

**Technical Education Institution
Manual
[TEIM]
for
Government Polytechnics**



**Directorate of Technical Education
Government of Gujarat
May 2018**



Vijay Rupani

Chief Minister, Gujarat State



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Dt. 11/05/2018

MESSAGE

Quality education is one of the prime objectives of Government of Gujarat, and I am happy to state that the **Education Department** is making untiring efforts to provide distinctive platforms for the qualitative nurturing of our students. The important initiative of preparing an **Institute Manual** for the colleges under the **Directorate of Technical Education** of the State will surely help to achieve the objectives of smooth academic administration, which can lead to seamless functioning of engineering institutions. The Manual describes best practices to be followed with guidelines and its deliverables so that institutes can become technically sound and socially more responsible.

I convey my best wishes to the entire team of the Education Department for their hard work in preparing this Manual and also to all the engineering Institutes for its successful implementation. I am sure it shall give a fillip to the all-round development of the students and fuel the growth of society and nation.


(Vijay Rupani)

To,
Shree K. K. Nirala, IAS,
The Director,
Director of Technical Education,,
Block No.2, 6th Floor, Karmayogi Bhavan,
Sector 10-A, Gandhinagar- 382010
Email: dte@yahoo.co.in, dire-dte@gujarat.gov.in

NITIN PATEL

Deputy Chief Minister,
Gujarat State



No. : Finance/R.&B./H.&F.W./M.E./N.,K./C.P.
57/518/18

**Finance, Roads and Building,
Health and Family Welfare,
Medical Education,
Narmada, Kalpasar,
Capital Project**

Government of Gujarat,
Swarnim Sankul-1, 2nd Floor,
Sardar Bhavan, Sachivalaya,
Gandhinagar-382010

Date : 14.05.2018

Message

Gujarat state is self sufficient in terms of number of institutes and seats in engineering. Quality education with institute of good governance is in the highest demand today.

The Technical Education Department, Gujarat State has designed the work profiles for faculties and staff members, which will help them to contribute to the education system. This manual targets for the multidimensional growth of the institutes and ultimately for the benefit of the students. I am sure that this step will enhance the overall performance of our technical institutes.

I believe that "The key to success is proper planning and deep contemplation of the work". Hence, the guidelines being issued for the first time will enhance academic delivery in a more systematic way.

I congratulate the Directorate of Technical Education, whole team for preparing such useful manual.

(Nitin Patel)

Resi. : Minister's Bungalows No. 20, Sector-20, Gandhinagar-382020

Ph. : 23259706, 23232491, 23221891 **Vidhansabha :** 079-23253194/23251058

Office : 079-23250106 to 23250110, 23238072-23248007, Fax : 079-23257616

E-mail : deputycmguj@gujarat.gov.in, nitinpateldycm@gmail.com

BHUPENDRASINH CHUDASAMA



No. Edu(P&S), H&T, L&J, L&P./ /201
Minister,
Education (Primary, Secondary and Adult),
Higher and Technical Education,
Law and Justice,
Legislative & Parliamentary Affairs,
Salt Industry, Cow-Breeding and Civil Aviation
Government of Gujarat,
Swarnim Sankul-1, 2nd Floor,
Sachivalaya, Gandhinagar-382 010

Date :

Message

It is a matter of pride for Education Department to dedicate this Manual prepared by Directorate of Technical Education, Government of Gujarat to Technical Education Institutes. This unique endeavor will surely help all stakeholders to understand their roles and deliver their best. This Manual will undoubtedly be of great help for our technical institutions to create an excellent ecosystem for engineering education.

A sound education system is the bedrock of an enlightened society. It is well said that "The best way to predict the future is to design it." This Manual will certainly help the institutions to design an education system that will mould our youth towards nation building.

On this auspicious occasion, I extend my heartiest congratulations to the entire team of Technical Education for taking this unique step forward.

Bhupendrasinh Chudasma



सत्यमेव जयते

Dr. J. N. SINGH, IAS
Chief Secretary

Government of Gujarat
Block No. 1, 5th Floor,
Sardar Bhavan,
Sachivalaya
Gandhinagar-382 010.
Phone : +91-79-23250301/03
Fax : +91-79-23250305



I extend my congratulations to the Education Department and the team of Directorate of Technical Education, Gujarat State for preparing this Manual.

This Manual will create opportunities for faculties to work for excellence with well-defined guidelines and indicators of academic and institutional activities. I believe that by systematic implementation of the strategies evolved in this manual will bring multidimensional growth of the institutes and it will give direct benefits to our students. Along with regular academic work, research, publication, social awareness, development of communication, interpersonal skills etc. are also very well streamlined in the manual.

Ben Bernanke says "No economy can succeed without a high-quality workforce, particularly in the age of globalization and technical change". I am sure that our technical institutes will steer themselves to achieve this goal through rigorous implementation of the processes and guidelines depicted in this Manual.

[J. N. Singh]
Chief Secretary
Govt. of Gujarat

Anju Sharma, IAS
Principal Secretary
Higher and Technical Education



Education Department
Government of Gujarat
Block No. 5, 8th Floor,
Sardar Bhavan, New Sachivalaya,
Gandhinagar-382 010

Date :



Message

It is a matter of pride to pen the message for this Manual on Technical Education Institutions, prepared by the Directorate of Technical Education, Gujarat State. This manual is a platform to showcase all its stakeholders how an institute imparting technical education should thrive for excellence through its efforts.

The road map indicated in this Manual, includes creating of ecosystems for academic collaborations, Placements, Start-ups, innovation, Co-curricular activities, Pedagogical interventions for faculty development and overall development of our students. Our engineering institutes can accomplish high standards and set milestones by following the guidelines in the manual.

To prepare our youth for future, we need to prepare them for technological advancement that is happening at an unforeseen pace. I am sure our educational institutes will prove to be a catalyst to serve the needs of Industry and the nation by providing technically qualified human resources possessing sound knowledge and capability.

I wish the best of luck to our institutions to use this manual in a professional manner and achieve great heights.

Anju Sharma
Principal Secretary (H & TE)
Govt. of Gujarat



सत्यमेव जयते

K. K. Nirala, IAS

Director

Directorate of Technical Education

Block No. 2, 6th Floor,

Karmayogi Bhavan,

Sector-10-A,

Gandhinagar - 382 010.

Gujarat, India

PREFACE

Technical Education in the State of Gujarat has witnessed manifold growth in the last decade. Better infrastructural facilities and well qualified faculties are committed to deliver the best as per the expectations of the society and the industries. To produce Engineers with sound technical knowledge and profound human values, Directorate of Technical Education is taking all possible steps to streamline the governance of technical institutions so as to impart quality education. As a part of continual efforts, Technical Education Institution Manual (TEIM) is prepared in-house manual to strengthen our institutions in all sense.



The teacher is mandated to play multiple roles in the institution, which broadly include direct teaching, academic administration and overall professional development, continuous interaction with students, industry and technological advancement through innovative curricular and co-curricular activities. TEIM provides guidelines for all such service oriented activities for smooth running of institutions under the Directorate of Technical Education.

This manual is expected to serve an institution as a whole, to meet the global challenges in the highly competitive market, and the activities required to be taken up by faculty beyond their teaching, in order to maintain the relevance and effectiveness of the technical education.

TEIM is divided into three Parts, with sixteen chapters in which Part 2 defines the major operational components for a strong and robust institution. It is envisaged that implementation of all sixteen components, will definitely help to create a good ecosystem for students, faculty and society. These practices, if institutionalised and adopted, with a positive and steadfast attitude will have far reaching outcomes.

The detailed and graphic descriptions in certain sections may be implemented in various stages, depending on where the institution stands in its current position.

My special thanks to Prof. Dr. Rajul Gujjar, Principal VGEC, Chandkheda and all faculty members who have devoted their time for preparing such a useful manual.

Shri K. K. Nirala, IAS
Director

TEIM Contributors: Prof. R.K. Gajjar, Prof. R.A. Thakker, Prof. G.H. Upadhyay, Prof. N.M. Patel, Prof. H.C. Patel, Prof. M.T. Savaliya, Prof. VrusangThekadi, Prof. C.S. Sanghavi, Prof. A.B. Dhruv, Prof. P.P. Lodha, Prof. Y.B. Bhavasar, Prof. R.R. Kapadia, Prof. R.K. Patel, Prof. V.G. Patel, Prof. Milind Shah, Prof. D.D. Mandaliya, Prof. N.D. Mehata

Acknowledgements

Institutions have been functioning and evolving on their own for long. However, a structured growth can be chartered only through specific guidelines and directives. Credit goes to Shri K.K.Nirala, IAS, Director of Technical Education, Government of Gujarat, for perceiving such a need and forming a committee of four senior Principals to write such a Manual.

The committee has brain stormed internally and has taken external feedback, through marathon meetings with senior Heads of Departments at VGEC and LDCE, and other government institutions, Deans and Directors of various autonomous institutes such as DAIICT and PDPU. Special thanks to Prof. Sudhir Jain, Director IITGnfor conducting a special session for this committee of eight members, in the initial stages.

Experts from many domains have contributed in giving shape to this manual. Dr.Navin Sheth VC GTU and Dr. SD Panchal Registrar GTU, Prof. N Ravichandran IIMA and Prof. S R Gandhi Director-SVNIT Surat, gave their valuable inputs. Prof. Kudchadker, Prof. Govind Acharya and Dr. Palak Sheth have provided their reviews online.

Inputs from Prof. V.S.Purani, Prof. P.C.Vasani and Prof. P.R.Dave the three Joint Directors of Technical Education have been valuable. Principals of each of the Degree Colleges have shared their own practices. The Core Committee constituted by DTE comprises Prof. Rajul K Gajjar, Principal VGEC as Chair with Prof. GP Vadoaria, Principal LDCE, Prof. AS Pandya, Principal AVPTI, Prof. BB Soneji, Principal RCTI as members.

Overall framework and content inputs were given by Principal, VGEC along with Heads of Department, VGEC.

A Working Committee was constituted with Prof. R.A.Thakker, VGEC-ECas Covenor and four members: Prof. N.M.Patel, VGEC-Chemical, Prof. H.C.Patel LDCE-Mathematics and Prof. V.K.Thekadi, RCTI-AM. This sub-committee has been the backbone of the Core Committee. They are the ones who coordinated all the sessions, wrote content for the five major chapters and supervised other chapters written by Prof. MT Savaliya, Prof. MT Thakker, Prof. D.D. Mandaliya, Prof. YB Bhavsar, Prof. PP Lodha, Prof. AB Dhruv, Prof. RK Patel, Prof. VG Patel, Prof. MS Shah from VGEC and Prof. CS Sanghvi from LDCE. The List of contributors is annexed at the end of this Manual.

Another important sub-committee that needs mention, is the Editing committee, convened by Prof. D.D.Mandaliya, VGEC Chemical with Prof. Amit Patel, VGEC-CE. This committee has formatted and created the design and proof of this manual.

