Semiconductor diode (no bias, forward, reverse),temperature effects, diode equivalent circuit, zener diode, LED , Half wave rectifier, full wave rectifier, clippers ,clampers.

UNIT-2

Bipolar Junction Transistors (BJTs):- Introduction, transistor operation, Simplified structure and physical operation of n-p-n and p-n-p transistors in the active region, Common–Base configuration, Common–emitter configuration, Common-collector configuration Current-voltage characteristics of BJT, BJT as an amplifier and as a switch.**Field Effect Transistors (FETs):-** Introduction, construction and characteristics of JFETs, transfer characteristics, D-MOSFET, E –MOSFET.

UNIT-3

Communication Systems: -Analog and digital signals, block diagram of basic communication system, need for modulation, methods of modulation,AM/FM transmitters & receivers (Block diagram description only)

Electronic Instruments:- Basic principle of Oscilloscope, Function of the sweep generator, Block diagrams of oscilloscope, Measurement of frequency and phase by Lissajous method, Application of oscilloscope for measurement of voltage, period and frequency, Block diagram of standard signal generator, AF sine and square wave generator, and Function generator.

UNIT-4

Digital Systems and Binary Numbers:-Digital systems, Binary numbers, number system conversion, octal &hexa decimal number, 1's& 2's compliments, signed binary numbers, binary codes, binary logic.

Logic Gates and Boolean Algebra:- The inverter, The AND, OR, NAND NOR, Exclusive-OR and Exclusive-NOR gate, Boolean operations and expressions, Laws and Rules of Boolean algebra, DeMorgan's theorem, Boolean analysis of logic circuits, Standard forms of Boolean expressions, Boolean expression and truth table Combinational Logic and Their Functions: Basic combinational logic circuits, Implementation of combinational logic, The universal properties of NAND and NOR gates, Basic adders

Teaching Methods: *Chalk& Board/ PPT/Video Lectures/Lecture by Industry Expert/MOOCS*

Text Books:

1. *Electronic Devices (Seventh Edition), Thomas L. Floyd, Pearson Education, 482 FIE, Patparganj, Delhi – 110 092 (Selected Portions).*
2. *Digital Fundamentals (Eighth Edition), Thomas L. Floyd and R.P. Jain, Pearson Education, 482 FIE, Patparganj, Delhi – 110 092.*
3. *Electronic Instrumentation, H.S. Kalsi, Tata McGraw-Hill Publishing Company Limited, New Delhi.*

Reference Books:

1. *Microelectronic Circuits (Fifth Edition), Adel S. Sedra and Kenneth C. Smith, Oxford University Press, YMCA Library Building Jai Singh Road, New Delhi – 110 001.*
2. *Electronic Devices and Circuit Theory (Ninth Edition), Robert L. Boylestad and Louis Nashelsky, Pearson Education, 482 FIE, Patparganj, Delhi – 110 092.*
3. *Electronics Principles (7th Edition), Albert Malvono and David J. Bates, Tata McGraw-Hill Publishing Company Limited, New Delhi.*

Title of the subject						
Subject Code	**Basics of Electrical Engineering**	**L**	**T**	**P**	**C**	**QP**
BBSES 1042		**3**			**3**	**A**

Pre -Requisite:

Course Educational Objective

CEO1: Impart a basic knowledge of electrical quantities such as current, voltage, power, energy and frequency to understand the impact of technology in a global and societal context.

CEO2: This course provides comprehensive idea about DC & AC circuit analysis, magnetic circuit analysis, working principles of machines and common measuring instruments.

CEO3: Emphasize the effects of electric shock and precautionary measures. Improve the ability to function on multi-disciplinary teams.

Course Outcome : ***Upon successful completion of this course, students should be able to:***

CO1: Understand basics of Electrical Engineering and to solve complex electrical networks mathematically

CO2: Demonstrate basic laws and techniques to develop a working knowledge of the network theorems of analysis used.

CO3: Understand elementary knowledge of electromagnetism

CO4: Differentiate between DC and AC circuits and analyse them

CO5: Understand the elementary knowledge of Electrical machines

CO6: Extrapolate on basic laws and techniques to develop a working knowledge on generating stations and measuring instruments

COs	**CO-PO & PSO Mapping**														
	PROGRAMME OUTCOMES												**PSOs**		
COs	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3
CO1	2	1											2	-	
CO2	3	2											2		
CO3	3	2											2		
CO4	3	3											2		
CO5	2	2											2		
CO6	2	1											1		
Avg.	2.6	2											1.33		

SYLLABUS

Unit – I : DC Circuits (8 hours)

Electrical circuit elements (R, L and C), voltage and current sources, Kirchoff current and voltage laws, analysis of simple circuits with dc excitation. Superposition, Thevenin and Norton Theorems. Time-domain analysis of first-order RL and RC circuits.

Unit - II: AC Circuits (8 hours)

Representation of sinusoidal waveforms, peak and rms values, phasor representation, real power, reactive power, apparent power, power factor. Analysis of single-phase ac circuits consisting of R, L, C, RL, RC, RLC combinations (series and parallel), resonance. Three phase balanced circuits, voltage and current relations in star and delta connections.

Unit – III: Transformers (6 hours)

Magnetic materials, BH characteristics, ideal and practical transformer, equivalent circuit, losses in transformers, regulation and efficiency. Auto-transformer and three-phase transformer connections.

Unit – IV: Electrical Machines (8 hours)

Generation of rotating magnetic fields, Construction and working of a three-phase induction motor, Significance of torque-slip characteristic. Loss components and efficiency, starting and speed control of induction motor. Single-phase induction motor. Construction, working, torque-speed characteristic and speed control of separately excited dc motor. Construction and working of synchronous generators.

Unit – V: Power Converters (6 hours)

DC-DC buck and boost converters, duty ratio control. Single-phase and three-phase voltage source inverters; sinusoidal modulation.

Unit – VI: Electrical Installations (6 hours)

Components of LT Switchgear: Switch Fuse Unit (SFU), MCB, ELCB, MCCB, Types of Wires and Cables, Earthing. Types of Batteries, Important Characteristics for Batteries. Elementary calculations for energy consumption, power factor improvement and battery backup.

Text Books &Reference Books:

1. *D. P. Kothari and I. J. Nagrath, "Basic Electrical Engineering", Tata McGraw Hill,2010.*
2. *D. C. Kulshreshtha, "Basic Electrical Engineering", McGraw Hill, 2009.*
3. *L. S. Bobrow, "Fundamentals of Electrical Engineering", Oxford University Press,2011.*
4. *E. Hughes, "Electrical and Electronics Technology", Pearson, 2010.*
5. *V. D. Toro, "Electrical Engineering Fundamentals", Prentice Hall India, 1989.*

Title of the subject						
Subject Code	**Programming for Problem Solving**	**L**	**T**	**P**	**C**	**QP**
BBSES 1050		**3**	**0**	**0**	**3**	**A**

Course Educational Objective

CEO1: To formulate algorithm, translate into program and then execute the programs for verifying its correctness.

CEO2: To analyze a problem for knowing its efficiency and decompose it into functions using divide and conquer approach.

Course Outcome: Upon successful completin of this course, students should be able to:

CO1: To formulate simple algorithms for arithmetic and logical problems and translate into programs.

CO2: To develop programs, understand and analyze its complexity.

CO3: To understand and develop programs using functions and recursions

CO4: To develop programs using pointers and structures and understand their functionality.

CO-PO & PSO Mapping

COs	PROGRAMME OUTCOMES												PSOs		
	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3
CO1	3	2	1												
CO2	3	3	2												
CO3	3	3	2												
CO4	3	3	2												
Avg.															

SYLLABUS

UNIT- I **(11 Hours)**

Introduction to Programming: Introduction to components of a computer system (disks, memory, processor, where a program is stored and executed, operating system, compilers etc.)Idea of Algorithm: Steps to solve logical and numerical problems. Representation of Algorithm: Flowchart/Pseudo-code with examples.From algorithms to programs; source code, variables (with data types) variables and memorylocations, Syntax and Logical Errors in compilation, object and executable codeArithmetic expressions and precedence. Conditional Branching. Writing and evaluation of conditionals and consequent branching.

UNIT- II **(11 Hours)**

Loops: writing programs and evaluation of loopswhile, do-while and for loop, break, continue, nested loop

Arrays: Arrays (1-D, 2-D)Basic Algorithms: Searching, Basic Sorting Algorithms (Bubble, Insertion and Selection), Finding roots of equations, notion of order of complexity through example programs (no formal definition required)

UNIT- III **(11 Hours)**

Character arrays and Strings: String handling operations, programs on strings, string handling functions. **Functions:** Functions (including using built in libraries), Parameter passing in functions, call by value, Passing arrays to functions: idea of call by reference.

Recursion: Recursion, as a different way of solving problems. Example programs, such as Finding Factorial, Fibonacci series

UNIT- IV **(11 Hours)**

Pointers: Idea of pointers, Defining pointers, dynamic memory allocation, Use of Pointers in self-referential structures, notion of linked list (no implementation)

Structure: Structures, Defining structures and Array of Structures.

Teaching Methods: Chalk& Board/ PPT

T*ext Books:*

1. *Byron Gottfried, Schaum's Outline of Programming with C, McGraw-Hill*
2. *E. Balaguruswamy, Programming in ANSI C, Tata McGraw-Hill.*

References:

1. *Brian W. Kernighan and Dennis M. Ritchie, The C Programming Language, PrenticeHall of India.*

Title of the subject						
Subject Code	**Communicative Enghlish and Soft Skills**	**L**	**T**	**P**	**C**	**QP**
BBSHS 1060		**2**	**0**	**0**	**2**	**A**

Course Educational Objective

CEO1: To promote communication skills and soft skills.

CEO2: To enhance the employability and entrepreneurial skills

CEO3: To motivate the students to participate in group discussions without stage fear

Course Outcome: Towards the end of the course, the students will be able to:

CO1: Understand the importance of effective communication for professional development

CO2: Application of vocabulary and grammar for effective communication.

CO3: Application of Information and Communication Technology(ICT) for career development

CO4: Nurture and motivate positive attitude towards placements.

CO-PO & PSO Mapping

COs	PROGRAMME OUTCOMES												PSOs		
	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3
CO1								1		3					
CO2										1		2			
CO3								2			3				
CO4									3			1			
Avg.															

SYLLABUS

UNIT -1 Importance of English for Communication in the 21st Century (9 hours)

1.1 Role of English in enhancing employability and entrepreneurial skills

1.2 The Nature and Scope of Communication

1.3 Objectives of Communication: Information, advice, suggestion, order, motivation, persuasion, warning, negotiation, decision-making, etc. through English Language skills, i.e., LSRW skills

1.4 The process of communication and factors that influence communication: Sender, receiver, channel, code, topic, message, context, feedback, noise, filters and barriers (steps such as Ideation, Encoding, Transmission, Decoding, etc. need to be dealt with); Audience and purpose 1.5 Types of Communication: General and Professional Communication; Formal and Informal Communication; Verbal and Non-verbal communication; Intrapersonal and Interpersonal communication; Written communication and Spoken communication.

UNIT -2. English Vocabulary, Grammar & Usage (8 hours)

2.1 Synonyms and Antonyms

2.2 Words often confused

2.3 Technical terms and one word substitutes

2.4 Idioms and Phrasal Verbs

2.5 Identify common errors in English.

2.6 Communicative use of the Passive Voice

2.7 Difference between American, British and Indian English (Vocabulary based)

UNIT- 3. Introduction to Corporate Communication (10 hours)

3.1 Seven C's communication

3.2. Ten C's of Non-communication.

3.3 Corporate Communication – Direction of Communication: Downward Communication, Upward Communication, Horizontal/Lateral Communication, Diagonal Communication

3.4 Communication challenges in today's work place: Advances in technology; culturally diverse workforce; Team-based organizational Settings; how to overcome these challenges

3.5 Information and Communication Technology (ICT) and the corporate world, Power point presentation using multimedia; Internet and Intranet; Fax; Teleconferencing; Videoconferencing;

3.6 Corporate/Business etiquette: Good listening skills, proper dressing and grooming; proper handshake, mobile etiquette, table manners

UNIT- 4 Soft skills Development. (9 hours)

4. 1 Importance of soft skills in personal and professional life

4.2 Are we hardwired for success?

4.3 Importance of developing a positive attitude

4.4 Leadership skills.

4.5 Teamsmanship.

4.6. Lateral thinking

4.7 Emotional Intelligence.

Text Books:

1. *An Introduction to Professional English and Soft Skills by B. K. Das et al., Cambridge University Press.*
2. *Communicative English for Engineers and Professionals by Nitin Bhatnagar and Mamta Bhatnagar. Published by DK/Pearson.*
3. *Practical English Usage. Michael Swan, OUP,1995.*

Reference Books:

1. *Technical Communication, Principle and Practice by Meenakshi Raman & Sangeeta Sharma, Oxford University Press*
2. *Business Communication Today by Bovee, Courtland L., Thill, John V. Prentice Hall.*
3. *The Ace of Soft Skills: Attitude, Communication and Etiquette for Success by Gopalaswamy Ramesh and Mahadevan Ramesh. Pearson.*
4. *Oxford Guide to English Grammar by John Easthood. Oxford University Press.*
5. *365 Ways to Change Your World by Norman Vincent Peale by Orient Paperbacks.*

Name of the Lab						
Subject Code	**Engineering Physics Laboratory**	**L**	**T**	**P**	**C**	**QP**
BBSBS 1120		**0**	**0**	**2**	**1**	

Course Educational Objective

CEO1: Providing fundamental information on basic instruments and their uses.

CEO2: To familiarize with different apparatus and applications to different experiments.

Course Outcome: *Upon Successful completion of this course, students should be able to:*

CO1: Understand the concepts of oscillation and waves through experimental observation.

CO2: Study and explain the experimental observation of interference and diffraction pattern

CO3: Interpret the fundamental characteristics of various materials and semiconductor materials through experiments

CO4: Analyze the quantum concept of light by experimental observation.

CO-PO & PSO Mapping

COs	PROGRAMME OUTCOMES												PSOs		
	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3
CO1	2		1	1											
CO2	2		1	1											
CO3	2		1	1											
CO4	2		1	2											
Avg.	2			1.25											

SYLLABUS

List of Experiments:

1. Study of frequency of an electric tuning fork by meld's experiment.
2. Study of the acceleration due to gravity by using Bar/Kater's pendulum.
3. Study of the law of transverse vibration by using sonometer.
4. Study of wavelength of light by Newton's Rings apparatus.
5. Study of wavelength of light by Fresenel's bi-prism/Michelson inter ferometer.
6. Study of grating element of a plane diffraction grating.
7. Study of double slit interface due to He-Ne laser.
8. Study of monochromaticity and divergence of the given laser beam
9. Study of reflection and total internal reflection by optical fibers
10. Study of Hall-coefficient of a semiconductor
11. Study of dielectric constant of given solid by Leacher wire method.
12. Study of the resistivity of a semiconductor with temperature by four- probe method.
13. Study of band gap energy of PN junction (Ge/Si) diode.
14. Study of plank's constant using photo-voltaic cell.
15. Study of B-H curve of ferromagnetic substance.
16. Study of magnetic susceptibility of solods.

Name of the lab						
Subject Code	**Engineering Chemistry Laboratory**	**L**	**T**	**P**	**C**	**QP**
BBSBS 1121		**0**	**0**	**2**	**1**	

Course Educational Objective

CEO: To train the students about the applications of chemical sciences in the field of engineering and technology

Course Outcome: *Towards the end of the course, the students will be able to:*

CO1: Understand the basic methods of chemical analysis and instrumentations involved

CO2: Standardize of Chemicals

CO3: Estimate the hardness, ions in salts and compositions in ores estimation appropriate consideration for the public health and safety and environmental consideration.

CO4: Synthesizes the drugs and know about their applications

CO-PO & PSO Mapping

COs	PROGRAMME OUTCOMES												PSOs		
	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3
CO1	1		1	2											
CO2	1		2	2											
CO3			2	2			1								
CO4	1		1									3			
Avg.	0.75		1.5	1.5			0.25					7.5			

LAB EXPERIMENTS

1. Determination of amount of OH^- and CO_3^{2-}present in supplied water sample.
2. Determination of total hardness of water.
3. Standardization of $KMnO_4$ using sodium oxalate.
4. Determination of ferrous ion in Mohr's salt by standardized $KMnO_4$.
5. Determination of percentage of dissolved oxygen in given water sample.
6. Estimation of available chlorine in bleaching powder/ chloride content.
7. Determination of rate constant of acid catalyzed hydrolysis of ester.
8. Preparation of drug (aspirin).
9. Adsorption of acetic acid by charcoal.
10. Acid value of oil.
11. Determination of strength of HCl and CH_3COOH acid from the mixture of acids using NaOH by Conductrometry.
12. Determination moisture and ash content of coal.
13. Determination of partition coefficient of iodine in benzene and water.
14. Preparation and determination of pH of buffer solution.
15. Determinationof viscosity of supplied sample.

Title of the subject						
Subject Code	**Basics of Electronics Laboratory**	**L**	**T**	**P**	**C**	**QP**
BBSES 1141		**0**	**0**	**2**	**1**	**-**

Pre-requisites *(if any)*:

Course Educational Objectives

CEO1: To provide students engineering skills by way of breadboard circuit design with electronic devices and components.

CEO2: To design and analyze various Electronic circuits such as multivibrators, applications of operational amplifiers, RC coupled amplifiers, oscillators, digital circuits etc. so that students are able to understand the practical aspects of basic electronics theory.

CEO3: To enable the students to simulate and test the Analog, Digital and mixed Electronics circuits .

Course Outcomes

At the end of this course students will be able to demonstrate the ability to

CO1: Generate sine, square and triangular waveforms with required frequency & amplitude using function generator.

CO2: Demonstrate introductory knowledge of software for schematic capture, circuit simulation, and circuit board layout.

CO3: Analyze the characteristics of different electronic devices and circuits such as diodes, transistors, rectifiers, amplifiers etc.,

CO4: Plan new electronic systems and technically present them

EXPERIMENTS: 1 Familiarization of electronic components and devices (Testing of semiconductor diodes and transistors using digital multi meter)

EXPERIMENTS: 2 Study and use of Oscilloscope, signal generator to view waveforms and measure amplitude and frequency of a given waveform.

EXPERIMENTS: 3 V-I characteristics of semiconductor diode

EXPERIMENTS: 4 Studies on half-wave and full-wave rectifier circuits without and with capacitor filter; recording of the waveforms and measurement of average and rms values of the rectifier output.

EXPERIMENTS: 5 Studies on clipper circuit.

EXPERIMENTS: 6 Studies on clamper circuit.

EXPERIMENTS: 7 V-I characteristic of an n-p-n or p-n-p transistor, DC biasing the transistor in common-emitter configuration and determination of its operating point (i.e., various voltages and currents).

EXPERIMENTS: 8 MOSFET I-V characteristics

EXPERIMENTS: 9 Studies on Logic gates (Truth table verification of various gates).

EXPERIMENTS: 10 Studies and experiments using ADDER CIRCUITS ICs

Name of the Lab						
Subject Code	**Basics of Electrical Engineering Laboratory**	**L**	**T**	**P**	**C**	**QP**
BBSES 1141		**0**	**0**	**2**	**1**	

Course Outcome: *Towards the end of the course, the students will be able to:*

CO1: Illustrate the transformers and single-phase motors constructional features

CO2: Analyse various electrical quantities with combination of loads

CO3: Examine the characteristics of AC and DC machines

CO4: Distinguish the methods of speed control of DC motors

CO-PO & PSO Mapping

COs	PROGRAMME OUTCOMES												PSOs		
	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3
CO1		1	1 2												
CO2		2	2												
CO3		1	2												
CO4		2	2												
Avg.		1.5	2												

SYLLABUS

List of experiments/demonstrations:

1. Basic safety precautions. Introduction and use of measuring instruments – voltmeter, ammeter, multi-meter, oscilloscope. Real-life resistors, capacitors and inductors.
2. Measuring the steady-state and transient time-response of R-L, R-C, and R-L-C circuits to a step change in voltage (transient may be observed on a storage oscilloscope).
3. Sinusoidal steady state response of R-L, and R-C circuits – impedance calculation and verification. Observation of phase differences between current and voltage. Resonance in R-L-C circuits.
4. Transformers: Observation of the no-load current waveform on an oscilloscope (non sinusoidal wave-shape due to B-H curve nonlinearity should be shown along with a discussion about harmonics).
5. Loading of a transformer: measurement of primary and secondary voltages and currents, and power.
6. Three-phase transformers: Star and Delta connections. Voltage and Current relationships (line-line voltage, phase-to-neutral voltage, line and phase currents).
7. Phase-shifts between the primary and secondary side. Cumulative three-phase power in balanced three-phase circuits.
8. Demonstration of cut-out sections of machines: DC machine (commutator- brush arrangement), induction machine (squirrel cage rotor), synchronous machine (field winging - slip ring arrangement) and single-phase induction machine.
9. Torque Speed Characteristic of separately excited dc motor.
10. Synchronous speed of two and four-pole, three-phase induction motors. Direction reversal by change of phase-sequence of connections.
11. Torque-Slip Characteristic of an induction motor.
12. Generator operation of an induction machine driven at super synchronous speed.
13. Synchronous Machine operating as a generator: stand-alone operation with a load Control of voltage through field excitation.
14. Demonstration of (a) dc-dc converters (b) dc-ac converters – PWM waveform (c) the use of dc-ac converter for speed control of an induction motor and (d) Components of LT switchgear.

Title of the subject						
Subject Code	**Programming for Problem Solving Laboratory**	**L**	**T**	**P**	**C**	**QP**
BBSES 1150		**3**	**0**	**0**	**3**	**A**

Course Educational Objective

CEO1: To develop programs for problems on different applications of array, functions, pointers and structure.

CEO2: To analyze different problems by comparing and implementing in programming.

Course Outcome: Upon successful completion of this course, students should be able to:

CO1: To understand operating system and its simple commands, writing programs, compilation, debug and execution process.

CO2: To develop programs using loop controls, arrays and understand the complexity using different programs.

CO3: To develop programs using functions and recursive function by decomposing a problem and analyze them.

CO4: To understand numerical problems, develop programs using pointers , structures and understand their functionality.

CO-PO & PSO Mapping

COs	PROGRAMME OUTCOMES												PSOs		
	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3
CO1	3	2	2	1											
CO2	3	3	3												
CO3	3	3	3	1											
CO4	3	3	3												
Avg.															

SYLLABUS

Tutorial 1: Problem solving using computers:

Lab1: Familiarization with programming environment

1) Introduction to OS: Before starting experiments explain the facilities and operations of OS.
2) Introduction to the C compiler, Compilation and Execution Process & writing simple programs.

Tutorial 2: Variable types and type conversions:

Lab 2: Simple computational problems using arithmetic expressions

1) WAP to input radius of a circle and Find the area, perimeter of it.
2) WAP to input two numbers and swap them without using intermediate variable.
3) Write a program to accept Fahrenheit and calculate its equivalent Celsius.

Tutorial 2: Variable types and type conversions:

Lab 2: Simple computational problems using arithmetic expressions

1) Write a program to input principle amount, no. of terms and rate of interest. Find simple interest.
2) WAP to input three unequal numbers and find the greatest using conditional operator.
3) Write a program to input a float value and display its integer part & fractional part separately.

Tutorial 3: Branching and logical expressions:

Lab 3: Problems involving if-then-else structures

1) Write a program to find the real roots of a quadratic equation when three co-efficient values are given.
2) Write a program to input a lower case alphabet and test whether it is vowel or consonant.
3) Write a program to find the greatest among three numbers.

Tutorial 4: Loops, while and for loops:

Lab 4: Iterative problems e.g., sum of series

1) Write a program to generate Fibonacci series of N numbers.
2) Write a program to find the greatest common divider of two positive numbers given.
3) Write a program to accept a positive integer and test it for palindrome or not.
4) Write a program to calculate the following sum:
   Sum = 1-(x^2)/2! +(x^4)/4! – (x^6)/6! + (x^8)/8! – (x^10)/10!
5) Write a program to generate the following pyramid.

```
      1
    1 2 3
  1 2 3 4 5
1 2 3 4 5 6 7
```

Tutorial 5: 1D Arrays: searching, sorting:

Lab 5: 1D Array manipulation

1) Write a program to accept 10 integers in to an array and find largest and smallest integers present in them.
2) Write a program to apply binary search on an array having elements in sorted order.
3) Write a program to accept 10 numbers in to an array and sort it using insertion sort in ascending order.

Tutorial 6: 2D arrays and Strings

Lab 6: Matrix problems, String operations

1) Write a program to input elements 4x4 matrix. Find the principal diagonal of them.
2) Write a program to input values into two matrices A(3x4), B(4x3). Perform matrix multiplication and display the resultant matrix.
3) Write a program to accept a string and test whether it is palindrome or not using string handling functions.

Tutorial 7: Functions, call by value:

Lab 7: Simple functions

1) Write a C program which contains three UDF's namely add(), subtract() and multiply(). Each function accepts two integers as their arguments and calculate and return the results
2) Write a program to create an UDF and test a number is prime or not.
3) Write a program to find the factorial of a given number using UDF.

Tutorial 8: Recursion, structure of recursive calls

Lab 8: Recursive functions

1) Write a program to find greatest common divisor of two integers using recursive functions.
2) Write a program to accept 10 elements into an integer array. Find the largest element present using recursive function.
3) Write a program to generate Fibonacci series using a recursive function.

Tutorial 9: Numerical methods (Root finding, numerical differentiation, numericalintegration):

Lab 9: Programming for solving Numerical methods problems

1) Write a program to implement Newton-Raphson Method.
2) Write a program to implement Euler's method.

Tutorial 10: Pointers, structures and dynamic memory allocation

Lab 10: Pointers and structures

1) Write a program to create user defined function called swap having two integer pointers as its arguments and it has no return value. Call this function using call-by-address.
2) Write a program to store 'n integers using dynamic memory allocation. Find the average value of the integers using a user defined function.
3) Write a program to input 11 cricket players' details using a structure array having member's player name, team name, batting average. Create a function which will display the player name whose batting average is >=30.
4) Write a program to create a structure for product having members like product code, price and quantity. Store N product details using dynamic memory and display them.

Teaching Methods: Chalk& Board/ PPT/Video Lecture

Text Books:

1. *Byron Gottfried, Schaum's Outline of Programming with C, McGraw-Hill*
2. *E. Balaguruswamy, Programming in ANSI C, Tata McGraw-Hill*

References:

1. *Brian W. Kernighan and Dennis M. Ritchie, The C Programming Language, PrenticeHall of India*

Title of the subject						
Subject Code	**Comunicative English and Soft Skills Laboratory**	**L**	**T**	**P**	**C**	**QP**
BBSHS 1160		**0**	**0**	**2**	**1**	

Course Educational Objective

CEO1: To develop the vocabulary and usage skills of students by practice.

CEO2: To develop the communication skills of the students, especially the Listening and Speaking skills.

CEO3: To enable students to participate in group discussions through proper listening and speaking.

CEO4: To enable students eliminate grammatical mistakes in speech and writing.

Course Outcome : *The Students will be able to:*

CO1: Build up a good range of vocabulary and know proper usage.

CO2: Become active listeners with good comprehension, participation, and evaluation.

CO3: Develop conversational and public speaking competencies.

CO4: Use grammar for effective speaking in GD and other formats of speaking.

CO5: Eliminate stage fear and disfluencies.

COs	**CO-PO & PSO Mapping**														
	PROGRAMME OUTCOMES												**PSOs**		
COs	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3
CO1										2					
CO2										2					
CO3										2					
CO4										2					
CO5										2					
CO6										2					
Avg.										2					

SYLLABUS

Phonetics & Listening Skills 16 hours = 8 classes [2 listening tests x 10 marks = 20 marks]

Vowels, diphthongs, consonants, consonant clusters; The International Phonetic Alphabet (IPA); phonemic transcription; Problem sounds; Syllable division and word stress; Sentence rhythm and weak forms; Contrastive stress in sentences to highlight different words; Intonation: falling, rising, and falling-rising tunes; Listening to Newspaper reading/Video, etc.

Listening with a focus on pronunciation (ear-training): segmental sounds, stress, weak forms, intonation & Listening for comprehension. Reading of English daily newspapers and self-development books be integrated listening and speaking activities.

Speaking skills 16 hours = 8 classes [4 speaking tests x 10 = 40 marks]

- Topics for 1 minute, 2 minutes, and 5 minutes speaking
- Pictures, Quotations, Attitude-testing Questions may be used.
- Summarizing/responding to handouts, articles, books, magazines and newspapers.
- Individual/Group presentations/discussion on given topics

Soft skills development 14 hours = 7 classes [4 assignments x 10 = 40 marks]

- Positive thinking (Teachers to engage game/activity-oriented classes)

Text/Reference Books:

1. *Form and Finesse, Business Communication and Soft skills by Shruti Das, Published by Orient Black Swan.*
2. *Business and Corporate Soft skills developed by Rai Tech. University (PDF available)*
3. *Spoken English (with CD). Sasikumar V and P V Dhamija. New Delhi: Tata McGraw-Hill Education Pvt. Ltd. (2nd Ed.)*

Title of the subject						
Subject Code	**Engineering Drawing**	**L**	**T**	**P**	**C**	**QP**
BBSES 1171		**0**	**0**	**2**	**1**	

Course Educational Objective

CEO1: To enable students to acquire and use engineering drawing skills as a means of accurately and clearly communicating ideas, information and instructions

CEO2: To enable students to acquire requisite knowledge, techniques and attitude required for advanced study of engineering drawing

Course outcomes: ***At the end of the course, the student will be able to:***

CO1 Demonstrate the views of different solid object.

CO2 Construct projection of plane surface and solids.

CO3 Develop Sections of various Solids surface.