Prof. Rajul K. Gajjar,
Principal VGEC & Chairperson Team

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Part 1

Governance Mechanism

Chapter 1 - Organizational Chart

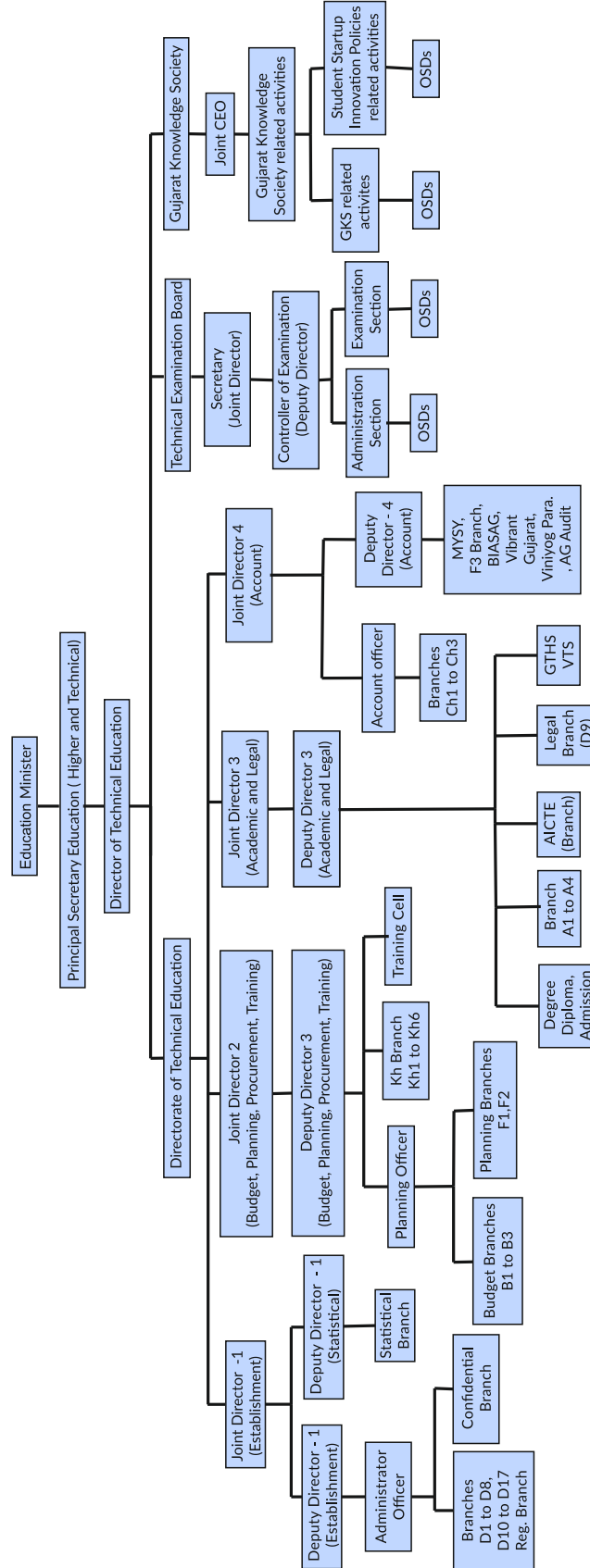


Figure 1 Organisational Chart

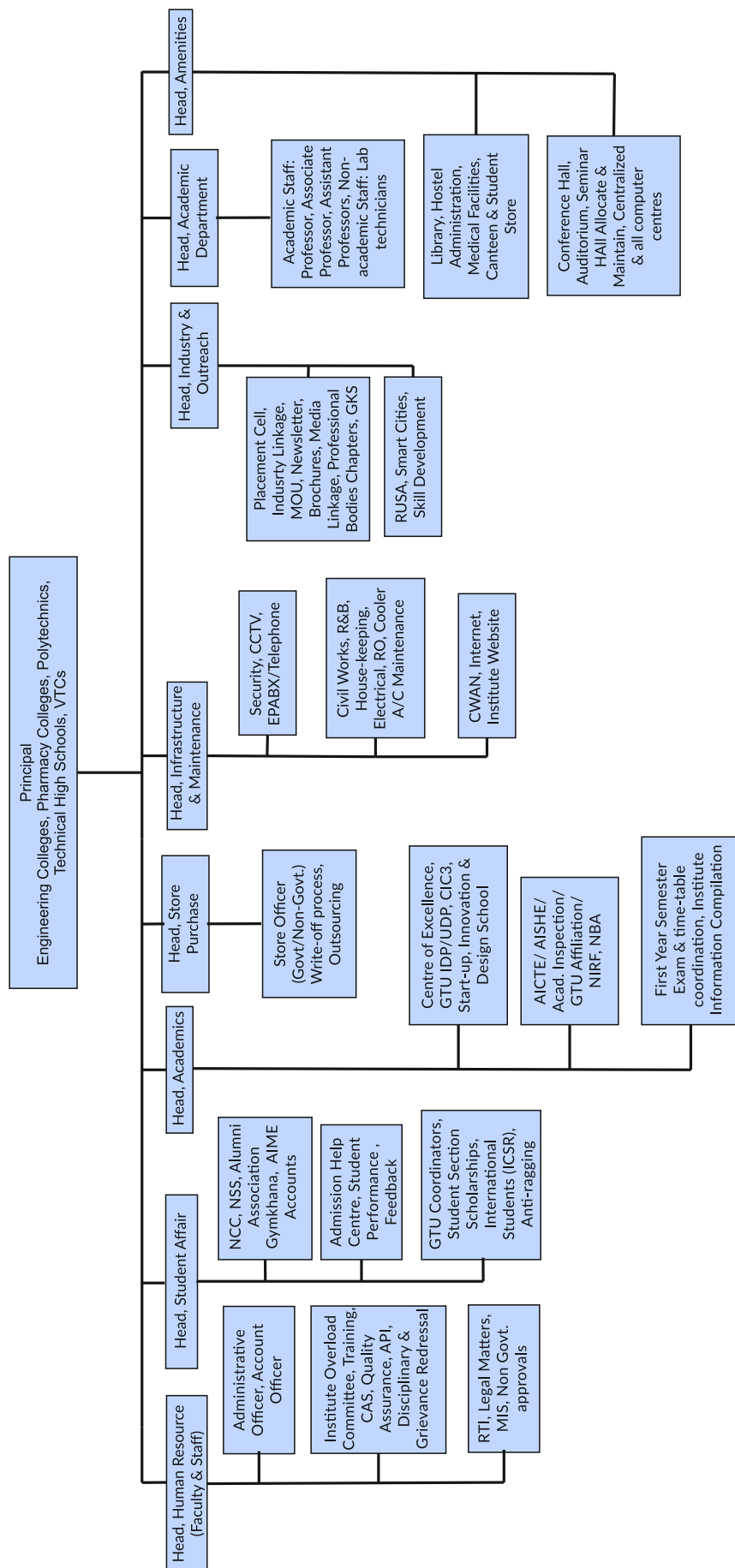


Figure 2 Institute Organisational Chart

Chapter 2 - Technical Education Management (Opportunities and Challenges)

2.1 Introduction

Technical Education Management is all about engaging students, teachers, industry and the society. The four pillars of an educational institution are strategy, pedagogy, research and practice. Each of these has a deeper connotation which defines the success and achievements of the institute.

An Institution should have a defined strategy to meet the goals it sets out to achieve. The institutional strategy aligns the decisions, actions and attitude of the management, faculty and students of the institution. It is interesting to note here that faculties have multiple roles in campus, as they have to balance the art of classroom teaching with management of department and institutional academic activities at different levels.

The primary goal of an educational institute is advancement of knowledge, which can happen through inquiry of current knowledge and a systematic investigation process to establish new perceptions or new conclusions. Thus research assumes the core of all academic activities undertaken both by faculties as well as students. We shall study later on, how research leads to successful institutional outcomes.

Faculties have to focus increasingly on practice, which enables the actual application of the current pool of knowledge, ideas and methods, as opposed to theory relating to it. Students of the smart age have access to knowledge in multiple modes. What they need to learn in class, is the application of knowledge in the traditional modes, creatively use it in new areas, and test the outcomes. Thus, research and practice have become as much important for technical education as the understanding of theory and its traditional applications.

Institutions will have to equip themselves with the tools to enable students to acquire the knowledge and skills needed in the 21st century. Thus, technical education management is all about foreseeing the technology changes, planning to meet the changes, developing systems to enable fast decision making and responding to new and evolving needs, preparing teachers for the smart age, developing systems for inquiry, research, experimenting and testing.

Another important sub-committee that needs mention, is the Editing committee, convened by Prof. D.D.Mandaliya, VGEC Chemical with Prof. Amit Patel, VGEC-CE. This committee has formatted and created the design and proof of this manual.

2.2 Leadership Challenges

Educational leaders have always faced daunting challenges such as Fiscal constraints, Heightened accountability, Emerging technologies, Substantial demographical changes and most important of all: Questions about relevance and effectiveness of Technical Education.

Engineering education needs huge resources in terms of equipment, software, computing facilities, books, journals, highly qualified teachers and a constant need for upgrading. Budget allocation for technical education, on the other hand does not meet the yawning gap. Institutions have to creatively meet the fiscal constraints, by exploring resources on and off campus, comprising non-government funds and applying for funding to various government agencies and associations.

One set of leadership and middle management accepts this challenge and take bold and creative steps to keep their ship afloat. There is another set which declines to acknowledge such a challenge and go about doing their business as usual. The former will face heightened accountability, but the latter will face a grave threat to their very existence without even perceiving it and get annihilated.

The challenges of emerging technologies and diversified learning backgrounds need more than fiscal inputs, as they need innovative ways of unlearning the old and learning the new. The classroom teachers have to meet this challenge on their own as well as collectively, to keep themselves updated, inclusive and relevant.

Traditionally engineering education has faced this age old challenge and discovered its own champions in the process. The problem is about maintaining the enthusiasm of these champions. For the leadership, may it be the Principal or the Head of Department; it is so much easier and safer to dampen the energy of these champions of change than to sustain their ever changing needs and plans. Hence it is very important that the leadership and middle management assume the role to be the champions of change, to begin with. This attitude and ability, then automatically, percolates down to all faculties and students.

2.3 Creating Enabling Systems to Capture Opportunities

Institutions can nurture capabilities to take advantage of opportunities, by being forward looking, flexible and fast in responding to new and uncharted domains. Students and faculties have to be given a platform to continuously articulate their needs and the management has to evolve processes which fall within the rules and yet, are able to take the institution forward.

Leadership at the institute and department level cannot function only as a typical government administrator or a regulator for maintaining rules. There will always be new and demanding situations arising on campuses that have no precedence. It is important that all the stake holders follow basic rules and maintain the code of professional ethics. Any breach or non-compliance has to be dealt with very firmly, and escalated to higher authorities. But the education management system as a whole has to be geared to accommodate change in its stride and adapt to new and emerging requirements.

Multiple avenues have to be explored and exposure to diverse situations, industry linkages, start up and innovation eco systems, should be encouraged on campus. Institute has to open up to a large number of takers for a variety of projects.

2.4 Assessment of Overall Development

This Manual addresses aspects of pedagogical interventions, exposure to industry and economic systems, innovation and critical thinking, as cross cutting parameters through most of its chapters. The Principal, Heads and faculties can weave their own ecosystems, as a subset of a larger ultimate grand plan, to start with. However, no assessment or evaluation criteria are defined to check where one stands, aims to reach or has achieved certain benchmarks.

A crisis sounded by the World Bank states that Education is happening without any Learning taking place. This is a wasted opportunity and a costly one at that. In the absence of any assessment mechanism, institutions are free to evolve their own corrective steps to change this trend.

The three actions that are sure to improve the systems are:

- i) Use well designed assessment schemes for programmes and faculties to measure overall development (not to reward or punish)
- ii) Act on evidence
- iii) Align stakeholders to create system wide change that supports learning & innovation

As this does not involve any incentives or disincentives, these three steps can be incorporated at institution level. For example, assessment and corrective actions for Subject-wise result analysis; Placement analysis; Funded projects; Research, publication and patents.

However, considering the fact that teachers are the most important factor that affects learning, it is necessary that systemic opportunities are created, and actions are taken for improving teachers process quality, motivation and development. Incentives of a raise in pay, based on teacher performance, opportunities for professional development of well performing teachers, such as off campus seminars etc. have been traditionally used and do hold some value, but on campus, peer help for longer duration and projects with definite outcomes, are proving to be very effective in the long run. In any case, it is important to have faculty performance evaluation linked to career growth.

2.5 Paradigm Shift for Growth and Development

Challenges, opportunities, assessment and strategies to improve can work only if an institution has a sound working platform, well defined processes and implementation mechanisms. Part 2 defines all the components and processes that are needed for smooth functioning of an institute. Once these are well established and institutionalised, they can go through a paradigm shift to bring systemic changes. These components and processes form the base on which new systems can be developed and incorporated to adapt to new and uncharted domains.

Thus, institutions the have to internalize systemic change as a part of their on- going processes rather than treating them as isolated, piecemeal cases.

Paradigm shift can be initiated with pedagogy and research, which will lead to substantial outcomes. Our institutions are already poised for such a shift, as the best qualified teachers are appointed at high salaries; infrastructure and equipment are provided as per the approval and affiliation rules; students having high merit, prefer government institutions and hence, their performance and capabilities are high and can be tapped for best outputs. The strength lies in the faculties who can together articulate, defend, document decisions and their reasons and transparently carry out activities which were earlier the domains only of high end institutions.

It is envisaged that leadership and management will ride the wave sweeping over the rest of the country and reach its maximum potential, provided that the internal processes are strengthen and the challenges posed by traditional interpretation of rules and equality are overcome. It is time that we take the rudder in our hands and use the strong backbone provided by the government, to excel in our domains.

Part 2

Operational Guidelines

Chapter 1 - Academics

1.1 Introduction

Academic is the prime duty of any Degree or Diploma Engineering Institute. The success of the entire Institute depends upon how carefully its program and related activities are planned and executed as well as assessed on the regular basis. It is advisable that senior faculties in the Institute should be assigned responsibility to take care of delivery of academic duties at the Institute level. Academic component includes coordination among all the departments of the Institute for academic calendar preparation in line with that of University, time table preparation, groundwork and achievement of accreditation, bringing out quality projects from students' as a part of their final year IDP/UDP work and taking them to publication or patent level, coordinating academic inspection, submission of AICTE data and to fulfil its requirements, etc.

It is required that each faculty member as well as supporting staff of laboratory perform their assigned teaching duties to the satisfaction level of students. The content in each subject should be delivered keeping in mind the needs of Industry. At the department level, expert talks should be arranged to update students with the state-of-the-art technology. Students should be taken for industrial visits for necessary exposure. Students should be encouraged to view online lectures of NPTEL and other standard resources. Faculties should also go through online lectures of faculty of IIT and other reputed Institutes. Faculties should conduct small quizzes for students on regular basis. Attendance records of students should be properly maintained. Irregular students should be informed and if required, their parents should be conveyed and invited for personal discussion to understand the reasons behind students' less attendance in classes. Faculties should make alternate arrangement for engagement of classes in case of his/her leave and it should be conveyed well in advance to the higher authority.

Head of Department should review the progress of faculties for the assigned academic work. Interaction with students should be done very regularly, to understand their problems and to improve overall academic environment within the department and Institute. Weak students should be given extra guidance to take their level at par with others. Each department should carry out result analysis, and necessary actions must be taken to improve the result.