CO4 Identify the projection in isometric scale.

COs	**CO-PO & PSO Mapping**													
	PROGRAMME OUTCOMES												**PSOs**	
COs	1	2	3	4	5	6	7	8	9	10	11	12	1	2
CO1	3			1						1	3			
CO2	1		1	3						2	1			
CO3				1						3				
CO4				1						3				

Unit - 1

1. **Introduction**: Introduction to Standards for Engineering Drawing practice, Line work and Dimensioning. **[1-Sheets]**
2. **Co ordinate system and reference planes:** Definitions of HP, VP, RPP & LPP. Selection of drawing size and scale. Representation of point and line. **[1-Sheets]**

Unit - 2

3. **Orthographic Projections :** Introduction, Definitions Planes of projection, reference line, Projections of points in all the four quadrants, Projections of straight lines (located in First quadrant/first angle only),True and apparent lengths, True and apparent inclinations to reference planes. **[1-Sheets]**
4. **Orthographic Projections of Plane Surfaces (First Angle Projection Only):** Introduction, Definitions– projections of plane surfaces–triangle, square, rectangle, hexagon and circle. **[1-Sheets]**
5. **Projections of Solids (First Angle Projection Only) :** Introduction, Definitions – Projections of right regular tetrahedron, hexahedron (cube), prisms, cylinders and cones in different positions. **[1-Sheets]**

Unit - 3

6. **Sections and Development of Lateral Surfaces of Solids :** Introduction, Section planes, Sections, Section views, Sectional views, Apparent shapes and True shapes of Sections of right regular prisms, pyramids, cylinders and cones resting with base on HP. **[2-Sheets]**

Unit 4

7. **Isometric Projection (Using Isometric Scale Only) :** Introduction, Isometric scale, Isometric projection of tetrahedron, cones and spheres. **[1-Sheets]**

Teaching Methods: Chalk& Board

TEXT BOOKS

1. *Engineering Drawing N.D. Bhatt & V.M. Panchal, Charotar Publishing House, Gujarat.*
2. *Computer Aided Engineering Drawing S. Trymbaka Murthy, I.K. International Publishing House Pvt. Ltd., New Delhi 1.*
3. *Engineering Drawing by N. S. Parthasarathy and Vela Murali Oxford University Press.*

Title of the subject						
Subject Code	**Engineering Workshop**	**L**	**T**	**P**	**C**	**QP**
BBSES 1172		**0**	**0**	**2**	**1**	

Course Educational Objective

CEO1: To enable students to work on different trades like Fitting, Carpentry, Black smithy etc… which makes the students to learn how various joints are made using wood and other metal pieces

CEO2: To familiarize with the basic manufacturing processes and to study the various tools and equipment used, hands on training is given in different sections

Course outcomes: ***At the end of the course, the student will be able to:***

CO1 **Explain** various safety precaution and use of various hand tools

CO2 **Demonstrate** the process configuration and basic mechanism of different machines like Lathe, Shaper and Milling machine.

CO3 **Identify** and **apply** suitable tools for machining processes including turning, thread cutting, facing, knurling and drilling.

CO4 Practice on manufacturing of components using workshop trades including fitting and welding

COs	**CO-PO & PSO Mapping**													
	PROGRAMME OUTCOMES												**PSOs**	
COs	1	2	3	4	5	6	7	8	9	10	11	12	1	2
CO1	2			2		1	1			1		1		
CO2	2			1						1		1		
CO3	1			1		1				1		1		
CO4	2			2						1		1		

Unit 1

1. **Safety Precaution:** To study the various Safety precautions in workshop.
2. **Fitting :**
   (i) Study of different hand tools and Machine tools used in fitting.
   (ii) Preparation of a male and female fitting job by using different hand tools.

Unit 2

3. **Machining:**
   (i) Study of various components and working principle of lathe machine
   (ii) Preparation of a cylindrical job by lathe (turning, Thread cutting, knurling)
   (iii) Study on Shaper and Milling Machine

Unit 3

4. **Welding Practice :**
   (i) Hand on practice on Electric Arc Welding to prepare Lap Joint, Butt Joint, T Joint and Corner Joint .
   (ii) Study of Oxyacetylene Gas welding and Gas cutting.

Teaching Methods: Chalk & Board, Hands on practice.

Reference Books:

1. Elements of Workshop Technology, Vol. I and II by Hajra choudhary, Khanna Publishers
2. Workshop Technology by WAJ Chapman, Viva Books
3. Workshop Manual by Kannaiah / Narayana, Scitech Publicaitons(P) Ltd.

Title of the subject						
Subject Code	**Engineering Mathematics-II**	**L**	**T**	**P**	**C**	**QP**
BBSBS 2011		**3**	**1**	**0**	**4**	

Course Educational Objectives

CEO1: To know about laplace and fourier transform.

CEO2: To calculate the gradients and directional derivatives of functions of several variables

CEO3: To introduce the concept of Vector differentiation and integration that finds applications in various fields like solid mechanics, fluid flow, heat problems and potential theory

Course Outcomes-*Towards the end of the course the students will be able*

CO1 To Solve Ordinary differential and integral equation by using Laplace transform.

CO2 To execute the technique of Fourier Integral and transform for learning in advanced Engineering Mathematics.

CO3 To relate gradient,curl and divergence and its application in fluid dynamics.

CO4 To evaluate multiple integrals by using Green's, Stokes' and divergence theorem to give physical interpretation of the curl and divergence of a vector field .

COs	**CO-PO & PSO Mapping**														
	PROGRAMME OUTCOMES												**PSOs**		
COs	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3
CO1	3	2													
CO2	2	3													
CO3	1	3													
CO4	2	3													
Avg.	2	2.75													

SYLLABUS

UNIT - I **(07 Hours)**

INTRODUCTION OF PARTIAL DIFFERENTIAL EQUATIONS:

Formation of Partial differential equations, Linear partial differential equation of first order: Lagrange's linear differential equation, Non-Linear partial differential equation of first order by Charpit's method.

UNIT-II **(20 Hours)**

Laplace Transforms:

Definition, existence of Laplace Transforms, Properties of Laplace Transforms, Evaluation of integrals by Laplace Transforms, Inverse transforms, convolution theorem, transforms of unit step function, unit impulse function, periodic function. Simple application to ordinary differential equations by Laplace Transform method, Definition of Fourier Integral and Fourier transform

UNIT - III **(10 Hours)**

Vector differential calculus:

vector and scalar functions and fields, Derivatives, Curves, tangents and arc Length, gradient, divergence, curl and their simple application.

UNIT – IV **(13 Hours)**

Vector integral calculus:

Definition and evaluation of double integration and triple integration, Evaluation of line integral, Surface integral and volume integral and their applications, Transformations theorems- Green's Theorem in plane , Stoke's Theorem,Gauss Divergence Theorem and their applications.

Prescribed Books

1. *Advanced Engineering Mathematics by E. Kreyszig, John Willey & Sons Inc. 10th Edition*

References:

1. *Higher Engineering Mathematics by B. V. Ramana , Mc Graw Hill Education.*
2. *Higher Engineering Mathematics by BS Grewal : Khanna Publishers, New Delhi.*
3. *Advanced Engineering mathematics by H. K. Dass.*

Title of the subject						
Subject Code	**Communicative English and Technical Communication**	**L**	**T**	**P**	**C**	**QP**
BBSHS 2061		**2**	**0**	**0**	**2**	**A**

Course Educational Objectives

CEO1: To develop the communication skills and soft skills of the students
CEO2: To enhance the ability of the students to develop employability and entrepreneurial skills
CEO3: To enable students to successfully participate in GDs and PIs
CEO4: To make students communicate effectively using technologies and techniques
CEO5: To inculcate a sense of professionalism in students

Course Outcomes-*Towards the end of the course the students will be able*

CO1 TUnderstand the importance of technology in communication
CO2 Develop career conscious leading to preparation for career.
CO3 Inculcate a positive attitude towards people, organization, and life.
CO4 Understand the nature and scope of corporate communication and try to be industry-ready.
CO5 Learn practical application of concepts and tools of communication
CO6 Prepare professional documents for career needs (e.g. Job application letter, résumé) and professional needs (e.g., Memo and E-mail writing)

COs	**CO-PO & PSO Mapping**														
	PROGRAMME OUTCOMES												**PSOs**		
COs	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3
CO1										2					
CO2										2					
CO3										2		1			
CO4										2					
CO5										2					
CO6										2					
Avg.										2		0.5			

SYLLABUS

UNIT-1 Introduction to Technical Communication **7 hours**

1.1 Essence of Technical Communication 1

1.2 Nature and Scope of Technical Communication: 1 +1 +1

Technical Communication — Interactive and Adaptable; Technical Communication — Reader Centered; Technical Communication and teamwork; Technical Communication Has Ethical, Legal, and Political Dimensions; Technical Communication – its International and Cross-Cultural nature; Technical communication and use of ICT.

1.3 Need of Technical communication for career development 1

1.4 Computer Assisted Language Learning (CALL) – Self learning through use of technology, Effectiveness of CALL for developing English Language Skills; Use of Internet 1 +1

UNIT-2 Career Communication **17 hours**

2.1. Career making: Setting Goals, SWOT analysis 1

2.3 Preparing a Résumé: Elements of a Résumé; Types of Résumés: Chronological Résumé, Functional Résumé; Use of job portals 1 +1 +1

2.4 Effective Job Application Letter/Cover letter 1 +1

2.5 Group Discussion 1 +1

2.6 Job Interview 1 +1 +1+1 +1

2.7 Effective Oral Presentation 1+1

2.7 Handling a Meeting 1+1

UNIT-3 Technical Approach to Reading **8 Hours**

3.1 Know your Reading speed; Advantages of speed reading 1

3.2 SQ4R Techniques of Reading 1+1

3.3. Techniques of Rapid reading: skimming, scanning 1+1

3.4 Understanding coherence and cohesion 1

3.5 Note taking, Mind maps 1+1

UNIT-4 Technical Writing **14 hours**

4.1 Writing a technical paper 1+1

4.2 Writing business letters – significance, purpose, structure and elements, layout; types of business letters 1+1+1+1

4.3 Memos 1+1

4.4 Business Reports and Technical proposals 1+1+1+1

4.5 Using the Social media for better communication 1+1

Text Books:

1. *Form and Finesse, Business Communication and Soft skills by Shruti Das, Published by Orient Black Swan.*
2. *Business Communication Today by Bovee, Courtland L., Thill, John V. Prentice Hall.*
3. *Technical Communication Today by Richard Johnson-Sheehan. Edition 5. Pearson.*
4. *Communicative English for Engineers and Professionals by Nitin Bhatnagar and Mamta Bhatnagar. Published by DK/Pearson.*

Reference Books

1. *Basic Communication Skills for Technology by Andre J. Rutherford, Pearson Education Asia, Patparganj, New Delhi.*
2. *Business Communication by Varinder Kumar and Bodh Raj. Kalyani Publishers.*
3. *A Textbook of English Phonetics for Indian Students by T. Balasubramanian*
4. *Technical Communication , Principle and Practice by Meenakshi Raman &Sangeeta Sharma, Oxford University Press*
5. *How to Read better and Faster by Norman Lewis. 4th Edition. Publisher: Crowell.*

Title of the subject						
Subject Code	**Communicative English and Technical Communication**	**L**	**T**	**P**	**C**	**QP**
BBSHS 2161	**Laboratory**	**0**	**0**	**2**	**1**	

Course Educational Objectives

CEO1: To enable students to successfully participate in GDs and PIs.

CEO2: To make students communicate effectively by classroom practice.

CEO3: To inculcate a sense of professionalism in students

Course Outcomes-*The students will be able to:*

CO1 Prepare professional documents for career needs (e.g. Job application letter, résumé) and professional needs (e.g., Memo and E-mail writing)

CO2 Effectively participate in GD and PI.

CO3 IEmerge as an effective presenter/public speaker

CO4 Understand the practical needs at workplace (e.g., organize a meeting)

COs	**CO-PO & PSO Mapping**														
	PROGRAMME OUTCOMES												**PSOs**		
COs	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3
CO1										2					
CO2										2					
CO3										2					
CO4										2					
Avg.										2					

SYLLABUS

1.	Writing an Effective Job Application Letter/Cover letter	**4 hours**
2.	Writing a winning resume and posting in job portals	**4 hours**
3.	Group Discussion	**8 hours**
4.	Job Interview	**8 hours**
5.	Oral presentation	**6 hours**
6.	Organizing a Meeting	**4 hours**
7.	Note making and Note taking	**4 hours**
8.	Memo writing	**2 hours**
9.	Profiling a company	**4 hours**
10.	Summarizing books/research paper/news report	**2 hours**

Teaching Methods: Chalk & Board/PPT/Video Lectures

Text Books:

1. *Form and Finesse, Business Communication and Soft skills by Shruti Das, Published by Orient Black Swan.*
2. *Business Communication Today by Bovee, Courtland L., Thill, John V. Prentice Hall.*
3. *Technical Communication Today by Richard Johnson-Sheehan. Edition 5. Pearson.*
4. *Communicative English for Engineers and Professionals by Nitin Bhatnagar and Mamta Bhatnagar. Published by DK/Pearson.*

Reference Books

1. *Basic Communication Skills for Technology by Andre J. Rutherford, Pearson Education Asia, Patparganj, New Delhi.*
2. *Business Communication by Varinder Kumar and Bodh Raj. Kalyani Publishers.*
3. *A Textbook of English Phonetics for Indian Students by T. Balasubramanian*
4. *Technical Communication , Principle and Practice by Meenakshi Raman &Sangeeta Sharma, Oxford University Press*
5. *How to Read better and Faster by Norman Lewis. 4th Edition. Publisher: Crowell.*

Title of the subject						
Subject Code	**Data Structures**	**L**	**T**	**P**	**C**	**QP**
BBSES 2050		**3**	**0**	**0**	**3**	**A**

Course Educational Objective

CEO1: Understand the object oriented concepts and to develop C++ programs for performing different operations on arrays, stack, Queue, linked list. Analyze the difference between them and understand different applications.

CEO2: Understand different searching and sorting methods and compare them in terms of performance and applications.

Course Outcome

CO1 Develop algorithms for performing different operations on 1D array, matrix, stack, Queue, analyze the difference between them and understand different applications.

CO2 Understand different searching and sorting methods, Linked lists and them compare them in terms of performance and applications.

CO3 Understand the Binary Tree and its memory representation; analyze Binary search Tree and its applications, compare the BST with AVL Tree and examine the advantages.

CO4 Design Heap Tree, observe its applications in sorting. Understand the memory representation of graph; analyze traversal methods and applications of graph. Analyze the Hashing techniques in compare with other sorting techniques.

COs	**CO-PO & PSO Mapping**														
	PROGRAMME OUTCOMES												**PSOs**		
COs	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3
CO1	2	2	3												
CO2	3	2													
CO3	3	3													
CO4	3	3	3												
Avg.															

SYLLABUS

Unit-1 **[11 hours]**

Basic concepts: Data abstraction, Algorithm specification, Memory Representation of 1D and 2D Array. Stack: Introduction to stack, basic operations and implementation of stack using arrays Queue: Introduction to linear queue, basic operations and implementation of linear queue using arrays, circular queue, basic circular queue operations& Representation of Double ended Queue.Applications on stack – Recursion, infix to postfix conversion, Evaluation of postfix

Unit-II **[11 hours]**

Searching: Linear search and Binary search using linear arraySorting: Bubble sort, Insertion sort, Selection sort, Quick sort, Bucket Sort using linear array.Linked Lists: Basic operations of singly, doubly and circular linked lists, implementation of stack and queue using singly linked list.

Unit-III **[11 hours]**

Trees: Introduction, Terminology, Binary Trees, Representation of Binary Trees using arrays and linked lists, Binary tree traversals, Creation of binary tree from in-order & pre-order sequences - Creation of binary tree from in-order & post-orderBinary Search Trees: definition, basic operations of BST (Searching, Insertion and deletion)Introduction to AVL trees, Height of an AVL Tree, Balancing AVL tree by rotations after insertions and deletions of a data node.

Unit-IV **[11 hours]**

Heaps: Introduction to binary heaps, definition of a Max-heap, Min-heap, creating Max-Heap, Applications: Heap sort, Priority queue. Graphs: Definitions, Graph representation - Adjacency matrix, Incidence Matrix, adjacency lists, Graph Traversals (BFS & DFS), Single source shortest path algorithm (Dijkstra's Algorithm) Topological Sorting.Hashing: Hashing Functions, Open hashing (chaining), closed hashing (Open addressing – linear probing, quadratic probing, double hashing), rehashing.

Teaching Methods: Chalk& Board/ PPT/Video Lectures/Lecture by Industry Expert/MOOCS

Text Books:

1. *Gilberg and Forouzan: "Data Structure- A Pseudo code approach with C" by Thomson Publication.*
2. *"Data structure in C" by Tanenbaum, PHI publication / Pearson publication.*
3. *Pai: "Data Structures & Algorithms; Concepts, Techniques & Algorithms "Tata McGraw Hill.*

Reference Books:

1. *"Fundamentals of data structure in C" Horowitz, Sahani & Freed, Computer Science Press.*
2. *"Fundamental of Data Structure" (Schaums Series) Tata-McGraw-Hill.*

Title of the subject						
Subject Code	**Data Structures using 'C++' Laboratory**	**L**	**T**	**P**	**C**	**QP**
BBSES 2150		**0**	**0**	**2**	**1**	

Course Educational Objective

CEO1: Develop algorithms for performing different operations on arrays, stack, Queue, linked list. Analyze the difference between them and understand different applications.

CEO2: Understand different searching and sorting methods and compare them in terms of performance and applications. Understand and analyze Binary search Tree, AVL Tree, Heap Tree and their applications.

CEO3: Understand the memory representation of graph, its traversal methods and applications. Analyze the Hashing techniques in compare with other sorting techniques.

Course Outcome

CO1 Understand and implement the object oriented concepts by in developing the programs for different operations.

CO2 Develop programs for performing different operations on 1D array, matrix, stack, Queue, analyze the difference between them and understand their applications.

CO3 Design code for different searching and sorting methods and analyze their performance.

CO4 Develop the codes for different operations on Linked lists and compare with other data structures.

COs	**CO-PO & PSO Mapping**														
	PROGRAMME OUTCOMES												**PSOs**		
COs	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3
CO1	2	2	3												
CO2	3	2													
CO3	3	3													
CO4	3	3	3												
Avg.															

SYLLABUS

Lab1: introduction to OOPs (C++ features), cin, cout, object, class, Simple programs.

Lab2: Access Specifiers, inline, private, public, arrays of objects, programs on them.

Lab3: Experiment No.1

1) Write a C++ program to create a class called student to store your rollno, name, age. Create an array of object to input 5 students data and then display where age>=20.
2) Write a C++ program to create a class having methods for operations insertion, deletion and display to perform operations on 1D array of elements.

Lab4: Experiment No.2

Write a C++ program to create a class having methods: insertion, multiply and display for performing multiplication on a matrix of elements.

Lab5: Experiment No.3

Write a program using C++ to create a stack using class and perform:

(i) push operation (ii) pop operation (iii) display operation

Lab6: Experiment No.4

Write a C++ program that uses Stack operations to converting an infix expression into equivalent postfix expression.

Lab7: Experiment No.5

Write a C++ program to create a linear queue and perform the following operations: (i) insertion ii) deletion and iii) Traversal

Lab8: Experiment No.6

Write C++ programs that use both recursive and non-recursive functions to perform the linear & binary search operation for a Key value in a given list of integers.

Lab9: Experiment No.7

Write a C++ menu driven program to implement bubble sort, selection sort and insertion sort for a given list of integers in increasing order.

Lab10: Experiment No.8

Write a C++ program to implement quick sort to a given list of integers to sort in ascending order.

Lab11: Experiment No.9

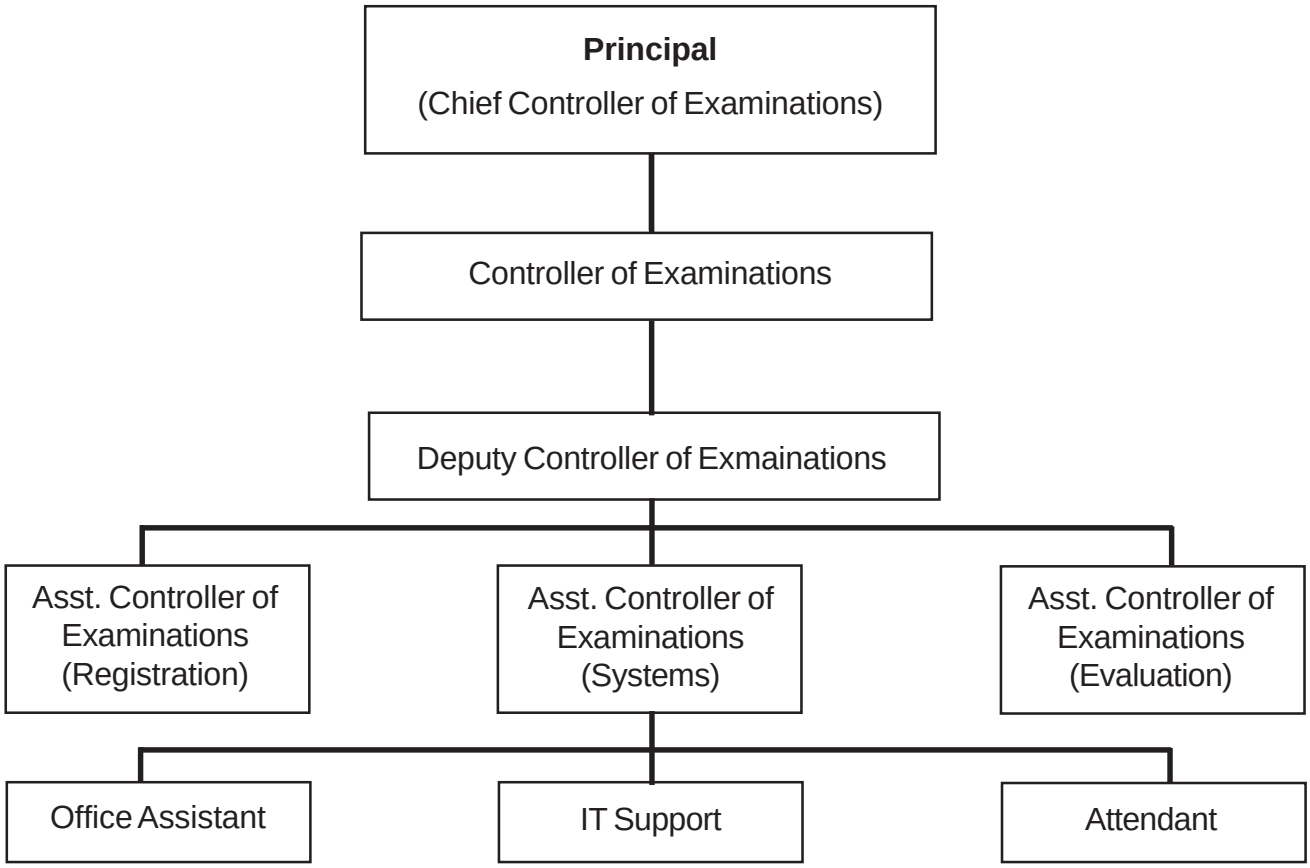
Write a C++ program that uses functions to perform the following operations on linear linked list: i) Creation ii) Insertion iii) Deletion iv) Traversal

Lab12: Experiment No.10

Write a C++ program that uses functions to perform the following operations on Double linked list: i) Creation ii) Insertion iii) Deletion iv) Traversal.

2.5 Regulations for Examination

2.5.1 Organizational Structure (Central Examinatin Section)



Apart from central examination system every department has departmental examination Coordinators for each year i.e., for B. Tech., first year examination coordinator, second year examination coordinator, third year examination coordinator and fourth year examination coordinator.

Currently Chief Controller of Examinations shall undertake the responsibilities of Question Papers, Student Services and Examination Conduction.

2.5.2. ACADEMIC CALENDAR OF THE SEMESTER

Dean and Principal in consultation with other functionaries of the college shall prepare the academic calendar before commencement of the academic year and communicate to all the concerned to inform the academic programme and various examinations schedule to be conducted in the semester. The examination cell, based on the approved academic calendar, will prepare a time-table for events to be conducted like internal and external theory and lab examinations, evaluation etc. Identification of subject experts is done in communication with respective HOD for Question paper setting and evaluation. Chief Superintendent of examination: The Principal acts as a Chief Superintendent of examination.

2.6 EXAMINATION PROCESS

Sl.No.	Type of Exam	UG (B.Tech)	Passing Marks	PG(M.Tech)	Passing Marks
1	MID-Sem Exam (Theory)	50	20	30	12
2	END-Sem Exam (Theory)	100	35	70	25
3	END LAB Exam	50	25	100	50

2.6.1 Pre-examination processes:

2.6.2 Registration

Every student has to register themselves at the beginning of each semester by paying prescribed registration fee as per the academic calendar.

2.6.3. Mid- Semester Examinations

a. Attendance in Mid-Semester Examinations is compulsory.
b. As per the academic schedule, the Very similar test (VST), Mid- Semester Examinations , Lab-examinations will be conducted by the Department examination coordinators and the same will be read out in the class rooms and display in the departmental notice boards. Two mid-Semester examinations for each theory subject will be conducted as per academic regulations.
c. Re Mid-Examination will be conducted (in case student is absent due to genuine reasons or failed in the concerned subject) with a payment of Rs. 100/- per each subject.

2.6.4. Very Similar Test (VST)

a. VST is a part of continuous evaluation method, which will start 15 days after commencement of class work.
b. VST will be conducted on every Wednesday/ Thursday afternoon, for two subjects, 20 marks each for 1 hour duration.

2.6.5. Conduct of end semester lab examinations:

a. Apart from continuous evaluation, end semester lab viva will be conducted at the end of semester by inviting external examiners either from Government Engineering Colleges/ NITs/ IITs etc.
b. The responsibility of the Semester end lab examination conduct lies with the respective HOD and the supervision of Chief Superintendent of the examination.
c. Semester end lab examinations will be conducted by the teacher concerned and external examiner.

2.6.6. Eligibility for appearing end semester examination:

The semester attendance has to be finalized by the Coordinator and HOD concerned before one week of the last working day of the semester.

a. The student, who falls short of prescribed percentage of attendance (70% and above below 80%) on medical grounds, has to apply to the Coordinator of the department concerned for condonation along with medical certificate. On the recommendation of the department Coordinator & Head of the department, the Principal will forward the condonation of the attendance and such list to be sent two weeks in advance before the issue of Hall Tickets. Students whose shortage of attendance is not condoned in any semester are not eligible to take their end examination.
b. Genuine medical certificates shall be submitted by the students soon after they reach headquarters.
c. Shortage of attendance below 70% in aggregate shall in no case be condoned. The list of the Detained candidates duly signed by the Principal shall be displayed on the notice board by the departments and a copy of the same to be sent to the examination cell before two weeks of the course completion of the semester.
d. The notification, calling for applications for form- fill-up of the ensuing end semester examination is issued at least two weeks before the commencement of examinations. Students are advised to clear their dues before form fill-up.
e. Students must bring Identity card, Registration Card and Admit Card.
f. In case any student loses his/her original admit card, a duplicate admit card will be issued on payment prescribed fee of Rs. 100.

2.7 . POST EXAMINATION PROCESS:

2.7.1. PROCEDURE PERTAINING TO RECOUNTING/RECHECKING OF UG/PG EXAMINATION

a. Recounting/Rechecking of answer script is applicable for end semester theory examination only.
b. Notification for Recounting / Rechecking will be notified by Examination Cell on the day of results declaration.
c. For Recounting/ Rechecking, prescribed application given in the notification is mandatory. The Candidate has to apply for recounting or revaluation in prescribed application format as specified/ notified.
d. The application for Recounting/ Rechecking after the last date will not be entertained.

Category	Prescribed Fees
Recounting Only	Rs. 200.00
Recheeking Only	Rs. 300.00
Rechecking with Photocopy of Answer Script	Rs. 1000.00
Challenge Evaluation	Rs. 5000.00

2.7.2. RECOUNTING

a. Senior faculty other than subject expert may be nominated.
b. The script will be verified to ascertain whether all questions are valued or not.
c. If there is any change in recounting and that is more than the previous marks, the recounting marks will be considered for award/grade in that subject.
d. In Recounting, if the marks secured are less than the previous marks awarded then the previous marks awarded holds good and there is no change in the status.

2.7.3. RECHECKING

- Rechecking will be carried out by other than the first examiner.
- In the rechecking, if the variation in the marks is less than or equal to 15% of marks secured, then previous marks secured by the candidate holds good.
- If the variation is more than 15% of the external marks, then it will be sent to the third valuation. The marks obtained in the third valuation will be compared with the first and the second valuation. The marks among these two which are closer to the third valuation are considered. If the marks obtained

in third valuation in mid way of valuation one and valuation two, then the case to be considered on lower Side.

- ♦ In Rechecking, if the marks Secured are less than the previous marks awarded then the previous marks awarded holds good and there is no change in the status.

2.7.4. RECHECKING WITH PHOTOCOPY OF ANSWER SCRIPT

Photocopy of answer script which was reevaluated can be made available to the students on submission of prescribed application along-with prescribed fees.

2.7.5. CHALLENGE EVALUATION

In case a script has not been evaluated in a proper manner as per regulations, then the prescribed fees paid by the student will be refunded. The concerned evaluator will be taken action against him/her as deemed fit.

2.8 . Backlog Examinations

a. Detained/ Failed / absent students will be allowed to appear backlog examination as per eligibility.
b. Candidates, who have failed in Mid-semester examination, can appear Re-Mid-Semester examination by paying a fee of Rs. 200.00 per subject.
c. Candidates who have failed in the Lab can reappear the same by paying a fees of Rs. 1000.00 per lab.
d. In case a student fails in Re-Mid-Semester / Lab examination, he/she will appear the next Mid-Semester/ Lab examination along-with the subsequent batch of students.