Each department should calculate and submit their faculty and other staff requirements as per the existing teaching load. They should also submit laboratory and other resource requirements every year in relevant formats prescribed by DTE office. It should be seen that consumables should be available well-in-advance to carry out laboratory work. Instruments in the laboratories should be properly maintained. It is advisable that each laboratory within the department should have a faculty in-charge to keep it up-to-date. It is also advisable that each class should have a faculty in-charge to provide proper mentoring to the students.

During vacation period, faculties should attend training programmes in their area of interest to update their knowledge. They should also submit proposals to the funding agencies to organize subject specific workshops in their Department and Institute.

Students should also be motivated by faculty members to take part in technical events held within and outside Institute. Various components along with activities and guidelines are outlined in the following sections.

1.2 Institute Academic Calendar and Time Table

1. Preparation of Institute academic calendar in line with that of Affiliated University
2. Preparation of department-wise time table for each faculty
3. Time table should be displayed on department notice board and Institute website before the beginning of academic calendar
4. Classroom requirements should be estimated well-in-advance and necessary arrangements must be made.

1.3 1st Year Academics, Common Subjects, and Result Analysis

1. Orientation programme for the 1st year students
2. Delivery of BISAG lectures
3. Inter-department subjects should be properly distributed to avoid conflicts in timings and for justifiable distribution of teaching load
4. Result analysis of each subject to identify subjects where more efforts are required to improve result

1.4 Accreditation, Affiliation, Academic Inspection and Institute News Letter

1. Coordination and data collection for AICTE, University affiliation and academic inspection.
2. Preparation and submission of accreditation (NBA) and AISHE, etc.
3. Preparation and publication of Institute Newsletter on regular basis

1.5 Laboratory and Students' Projects

1. Faculty in-charge should be mad for each laboratory in the Department in addition to laboratory assistants for maintenance and best usage
2. Coordination of activities related to students' projects, maintenance of records, its exhibition, etc.
3. Faculties and students should identify and take projects of state/national level importance and apply for funding
4. Faculties should submit funding proposals to AICTE, GUJCOST, MODROBS etc. for development of laboratories and projects

1.6 Faculty Trainings

1. Department and faculties should carry out Training Need Analysis(TNA) to strengthen manpower and have equal distribution as per curricular.
2. Faculties should attend subject specific training programmes, conferences, workshops, and seminars during vacation period.
3. Department should organize subject specific training programmes, conferences, workshops, seminars, etc.

4. Department should submit proposals to get funding for organizing training programmes, conferences, workshops, seminars, etc.
5. Faculties and students should carry out research work and publish papers and patents on regular basis
6. Institute and Department should motivate faculties without PhD degree to register for PhD programme.

1.7 Students' Chapter, Technical Clubs, Membership of Professional Bodies

1. Students' chapters such as Institution of Engineers, IEEE, etc. should be initiated in the Institute and at the Department level
2. Various technical clubs such as Hackathon, Robotics, etc. should be initiated in the Institute and at the Department level
3. Students should be motivated to become members of professional bodies such as Indian Society for Technical Education (ISTE), Institution of Engineers, IEEE, etc. and actively participate in their programmes

1.8 Academic work distribution at Department level:

Sr. No.	Activity	Faculty/Staff	
1	Maintenance (Equipments Computer +Printers)		
2	Time-table, subject in charge distribution		
3	Faculty/Staff training		
4	Class Coordinators	Semester and Div	Faculty/Staff In charge
		1 st Year (A)	
		1 st Year (B)	
		2 nd Year (A)	
		2 nd Year (B)	
		3 rd Year (A)	
		3 rd Year (B)	
		4 th Year (A)	
5	Laboratory Incharge	Name of Lab	Faculty/Staff In charge
6	IDP/UDP and Students' Training and Placement		
7	Industrial Visits, Expert Lectures, Extra & Co Curricular Activities		
8	Vikas Lakshi, New item Purchase		

9	AICTE, NIRF, GTU Affiliation Co-ordination	
10	NBA	
11	Dept. Library	
12	UG/PG/GTU Coordinator	
13	E-news letter	
14	GATE club	
15	Technical club and students' chapters	

1.9 Guidelines

It is advisable to appoint faculty for the following tasks,

1. Senior faculty to coordinate all academic activities at the Institute level
2. Head of General department or some other faculty connected with 1st year to coordinate overall academic activities for the 1st year
3. Senior faculty to coordinate academic inspection
4. Senior faculty to coordinate preparation and submission of documents related to AICTE, NBA, AISHE, GTU, etc.
5. Faculty to coordinate preparation and displaying of time table at Institute level
6. To collect data related to various activities organized within the Institute as well as achievements of faculty and students for preparation and publication of Institute magazine on regular basis
7. To coordinate activities related to students' projects (IDP/UDP), and identifying best projects at department level and institute level.
8. To coordinate training programme activities at the Institute level and Department level
9. To coordinate technical clubs, professional membership activities, students' chapters. etc.

1.10 References

1. DTE/GEC/Workload/2015/Est/Gh.1/3569, Dt. 07th Feb. 2015
2. TEM/1202/197/GH, Education Department, Gujarat Government, Dt.: 05/04/2003
3. Faculty Handbook, IIT Kanpur
4. Faculty Handbook 2014, IIT Bombay

1.11 Formats

Format 1.1 A sample format for work distribution

Academics In-charge:			
Sr. No.	Activity	Convener	Members
1	1 st year coordination		
2	Institute time table coordination		
3	AICTE/AISHE/GTU Affiliation		
4	Academic inspection, NIRF, NBA, AISHE		
5	GTU, IDP/UDP, CiC3		
6	Centre of Excellence		
7	Students' Result Analysis		
8	Institute' News Letter		
9	Faculty training coordination		
10	Technical club and students' chapters		

Chapter 2 - Project and Internship

2.1 Introduction

Educational institute offering diploma in engineering programme has a very crucial role in the present era. Along with the automation in industry technical skill still remains the most sought after prerequisite by the industry. The technical skill always play lead role for the growth of any engineering business. The lacuna between the institute and the industry can be filled by allowing the final year students to undergo various projects and internship at different industry. The industry may be relevant or inter disciplinary kind where the student is exposed to real life industrial practices. Which ultimately nurture the holistic growth of the student and the candidate will be very well equipped with knowledge and skill expected by the industry to get better employment.

Project is the integral part of many Diploma engineering programmes. Which is being offered in 5th and 6th semester. The project may be either Industry Defined (IP) or University Defined (UD). It is the very good teaching learning tool which will give better understanding of application of theoretical engineering concepts to the students. The project will harness the competencies of students to devise novel concepts from all the ways, which may have commercial significance or viability. This ultimately, may draw him towards entrepreneurship development.

Internship is also an intrinsic part of certain unique Diploma engineering programmes, which is being offered in either 6th or 7th semester. During internship the student is sent to industry relevant to his branch for one full semester, where he/she will learn the real shop floor experiences and trouble shootings. Internship is also a very good teaching-learning tool. During internship the students learn about operation & maintenance, manufacturing practices, inter-personal skill, time management etc., which in turn will groom the personality of candidate and mould him the professional candidate. This is the beauty of internship.

2.2 Organizing contacts with Industry

1. Organizing correspondence with different industries.
2. Organizing meetings with different level personnel of industries.
3. Organizing talks about need for projects and internship.
4. Organizing different expert lectures at regular interval of time to bring together different domain experts.
5. Deputation of students for project and internship at different industries.
6. Arranging industrial training for the faculties.
7. Signing MoU with the industries for the benefit of the students.

2.3 Project

1. Conducting literature surveys in different subject areas.
2. Understanding the various engineering activities involved in specific project
3. Writing project proposal.

4. Understanding the interdisciplinary projects on innovative ideas for social betterment.
5. Contribution of faculties as a guide/reviewer/members.
6. Undertaking the various design engineering activities
7. Writing minor/major research proposals
8. Undertaking the interdisciplinary projects on innovative ideas having social impact
9. Undertaking sponsored research projects and consultancy works including testing.
10. As Contribution of faculties as reviewer/members of program or organizing committee

2.4 Internship

1. Knowing the area of interest of students
2. Deputing the student at specific industry of his area of interest.
3. Reporting of students to submit progress report.
4. Taking industrial follow up by department faculty.
5. Contribution of faculties as a guide/reviewer/members.

2.5 Patent filing and publication

1. Arranging patent awareness programmes for students and faculties.
2. Conducting patent search and drafting workshop.
3. Developing students' projects based on novel and innovative ideas leading to patenting.
4. Filing and publishing the patents.

2.6 Student Chapters

1. Creating student branches of professional bodies relevant to each programme.
2. Organising various activities under the student's chapters like seminars, expert lectures, workshops, quiz etc.
3. Reporting of activities in the news letter of the institute.
4. Participation of students in the activities of professional societies, associations, tech fests.

2.7 Guidelines

1. Institute should have department wise expert committee comprising senior faculties with members from industry to promote, monitor and guide the project & internship activities.
2. Project & Internship groups for the different domains should be formed and continuous activities to be held for promoting project and training attitude amongst the faculties and students. Each Project & Internship group should plan activities on semester basis.
3. Each Project & Internship group should report to department for progress evaluation.

4. Evaluation should be done by an expert faculty and head of department.
5. The faculties of each department should conduct industrial follow up regularly to cross check the student's progress where he has been undergoing as project intern.
6. Institute should establish the industry-institute cell comprising coordinator and representative from each department.
7. The cell should conduct various activities regularly. The cell should also identify the industries and plan the activities with semester wise calendar.
8. Institute should conduct the department level presentation for each project and internship group.
9. The presentations should be evaluated either by expert faculty or expert from industry having domain of the area of project and industry.
10. The institute should consider the quality parameters in the areas of Project & Internship activities.
11. Funding support should be sought for attending conference, presentation, registration fees and travelling expenses. The institute should finalise the eligibility criteria for funding support.
12. Institute should willing to be equipped with latest and adequate laboratory infrastructure and enough supporting staff.
13. Institute should apply for funds for subscribing the reputed journals and good reference books.

2.8 References

1. <http://nbaind.org/accreditation-documents.aspx>
2. https://www.aicte-india.org/downloads/Final-Approval-Process-Handbook-2017_18.pdf
3. Resolution No: PRC/2016/IPIES/DS/S/710197, Education Department, Government of Gujarat, Dt: 11th Jan 2017
4. https://www.ugc.ac.in/oldpdf/regulations/webnotification_pbas.pdf
5. Career Advancement Scheme (Diploma) on AICTE website, <http://www.old.aicte-india.org/adrules.php>

Chapter 3 - Start-up and Innovation

3.1 Introduction

The start-up and innovation activities if planned in a structured manner, will produce high calibre students with an outlook to compete at an international level with a firm sight on the local market condition. The technological changes shall pose a challenge to the contemporary technical education. The inherent multi disciplinary and interdisciplinary nature of engineering projects demand for individual with insight and knowledge of market, patents, business, management, human resources, and finance apart from domain expertise. Institute should strive to create a balance between academics and potential of start-ups and innovation. The following activities are envisaged for government engineering colleges under start-up and innovation.

3.2 Pre-incubation

1. Activities as per Student Start-up and Innovation Policy (SSIP)
2. Identification of probable Industry defined projects / User defined projects for Proof of Concept (PoC)
3. Design engineering-based approach for Innovation
4. Hackathon Events – Smart India Hackathon, Smart Gujarat Hackathon and other discipline specific Hackathon
5. Eco-system expert talks
6. Incubator visits
7. Open House with industry
8. Institute Competitions.
9. Bootcamps: brief activities
10. Investor Pitch
11. Open Courses on Innovation and Design using edx, coursera, udemy, NPTEL and other such as Wadhvani Foundation NEN.

3.3 Incubation

1. Student support system for legal, finance, patents, human resources
2. Patent Drafting and Filing Support
3. Angel Finance
4. Venture Capitalist Funding
5. Prototype and Proof of Concept Model Preparation
6. Business Plan Making Competitions
7. Grant proposals for start-ups and innovation activities for various scheme such as:
 - i) Atal Innovation Centre
 - ii) Start-up Gujarat, Industries and Mines Department, Government of Gujarat
 - iii) IT/ITes Policy, Govt. Of Gujarat
 - iv) Start-up India
 - v) Standup India
 - vi) Make in India

- vii) Swachh Bharat
- viii) NITI Aayog Proposal
- ix) Mudra banks
- x) MSME finance

3.4 Post-Incubation

1. Participation in National and International Competitions
2. National Start-up Summits of ISBA
3. Events related to start-up and innovation

3.5 Guidelines

The following guideline should be followed at all times for carrying out above activities,

1. All the purchases to be made for carrying out above activities should follow GFR.
2. The schedule of carrying out above activities should be prepared at the start of semester and communicated to stakeholders along with the Odd semester timetables.
3. The expected outcome of all the activities should be communicated in advance to all the stakeholders and financial approval should have been obtained at appropriate level.
4. Priorities should be given to the activities of national level.
5. Program specific guideline issued for activities should be followed, whenever a conflict is found with the state government guidelines, a written consultation with committees should be made.
6. Program specific guideline issued by state government have precedent over the guidelines issued by any other body.
7. Government employees should have obtained necessary approvals for performing external duties.
8. A strategic intervention plan or action plan should be subdivided among the faculty members and awards/appreciation letter etc should be done based on the attainment of the goals in the action plan.
9. A transparent evolution system should be evolved for taking part in the above activities along with other departments. The final annual performance should reflect such attainment.
10. The start-up and innovation requires an availability of land. In no case, the government land should be handed over to private players.
11. The intellectual property generated out of the innovation and start-up activities should be the combined property of the investigator and institute. The institute name should be invariable placed in all patents and research papers arising out of innovation and start-up activities.
12. The norms for the consultancy and testing should be followed in providing mentor-ship to the start-ups.
13. Books of account should be maintained by SSIP Cell of institutes and should be open to internal and external government audits.

3.6 References

1. SSIP Policy
2. SSIP Policy financial guidelines
3. NITI Aayog Atal Incubation Guidelines
4. Nodal Institute Guidelines
5. IDP/UDP guidelines from GTU
6. Hackathon Guidelines – State Level
7. Hackathon Guidelines – Central Level
8. AICTE Innovation Document
9. Design Engineering Guidelines

3.7 Formats

Format 3.1 Sample format -Sample Action Plan

Action	Outcome	Communication Methods	By whom	Timeline
Familiarizing students group with the objectives of SSIP	Students group familiarized with objectives of SSIP	Discussion and Email	SSIP Faculty Core Team	October 16, 2017 to November 30, 2017

Specimen Copy

Chapter 4 - Placement

4.1 Introduction

Placement Cell focuses on various activities for enhancement of the technical and other skill sets of students, which ultimately results in improved placement. One of the key roles of placement cell is to provide a platform to students and faculty to interact and associate closely with industries. These interactions provide opportunities to acquire the practical knowledge and applications of themes to their field. It enhances the skills of students through exposure to real-life situations in the industries, experience of challenging situations, adapting to teamwork and learning different work cultures. The intense industrial exposure helps Students to connect to the curriculum with the industries projects/problems. These students are to prepare themselves for the skills needed in the field.

The expectations from engineers are not only adequate technological ability and problem-solving skills, but also skills like cooperation, communication, and presentation, business ethics and inter-personal relationship. They must have a deep commitment to safety, reliability, quality and sustainability of all engineering operations in which they take part. Engineering colleges have now a new responsibility to provide opportunities to every engineering student to acquire these abilities in addition to their technological knowledge. It provides platform to students in choosing their carrier as also for opportunities for further studies through different campus activities.

It is recommended to adopt three stage placement models involving the pre-placement activities, placement activities and post placement feedback system.

4.2 Organizing contacts with Industry

1. Formation of placement team: Placement team consisting of placement officer, assistant placement officer and department wise placement coordinators.
2. Volunteer team: two final year and two pre-final year students from each branch should be nominated by each department on placement team.
3. Identification of potential recruiters in each of the categories: Local, Regional(state), National and Global
4. Recruitment policy of institute: classify recruiters in two categories, normal and prime. Students selected in normal categories may be allowed to appear for placement by prime recruiters.
5. Placement Brochure
6. Website page for placement under institute website
7. Database management and communication with students on placement portal.
8. Placement database on portal with verification system before commencement of placement activities.
9. Workshop and counselling for Curriculum Vitae (CV) preparation
10. Placement orientation workshop

11. Mock Group Discussion (GD) and Personnel Interview (PI) sessions for students to enhance their abilities.
12. Entrepreneurship workshops
13. Skill development course: soft skills and professional skills
14. Counselling for further Education: national and global
15. Industrial visits by members of placement team, faculties and students
16. Skill identification and carrier counselling for students
17. GATE club, Study abroad club, Management club, eCell to support other carrier options.

4.3 Placement activities

1. Placement calendar announcement
2. Campus placement team formation and allocation of duties
3. Industry wise eligible student's database through placement portal and correspondence with industry
4. Placement day activities: pre-placement talk, screening test, GD, PI
5. Feedback at the end of placement day
6. Job fair.
7. Pool campus
8. Placement notice board for published placement advertises
9. Student Counselling

4.4 Post placement activities

1. Review of placement records
2. Feedback from industry
3. Feedback of placed students
4. Alumni feedback
5. Participation at TPO meetings
6. Associating with Professional organisations.

4.5 Guidelines

4.5.1 Placement Cell Infrastructure should preferably have

1. A placement office of at least 200 sq. feet with executive chair, officer table, sofa sets, telephone, desktop computer, multi-functional printer, whiteboard, notice board and washroom facilities inside the office.
2. Three Personal Interview(PI) rooms, each of 100 sq. feet area with executive chairs and tables, whiteboard.
3. A Group Discussion (GD) room with 300 sq. feet and with round table facilities, PA system for 20 students
4. An auditorium/seminar hall with all facilities like Podium, Sound system, Projector and PC and chairs for at least 120 students.
5. Air conditioners, Wi-Fi, curtains for Placement office, PI rooms, GD room, and auditorium/seminar room.
6. A small refrigerator along with tea or coffee maker can be a part of placement office as an extended corporate culture.

4.5.2 Appointment of placement officer and team

1. A capable placement officer should be deputed from existing establishment of class-I/ class-II along with supporting staff of one class-III and one class-IV for placement cell activities.
2. An assistant placement officer should be deputed from existing establishment of class-I/ class-II for placement cell activities.
3. One department placement co-ordinator should be deputed from each engineering department for placement cell activities.
4. A team of Volunteers from final year and pre-final year batch should be identified and associated with placement team.
5. Load of placement officer should be reduced to 50% along with his alternate arrangement during important days of placement activities.
6. Placement team members timetable should have provisions for placement activities: two full days for placement officer and one day for other team members.

4.5.3 Identify long-term and short-term Targets

Each institute should form their short term and long-term placement targets and review them periodically. Sample short term and long-term objectives - (copy of VGEC, Chandkheda, for the placement year 2017-18) is given as below:

Short Term Plan:

- Vocational course for each department under RUSA.
- Skill test of all students under AICTE scheme.
- Institute brochure to be designed and regularly updated.
- Each department will prepare single page department profile which will be part of Institute Placement brochure.
- Each department TPO Co-ordinator & Head will identify 5 industries and visit them personally to establish linkage for placement.
- Each department will establish link by communication with at least 25 companies using Email & Postal communication.
- We have achieved placement of 100 students for batch 2017-18 and will target 250+ students' placements through campus.
- At least Three workshops for communication skill developments
- Four workshops planned for Abroad Education (Further Study) Collaboration with GTU Placement Cell.
- Collaboration with Other Institutes for Pool Campus.
- Allowing other remote institute to use our T&P resources.
- Improving Placements by inclusion of Elective subjects in consultation with Industry Experts.
- Internship & Industrial Training.

Long Term Plan:

- Planning of additional Vocational courses based on the need of Industry.
- 100% placement is targeted for 2018-19 batch.
- State Level Job Fair for all Govt. Engg. Colleges will be planned in Nov-2018.

4.6 References

1. Sample Placemat matrix for record keeping - (copy of VGEC, Chandkheda)
2. Sample Placemat Rules - (copy of VGEC, Chandkheda, for the placement year 2017-18) as below

Rules & Regulations to be followed by all students during campus placement

1. Students should be well groomed with formal dress.
2. Boys: Shirt, trouser (Jeans not allowed), leather shoes,
3. Girls: Either Punjabi dress or Shirt and trouser (Jeans not allowed)
4. Students should carry following documents, Latest resume, All original certificates and one attested copy of each of them, Two passport size photographs, Envelopes and stationary
5. Placement fee for all final year students who are willing to participate in the placement drive either on campus/off campus is decided Rs. 500/- mandatory. Only those students who have paid fees will be allowed to appear in placement drive if eligible as per company criteria. Rs. 500/- placement fee is non-refundable even if student is not placed in any company.
6. It is made mandatory for the students to upload their latest result on the placement portal www.placement.vgecg.ac.in. False entry in the data by the students will lead to disqualification in placement drive even if he has paid the fees.
7. Departmental coordinator for placement activity will verify within week of declaration of results, the entries updated by the student and will approve that entry. Only the approved students will qualify for placement.
8. Student should regularly check notice board in their respective department and placement website (<http://placement.vgecg.ac.in>) for any information regarding T & P.
9. Students should report 30 minutes before the start of placement activity
10. Students should regularly check email accounts and SMS for any update regarding T & P
11. Students should be in regular contact with their T & P representative
12. Students should maintain discipline during campus placement
13. Students should enter their latest correct data on placement website e.g. (<http://placement.vgecg.ac.in>) at the beginning of the semester and keep it updated as an when there is any change or results are declared within two days. If data is not updated on placement website within two days then TPO is not be responsible to send candidates/ students name for placement process.
14. The companies are grouped into following two categories on the basis of salary package:
 - a. Grade A: Greater than or equal to 3 LPA
 - b. Grade B: Less than 3 LPA
15. Student already selected in a particular grade will not be allowed to attend the campus placement for the company of same or lower grade. However, a student selected in lower grade company will be allowed to attend the campus placement for the company of higher grade.
16. Student, who is already selected in a lower grade company, appears for a campus placement of higher grade company and gets selected, will have to deposit Rs. 500/- (Rs. Five Hundred) again.

Chapter 5 - Administration

5.1 Introduction

Administration cell is of prime importance for the functioning of any institution. The administrator should have humanitarian approach, should be visionary, and always instrumental in the overall development of the institution. In academic institutions the administrators have additional responsibilities like social causes, skill development, ombudsman's role, good rapport with industries and allied agencies to achieve desired goals for a model institution. The administrator is also responsible for planning, maintenance, placement and prompt solutions with minimal response time in critical situations.

5.2 Establishment

5.2.1 Introduction

Establishment is the foundation of any institute to function properly. It is observed that the best of the teachers fall short of administering their duties efficiently. The information that this chapter contains familiarises the staff members with policies, procedures, programs, services and benefits. The Principal is responsible for faculty related issues regarding service matters in terms of leave, higher education, time scale like CAS and promotion. One can find here, a set of all possible tasks and actions to be taken, based on rules stipulated from time to time. The administrators need to be aware of where and when GCSR and its amendments are to be observed, as well as similar relevant documents in the service matters of employees.

5.2.2 Activities under Establishment

There are various activities to be carried out as mentioned below:

1. Joining procedure of an employee
2. CPF Account for new employee
3. CCC+ and additional language clearance.
4. Medical Checkup, Nomination and Hometown declaration for new employee.
5. Probation and Long term proposal of new employee
6. Charge Transfer procedure in the case of faculty transfer/promotion/retirement/ deputation etc.
7. Leave approval procedure and maintenance of its record.
8. Maintenance of Service Book and continuous up gradation.
9. History Card
10. Applications of faculties with respect to Promotion/CAS/Higher Grade/ Request Transfer/Passport NOC/ Foreign Travel NOC/ Higher Education NOC and Bonds/ Other NOC etc. should be processed.
11. IQAC
12. Constitution of Women's Development Cell as well as Sexual Harassment Prevention Cell.
13. Internal Complaint Committee (ICC)
14. Establishment of Special Cells for SC and ST candidates.
15. CR/PBAS

16. Property Declaration Paper on 31st December
17. MIS
18. Vacation Detention
19. New Item for establishment
20. Post Continuation proposal
21. Daily Attendance and Muster
22. Staff quarter allotment (If available)
23. Arrears/Allowances/Overload proposals
24. Pension Cases/VRS Cases
25. ROP
26. Circulation and implementation of office orders and GRs
27. Disciplinary matters and Confidential orders
28. Personal file maintenance of faculty members

5.2.3 Guidelines

1. To appoint MIS coordinator at the institute level.
2. IQAC committee at institute level should be formed to verify and recommend CAS cases. IQAC committee should plan and decide the milestones to be achieved for next five years in order to enhance the academic quality, faculty growth and institutional growth.
3. Special cell for SC/ST.
4. Appointment of WDC members at the department level and an institute level coordinator.
5. To form a committee in order to look after the Sexual Harassment Prevention Cell.
6. Execution of pension and VRS cases within set time limit.