2.9. Special Supplementary Examination / Special Examination

Candidate(s), who failed in theory / seminar / project work etc. in 8th Semester (end semester in the programme) can appear for Special supplementary examination which will be conducted within one month after declaration of the revaluation results.

However, those candidates who has backlogs by the end of the programme, can appear special examination which will be held in the month of August every year (From 2021 onwards)

3.0. Declaration of Result and Promotions

3.1. In order to pass a programme / course a candidate must secure at least Pass Grade in each of the Theory, Practical, Project, Seminar, Sessional and Viva Voce items.

3.2. The promotional status between two consecutive semesters and / or two consecutive levels / years shall be indicated on the Semester Results as detail below:

A. Passed and Promoted (denoted by P) indicating that

- The candidate has cleared every registered course item of both odd and even semester of the academic year.
- He / She has no backlog from lower levels.
- He / She has secured CGPA of 6.0 or more.

B. Eligible for Promotion with backlogs (denoted by XP) indicating that. The candidate is eligible for promotion with backlog (XP) in the following situation

- For promotion from 1st year to 2nd year:
  A student at the end of the first year (inclusive of first and second semesters) having a minimum of CGPA of 4.50 is eligible for promotion to the Second year, regardless of the number of failed subjects except candidates under Clause - D.
- A student (at the end of first year) with a CGPA of less than 4.50 may choose to quit; or pursue studies after registering as a fresh student in the First year. If such a student in the new 1st year once again fails to secure a CGPA of at least 4.50 at the end of the new First Year, he/she has to quit.
- For promotion from 2nd year to 3rd year :
  All students of second year (after 4th semester) are eligible for promotion to 3rd year except candidates under Clause - D.
- For promotion from 3rd year to 4th year :

All students of third year (after 6th semester) are eligible for promotion to 4th year except candidates under Clause - D.

Important Note: The SGPA of the lower semester(s) of XP category students after clearing their backlog subjects would be updated. This updated SGPA would be considered for their promotion in the 1st year.

C. The candidate is eligible for promotion to next higher level (year / semester) if (i) he / she has registered for all the subjects for any semester AND (ii) he /she has appeared in the semester examination in at least 3 (three) theory subjects of the regular semester AND (iii) he/she has attended at least 2 (two) lab / practical / Sessional classes.

N.B.: All the above three conditions have to be satisfied for promotion to the next higher semester / year.

D. Not Eligible for Promotion (denoted by X) indicating that The student is NOT eligible for promotion to the next higher level as he / she has not fulfilled the stipulated requirements defined under the provisions, stated above under Clause 'A', 'B' and 'C' for promotion.

Important Note : The 'X' category students as well as those who do not want to be promoted and who are otherwise eligible to continue in the BPUT system, are required to re-register for that year. They are required to register in all the backlogs (failed / not appeared) subjects of both the semesters of that year except 1st year.

3.3. A candidate shall be eligible for promotion to the next higher level / year if he / she satisfies the conditions laid down under the rules formulated by the Academic Council.

3.4. The Institute shall publish a list of all successful candidates of each of the semester examinations within the date prescribed in academic calendar.

3.5 The overall performance of a successful candidate for the award of a degree shall be based on the combined results of all the examinations of the concerned programme.

3.6 A student's level of competence shall be categorized in accordance with the Cumulative Grade Point Average.

4.0. GRADING SYSTEM FOR UG AND PG PROGRAMMES

4.1 B.Tech/ M.Tech

Qualification	Grade	Score On 100% Point	Point
Out Standing	O	90 to 100	10
Excellent	E	80 to 90	9
Very Good	A	70 to 80	8
Good	B	60 to 70	7
Fair	C	50 to 60	6
Average	D	37 to 50	5
Fail / Absent	F	<37	2
Malpractice	M	-	0

4.1.1: A student's level of competence shall be categorized by a GRADE POINT AVERAGE to be specified as:

SGPA – Semester Grade Point Average
CGPA– Cumulative Grade Point Average
It shall be the basis of judging his/her overall competence in the course.

4.1.2: Definition of terms:

a) POINT - Integer equivalent each letter grade
b) CREDIT - Integer specifying the relative emphasis of individual course item(s) in a semester as indicated by the course structure and syllabus.
c) CREDIT POINT - (b) x (a) for each course item
d) CREDIT INDEX - Ó CREDIT POINT of course items in a Semester
e) GRADE POINT - CREDIT INDEX / Ó CREDIT

Calculation of Semester Grade Point Average (SGPA):
The performance of each student at the end of the each semester is indicated in terms of SGPA. The SGPA is calculated as given below

SGPA = CREDIT INDEX / Ó CREDITS for each semester

Calculation of Cumulative Grade Point Average (CGPA) for Entire Program:
The CGPA is calculated as given below:

CGPA= (ÓCREDIT INDEX all previous semester)/ (Ó CREDITS of all previous semester)

4.1.3: Conversion of CGPA to PERCENTAGE:

Equivalent Percentageof Marks = (CGPA - 0.50) * 10

4.2. Issue of Grade Sheets

a. After the announcement of revaluation results, grade sheets will be printed year-wise.
b. Grade sheets will be issued to students after 15 days from announcement of revaluation results.
c. If any student loses the grade sheet issued to him/her, a duplicate grade sheet may be issued on application and payment of prescribed fee of Rs. 200/- (per grade sheet) with submission of FIR Copy from nearest police station. Such grade sheet may be oriented prominently as "DUPLICATE".

4.3. Issue of Transcripts / Original Degree / Migration Certificate

a. A transcript is an official document containing the performance of a student, course taken by the student, the credits earned and the grades awarded.
b. A student can obtain transcripts by submitting the application with prescribed fee.
c. The application should be accompanied by photo copies of all the grade sheets issued to the student by the examination section.
d. The staff concerned after checking the entries made in the application with the photo copies of the grade cards, will forward the application to the Assistant controller of examination concerned for further checking.
e. The Assistant controller of examinations concerned should check the entries made by in the application with entries in the tabulation register.
f. If the entries are found to be correct, the Assistant controller concerned forwards the application to the Controller of Examinations.
g. Assistant controller of examinations will forward the application along with copy of grade sheets to the parent University for issuing of transcript.
h. The above procedure shall also be followed for obtaining "Original Degree Certificate" and "Migration Certificate".

4.4. BRANCH CHANGE

1. Any student pursuing B. Tech programme, may be allowed a change of branch after completion of course requirements for the first (autumn) and second (spring) semesters of the first year programme, subject to availability of seats in a programme. The selection shall be on the basis of merit, assessed through the combined results of the first and second semester examinations declared in the form of Cumulative Grade Point Average (CGPA) at the end of the first year which should be 8.00 or more.

2. Only such students who have cleared all examination of both the semesters in first attempt, in examinations held during academic session of his / her first admission to the course shall be qualified to apply for a change of branch. Change of branch may be accorded subject to the condition that the consequent total student strength in the 'gainer' programme shall not exceed by 10% of the approved seats and the net student strength in the loser programme shall not deplete by more than 10% of the actual student strength existing on the rolls prior to the change during the process.

3. To award benefit of branch change, a Branch Change Committee shall be formed with the Principal as its Chairman. The committee shall invite options from the students. The committee will prepare a merit list based on CGPA and allot change of branch in order of their preferences. Institutional decision on the matter shall be final. The college shall intimate the decision on branch change within seven calendar days starting of the 3rd semester.

4.5. PERMISSION FOR SCRIBE TO APPEAR FOR EXAMINATIONS

1. Candidates in need of Scribe should apply with the reason and following evidences.
   (a) Medical Certificate issued by a Civil Surgeon working in a Government Hospital.
   (b) Photo of the student / candidate highlighting the inability to appear for the examination.
   (c) The Particulars of proposed scribe i.e., name, address, qualifications, photo and present occupation. [The scribe should not exceed intermediate qualification].
   (d) A letter from the scribe stating that he / she is willing to act as scribe.
   (e) A copy of the certificate of scribe's qualification along with recent photograph duly attested by the head of the institution.
2. Controller of Examinations in consultation with Principal approves that he /she personally verify regarding qualification of the scribe as per norms and provide a separate room and invigilator for all examinations of the candidate.

4.7. Rules and Regulations to be followed by students during End Semester Examinations:

1. Students should reach examination hall before 30 minutes from commencement of examination.

4.6. MALPRACTICE RULES

Nature of Malpractices / Improper conduct *If the candidate:*		Punishment
1.a.	Possesses or keeps accessible in examination hall, any paper, note book, programmable calculators, Cell phones, palm computers, blue tooth or any other form of material concerned with or related to the course of the examination (theory or practical) in which he/she is appearing but has not made use of (material shall include any marks on the body of the candidate which can be used as an aid in the course of the examination)	Expulsion from the examination hall and cancellation of the performance in that subject only.
1.b.	Gives assistance or guidance or receives it from any other candidate orally or by any other body language methods or communicates through cell phones with any candidate or persons in or outside the examination hall in respect of any matter.	Expulsion from the examination hall and cancellation of the performance in that subject only of all the candidates involved. In case of an outsider, he/she will be handed over to the police and a case is registered against him.
1.c.	Has copied in the examination hall from any paper, book, programmable calculators, palm computers or any other form of material relevant to the course of the examination (theory or practical) in which the candidate is appearing.	Expulsion from the examination hall and cancellation of the performance in that subject.
2.	Impersonates any other candidate in connection with the examination.	The candidate who has impersonated shall be expelled from examination hall. The candidate is also debarred for four consecutive semesters from class work and all end examinations. If he/she is not a student of the college he/she shall be handed over to police.
3.	Smuggles in the Answer book or additional sheet or takes out or arranges to send out the question paper during the examination or answer book or additional sheet, during or after the examination.	Expulsion from the examination hall and cancellation of performance in that subject and all the other subjects. The candidate is also debarred for two consecutive Semesters from class work and all Semester end examinations.
4.	Uses objectionable, abusive or offensive language in the answer paper or in letters to the examiners or writes to the examiner requesting him to award pass marks.	Cancellation of the performance in that subject and handover him/her to Disciplinary committee for appropriate action.
5.	Leaves the examination hall taking away answer script or intentionally tears of the script or any part thereof.	Expulsion from the examination hall and cancellation of performance in that subject and all the other subjects. The candidate is also debarred for two consecutive Semesters from class work and all Semester end examinations.

6.	If student of the college, who is not a candidate for the particular examination or any person not connected with the college indulges in any malpractice or improper conduct	Student of the colleges expulsion from the examination hall and cancellation of the performance in that subject and all other subjects the candidate has already appeared including practical examinations and project work and shall not be permitted for the remaining examinations of the courses of that Semester/year.
7.	Comes in a drunken condition to the examination hall.	Rustication from all examinations as well as from the college for one semester.
8.	Copying detected on the basis of internal evidence, such as, during valuation or during special scrutiny.	Cancellation of the performance in that subject depending on the recommendation of the committee.
9.	If any malpractice is detected which is not covered in the above clauses 1 to 8 shall be reported to the Principal for further action to award suitable punishment.	

4.7. Rules and Regulations to be followed by students during End Semester Examinations:

1. Students should reach examination hall before 30 minutes from commencement of examination.
2. Identify the correct Hall Number from the display boards before going to the examination hall, any difficulty can be reported to exam section.
3. Duplicate admit card will be issued in the Examination section by submitting a letter signed by HOD on payment of prescribed fees.
4. Students will not be allowed into the examination hall after 30 minutes of the scheduled time of examination and not permitted to leave the hall before half of the total time (90 minutes) allotted for the Examination.
5. Mobile phones, Electronic Gadgets, any study Materials / Notes etc. are not allowed into the exam hall.
6. Possession of study material in any form either on body or on cloths is strictly prohibited.
7. Admit Card, IDENTITY CARD and Registration Card are to be made available to the invigilator in the Examination hall for verification and issue of answer booklet.
8. Discussions / exchange gestures inside the examination hall is prohibited. Strict silence to be maintained in examination hall and violation will lead to punishment.
9. Name and Registration Number should not be written on any part of the answer booklet except in the space provided.
10. Verify the question paper for the day's examination and check the total number of pages with printing or not, any deviation may be informed to the invigilator.
11. On receipt of question paper, Registration number can only be written, writings of any other kind are not permitted and punishable.
12. During semester exam, attendance sheet should be signed by all the students.
13. Necessary information booklets can be asked as required for answering the questions.
14. Required rough work (if any) can be done on the two sides of the last page with title "Rough work".
15. All necessary equipment and writings mentioned to be brought by the students themselves (pen, pencil, scale, eraser etc.) and no exchange of above is permitted.
16. Students will not be permitted to write the answers beyond the stipulated time and to remain in the seats till answer booklet is collected.

** The above exam rules are framed for information of all concerned, which may be changed/altered/ modified/ revised from time to time with the approval of authority.*

Chief Controller of Examinations

5.0 DRESS CODE FOR THE STUDENTS:

For creating a feeling of identity and dignity and promoting fellow feeling among the students, GGI, Gunupur prescribes dress code for all its students keeping in view the standard practice in all the educational institutions and as per the prescribed code of conduct.

As per the dress code, the institute provides dresses of specific colours to the students of a particular batch and course. Student should wear the prescribed uniform from the beginning to the end of their respective courses.

5.1. DRESS CODE FOR MALE STUDENTS:

- Should wear formal full pants and full sleve shirts along with ties, badges, and identify cards while attending classes and on other formal occasions.
- Should wear formal shoes & socks and avoid using hawai / bathroom Chappal while attending classes or any official functions.
- Piercing of nose, ears or eyebrows and using ornaments like earrings etc. are strictly prohibited.
- Should not flaunt long hair.

5.2 DRESS CODE FOR FEMALE STUDENTS:

- Should wear formal salwar suits along with badges, and identity cards while attending classes and other formal occasions.
- No one is allowed to attend classes or any official functions wearing Jeans, T-Shirts, or sleeveless dresses.
- Should avoid using costly ornaments made of gold, diamond etc. for security reason. The institute will not take any responsibility in case of loss or theft of the said items.

5.3 DRESS CODE IN WINTER:-

Both the male and female students are provided blazers with the institute logo by the college. All students are required to attend classes as well as other formal occasions in winter wearing blazer. No one is allowed to use any other fancy winter clothes for this purpose in any circumstances inside the instiute.

6.0 CLASS TEACHERS AND PROCTORS:

"Quality is never an accident; it's always the result of high intention, sincere effort, intelligent direction and skillful execution; represents the wise choice of many alternatives" (William A Foster). We at GGI, Gunupur fully comprehend the implication of this statement and believe that quality control needs two pronged strategy: supervision and support. Class teachers and proctors work closely with the students providing moral support and proper direction supervision as when necessary.