5.2.4 References

1. GCSR.
2. DTE rules set for
 - a. Application form for CCC+ and other departmental exams
 - b. History card format
 - c. Inspection report format
 - d. Application form for higher study
 - e. Application form for Foreign visit/passport NOC
 - f. Application form for Direct Application for Service
 - g. Application form for Declaration of Property
 - h. Application form for Request Transfer
 - i. Application form for Voluntary Retirement
3. The Sexual Harassment of Women at Workplace (Prevention, Prohibition and Redressal) Act, 2013
4. UGC guidelines for Establishment of Special Cell for SC and ST candidates in Institutes and Universities
5. https://www.ugc.ac.in/pdfnews/5172195_Guideline_IQACs.pdf

5.2.5 Formats

Format 5.1 Sample format - Sample Work Distribution Format

Institute Name			
College work distribution (wef :__/___/____) No_____/EST/WD/			
1	Head, Human Resource (Faculty & Staff):		
Sr No	Activity	Convener	Members
1	Administrative officer		
2	Institute Overload committee and workload calculation		
3	Legal Matters		
4	R T I		
5	MIS		
6	Women Development cell & Internal Complaint Committee		
7	CAS, Quality Assurance, API, Disciplinary Committee (Staff) Grievance redressal		
8	Training (Faculty/Staff)		
9	Account Officer		
10	Non Government Approvals		
11	Student Feedback		
2	Head, Student Affairs :		
Sr No	Activity	Convener	Members
1	GTU Coordinators		
2	Student Section		
3	Student Scholarship		
4	Gymkhana		
5	Alumni Association		
6	NSS		
7	NCC		
8	Anti Ragging Committee		
9	Mentor international student CSR		
10	Admission & Help Center		
11	Student Performance & Result Analysis		
12	AMIE Accounts		
3	Head, Store & Purchase:		
Sr No	Activity	Convener	Members
1	Store Officer, New Items-Govt./Non-Govt, ST/AMTS & Tendering for Outsourcing		
2	Write-off		
4	Head, Academics:		
Sr No	Activity	Convener	Members
1	First Year co-ordination and semester Exam Coordination		
2	Institute Time table coordination		
3	Institute Information Compilation Committee including CTE Follow up		
4	AICTE/AISHE/GTU Affiliation		

	5	Academic Inspection, Institute Ranking /NBA/NIRF		
	6	GTU IDP/UDP, CIC3, Startup Innovation and Design School		
	7	Center Of Excellence		
5	Head, Infrastructure & Maintenance:			
	Sr No	Activity	Convener	Members
	1	Civil Works and R&B (Civil)		
	2	House Keeping and Gardening		
	3	Electrical maintenance , Billing & R& (Elect) liason, Solar Plant		
	4	RO & Water cooler, AC Maintenance Fire Extinguisher		
	5	EPABX/Telephone		
	6	CCTV Camera video Conferencing		
	7	Security		
	8	CWAN/Internet Facility		
	9	Institute Website		
	10	KYC Update		
6	Head, Industry & Outreach:			
	Sr No	Activity	Convener	Members
	1	Placement Cell, Industry Linkages and MOU/ CII		
	2	E-Newsletter, Inst & Dept Brochure		
	3	Media Coordinator		
	4	Professional bodies and Student Chapters		
	5	RUSA and Other GOI Scheme		
	6	GKS/Language Lab/ Skill Development/Finishing School		
7	Head, Amenities:			
	Sr No	Activity	Convener	Members
	1	Library		
	2	Hostel Rector & Medical Facility		
	3	Canteen and Student Store facility		
	4	Conference, Auditorium, Seminar Hall Allocation & Maintenance		
	5	Centralized & All Department Computer Centers		

5.3 RTI

5.3.1 Introduction

All citizens shall have the right to information, subject to the provisions of RTI Act. RTI Act 2005 provides for setting up a practical regime of right to information for citizens to secure access to information under the control of public authorities, in order to promote transparency and accountability in the working of every public authority. Various activities to be performed under RTI are as follows:

5.3.2 Activities

1. Appoint Public Information Officer and Assistant Public Information Officer
2. Appellate Authority - Principal

5.3.2 Activities

3. Upload pro-active disclosure on website for public information
4. RTI annual return should be filed before 30th April, online, every year.
5. Fees and costs to be charged as per norms
6. Form of access to information
7. Need to follow the time limits for disposal of requests
8. Third party information
9. Protection of copyrights/current litigation/personal information and rejection of requests if in case as per the norms
10. Dealing with APIOs and other departments
11. RTI Application Transfer Register
12. Dealing with Appellate Authorities

5.3.3 Guidelines

1. Every institute authority shall maintain all its records duly catalogued and indexed in a manner and the form which facilitates the Right to Information Act and ensure that all records that are appropriate to be computerized, within a reasonable time and subject to availability of resources, computerized and connected through a network all over the country on different systems so that access to such records is facilitated.
2. Every institute authority shall publish all relevant facts while formulating important policies or announcing the decisions which affect public and other details as stipulated under this Act.
3. Every institute authority shall provide as much information suo motu to the public at regular intervals through various means of communications, including internet, so that the public has minimum resort to the use of this Act to obtain information.
4. PIO and APIO has to follow the RTI Act 2005 and related documents provided by Central Information Commission, State Information Commissions.

5.3.4 References

1. RTI Act 2005
2. Gujarat Right to Information Rules, 2010 by GAD Notification, 22nd March, 2010.
3. FORM A (See rule 3(1)) Application form for obtaining information
4. FORM B (See rule-3(3)) Intimation to applicant to deposit fee and charges for required information and I or documents
5. FORM C (See rule 4 (1)) Supply and/or rejection of information to the applicant
6. FORM D (See rule 4 (2)) Transfer of application pertaining to another public authority
7. FORM E (Sec rule 6 (I)) Form of First Appeal

5.4 Legal

5.4.1 Introduction

The State of Gujarat aims to transform Government into an Efficient and Responsible Litigant State by ensuring protection of the rights of citizens,

respecting fundamental rights, saving all avoidable costs on unproductive litigation, reducing load (backlog of old cases) on judiciary whenever the government is a litigant (party to the proceedings). The institute should work on the principle "for the people" and more importantly "for the welfare of the people" to frame a litigation system. The Principal and his/her core team is ultimately responsible for the working of the Institute. Each Institute may appoint a nodal legal officer. This nodal officer shall pre-empt and pro-actively pursue the litigation of institute.

5.4.2 Activities

1. Form a Grievance Cell to avoid litigation and to promote Alternative Dispute Redressal mechanism.
2. Appointment of Nodal Officer in the institute.
3. Form a Legal Cell for continuous monitoring of cases.
4. Consultation with Government Pleader, whenever any litigation filed, or notice received and send parawise remarks under concurrence with DTE office.
5. To file affidavit in due time limit with due permission of DTE office.
6. Remain present at the time of hearing in court and inform higher authority in written about day to day proceeding and any court order or judgment.
7. Collection of certified copy of orders.
8. Consultation with Legal Department as per the directives of DTE office.
9. Maintain record of court orders and judgments, government circulars, notification act etc. Also maintain record related to land, infrastructure, environment, permission letter issued by authority, MOU etc.
10. Maintaining record of all meeting and decision in writing.

5.4.3 Guidelines

1. Before taking any decision or action always consider all legal aspects and Justice.
2. To avoid litigation and to promote Alternative Dispute Redressal mechanism, it shall follow the dictum "Let's not litigate, if required, let's opt for alternative dispute resolution" as the first preference to resolve the issue.
3. Resort to litigation only when it is essential only; always avoid false pleas and technical points; bring only correct facts and relevant documents before the Court and provide all relevant information required by the Court.
4. Become an efficient litigant by focusing on the core issues involved in the litigation, managing and conducting litigation in a cohesive, coordinated and timely manner, ensuring the successful outcome of good cases.
5. Whenever any litigation is filed, or notice is received the Principal should consult government pleader and he/she should continuously advise the nodal officer to prepare and send parawise remarks and related document to Government pleader under concurrence with DTE office.
6. The Principal must file affidavit as per government pleader's instruction in due time limit with due permission of DTE office with true and actual fact. In case of urgency the Principal can take oral or email permission.
7. The Nodal officer along with the government pleader should be present at the time of hearing in court and inform higher authority in a concise way about day to day proceeding at the court.

8. The Principal should inform higher authority about any court order and judgement in due time.
9. Nodal officer has to collect certified copy of order or judgement from Government pleader or Hon'ble court.
10. In the case of implementation of order complete the necessary action in time limit. If time limit is not sufficient then the Principal should seek additional time from the court.
11. In the case of not acceptable order consult with legal department and file an appeal for stay in due time and if interim relief is not given by court then take necessary permissions from DTE office on priority for implementation of original order.
12. Files related to court case must be given first priority.

5.5 Grievance cell

5.5.1 Introduction

The Ministry of Human Resource Development (MHRD), Government of India has emphasized that there is a need of structured mechanism for online registration as well as disposal of the grievances of students/faculty/stakeholders in every Institution approved by AICTE.

Grievance Redress Mechanism is part and parcel of the machinery of any administration. No administration can claim to be accountable, responsive and user-friendly unless it has established an efficient and effective grievance redress mechanism. In fact, the grievance redress mechanism of an organization is the gauge to measure its efficiency and effectiveness as it provides important feedback on the working of the administration.

In view of the above, the Institution should put in place an online mechanism, if not presently existing, for registering and disposing of grievances.

Grievance Cell:

Principal	Chairperson
Three HoD - One convener and Two Members	Convener
Legal Nodal Officer	Member
Student ragging/harassment cases: relevant cohort of UG-PG students/ Girl students	Member
Admin Head / A.O.	Member Secretary

5.5.2 Activities

1. Form a Grievance Cell to avoid litigation and to promote Alternative Dispute Redressal mechanism.
2. Each Technical Institution should be able to receive and dispose of the grievances online.

3. Each Technical Institution should be able to develop an organizational framework to resolve grievances of the students, faculty and other stakeholders.
4. Each Technical Institution should be able to enlighten the students on their duties and responsibilities to access benefits.
5. Each Technical Institution should be able to ensure effective solution to the student's grievances.
6. Each Technical Institution should be able to investigate the reason of dissatisfaction.
7. Each Technical Institution should be able to obtain where possible a speedy resolution to the problem.
8. The meeting of the committee shall be convened by the Member Secretary in consultation with the Chairman as and when required.
9. The Grievance Committee shall hear and settle grievances, as far as may be practical, within three months after the grievance is lodged with the committee.
10. Maintaining record of all meeting and decision in writing.

5.5.3 Guidelines

1. The grievance shall be redressed depending on the nature of grievances.
2. Grievances Redressal committee shall receive, and redress grievances reported of following issue: Academic issues: pertaining to teaching learning activities. Students' teacher, student- students relationship pertaining to harassment, Internal evaluation and in assessment marking. Complaint related to library and IT services. Grievances related to hostel, food, water, electricity etc. Grievances related to sports, cultural and selection process etc.
3. Grievances related to women issues and harassment are specifically redressed by women welfare and anti-sexual harassment committee.
4. Grievance related to ragging is referred to anti ragging committee for appropriate Redressal.
5. Grievances related to examination, related to behaviour of administrative staff. Grievances related to delay in issuance of records and documents.
6. Department level counselling, college / institutional level counselling where the matter can be resolved through these efforts.
7. Most of the academic / internal evaluation (grievances related to internal assessment) shall be redressed at either individual faculty level, HOD or Principal
8. All grievances and related review shall be redressed by receiving written and signed application.
9. As soon as the application is received, the Redressal committee shall review the complaint and invite both the parties for discussion. The grievances at this level shall be resolved by issuing warning letters, memos and reformation remedies.
10. The grievances that need detailed investigation shall be subjected to enquiry by team of independent members. Enquiry report along with recommendation related to punishment should be sent to higher authorities.

8. All the grievances Redressal reports at institutional level shall be sent to university/DTE office Redressal cell for review and further actions.
9. Student representatives shall be invited only to those meetings in which grievances of students are to be considered and they shall attend only that part of the meeting, during which grievances of students are considered.

5.5.4 References

1. AICTE Regulation F. No.: 1-101/DPG/AICTE/Regulation/2017 dated 20th Feb 2017

5.6 Budget Planning and Finance

5.6.1 Introduction

The accounting department plays a pivotal role for smooth functioning of any institute. It is responsible for getting appropriate grants and expenditure from various available grants or funds. It also plans for future expenditure in the form of a budget. Broadly, it is responsible for recording and reporting the Government and Non-government cash flows in and out of an institute. There are five basic areas within the accounting department has to perform with reasonable accuracy.

1. Financial Receipts
2. Financial bill processing & payments
3. Financial reporting
4. Financial management , control & verification mechanism
5. Financial planning and budget
6. Financial auditing

Various activities to be performed under above mentioned area are as follows:

5.6.2 Financial Receipts (Govt. & Non-Govt.)

7. Collection of various student fees
 - a. Tuition fees and other college level fees, caution money deposits
 - b. GTU fees
 - c. Hostel fees
8. Collection of other receipts
 - a. Tender fees, IRG & consultancy fees, Recovery, Penalty, RTI fees, Security deposits, Earnest money deposits

5.6.3 Financial Bill processing and payments (Govt. & Non-Govt.)

Bill processing

1. Various bills for : pay and arrear , Leave encashment, LTC, TA-DA, GPF bills, GTU exam, PLA/PD, Abstract bills, Contingency bills, HBA/MCA, GINS, Medical reimbursement, Voucher bills.

5.6.4 Financial Reporting (Govt. & Non-Govt.)

1. by expenditure statement
2. by UC statement

5.6.5 Financial management, control and verification mechanism (Govt. & Non-Govt.)

1. Maintaining Bill register, Cheque/DD register, challan register, PLA statement, CASH book, GPF register, TA, LTC Bill register
2. Maintaining ABC register, Other income register, grant issued register
3. Maintaining IFMS - digital signature certificate register
4. Checking of cash book & bill register on daily basis by AO/DDO
5. Checking of physical cash in safety vault on monthly basis
6. Checking of PD-PLA statement on monthly basis
7. Exchange of safety vaults keys with treasury-every April
8. Maintaining file of Bond – cashier
9. Circulating GPF & CPF annual statements

5.6.6 Financial Planning & Budget (Govt. & Non-Govt.)

1. Submitting financial budget Estimates in the month of Sept- Based on the previous year annual expenditure and adding probable future requirements
2. Submitting Revised financial budget Estimates in the month of Feb- Looking to the current year savings and adding probable expenditure up to 31st March
3. Submitting grant requirement/surplus information
4. Submitting Abstract details to CTE and receiving DC bill certificate quarterly

5.6.7 Financial Auditing (Govt. & Non-Govt.)

1. Effectively convincing, supporting and settlement for Half Margin raised during AG audit-Usually after every four year span , Govt. Audit is done by AG, Rajkot
2. Local CA audit for Central Government schemes
3. Income Tax statement audit within institute in the month of Feb
4. Probable Income tax deduction audit within the institute in the month of April
5. Submitting quarterly and Annual Income tax return
6. By effectively communicating for AG Para settlement – through AO , CTE

5.6.8 References

1. The state litigation policy, declared by law department in notification dated 29/12/2011
2. GAD circular raham 102012-290-K, dated 15/3/2012

Chapter 6 - Estate

6.1 Introduction

The role of estate section is to develop and maintain the infrastructural facilities to provide enabling teaching-learning process at the campus. The major tasks to be handled by the estate section are civil works, electrical works, grounds, gardens and landscaping, security, house-keeping, water coolers & purifiers, air conditioners, fire extinguishers, solar panels / geysers etc.

Civil and electrical maintenance is to be done in liaison with Road and Building Department (R&B) of Government of Gujarat, while security, housekeeping and gardening are to be carried out through outsourcing. Other facilities like Water coolers and purifiers, air conditioners, fire extinguishers, solar panels / geysers are to be procured and maintained at institute level.

Property tax payments, maintenance of buildings and allocation of quarters are also part of the estate section of the Institute and need to be managed efficiently. Important documents / drawings pertaining to land, buildings and other facilities are to be maintained and updated regularly.

6.2 Civil Works

6.2.1 Activities

1. Formation of Institution level committee for civil works.
2. Liaison with R & B for various development and maintenance activities.
3. Preparing annual budget proposal for Major Civil Works.
4. Follow up of the sanctioned budgeted works.
5. Reporting of the progress of the work regularly.
6. Correspondence with R and B For special repairs.
7. Development of mechanism for the registration and follow up of the complaints of the routine maintenance from various departments of the institute.
8. Taking the possession of the completed works with Taba Pavti.
9. Payments of property taxes as and when demanded by local bodies.
10. Land Records maintenance related activities.
 - a. Necessary land records are to be maintained.
 - b. Necessary records of building drawings and Taba pavti are to be maintained.
11. Quarter allocation related activities
 - c. Formation of Quarter allocation committee and maintenance of waiting register.
 - d. Allocation and taking possession back of Quarters.

6.2.2 Guidelines

1. A committee should be formed for the development and maintenance of civil works at Institute level.
2. Routine civil complaints to be registered and monitored by section officer of R and B Department.
3. For all major works and new buildings annual plan is to be prepared based on the regulatory agencies (NBA, AICTE etc.) requirements from time to time. The major new works are to be proposed after duly analyzing the institutional needs and future plan.
4. All maintenance works to be proposed after duly identifying needs. Budget proposal with plinth area estimates is to be submitted to the Head Office for further action and approval.
5. For all the new sanctioned budget work, follow up is to be done with R and B department.
6. The necessary provision is made in the Institutional budget for the annual property taxes.
7. Record and maintenance related Guidelines:
 - a. One nodal officer is to be appointed to maintain the records
 - b. Land records like orders of land, 7-12, 8 and 6 Statements of land are to be maintained. or any other relevant documents issued by Local bodies
 - c. Building plans are to be maintained
 - d. Tabapavti of completed buildings are to be preserved.
8. Quarter Related Guidelines:
 - a. A committee is to be formed under HOD Civil Department. And comprising three other members.
 - b. Allocation is to be made according to the committee decision and Government Guideline.

6.3 Electrical Works

6.3.1 Activities

1. Routine maintenance and monitoring of Electrical supply.
2. Routine complaints are to be resolved in liaison of wireman and section officer of R & B electrical.
3. All major electric works should be included in budget of civil works. All maintenance of electrical fittings, appliances, and supply should be included.
4. Regular payment of electric power consumption charges. Solar power maintenance and its related work to be included.

6.3.2 Guidelines

1. A Register of complaint is to be maintained at R and B electric section office.
2. Major works are to be proposed along with R and B electrical.
3. Bills are provided by power supply agencies every month. Necessary mechanism is to be developed for payment of the bills, to avoid penalty etc.

6.4 Gardening & Maintenance of the Grounds

6.4.1 Activities

1. Inviting tenders for the out sourcing of the gardening as per the government guidelines.
2. Monitoring of gardening and grounds.
3. To develop mechanism for watering of the garden & procurement of pipes, sprinklers, fertilizers.
4. Making monthly payments to the out-sourcing agencies.

6.4.2 Guidelines

1. Government has issued the guidelines for the hiring the out-sourcing agencies, accordingly, contracts should be processed.
2. Providing fertilizer and pipe networks may also be clubbed with the contracts. But should be monitored closely.
3. Regular supervision of green areas is anticipated.

6.5 House-keeping

6.5.1 Activities

1. Inviting tenders for the out sourcing of the house keeping as per the government guidelines.
2. Monitoring of housekeeping activities such as cleanliness of toilets, classrooms, laboratories, roads, staff cabins, drinking water.
3. To develop mechanism for monthly payments and penalty to the out-sourcing agencies on the basis of reports from the different departments.

6.5.2 Guidelines

1. Government has issued the guidelines for the hiring the out-sourcing agencies, as per the guideline annual contracts may be given.
2. Providing cleanliness material like phenyl, acid, etc. can be clubbed with the contracts.
3. Routine monitoring and planning of housekeeping activities at several levels in the department and at the institute levels.

6.6 Monitoring of Mechanical Facilities

6.6.1 Activities

1. Procurement & maintenance of Water Coolers, RO, Air Conditioner & Fire Extinguishers and Water Heating Systems.
2. Routine maintenance & monitoring of the facilities.
3. Taking annual maintenance contract (AMC) of the above facilities.

6.6.2 Guidelines

1. RO/Water Purifier:
 - a. RO / water purifier should be installed with right type of membranes and modules to maintain appropriate pressure at different locations of membrane arrays.
 - b. This facility is useful for staff, technical experts and visitors.
 - c. The system should be installed where drinking water taps/space is provided.
 - d. The system shall be capable of working 24hrs.x365 days by using the semi treated water provided through Borewell / Municipal water supply.
 - e. Reverse Osmotic System checked by technicians regularly to ensure high performances.
 - f. At least one RO of 100 lph capacity preferably be provided for the 240 students.
 - g. It should be serviced and repaired annually under AMC.
2. Water Cooler:
 - a. A water cooler should be provided for students at right temperature.
 - b. Facility of water cooler for other staff and areas.
 - c. At every 240 students there should be a water cooler of 100 liter storage capacity.
 - d. Water cooler need to be installed in prominent critical areas of the institute like library, gymnasium, workshop, student section and offices.
3. Air Conditioner:
 - a. All Laboratories should have air conditioned for instruments / equipment / machines.
 - b. Students and staff can be provided with this facility as per GoG guidelines.
 - c. Air conditioner capacity should be selected as per room storage capacity.
4. Fire Extinguisher:
 - a. All critical and fire prone areas should be provided with fire extinguishers.
 - b. Provide portable extinguishers for laboratory use with defined category (Class A, B, C)
5. Gyser System / Solar Heating System
 - a. Hostels should be provided with such systems
 - b. Maintenance and Operating mechanism should be set up

6.7 Security of the Institute

6.7.1 Activities

1. To check entry and exit of all the vehicles.
2. To check every individual's ID card entering in the campus.
3. To take & maintain entry in the visitor's register of all the visitors and guests.
4. To stop any kind of anti-social activity within the campus.
5. To protect the campus amenities like labs, equipment etc.
6. To stop the entry of stray animals in the campus.
7. At the entry point and in the reading room of library the security guards will take care of entry exit register.
8. They have to perform all the duties which are described in the agreement between the college and GISFS.
9. To make the monthly payments of the bills.

6.7.2 Guidelines

1. A committee should be formed to look after all the issues pertaining to the security of the Institute.
2. There should be minimum two security guards at the main gate.
3. Security should be provided outside the boys and female security guards at the girls hostel.
4. Every parking within the campus to be provided separate security guard.
5. All building blocks to have a separate security guard.
6. Security supervisors to be provided for smooth functioning of campus security preferably, one in each shift.
7. Monetary penalties may be assigned for irregularities or lapses in security.
8. Security force should obey dress code.
9. They have to sign the register at both the time of their duty without fail.

6.7.3 References

1. Roads and Building Department Resolution no BDG/6188/7761/PART 31N/3/7/2008
2. General Administration Department Resolution NO makam/2004/2539/1/kha-3 dt.1/4/2010
3. GCSR Provision gn/36/gc1/102001/331/ch Dt. 15/11/2002
4. SOR, R & B
5. DTE/Esta/Security Guards/2010/Gh.8./9583 Dated 22nd March 2011
6. Agreement of GISFS and respective college for each year

6.7.4 Formats

Format 6.1 Sample Format - For Reporting Progress of Civil Works

Sr. No.	Name Of Work	Budget item No page No	Estimated Cost	Expenditure up to 31/3/2xxx	Expenditure in the quarter under reporting From----- to -----	Total Expenditure Ending -----	Remark

Format 6.2 Sample Format - Proposed New Construction Works

Sr. No.	District	R and B Executive Engineer and Division	Name Of Work	Amount of Estimated Cost	Budget provision 33 % Of the Estimated Cost	Justification of Work

Chapter 7 - Students Section

7.1 Introduction

The main objective of the student matters office is to address various student related administrative works. With help of faculty coordinators and office staff, it provides necessary certificates to be authorised by institute head and assists students to avail benefits of various state/national/private trust schemes. A proper student grievance redressal system should be developed to overcome students' grievances effectively. A Women Development Cell (WDC) should also be as per the direction given by AICTE/UGC and MHRD. WDC primarily focuses on creation of hassle free environment for female students and staff of the campus community and enhance self-respect and self-confidence among them.

7.2 Admissions, Transfer and Certificates

1. Reporting/Registration of new Admitted students- ACPC/ICCR/MHRD
2. Bonafide / Character Certificate for passed out and current students
3. Online or offline anti ragging affidavit submission by students
4. Semester Term fees notification and collection of fees and refund related process
5. Bus/Train Pass Authorization
6. Smart Library I-Card for new admitted students and duplicate I-Card
7. Transcript/Migration certificate for other Universities
8. Institute Transfer related matters
9. Education verification of pass out students for third party and govt. agency
10. Specific certificates asked by student for authorization

7.3 Scholarships and Others

1. Scholarship(SC/ST/SEBC/PH/PG/MYSY/KCG and all special schemes of govt./All other of private trust/societies)
2. Student 100-point activities coordination
3. Provide Result Analysis
4. Provide student related institutional information and statistics to head office/other government agencies
5. Redressal of student grievances through proper student grievance system.

7.4 GTU Related Services

1. Enrolment of GTU, name correction in enrolment
2. Coordination of GTU external and internal examination and practical examination
3. Admission cancellation
4. Distribution of Student Grade card and Provisional Certificates to students
5. Rechecking and Reassessment process of GTU examinations
6. Mid Semester Internal Examination Schedule for institute
7. All internal marks entry
8. Issue and verification of certificates for 100-point activities

7.5 Women Development Cell

1. Suraksha Setu
2. Girls common room
3. Internal Complaint Committee (ICC)
4. Awareness Activities

7.6 Grievance Redressal

7.7 Guidelines

1. Institute has to create a standard format for registration of the students under ACPC/ICCR/MHRD. Temporary Roll No. may be allotted on the date of orientation of the students.
2. A separate institute faculty coordinator should be assigned to mentor ICCR students as per GTU guidelines [1].
3. Bonafide certificate/character certificate/migration certificate/transfer certificate should be issued to students on demand. Standard format shown in Annexure-I to Annexure-V can be used.
4. Online anti-ragging undertaking or offline anti-ragging undertaking (Annexure-VI) should be filled up by each student without fail.
5. Admission cancellation process after the enrolment of students should be as per GTU circular [7]. Student should submit handwritten application and proper documents to the institute for the enrolment cancellation process. Admission cancellation before the enrolments of the student should be communicated with ACPC by taking written application and proper documents from the student.
6. Name correction of student should be carried out as per GTU circular [8]. Format shown in annexure-VI should be adopted as student application for name correction. Format of the forwarding letter of institute with student application shown in annexure-VII.
7. Various subcommittees may be formed under the Head of student's section for smooth conduction of the above functions.
8. Institutional GTU team headed by GTU coordinator looks after the smooth execution of the GTU related matters.
9. Head of Student Section along with a team will coordinate scholarship related issues with various government offices as well as to assist students for the same.
10. Department heads and faculty coordinators organize different programs related to 100 points activities.
11. Form a Women development committee / ICC /Suraksha Setu as per the norms given in references and display on Notice Board of each department of Institute. WDC should meet at least once a month, preferable twice.
12. Cases of women harassment, ragging of girls in the campus, complaints made in grievance cell should be handled by WDC.
13. Form a plan for every semester to organise various activities as mentioned above.
14. Effort shall be made to create an atmosphere where every teacher, staff and student can work freely without any gender bias.