6.1. THE ROLE OF THE CLASS TEACHER:

A faculty member of the institute will be designated as the class teacher of a particular section or batch of students. She/he in charge of students of the given section or batch will maintain a record of all the activities done by students and report the same to the HOD, the Principal and /or to the concerned authorities as per the need. Therefore,all students have to cooperate with the class teacher and must route their applications for leave etc. through the class teacher. In case of any problems concerning academic or non academic issues, students are advised to bring the same to the notice of the class teacher immediately.

6.2 ROLE OF THE PROCTOR:

Besides the class teacher, another faculty member will be designated as the proctor. She/he will be assigned the responsibility of certain number of students. The proctor will meet students of his/her

group as per the time and place either specified by the institute or suitable to both the parties. The students can sort out their difficulties in respect to both academic as well as non academic matters with the proctor and seek his/her advice.

7.0 PROCEDURES TO PROCURE CERTIFICATES AND OTHER DOCUMENTS:

Students have to follow the following set of procedures to procure their certificates and other relevant documents.

- For obtaining 'Conduct Certificate' and 'College Leaving Certificate' a student has to submit an application along with a 'NO DUES' certificate in the prescribed format in the examination section at the end of the university sem. exam.
- For obtaining 'Mark Sheet' the student has to apply in the prescribed format giving details as required.

If there is any discrepancy in the mark sheet, the candidate is advised to immediately bring the same to the notice of the concerned authority in writing. One can obtain duplicate 'Mark Sheet' by applying in the prescribed format and paying prescribed fee to the university.

It takes at least two working days to complete all the necessary procedures for issuing certificates and other documents. So, a candidate has to apply for the issue the required documents well in advance.

8.0 SCHOLARSHIP FOR MERITORIOUS STUDENTS:

The institute always takes care to provide maximum support to the students of the disadvantaged section of the society. All the bonafide students of GGI, Gunupur belonging to SC/ST/OBC/Minority category are eligible for the Post Matric scholarship under the centrally sponsored scheme of the Ministry of Tribal Affairs.

Eligibility Criteria:

- Must belong to SC/ST/OBC/Minority category
- Must have obtained minimum 60% marks in +2 (Standard XII)
- Parents' annual income must not exceed the specified limit fixed by the Govt.
- Students coming under TFW Scheme.
- Eligible students may contact the Registrar's office for detailed information.

9.0 UNIVERSITY WELFARE FUND:

There is provision for students to avail the university welfare fund while paying the entire engineering academic expenses to those students whose parents (earning) meet untimely death.

10.0 GUIDELINES FOR ON/OFF CAMPUS BEHAVIOUR

10.1 DISCIPLINE:

Discipline is the bridge between the goals and accomplishments. GGI attaches much importance to reach goals and never absolves unsavory conduct of any student on the ground that he has achieved the highest goal. On the other hand, it believes the one who reaches the highest observes strict discipline in every step and leaves behind a legacy to be emulated. This belief drives the institute to enforce strict discipline to produce highly successful sons and daughters for their parents and ethical citizens for mother land.

GGI, Gunupur expects students to go through the following rules and regulations regarding discipline and follow them with letter and spirit.

- Be courteous to the members of the faculty, employees of the institution and fellow students.
- Should take care of the institutional property like furniture, laboratory equipments, electrical fitting, transport, etc. without damaging them.

- Should follow the rules framed by the institution regarding the use of the library, laboratory, transport, hostel etc.
- Should not try to adopt unfair means in the examination.
- Should preserve the beauty and sanctity of the institution by maintaining cleanliness of the class rooms, laboratory etc. Should not ever spoil walls, furniture etc by writing or spitting at them.
- **SHOULD NOT USE ADDICTIVE SUBSTANCES AT GGI, Gunupur**. Use of tobacco, alcohol, chewing of betel leaves, and chewing gums etc are strictly prohibited, on & off the campus.
- Should not organize or take membership of any union or association without prior permission from the institution.
- Should not organize or attend any unauthorized meeting on the campus or in the hostels.
- **Should not use mobile phones in the academic area or during study hours in the hostels.**
- **Ragging of any sort is strictly prohibited on and off the campus**

NB: Violation of any of the above mentioned rules shall be treated as an act of indiscipline and misconduct such act will invite strict disciplinary action.

10.1.1. POLICY ON SUBSTANCE ABUSE

Objective : To prevent substance abuse and to create a secure, conducive atmosphere for learning among the students on the campus.

GIET Main Campus (Autonomous), Gunupur strictly adheres to the following guide lines concerning the possession, use and / or distribution of substances of abuse.

Cannabis, Heroin, Benzodiazepines, barbiturates, Flunitrazepam , Cocaine, Ketamine, Psilocybin , Lysergic acid diethylamide, Amphetamine, Methamphetamines, MDMA, Phencyclidine, GHB, Methaqualone, Inhalants and other drugs and substances mentioned in The Narcotic Drugs and Psychotropic Act 1985.

1. The Possession, use and/or distribution of substances of abuse are prohibited on premises owned or controlled by GIET Main Campus (Autonomous), Gunupur.
2. GIET Main Campus (Autonomous), Gunupur.squads will carry out random checks on students/ residential premises for substances of abuse.
3. Possession, use and/or distribution of substances of abuse will attract appropriate disciplinary action which may include expulsion.

   Offenders will also come under the purview of Narcotic Drugs and Psychotropic Substances Act 1985 (NDPS Act) and will be liable for penal action

10.1.2 Disciplinary procedures

A student violating the GIET Main Campus (Autonomous), Gunupur policy on substance abuse will face :

A. Immediate suspension from the college, pending enquiry.

B. Parent/legal guardian will be informed immediately and will be expected to meet the HOD at the earliest.

C. The Institutional disciplinary committee will conduct an enquiry and submit the report to HOD who will initiate further action in consultation with the Higher Authorities GIET Main Campus (Autonomous), Gunupur.

10.1.3 DISCIPLINARY COMMITTEE:

As the institution attaches utmost importance to discipline, it has constituted disciplinary committee to look into any act of indiscipline on and off the campus.

In case of any breach of discipline reported by a student, faculty member, hostel staff, student welfare officer, or HOD etc. the committee investigates the matter and decides corrective of purifire measures. The decision of the Disciplinary Committee is final and binding.

10.2 RAGGING FREE CAMPUS:

The ugly monster of RAGGING is a nightmare for all students and their parents We at GGI, Gunupur fully understand the gravity of the situation and have ensured an absolute RAGGING FREE CAMPUS. Proud to announce that not a single incident of ragging has occurred in GGI, Gunupur and assure to maintain this impeccable record all in the, times to come.

10.2.1 RAGGING IS DEFINED AS:

- Forcing a student to perform some action against his/her will.
- Physical violence of any kind against a student.
- Any act of mental harassment or intimidation to any students.

Realizing the seriousness and sensitivity of the situation, the institution has taken a plethora of positive steps to ward off any kind of ragging. They are:

- Senior students are not allowed to enter the academic block meant for junior students during their (Juniors') class hours.
- Senior students are not permitted to board the bus meant for junior students and vice versa.
- Senior students are prohibited to intimiate any juniors while in the library, laboratory or any other place on/off the campus.
- Senior students are not allowed to enter any hostel meant for the juniors under any pretext vice versa. Nor any senior student is permitted to invite/ask for discussion any junior student to his/her hostel.
- Junior students are not allowed to enter to the hostels meant for senior students under any pretext.

In case any student is subjected to ragging, the incident must be reported to the concerned authority such as the security Proctor, Coordinator, HOD, Dean (Administration), or the Principal without delay convenor or any member of the disciplinary committee.

10.2.2 PUNISHMENT AGAINST RAGGING:

Depending upon the nature and gravity of the offence as established by the Anti-ragging Committee of the institution, the possible punishments for those found guilty of ragging at the institution level shall be any one or any combination of the following.

- Suspension from attending classes and academic privileges
- Withholding/withdrawing scholarship/fellowship and other benefits.
- Forfeiting campus placement opportunities/recommendations.
- Debarring from appearing in any test/examination or other evolution process.
- Withholding of results.
- Debarring from representing the institution in any regional, national or international meet, tournament, youth festival,etc.
- Suspension/expulsion from the hostel.
- Cancellation of admission.
- Rustication from the institution for a period, ranging from 1 to 4 semesters
- Expulsion from the institution and consequent debarring from admission to any other institution fro a specific period.
- Fine to be paid.
- Collective punishment: When the persons committing or abetting the crime of ragging are not identified, the institution shall resort to collective punishment as a deterrent to ensure community pressure on the potential raggers.

A high level ragging prevention committee has been constituted with senior faculty members to look into any ragging related complaint and award speedy justice to the aggrieved students/students after thorough enquiry into the matter.

NB: Students found indulging in ragging may face expulsion from the institution and face criminal procedure in the court of law.

10.3 STUDENT GRIEVANCE REDRESSAL CELL:

The objective of the Grievance Redressal Cell (GRC) is to develop a responsive and accountable attitude among all the stakeholders in order to maintain a harmonious educational atmosphere in the institution.

The GRC deals with grievances put forth by the students concerning Academics, Finance or any other relevant matters. Hence, any student facing difficulties concerning any of these matters may intimate the same to the Grievance Redressal Cell so that appropriate steps can be taken to alleviate the problem.

Modus Operandi:

- Write your grievance in the format attached with this book and drop it in boxes marked for this purpose.
- Attach all the necessary documents with your application.
- The GRC will take up only those matters which have not been solved by any other department.
- Grievances related to financial matter like fees etc. will be taken up for consideration only if the relevant documents like demand drafts etc are attached with them.
- However, the GRC will not entertain any application in the following cases:
- Decision of the Executive Council, Academic Council, Board of Studies and other Administrative or Academic Committees constituted by the University from time to time.
- Decisions with regard to awarding of scholarships, fee concession, medals etc.
- Decisions made by the University with regard to disciplinary matters and misconduct.
- Decisions of the University about admissions in any courses offered by the institute.
- Decisions by competent authority on assessment and examination results.

10.4 DOs AND DONOTs FOR STUDENTS:

DOs:

- Wear the prescribed uniform while in the college premises.
- Always carry the ID card and produce it if demanded by the concerned authority at any time.
- Attend all classes observing discipline and decorum befitting the dignity of the institution.
- Take care of the Institutional property such as furniture and fixture, laboratory equipments, electrical fittings, transport garden around etc.
- Preserve the cleanliness of the campus.
- Strictly follow the guidelines while using resources like library, internet laboratory, dispensary, swimming pool, transportation etc.
- Cooperate with the Class Teachers/Proctor and furnish necessary information to them as & when required / asked for.
- Students should come up individually, not in a group to solve his/her problems

DONOTs:

- Don't get involved in ragging or related activities.
- Don't cause damage to institutional property like laboratory equipments, electrical fittings, furniture and fixtures, transport facilities etc garden / greenery maintained around .
- Don't' spoil walls, furniture, stair case etc. by spitting or writing any thing absurd.
- Don't adopt unfair means during examination.
- Don't attend classes or any official occasions without proper uniform and shoes.
- Don't use mobile phones in the academic area.
- Don't use tobacco, alcohol, betel leaves, chewing gums and or any other addictive substances.
- Don't invite any outsiders including friends and relatives to the Institute hostels without prior permission.
- Don't misbehave with any one in the classroom, during meeting, sports events, or any other such occasions.
- Don't violate any guidelines while using resources like library, health club, swimming pool, dispensary, transportation etc.
- Don't treat your personal problem as a common problem

10.4.1 DISIPLINARY RULES FOR SUTDENTS

- Students have to maintain 80% above attendance in theory subject to avoid detentions
- Less than 80% of attendance in any subject, will automatically lead to detention in that subject.
- Students have to maintain 100% attendance in every laboratory.
- Without proper dress code students are not allowed to theory and laboratory classes. Anybody violating will be marked absent in that theory /laboratory class in consultation with HoD of respective department.
- Mobile usage is prohibited in the college / classroom. If any student found with mobile in college it will be seized and returned only during the semester end.
- Consuming alcohol, cigarette will lead to detention/ debar and expulsion from hostels and debar from end examinations.
- If students are facing any problem then he/she has to follow the reporting procedure as:

  1.Proctor 2.Proctor supervisor 3.HOD 4.Dean/principal
- After pass out from college alumni details are to be maintained at department level and possible interactions may be organized

10.5 DOs AND DONOTs FOR PLACEMENT:

DOs:

- Attend placement drives in complete formal dress.
- Carry College ID Card and Registration Card.
- Carry attested copies of all relevant documents like certificates etc along with a latest resume.
- Keep all your documents properly arranged in a file.
- Maintain proper discipline keeping in mind the dignity of the Institution.
- Keep mobiles in switched on mode while you are out of station for easy communication.
- Switch off the mobile phones at the time of written examination, attending Personal Interview or corporate presentations.
- Follow the instruction of the concerned authority accompanying you while going for a campus outside Gunupur.

DONTs:

- Don't wear casual dress while attending the placement drive.
- Don't use tobacco, alcohol or any other addictive substance.
- Don't use vulgar or obscene language while traveling during campus drive.
- Don't spit in the bus, damage properties of the bus, shouting or misbehaving with staff members while traveling.

N.B: Violation of all or any of the above mentioned rules and regulation will be treated as gross misconduct and will invite disciplinary action, which may lead to debarring from attending campus interviews in future.

10.5.1 Placement status report update:

Courses	2013 - 17	2012 - 16	2011 - 15	2010 - 14	2009 - 13	2008 - 12
AEIE	98.00	97.12	95.56	89.00	97.25	95.41
BT	87.00	99.00	62.50	98.00	100.00	91.23
CHEM	95.00	100.00	100.00	100.00	90.32	94.44
CIVIL	88.00	89.00	75.44	88.00	77.78	
CSE	97.00	96.15	86.96	90.00	84.11	94.17
EE	98.00	99.00	84.51	88.00	97.62	96.30
EEE	92.00	96.81	100.00	87.69	88.31	93.44
ECE	96.00	98.00	96.61	89.00	97.56	95.45
IT	98.00	97.83	63.64	88.00	75.51	93.68
MECH	96.00	90.86	100.00	95.00	94.12	98.45
META	80.00	82.00	33.33	85.71	87.50	
TOTAL	**93.18**	**95.07**	**91.46**	**90.76**	**90.84**	**95.69**

10.6 INFORMATION TO PARENTS:-

GGI, Gunupur is one of the premiere technical institutes of India, aspires to produce technocrats par excellence and tries to impart quality education for producing skilled, committed and responsible citizens who can hold the banner of our nation high.

This lofty mission of ours can't be realized without the active support of the parents. So we call upon the parents to work hand in hand with us in nurturing the talent of students and enabling them to realize their full potential.Parents are requested to:

Please • Be vigilant and have a strict follow up on the attendance of their wards to ensure that their wards attend all their classes.

Please • be in regular touch with class teacher to know regarding their sons/daughter academic progress of ward's.

Please • advise their wards regarding value of discipline punctuality and sensitize / educate them about importance in building a meaningful career.

Please • contact the Proctor class teacher, Head of the Department and Principal if they feel their ward is not progressing academically as per their expectation.