7.8 References

1. GTU guidelines for ICCR students
http://www.gtu.ac.in/circulars/13Dec/GuidelinesforInternationalStudentsMentors_by_ISA.pdf.
2. AICTE notification on Anti-ragging <https://www.aicte-india.org/downloads/Antiragging.doc>
3. AICTE public notice for curbing menace of ragging <https://www.aicte-india.org/downloads/Anti%20ragging%20notice.PDF>
4. Online anti-ragging undertaking
http://antiragging.in/site/affidavits_registration_form.aspx
5. GTU circular for information of transcript/migration as well as other certificates
http://www.gtu.ac.in/ImpCircular/Student_Application_Form_Instruction.pdf
6. Standard application form of GTU for migration/transcript/other certificates
http://www.gtu.ac.in/ImpCircular/Student_Application_Form_ALL.pdf
7. GTU circular for enrolment cancellation process No: GTU/Academic/Enr/Cancellation/2016/3683 dated 16/06/2016
8. GTU circular for name corection
http://www.gtu.ac.in/circulars/13Mar/circular_Name%20correction-1.pdf
9. Vishakha guideline Hindi
(http://www.svnit.ac.in/Data/womencell/shc_rules2013inHindi-4-6.pdf)
10. GTU guideline (Ref: GTU/WDC/CTE/Student Squad/2014/8084)
11. UGC Guideline ([https://www.ugc.ac.in/pdfnews/1984034_UGC-letter-Rajpatra0001-\(2\).pdf](https://www.ugc.ac.in/pdfnews/1984034_UGC-letter-Rajpatra0001-(2).pdf))
12. The Sexual Harassment of Women at Workplace (Prevention, Prohibition, and Redressal) Act, 2013
(<https://www.iitk.ac.in/wc/data/Handbook%20on%20Sexual%20Harassment%20of%20Women%20at%20Workplace.pdf>)
13. Web page of National Commission for Women
(<http://ncw.nic.in/default.aspx>)
14. Indian Kanoon
(<https://indiankanoon.org/search/?formInput=sexual%20harassment%20cases>)

7.9 Formats

1. Bonafied Certificate
2. Bonafied Certificate for passport purpose
3. Character Certificate
4. Transfer Certificate
5. General Application format for character certificate, bonafide certificate, transfer certificate and special purpose certificate etc.
6. Anti-ragging undertaking by students and parents
7. Application form for duplicate I-card
8. Format for students for application for name correction
9. Format of institute forwarding for name correction application of student

Format 7.1 Sample Format - Bonafide Certificate

Format-I

Institute Name

Date:

BONAFIDE CERTIFICATE

This is to certify that (Name of Student) Enrolment No: _____ is bonafide student of B.E. Sem. _____ in the _____ branch, (Institute Name) _____ during the academic year 2017 -18.

The institute is affiliated to Gujarat Technological University, Chandkheda, Ahmedabad.

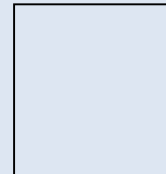
PRINCIPAL

Format 7.2 Sample Format - Bonafide Certificate

Format-II

Institute Name

Date:



BONAFIDE CERTIFICATE

This is to certify that (Name of Student) Enrolment No: _____ is bonafide student of B.E. Sem. _____ in the _____ branch, (Institute Name) _____ during the academic year 2017-18.

The institute is affiliated to Gujarat Technological University, Chandkheda Ahmedabad.

PRINCIPAL

Format 7.3 Sample Format - Character Certificate

Format-III

Institute Name

CHARACTER CERTIFICATE

This is to certify that (Name of Student) Enrolment No: _____ is bonafide student of B.E. Sem. _____ in the _____ branch, (Institute Name) during the academic year 2017-18.

To best of my knowledge and belief, he is bearing good moral character during his stay at the institute.

PRINCIPAL

Format 7.4 Sample Format - Transfer Certificate

Format-IV

Institute Name

VGEC/ STS/

DATE:

TRANSFER CERTIFICATE

This is to certify that Mr . _____ Enrolment No. _____ was a bonafide student of the Institute Name Affiliated to Gujarat Technological University .

- A. He has kept all terms in this college as per attachments.
- B. He passed out exam at the _____ Examination in getting B.E. (ELECTRICAL ENGINEERING).
- C. His conduct and character are good.

Principal

Encl:

History Card

Forwarded with compliments to the principal/Registrar _____

Format 7.5 Sample Format - Application Form for Certificate

Annexure- V

(General application form)

Application Form for Certificate

Read the following instruction carefully before filling the form:

1. Attach self attested copies of following documents: a. SBI collect receipt b. Final or Provisional Degree Certificate
2. If the application is for CHARACTER CERTIFICATE then get it recommended by HOD of your department.

Date: _____

Tick on suitable option form below:

Bonafide certificate / Transfer certificate / Character certificate / Other special purpose certificate

Name of Applicant (In capital): _____

Enrollment Number: _____

Course: Diploma/ Degree Branch: _____ Semester/ Pass out Year: _____

Permanent Address: _____

Purpose of Certificate: _____

Signature of applicant: _____

Signature of HOD: (In case of Character Certificate): _____

For office use only:

Remarks: _____

Received the copy of certificate as per application/ required:

Signature of Applicant

Format 7.6 Sample Format - Affidavit by the Student

Format-VI Anti ragging undertaking

AFFIDAVIT BY THE STUDENT

1. I,
(full name of student with admission/registration/enrolment number) Son/Daughter of Mr./Mrs./Ms....., having been admitted to, (Name of the Institution) received a copy of the UGC Regulations on Curbing the Menace of Ragging in Higher Educational Institutions, 2009, (hereinafter called the "Regulations") carefully read and fully understood the provisions contained in the said Regulations.
2. I have, in particular, perused clause 3 of the Regulations and am aware as to what constitutes ragging.
3. I have also, in particular, perused clause 7 and clause 9.1 of the Regulations and am fully aware of the penal and administrative action that is liable to be taken against me in case I am found guilty of or abetting ragging, actively or passively, or being part of a conspiracy to promote ragging.
4. I hereby solemnly aver and undertake that
 - a) I will not indulge in any behavior or act that may be constituted as ragging under clause 3 of the Regulations.
 - b) I will not participate in or abet or propagate through any act of commission or omission that may be constituted as ragging under clause 3 of the Regulations.
5. I hereby affirm that, if found guilty of ragging, I am liable for punishment according to clause 9.1 of the Regulations, without prejudice to any other criminal actions that may be taken against me under any penal law or any law for the time being in force.
6. I hereby declare that I have not been expelled or debarred from admission in an institution in the country on account of being found guilty of, abetting or being part of a conspiracy to promote, ragging; and further affirm that, in case the declaration is found to be untrue, I am aware that my admission is liable to be cancelled.

Declared this Day of Month of Year.

Signature of deponent Name:

OATH COMMISSIONER

Format 7.7 Sample Format - Affidavit by the Parent/Guardian

AFFIDAVIT BY THE PARENT/GUARDIAN

1. I Mr./Mrs./Ms., (full name of the parent/guardian) father/mother/guardian of Mr./Ms., (full name of student with admission/registration/enrolment number) having been admitted to (name of the institute), have received a copy of the UGC Regulations on Curbing the Menace of Ragging in Higher Educational Institutions, 2009, (hereinafter called the "Regulations") carefully read and fully understood the provisions contained in the said Regulations.
2. I have, in particular, perused clause 3 of the Regulations and am aware as to what constitutes ragging.
3. I have also, in particular, perused clause 7 and clause 9.1 of the Regulations and am fully aware of the penal and administrative action that is liable to be taken against my ward in case he/she is found guilty of or abetting ragging, actively or passively, or being part of a conspiracy to promote ragging.
4. I hereby solemnly aver and undertake that,
 - 1) My ward will not indulge in any behaviour or act that maybe constituted as ragging under clause 3 of the Regulations.
 - 2) My ward will not participate in or abet or propagate through any act of commission or omission that may be constituted as ragging under clause 3 of the Regulations.
5. I hereby affirm that, if found guilty of ragging My ward is liable for punishment according to clause 9.1 of the Regulations, without prejudice to any other criminal actions that may be taken against me under any penal law or any law for the time being in force.
6. I hereby declare that My ward has not been expelled or debarred from admission in any institution in the country on account of being found guilty of, abetting or being part of a conspiracy to promote, ragging; and further affirm that, in case the declaration is found to be untrue, I am aware that my admission is liable to be cancelled.

Declared this Day of Month of Year.

Signature of deponent Name: Address:

Telephone/Mobile No:

Format 7.8 Sample Format - Application Form for Duplicate I-Card

Application Form for Duplicate I-Card							
Application No				Date:			
Photograph							
Name of Applicant (In Capital):							
Enrollment No							
Branch				Semester			
Permanent Address of Applicant							
Blood Group							
Mobile No. Home							
Mobile							
E-mail							
Reason for Apply for Duplicate I-Card							
Undertaking	I declare that I will inform authority, in case of original smart I-card found. I assure the reason for taking duplicate smart I-card mentioned above is correct.						
Candidates Sign							
OFFICE USE ONLY							
SMART CARD	INSTITUTE	100 Rs.	Fee Receipt		Date		Authorized

Format 7.9 Sample Format - Student Application for Name Correction

Annexure-VIII

Institute Name

STUDENT APPLICATION FOR NAME CORRECTION

Date: - ___/___/___

STUDENT DETAILS

COURSE NAME (BE/ PDDC/DE)			
ENROLLMENT NO.(12 DIGIT):			
NAME OF STUDENT (IN CAPITAL):			
CONTACT DETAILS:			
E-MAIL ID:			
COLLEGE CODE :		BRANCH CODE:	

Name Correction	
Student Wrong Name	
Student Correct Name	
Documentary Proof	<ol style="list-style-type: none"> 1. College Forwarding letter along with student hand written application with details. 2. Photo copy of student's mark sheet of HSC/ SSC/ School Leaving Certificate/Gujarat Government Gazette copy. 3. Photo copy of Marksheets with wrong name (if any). Also fill the details in below Table – A)

Applicant must tick in given box for particular document and attach in given order for individual application.

Table –A

Sr no	Semester	Regular/Remedial	Month and year

Note:

Students must not submit original Marksheets having wrong name along with the application. The wrong Marksheets must be submitted at the time of receiving correct Marksheets only.

Instructions for the Students:

1. Student's must have to submit listed document as above (i.e. Documentary Proof and Table-A). Application without above details/Documents will not be processed. (I.e. not taken into consideration).

2. If Student is not available for receiving grade card (applied for) then student needs to provide following document along with receiving person. Student need to verify grade card while receiving from university.

- o Authority Letter of Student
- o Receiving Person's Photo Id Proof
- o Student Photo Id Proof

3. If student has submitted application for change in Marksheet due to "Name Correction", then track the status through the link: -

<http://students.gtu.ac.in/MarksheetRequestTrack.aspx>

DECLARATION

I, hereby under sign, declare that, I have read all the instructions and the entries made by me in the Application Form are complete and true to the best of my knowledge and based on records.

Signature of Applicant

Format 7.10 Sample Format - Institute Forwarding for Name Correction

Annexure-IX

Institute Name

(Institute forwarding for name correction)

(Institute outward no.)

DATE:

To,

The Registrar,

Gujarat Technological University

Nr. Vishwakarma Government Engineering College

Nr. Visat Three Roads, Visat- Gandhinagar Highway Chandkheda, Ahmedabad-382424.

Subject: -Application for Name Correction for college code (College code and name)

Respected Sir/Madam,

With reference to the above mentioned subject, kindly change/correct students name in GTU Records as in below mention table:

Sr No	Course	Enrollment No	Name of Student (Wrong Name)	Name of Student (Correct Name)	Branch Code	Ref no (Display at institute admin panel)
1						
2						

I, the undersigned, verified above stated student's applications are received at institute and found genuine.

Thanking You

(Principle Signature and Stamp)

Enclosure:

1) Student(s) application (Format Given by GTU).

2) Required documents as per instruction in circular

Chapter 8 - Central Store and Purchase

8.1 Introduction

Central store of institute looks after the purchase of new equipment for various laboratories of the departments. Store provides assistance to department heads in carrying out repairs/maintenance and write off equipment and annual maintenance contracts.

Store provides technical guidance and processing functions for the purchase of Govt as well as non-govt. items such as equipment, library books and all outsourcing contracts.

8.2 Purchase and processing

1. Purchase related coordination with institutional departments and head office.
2. Compilation of equipment list, books and journals to be purchased in various departments.
3. Liasoning with head office for purchase of equipment costing more than Rs.20000.
4. Quotation/Tendering process for equipment costing less than Rs.20000 from Government of Gujarat grant after getting prior approval.
5. Placing order for books to empanelled vendors and subscribing to journals as per approved amount.
6. GeM/GIL/CSPO/Direct purchase process liasoning.

8.3 Post purchase process

1. Carryout purchase bill processing after satisfactory installation/demonstration for the received goods.
2. Update and maintain GPR, and maintain Dead stock, expendable, consumable and furniture register.

8.4 Write off

1. Carryout write-off process at regular interval for non-repairable equipment and furniture.
2. Get approval from GIL, R&B, and Head Office for the equipment, furniture and e-waste identification write-off.
3. Open auction of written off equipment.
4. Deposit amounts and others.

8.5 Maintenance

1. Annual maintenance contract for various equipment like, Air conditioners, printer, copier, water cooler and purifier.
2. Annual physical verification of departmental equipment as per dead stock.
3. Tendering process for student's store, canteen, mess, housekeeping, and gardening contracts.