Please • make it a point to respond promptly to any written or oral communication sent to them by the Institutions.

Please • ensure timely deposit of college/other related fee.

Please • sign an undertaking at the time of admission that they will abide by the rules and regulations of the Institution.

Please • avoid giving big amount of pocket money to their wards as it has the potential of distracting the attention of the ward and drag them to go astray from their path.

Please • Avoid giving costly mobile phones.

Please • take a note that the decision of the management on all matters regarding rules & regulations shall be final and binding as these are benefical for their wards.

11.0 FACILITIES

11.1 MEDICAL FACILITY:

A healthy mind lives in a healthy body. GGI, Gunupur is fully aware of role and responsibility in maintaining the health of students and has taken all possible measures to provide healthcare service to the students. A dispensary equipped with all necessary facilities to meet any health related emergency is available inside the campus. Qualified doctors and pharmacists working round the clock to provide health care service to students and staff of GGI. Doctors, Director / Principal, Dean (Admin.) and Warden regularly visit the hostels and monitor the health care situation. The Institute has Ambulance vans to medical emergency. Consultancy for staff & students is free in the institute dispensary.

11.2 TRANSPORT FACILITY:

The institute provides transport facilities to all students. The Dean (Admin.) looks after the facility on a day to day basis. The commuters are advised to follow the following rules:

- The buses have specified stops. All the students must wait at those specified stops to board the bus.
- Students must travel by the bus allotted to the route concerned and must not change their bus number or routes.
- Decency & discipline must be maintained while travelling in the bus.
- Use of any addictive substance including smoking, consumption of tobacco, alcohol etc in the bus are strictly prohibited.
- Ragging of any form in the bus is strictly prohibited.
- Commuters must not damage any of items like seats, lights, glasses etc. in the bus. In case of any such incident, they have to pay fine for the damage as decided by the authority.
- Students must behave politely with the transport staff.
- Violation of any of these rules in any manner shall invite strict disciplinary action.
- Any suggestion related to the transport services should be communicated to the Transport Supervisor / Dean (Admin.).

11.3 LIBRARY FACILITY:

11.3.1 FACILITIES AVAILABLE TO THE STUDENTS:

- Text Books
- Reference Books
- Photocopy
- Spiral Binding & Lamination
- Digital Library & E- Resources
- CD & DVD Library
- Web OPAC to search the book
- Magazines & Journals and back volumes

11.4 GAMES & SPORTS FACILITY:

Sports and games play an important role in maintaining a healthy body and mind. The institute gives equal importance along with study and has built a massive infrastructure for both outdoor and indoor games. Regular sports and games related activities are organized and a qualified trainer looks after the training as well as organization of such activities. Student actively participate in Inter-college / Inter-university level sports / games meets. The Institute takes pride in encouraging the sportspersons and honour them with awards, prizes, certificates etc.

The Institute encourages sportspersons of boys & girls equally without any discrimination. Moreover, even girl students are encouraged to participate in sports and games as well as cultural activities in a big way and the Institute takes all possible steps to fullfill their attempts. Lady faculty members accompany girl students to guide them whenever there is any off-campus sports or cultural activities.

The institute has also built a massive swimming pool, and appointed a trained swimming instructor to train the students. Different time slots are allocated for boys and girls students as well as staff members for the swimming session.

Some of the facilities available in the Institute are:

- Five-track National Standard Swimming Pool.
- Separate play grounds are available in the campus for:

⇒ Foot-ball
⇒ Cricket
⇒ Basket-ball
⇒ Volley-ball
⇒ Badminton

As part of the indoor games, following facilities are also available for the students:

⇒ Table-tennis
⇒ Chess
⇒ Carom etc.

12.0 SPECIAL ACTIVITIES

12.1 SEMINARS:

Seminar is an integral part of academic activities. Every department, under the guidance of a senior faculty member, conducts seminars and workshops regularly which provide new exposure to both the faculty members as well as students. The management actively supports and encourages such programs. The regular features of such activities are:

- Inviting experts, guest faculties, eminent scholars, scientists et al. from outside to deliver talk in the field of their expertise.
- Seminars by the faculty members of the Institute on specific area of interest.
- Conducting students' seminar, personality development programs etc.
- Every student is allowed to participate in one conference/seminar/workshop in a year.
- Registration fes up to Rs.500/- or as per actual on submission of relevant supporting document in original.
- To & Fro sleeper class train tickets (student concession) from the nearer railway station (break journey and PremiumTatkal tickets will not be considered.)
- To and Fro bus and train fare from Gunupur Campus to Rayagada/Palasa.
- Local conveyance allowance (such as auto, City Bus etc) for metro cities shall be Limited to Rs.100/- only.

12.2 CULTURAL & SOCIAL WELFARE SOCIETY:

After a entire day's uninterrupted study, mind needs entertainment and fun for refreshment. GGI, Gunupur regularly organizes different cultural activities on the campus. Cultural committee headed by a senior Faculty member and supported by student representatives and achieving participate in such programs.

At the same time, GGI, Gunupur has not forgotten its social responsibility towards creating an educated and empowered society. The Institute undertakes various welfare schemes to empower the local population of Gunupur. The NSS wing of the Institute also actively organizes different programs from time to time at different places/spots.

12.3 SCIENCE & TECH FEST:

Our students are not one-dimensional personalities but multidimensional potentialities waiting for a proper platform to blossom. Keeping this in mind, GGI, Gunupur organizes a Techno Management Fest (usually for two days) named ***SCIENCE & TECH FEST*** every year.

All students eagerly wait for this event as it gives them an opportunity to exhibit their talents in their respective fields . Besides a National level paper presentation where a substantial number of students from Odisha & outside the state participate, the event features many fun-filled competitions and cultural programs.

12.4 CAMPUS FLASH:

The institute publishes a monthly Newsletter called "Gandhi Campus Flash" which gives information about the happenings on the campus. The newsletter highlights various achievements of the students as well as the faculty members, as like their participation in various Seminars / Conferences / Workshops and other commendable deeds. The students are also encouraged to contribute their news items to the Newsletter through the correspondent of their respective department.

12.5 TRAINING & PLACEMENT ASSISTANT

T & P PROCESS CHART

Sl. No.	Year	Training Activities	Training Agency
1	1st Year	Communicative English	External Experts
		Personality Development	External Experts
2	2nd Year	Business English Communication (BEC Vantage)	British Council, Kolkata
		Accent Training	Internal Faculty
		Oracle (SQL / PL SQL) Technology	Internal Faculty
		Summer Training	Visit to Industries
3	3rd Year	Pre Placement Training - Arithmetic, Reasoning, General English	External Exprerts
		PPT - C, C++, DS, JAVA, DBMS, Linux & OS	Internal Faculty
		GD / PI Techniques	External Experts
		Campus Oriented Brush up Sessions	Industry HRs & Experts
		Mock Test / Very Similar Test	Online Web Portal
		Campus Connect Program	Infosys
4	4th Year	Training GAP Analysis	T & P Cell
		Company Specifics FAQs-Discussion	External Experts
		HR Meet and Interaction session	Industry Experts
		Recruitment Drives Starts	TCS, Tech Mahindra etc.

12.6 NSS:

The institute patronizes NSS units for pioneering the social schem.

12.7 WOMEN DEVLOPMENT CELL (WDC):

WDC girl students regarding communicatin health aspects and makes fear free environment. Encourage female staff and student for debating seminars, competetions etc and handle any problems and grievances of female staff and students.

13.0 RULES & REGULATIONS

13.1 LIBRARY RULES:

13.1.1 ADMISSION TO THE LIBRARY:

- A student has to show Identity Card while entering the library.
- Every student has to enter his / her name, Roll No, section, time etc in the Register kept at the enterance with the gatekeeper.
- Personal books and belongings have to be deposited at the property counter at the gate.
- Students are not allowed to enter the Library when they have scheduled classes.
- Outsiders are not allowed into the Library without prior permission.

13.1.2 WORKING HOURS :

- **Reference section** - Round the clock both on working days and holidays
- **Issue section** - 9.00 AM To 6.30 PM on working days
- **Xerox Section** - 8.00 AM To 8.00 PM. on working days and holidays

13.1.3 CONDUCT WITHIN THE LIBRARY:

- Maintain silence inside the library.
- Spitting, smoking, sleeping, gossiping inside the Library are strictly prohibited.
- Combined or group study / discussion is not allowed in the library reading room.
- The library premises must not be used for any purpose other than reading.
- No person shall write on books, journals & periodicals, either for the purpose of correcting an error or otherwise or make any marking on publications belonging to the library.
- Don't damage any books, journals, magazines or any of the materials available in the library.
- Personal books, photocopied materials etc are not allowed inside the library.
- If any publication is lost / damaged or any page is removed by a reader, he / she must replace it by a new copy or pay three times the cost of that volume and pay any fine that may be imposed on him / her by the authorities.
- If someone loses a book, he / she must report the matter to the Librarian on the same day. Otherwise late fine will be added with the amount payable for the lost book.
- If one volume of a set is lost by the a user, the whole set shall have to be replaced by him/her.
- Before leaving the library each person shall return the books/ documents taken for reference / reading in the reference counter.
- The gatekeeper or watchman may search any student at the library exit gate.
- Book bank facility is provided by the central library at intervals with the stipulated rules & regulations.

13.1.4 BORROWING PRIVILEGES:

- A student has to get enrolled as a member of the Library to avail this facility.
- A library card will be issued to each member. The library card will be valid for one academic year and shall be renewed in the beginning of the subsequent years.
- Documents will be issued to a borrower only against the Library card.
- No. of books issued to the student:

Class	No. of Books Issued	Maximum Issue (Period)
Ist Year B. Tech	02	07 days
IInd Year B. Tech	02	07 days
IIIrd Year B. Tech	03	07 days
IVth Year B. Tech	03	07 days
M. Tech	05	For one Semester
MCA	03	07 days

A student has to return the bnook(s) within a period of seven days (including last day) failing which he / she shall have to pay the following fines per day per book from the 7th day of the issue of the books

From (Day)	To (Day)	Fine / Day / Book
7th	13th	Rs. 1/-
14th	20th	Rs. 2/-
21st	27th	Rs. 4/-
28th	Onwards	Rs. 8/-

N B: immediately after 28 days, disciplinary action will be taken against the defaulter

- In addition to the issue of Library books, the college has a Lending Library system, where a Student can borrow a maximum of five books for the duration of one semester on payment of 20% of the cost of the book

13.2 HOSTEL RULES:

These rules are applicable to all hostels of Gandhi Group of Institutions.

13.2.1 ADMISSION:

- A student shall not be entitled to retain accommodation in the hostel beyond his / her tenure of the course. However, a student who has submitted his/ her thesis may be permitted to retain hostel accommodation till his / her final Viva-voce test. This is subject to payment of usual rent and availability of hostel accommodations, provided he / she actually resides in the hostel.
- A student wishing to get College Leaving Certificate has to get his / her all hostel related dues cleared before receiving the said certificate.
- Students having more than four back papers is not allowed to stay in the hostel.

13.2.2 WITHDRAWAL:

- After allotment, application for withdrawal from the hostel shall not be entertained unless the same is countersigned by the Father / Guardian of the student and the Principal /Director / Dean Admin. through student welfare officer (SWO) /Superintendent/ Matron as the case may be. Such an application shall be entertained only after hostel dues are cleared and a certificate to that effect is obtained from SWO / Hostel Superintendent / Matron and Warden enclosed along with the application.
- While vacating the hostel, the boarder must hand over the charge of the room along with the hostel properties issued to him / her and obtain a NO OBJECTION CERTIFICATE from the SWO / hostel superintendent / matron and warden.

13.2.3 STUDY HOURS:

- A boarder must strictly follow study hours between 6.30 PM to 9.00 PM everyday. He / she must also observe pindrop silence during these hours. Playing musical instruments, radio, tape recorder or creating any kind of noise or disturbance during study hours is strictly forbidden. Boarders found violating the same are liable to fall disciplinary action

13.2.4 REPORTING TIME:

- All the boarders should reach their respective hostels before 6.30 PM to maintain study hours. However in the case of girls, following shall be the reporting time in their respective hostels:

A) 1st March
To 6.30PM
30th September

B) 1st October
To 6.00PM
28th / 29th February

13.2.5 LEAVE OR ABSENCE:

- For leave or absence from hostels or leaving head quarters, the boarder shall obtain prior written permission from the concerned HOD and the same should be submitted to the SWO.
- In case of girls the boarders shall also obtain written permission from HOD / Principal and Dean Admin. The same should be submitted to the Matron.
- Absence from the hostel beyond the specified time without prior permission of the SWO / Matron is considered as an act of gross indiscipline and misconduct and would invite heavy punishment. Such cases will be reported to the Dean Admin / the Principal by the concerned Matron / SWO / Warden.
- Repeated violation of the rules may lead to expulsion from the hostel and College.

13.2.6 CARE OF HOSTEL PROPERTY:

- Boarders will be responsible for the safe keeping of their room and the furniture and fittings provided to them. Damage or breakage of any hostel property will invite heavy punishment. Such cases must be reported immediately to the SWO / Matron.
- Any loss or damage caused to the Hostel property by any student will be recovered from him / her. In case of un-identifying the offenders, who actually caused such loss or damage, collective fine may be imposed on all of them.
- Students are expected to keep their rooms neat and tidy and maintain cleanliness all through. Spitting on walls, furniture, doors, etc. should be avoided and these should not be defaced with pencil / chalk marks, posters etc. or by indiscriminate driving of nails etc.

13.2.7 ELECTRICITY:

- Use of electrical appliances like heaters, iron, table lamps, music system, etc. without permission is punishable. Any one using immersion heater or other type of heater may be fined Rs 5000/- and such appliance may be confiscated.
- Cooking inside the room in the hostel is not allowed. Any body found cooking in his/ her room is liable to strict disciplinary action.

13.2.8 SECURITY:

- Boarders are advised not to keep any valuables in their rooms. They should take care of their personal belongings, and keep them under lock and key. The college shall not be responsible for any loss on account of theft or carelessness.

13.2.9 VISITORS OR GUESTS:

- No visitor is allowed into the hostel after 6 PM. Friends of opposite sex are not allowed into rooms at any time. Visitors can meet boarders at the appointed place in the premises. A boarder keeping guest without permission of the hostel SWO / Matron is liable to be punished.

13.2.10 MEDICAL ASSISTANCE:

- Warden in his turn refer to the Medical Officer for immediate medical aid.

13.2.11 CODE OF CONDUCT STAYING OUTSIDE THE CAMPUS:

- They should put up 80% attendance in classes or else the competent authority of the institute may take punitive action against them as may be deemed fit and proper.
- They will neither join in any coercive agitation / strike for the purpose of forcing the authorities of the institute to solve any problem ,nor they will participate in any activity which has a tendency to disturb the peace and tranquility of life GIET Main Campus (Autonomos) and or its hostel premises.
- They shall be solely responsible for their involvement in any kind of undesirable / indisciplinary activities outside the campus and shall be liable for the punishment as per the law of the land. The institute shall in no way provide any support to them and will not be held responsible for their any such action.
- They will not involve nor instigate in any of the activities, which hampers the image and the reputation of the college, in such cases if they are found to be guilty they shall be liable for punishment as deemed fit and proper.

- The college authorities have the liberty to visit the mess off and on and take action against them if they are found guilty in any unlawful activity.
- They will not use any vehicle (Two Wheeler or Four Wheeler) for their personal conveyances.
- They have to abide by the admissible rules and regulations , concerning discipline, attendance etc of the institute and also to follow the code of conduct prescribed for the Students of the Institute , as in force from time to time and subsequent changes/modifications/amendment made thereto
- They must maintain dignity and decorum. of themselves, their parents and Institution during their entire state in the mess.

13.2.12 MESS:

- Mess is compulsory for all boarders.
- Boarders should not remove common room articles, dining hall utensils, furniture and other articles of hostel from their respective places.
- Mess charges must be paid regularly along with college fess.
- No food is served in the rooms of the boarders. However, on medical grounds, and on advice of the Doctor, a student may be allowed to take food in his/her respective rooms with the knowledge of SWO / Matron.
- Boarders must follow the mess timing properly.
- Outside food is not allowed in mess.
- Mess properties are not to be taken outside the mess premises.
- Use of outside containers is not permitted in the mess.
- **Food wastage is a crime aginst humanity.**

13.2.13 DISCIPLINE:

- A boarder shall be liable to expulsion from the hostel, if he / she is in the habit of staying away from hostel without permission or is negligent in studies or is found guilty of misconduct or indiscipline, by the Principal / Dean Admin on recommendation of the SWO / Matron and warden.
- Ragging of any kind in the hostel is an offence and hence prohibited. Any body reported to be indulged/involved in ragging will be liable to severe punishment. Such a student may be expelled by the Principal. Again such cases shall be reported to the police for necessary action in view of the decision of the apex court.
- A boarder must not take alchohal intoxicating drinks or any kind of intoxicants or indulge in gambling in the hostels or outside. For rowdy and indisciplin behavior, a boarder is liable to be expelled from the college.
- Any meeting to be held in the hostel premises should have prior approval of the Principal / Dean Admin, who may give approval if such meeting is concerned with hostel affairs only.
- No boarder is allowed to keep any fire arms, lethal weapons, poison or intoxicants of any kind in the hostel. In case, any body found with said items, disciplinary action as deemed fit shall be taken by the authority.
- All kinds of shouting, violent demonstration, knocking or any other act of movement or behavior, which is likely to cause disturbance or annoyance to the boarders are strictly prohibited.
- Quarrels and disputes with fellow boarders should be avoided. Boarders must not take the law into their own hands but must report all about quarrels and disputes to the SWO / Matron immediately.
- All the boarders must attend the classes regularly in the college. Boarders are not supposed to be in the hostels, if they have scheduled classes in the college.
- Every boarder must be acquainted with all rules and regulations of the hostel. He / she must observe these rules strictly. Ignorance of rules will not be considered as an excuse during interrogation/interaction.
- A boarder found guilty of having committed a breach of any of these above rules shall be liable to strict punishment.

- Students having four back papers are not entertained in hostels.
- Students not appeared in the mid sem exams are not permitted the semester examinations.
- All class rooms and labs are strictly supervised through close circuit cameras.
- These rules may be changed, modified or altered at any time by the authority.
- ***If a student faces disciplinary proceeding on any ground, shall be deprived of placement and other facilities as decided by authority.***

13.3 INTERNET FACILITY:-

- Violation of rules and misuse of the net will be viewed seriously leading to punishment.
- Students should use the net for mailing and for browsing the sites related to educational document only.
- ***Any difficulties in browsing internet contact:***

Mr. Chandra Sekher Behera : 7735745516
Mr. Sudishkar Paricha : 7735745517
Mr. Debidatto Mishra : 7735745503

14.0 SERVICE DIRECTORY:

In order to be more close with the students, parents and stakeholders of GGI, Gunupur to provide better services, the authorities have decided to insert a column in the web site (www.giet.edu) namely SERVICES DIRECTORY with immediate effect. Hence, all students, parents are requested to follow the SERVICES DIRECTORY provided in the college website for quicker and prompt disposal of their queries/ problems/ suggestions/ clarifications etc.,

14.1 ACCOUNTS:

Mr. Sarat Chandra Panda (Account Officer), Mob: 7735745544 may be contacted for

- Fee particulars & mode of payments.
- Students fees
- Tuition fees draft.
- Fees related to value added courses.
- Anomalies in Payment of fees.
- Refund of Caution / excess money.
- All other finance related queries.
- Opening of new Bank Account.

All students can deposit their fees through the following details:-

- **Bank RTGS/NEFT payment for B.Tech/M.TECH**
- **Account Holders Name-Gandhi Institute of Engineering and Technology, Gunupur**
- **Account No-34542974666**
- **IFSC CODE NO-SBIN0017769**
- **MICR CODE NO-765002525**
- **SWIFT CODE NO-SBININBB273**
- **BRANCH ADDRESS- GIET BRANCH ,GUNPUPUR**

NB: After transaction keep the counter foil with you and get money receipt from account section by producing the same

14.2 CAMPUS HOSTEL / TOWN HOSTEL:

Given below Welfare Officers may be contacted for:

- Students In / Out Timing.
- Parent Query.
- Hostel Discipline.
- Leave Application Verification & Record
- Any Health Problem
- Any other queries related to Campus Hostel

SL NO	DESIGNATION	NAME OF THE STAFF	PHONE NO
1	Warden(In Campus)	**Mr.A.K.Mahapatra**	**7735745525**
2	Warden (Town Campus)	**Mr.A.K.Mahapatra**	**9437598823**
3	SWO	**Mr.M.Dharama Rao-**NC-9&10	**8655831775**
4	SWO	**Mr.Purna Chandra Das-**NC5&6	**9437207360**
5	SWO	**Mr.Laxmikanta Choudhury –**NC-1,2,3	**9438223904**
6	SWO	**Mr.Dharmendra Singh –**NC-12	**9437873308**
7	SWO	**Mr.Gopal Krushna Sahu-**NC-11&4	**8763641904**
8	SWO	**Mr.Siba Prasad Pradhan-**NC-7&8	**8280090247**
9	Care Taker	**Mr.Manaranjan Padhi-**NC9&10	**9583844195**
10	Care Taker	**Mr.Jitendra Tripathy** NC-5&6	**9777265126**
11	Care Taker	**Mr.Santosh Kumar Patra** NC-4&11	**8117926660**
12	Care Taker	**Mr.Minaketan Rath** NC-123	**8093147228**
13	Care Taker	**Mr.Pankaj Kumar Sethi-**NC-7	**9438224272**
14	Care Taker	**Mr.Manoj Kumar Sahoo-**NC-12	**8984138887**
15	Care Taker	**Mr.Neelakantha Mahankuda-**NC-8	**8763893165**
16	Care Taker	**Mr.Satya Prasad Das-**NC-12	**9348993810**
17	SWO	**Mr.S.N.Khadanaga** – Gyatri-1&2, MM-1&2,Krupasindhu(Ladies Hostel)	**9438672128**

All the above mentioned Welfare Officers of the concerned hostels may be contacted for:

- Medical Assistance.
- Ambulance Arrangement.
- Shifting of patient to out station.
- Patient's status.
- Diagnosis Report.
- Any other queries related to Health of the students.

If not clarified then Mr. Ashok Mohapatra, Mob: - 9437598823 (Warden) for city hostel may be contacted.

14.4 DISPENSARY:

Dr. S. S. Padhy, Mob:- 7735745538, (Doctor GIET, Dispensary) may be contacted for any student's health status.

14.5 MAINTENANCE:

Mr. K. Ch. Mishra, Mob:-9438224498
Mr.Chandra Kanta Sehti (Facility Manager)-7381052119
May be contacted for: Hostel / Campus Maintenance, Electricity & Water Supply.

14.6 EXAMINATION:

- Result (S, W & F category in the mark sheet of University Result, online registion, Course completion & queries about certificate) *Mr. Sanjay Panda, Mob:- 7735745530 & Mr. Jagadish Bhukta, Mob:- 9861103642* the following persons may be contacted.
- Anomalies in Mark Sheet & University related Matter *Mr. Udaav Goudo, Mob:- 773574511* May be contacted.
- M.Tech related queries Mr. Sanjay Panda, Mob:- 97735745530 may be contacted.
- Education Verification of students Mr. Jagadish Bhukta, Mob:- 9861103642 may be contacted.

For any other query or else not clarified then
Prof. D. Anil Kumar, Mob: -09437133014 (In - charge Exam Cell) may be contacted.

14.7 SCHOLARSHIP / WELFARE FUND:
Mr. Swapna Rani Pradhan, Mob:-9778737505, may be contacted.

14.8 LIBRARY:
Dr.Nikunja Patra, Mob:-9437234039(Sr.Librarian) may be contacted for:

- Library Fine
- Lending Library
- Book Return by Pass out Student / Ex - Staff
- Anomalies in fine collection
- Identity Card(Staff / Student)
- Library Card

Any other query relevant to Library

14.9 ATTENDANCE / FORM FILL UP / REGISTRATION / MID SEM Marks / Student
Performance / Leave Sanction of Students Concern HODs may be contacted:

Sl. No.	Branch	Name of the HOD	Phone No.
1	CSE	Dr.Sanjay Kumar Kunar	**Mob:- 9437835995**
2	AE&IE & ECE	Prof. Subhrajit Pradhan	**Mob:-9437640423**
3	EEE & EE	Prof. G. Satya Prasad	**Mob:- 8598853582**
4	Chemical	Mr.Radha Krushna Padhi	**Mob:- 9437951486**
5	Mechanical	Dr. Ajit Senapati	**Mob:- 9437783220**
6	Civil	Prof. Asish Kumar Samal	**Mob:- 8093186822**
7	Bio-Tech	Dr. Manoj Dash	**Mob:- 9437771065**
8	BSH	DR.AVNL Sharma	**Mob:- 9441077522**

14.10 Admission Section:
Mr. Gouri Patnaik, Mob:-9437373201 may be contacted for:

- Study Loan Estimation Report
- Income Tax Purpose
- Bonafide Certificate
- C.L.C / C.C
- Issue of original class X and XII

14.11. Card issue & Renewal of I Cards:
Mr.Sunil Kumar Panigrahi , Mob: 9861907292

14.12 Welfare of Foreign National Students:
Mr. S. Sibajee, Mob:- 9437783209 for Foreign Nationals may be contacted.

14.13 Recruitment :
Submission of CV and for any other Correspondence - mail to hr@giet.edu

14.14 Bus:
Campus Bus:- Mr. Uma Prasad Dandasena Mob:- 8895320772
*Mr.*Govind Chandra Panda Mob:-7978690092
(Transport Supervisor) may be contacted for following points:
- Trip in Student Timing
- Bus Stoppage
- Other Relevant to college buses.

14.15 Placement:
Prof. Jyotirmaya Mishra, Mob:-09437207065 may be contacted.
For following query:
- Training
- Upcoming Campus Drive
- Offer Letter
- Joining Letter
- Any other matter related to T&P
- If not clarified then Prof. (Dr.) N. V. J Rao (Dean Admin.), Mob: - 9437044170 may be contacted.

14.16 Guest House Accommodation:
Guest House (15 Seated) -
Mr. Debendra Mahankudo, Mob: - 07381555665 may be contacted for:

- Advance booking
- To know either suits are vacant or not
- Any other matter related to Guest House

14.17 *Please avail these facilities in a proper way and cooperate with the system. If anybody is not clarified with the information provided by the concerned people, finally they may contact:*
Vice Chairman - Prof. Jagadish Panda,Mob:- 09437233987
Principal - Dr. K.Senthil Kumar:- 06857-251156
Dean (Admin.) - Prof. (Dr.) N.V.J Rao, Mob: - 09437044170
1st Year
Mr. Dilip Patnaik, Asst. HOD (Academic):- 07381113021
Mr. Debasis Patnaik, Asst. HOD (Administration):- 08339811556
Mr. T.Appa Rao, Coordinator:- 08093990010

BSH FACULTY LIST

SL.NO.	NAME OF THE FACULTY	DESIGNATION	MOBILE NO
1	Prof. (Dr.) A. V. N. L. SHARMA	Prof. & HOD	9441077522
2	Dr.Tapan Kumar Patnaik	Associate Prof.	9438317020
3	Prof. (Dr.) B.P.G.Mahapatra	Associate Prof.	9437660593
4	Prof.(Dr.) Biplab Kumr Rath	Associate Prof.	9437746902
5	Prof.(Dr.)Arun Kumar Dash	Associate Prof.	9437392485
7	Dr.Deepika Patnaik	Associate.Prof	9439322609
6	Dr. Soumya S.Patnaik	Asst.Prof	9437848120
8	Dr. Runu Sahu	Asst.Prof	9776119434
9	Dr. Biswajit Dalai	Asst.Prof	9778179244
10	Dr. Prativa Kar	Asst.Prof	9438324404
11	Mr.Ansuman Nayak	Asst.Prof	9437338988
12	Mr.V.Ganesh	Asst.Prof	7205608884
13	Mr.Dillip Kumar Pattanaik	Asst. Prof & Asst. HOD (Academics)	7381113021
14	Mr.Debasish Patnaik	Asst. Prof & Asst. HOD (Adminstration)	8018855556
15	Mrs. Rasmita Panigrahi	Asst.Prof	8984055412
16	Mr. N. Jagannadham	Asst.Prof	8093192757
17	Mr. Kishor Kumar Panda	Asst.Prof	9438017875
18	Ms. Ranjita Rath	Asst.Prof	9437142489
19	Mrs. Bijaya Laxmi Kuanar	Asst.Prof	9778119391
20	Mrs. M. Sivakami Sunndari	Asst.Prof	8610395196
21	Mr.Rabindra Kumar Mishra	Lecturer	9437783128
22	Ms. Shobharani Jena	Lecturer	7681800878
23	Ms. Rajeswari Panda	Lecturer	8895506224
24	Mr. James Pradhan	Lecturer	7852996050
25	Mr. Kuna Bibar	Lecturer	7504086502
26	Mr. Trilochan Nayak	Lecturer	7064325472
27	Mr. Sumanta Kumar Rana	Lecturer	9114332129 7978910717

Annexure – I

GIET MAIN CAMPUS AUTOMOUS, GUNUPUR-765022

STUDENTS' GRIEVANCE CELL

PRO FORMA

Student's Details

1. **Name:……**
2. **Roll Number:……**
3. **Regd. No.:……..**
4. **Father's Name:……**
5. **Address for Communication:……**
6. **Branch:……**
7. **Year / Semester:……..**
8. **Nature of Grievance: ……**

……

……

Forwarded to with comments:

Enclosures:

(i) (ii)

(Signature of the Student)

Signature & Seal
Grievance Redressal Officer (SGC)

Signature & Seal
Director/Principal

Note: To expedite the process of redressal please follow the general instructions.

Follow up comment