8.6 Audit and Other activities

1. Audit of purchase data verification through AG Rajkot and DTE audit team.
2. Provide purchase data and inventory as and when required by head office and other government department.
3. Maintain inventory data on DTE MIS portal.

8.7 Guidelines

1. Institute purchase committee should be formed for the smooth functioning.
2. Schedule for purchase, tendering and write-off should be prepared and followed.
3. Collect departmental information in the Vikashlakshi(New items) forms and compilation as per the format provided by head office
4. Follow the purchase manual procedures defined by authorities such as, GIL,CSPO, GeM, department of industries and mines.
5. Follow GOG guidelines for tendering of canteen, mess and housekeeping contract.
6. Maintain transparency in tendering process.
7. Write-off process of equipment and furniture as per head office direction and e-waste as per the GR of GPCB.

8.8 References

1. DTE website
2. Purchase manual by department of Industries and Mines.
3. CSPO Manual.
4. GIL Guidelines related procurement of IT products and services.
5. Government E-Marketplace purchase and service guideline.
6. The e-waste policy framed by GIL and GPCB is to be followed while writing off electronic waste.

Chapter 9 - Library

9.1 Introduction

Teachers, laboratories and libraries are important components in imparting effective engineering education to students. A library functions as the heart of any institute and helps in developing young engineering minds. The objective of an engineering college library is to assist engineering professionals in enhancing and updating their knowledge and skills, and to provide them information regarding new innovations, views, theories, engineering education, and research. For academic institutes, the librarians provide the link between teacher and students. A well-managed library keeps updating as per the needs of students and faculties; motivates them to use its resources and helps them to access the resources. It has a major contributing role in shaping engineering students to remain lifelong learners.

The needs of the users of engineering institute libraries have become complex due to the tremendous amount of publications and interdisciplinary researches that are being promoted at the level of higher education. The library in-charge officer needs to pay sincere attention to acquire appropriate and need based literature in the relevant subjects and to the utmost satisfaction of faculty and students. In this critical situation, library officer should have a clear understanding of the users' needs and their information seeking preference so that the libraries can satisfy as well as improve the existing services accordingly.

Information and Communication Technologies are increasingly used to collect, store, retrieve and disseminate a great amount of information to help engineering professionals in modern libraries.

The library resources are broadly classified in three categories, text books, reference books and journals; each category comprises of print and digital resources. In addition to these basic components video lectures, Internet and software are becoming important components in the age of ICT. Reading room is an internal part of library.

9.2 Text Books

The activities needed for management and utilization of text books includes:

1. Purchase of text books recommended by faculty as per curriculum
2. Arrangement of books for easy access
3. Labelling in stacking area for easy access and search of books
4. Indexing, Arrangement and database entry of new books
5. Circulation of books: Issue return system
6. Verification of proper arrangement of book stack
7. Stock verification
8. Write-off of old, lost, obsolete or damaged books and purchase of new versions

9.3 Reference books

Reference books include resources which remains inside library and are not issued to users, it includes:

1. Encyclopaedia, Handbooks and conference proceeding books
2. Special subject area books
3. Occasionally required books

9.4 Journals and periodicals

1. National and International Print Journals
2. e-journals

9.5 Video lectures

1. Audio Video digital e-classroom equipped with multi-medias, speakers, microphones, internet
2. NPTEL lectures
3. Massive Online Open Courses (MOOC)

9.6 Language lab

1. Teacher Console
2. Student console with head phones and Mic – 30 nos.
3. Internet Access
4. Projector, Bluetooth PA system & Whiteboard
5. Language Lab software

9.7 Hardware and Software

1. Internet access centre with library server
2. Computational centre
3. Abstract Databases
4. The library should have digital library management system comprising of,
 - a. Windows or Linux dedicated server for library management
 - b. Sole/Koha or any stable library management software
 - c. RFID/Barcode based system for user interface

9.8 Reading room

1. Capacity of reading room as per AICTE norms
2. With CCTV
3. Library Reading room should preferably have,
 - a. A space at least 800 sq. feet with chair, officer table,
 - b. Access of reference books to read in library

9.9 Guidelines

1. Library stack room should have Open access of books.
2. Book Issue System
 - a. Library rules for users
 - b. Guidelines for users
3. Library server
4. Write off old unused books
5. Replacement of torn out and lost books
6. Reprographic services
7. Membership for other resources

9.10 References

1. AICTE, NBA requirements and any other guidelines
2. NPTEL links
3. Shodhganga and other links
4. National Digital Library

Chapter 10 - Hostel Facility

10.1 Introduction

The college provides hostel facility for B.E. and M.E. students and separate Hostels for Boys and Girls. The hostel is administered by the Rector and Wardens through the Hostel Committee. In each hostel, a caretaker follows up on all routine maintenance issues, and the warden is responsible for day to day hostel administration and report to the Rector. Each student is issued basic furniture including chair, study table, and cot at the beginning of the academic year. Students in all hostels have access to a common room, and mess facilities within their respective hostels. Entertainment facilities like TV room, badminton room, library, computer room with internet can be made available in hostel. Outdoor and indoor games are also provided for the hostel students.

10.2 Hostel admission

1. Admission to students as per merit.
2. Hostel fees collection.
3. I-card Issue and cancellation of hostel admission
4. Hostel facilities (Furniture, TV room, study room/ library, computer room with internet, food and kitchen management etc.)

10.3 Hostel Maintenance

1. Hostel maintenance (RO plant, Geyser, Tube lights, Fans etc...)
2. Housekeeping activities in hostel.
3. Medical facility in hostel (First-aid box and Doctor's Visit).
4. Students' committee in hostel (Discipline, Maintenance, Food, Sports etc.).
5. Safety and security of the students.

10.4 Hostel administration

1. Sports, cultural and other activities (Swachata Abhiyan, Tree Plantation etc.) in hostel.
2. Student Counselling and Anti-ragging activities.
3. Purchase of hostel amenities (cots, chairs, tables, mess facilities, etc.)
4. Punishment for indiscipline in hostel.
5. Scholarship for hostel students.
6. NOC for pass out students.
7. Regular visits of Principal, Rector, HOD's and Wardens.

10.5 Guidelines

1. Admission on the basis of ACPC merit of students.
2. Seat allocation on the basis of branch and category prorata.
3. Admission to first year students, D2D and M.E. and Students' Admission thorough MHRD.

4. Formation of hostel committee should include 10 students and 05 faculties including rector and warden.
5. Priority should be given to students having native place more than 50-100 kms.
6. Hostel fees collection Semester wise.
7. Utilization of domus funds should be recommended by hostel committee for maintenance and up gradation of hostel facilities.
8. Security guards should be provided for each hostel.
9. Purified water (RO plant) with water cooler on each floor.
10. Cleaning of lobby and toilets daily by housekeeping staff.
11. CCTV camera at lobby and entrance of hostel building.
12. Entry of girl students should be restricted after a specified time.
13. Visit book should be maintained.
14. Display disciplinary rules for students of hostel.
15. Allocation of warden quarter if available in campus
16. Strict actions are taken against students flouting hostel rules.
17. Doctor's Visit has to be provided.
18. Anti-ragging committee to create awareness and decide penalty.

10.6 References

1. <http://www.antiragging.in/>
2. <http://amanmovement.org/amanmovement/>

10.7 Formats

1. Hostel Admission form
2. Hostel Rules
3. Fees structure
4. Visitors book
5. No due certificate
6. Leave application for girl's student
7. Student complaint register
8. Scholarship / passport form for hostel student

Format 10.1 Sample Format - Rules for Hostel Admission

RULES FOR HOSTEL ADMISSION

1. Hostel fee is non-transferable and non-refundable
2. Hostel fee shall be paid as per the given instruction and receipt should be produced to the authority on demand.
3. Ragging in any form is banned inside and outside the hostel campus. Strict action is taken against persons flouting this rule; no leniency is shown. Suspension and/or withdrawal from the hostel/ college is the first action against the offender.
4. Students must occupy the rooms allotted to them and should not change/exchange rooms without prior permission from authority.
5. Students are not allowed to use extra electrical fitting in their rooms unless permitted by the authorities.
6. Students should not keep Mopeds, Motor cycles, Scooters and Cars in the hostel premises without prior permission from authority.
7. Girl students should return to the hostel before 9 pm and boys before 10 pm on all days.
8. Hostel Furniture shall not be removed from one room to another under any circumstances. Students are responsible for the care of furniture and fittings in their respective rooms. The cost of furniture and fittings will be recovered from them in case of any damage or loss along with the fine decided by authority.
9. The use of Tobacco, Narcotic and Alcohol is strictly prohibited and defaulter shall be treated according to the provision of law. Hostel admission may cancel due to this activity.
10. Student must follow all rules regarding cleanliness in hostel premises and his/her room.
11. Unauthorized person if found in the room, all roommates shall be held responsible. Due to that, whatever action taken by hostel authority must be accepted to all roommates.
12. All the hostelite must keep their Hostel identity card with them all the times and shall produce the same when asked by the authority/ security.
13. If the student wishes to cancel the admission from the Hostel shall apply well in advance in writing to the authority so as to facilitate the allotment of his vacancy to the needy person.

I have read all above rule & understand it properly. I shall abide by the all hostel rules. My hostel admission may be cancelled in case of any misbehaviour or default on my part along with the fine/penalty as decided by the authority.

SIGN. OF APPLICANT

Date :

SIGN. OF GUARDIAN

Format 10.2 Sample Format - Hostel Admission Form

Rs.10-00 Form No. : _____
Branch: _____ ACPC Merit No: _____ (Attach Proof)

Institute Name

Institute Address

Hostel Admission Form

To,
The Rector,
Institute Address



Sir,

I hereby apply for the admission in the College Hostel, My Bio data and other particulars are as under :-

Full Name :- _____

Sem. & Branch :- _____

Category: SC/ST/SEBC/NT/DNT/PH/OPEN : _____ (Attach Certificate)

Result of 12th Science: _____ (Percentage) (Attach Marksheet)

Result of Diploma: _____ (CPI) or _____ (Percentage) (Attach Final Semester Marksheet)

Permanent Address :- _____

_____ (Attach Proof)

Student's Mobile No.: - _____ Father's Mobile No.: _____

Father's Name :- _____

Father's Occupation: - _____

Father's Address of working place: - _____

Name & Address of local Guardian: - _____

I accept responsibility for the accuracy of the particulars contained in the application form and agree that if I admitted the validity of my admission shall depend upon the accuracy of these particulars. I declared that all above details of mine are correct. I understand that all rights are reserved to hostel authority/officer to give me admission in hostel.

Signature of student

Date:

Format 10.2 Sample Format - Hostel Admission Form

Rs.10-00
Branch: _____ ACPC Merit No: _____ (Attach Proof) Form No. : _____

Institute Name

Institute Address

Hostel Admission Form

To,
The Rector,
Institute Address

Sir,

I hear by apply for the admission in the College Hostel, My Bio data and other particular are as under :-

Full Name :- _____

Sem. & Branch : - _____

Category: SC/ST/SEBC/NT/DNT/PH/OPEN : _____ (Attach Certificate)

Result of 12th Science: _____ (Percentage) (Attach Marksheet)

Result of Diploma: _____ (CPI) or _____ (Percentage) (Attach Final Semester Marksheet)

Permanent Address :- _____

_____ (Attach Proof)

Student's Mobile No.: - _____ Father's Mobile No.: _____

Father's Name : - _____

Father's Occupation: - _____

Father's Address of working place: - _____

Name & Address of local Guardian: - _____

I accept responsibility for the accuracy of the particulars contained in the application form and agree that if I admitted the validity of my admission shall depend upon the accuracy of these particulars. I declared that all above details of mine are correct. I understand that all rights are reserved to hostel authority/officer to give me admission in hostel.

Signature of student

Date:

Format 10.3 Sample Format - Declaration by the Student

ANNEXURE I DECLARATION BY THE STUDENT

I,-----
(full name of student with admission/registration/enrolment number) s/o or d/of
Mrs./Ms.-----

have been admitted to INSTITUTE NAME & he/she has read a copy of the AICTE Regulations on curbing the Menace of Ragging in Higher Educational Institutions 2009, (hereinafter called the " Regulations") carefully and fully understood the provisions contained in the said Regulations.

I have, in particular, perused clause 4 of the Regulations and aware as to what constitutes ragging.

I have also, in perused clause 8 and clause 8.4(a) of the Regulations and fully aware of the penal and administrative action that is liable to be taken against me in case I am found guilty of or abetting ragging, actively or passively, or being part of a conspiracy to promote ragging.

I hereby solemnly aver and undertake that.

a) I will not indulge in any behaviour or act that may be constituted as ragging under clause 4 of the Regulations.

b) I will not participate in or abet or propagate through any of commission or omission that may be constituted as ragging under clause 4 of the Regulations.

I hereby affirm that, if found guilty of ragging, I am liable for punishment according to clause 8.4(a) of the Regulations, without prejudice to any other criminal action that may be taken against me under any penal law or any law for the time being in force.

I hereby declare that I have not been expelled or debarred from admission in any institution in the country on account of being found guilty of, abetting or being part of a conspiracy to promote, ragging; and further affirm that, in case the declaration is found to be untrue, I am aware that my admission is liable to be cancelled.

Declared this-----day of-----month of----- year.

Signature of deponent

Name:

VERIFICATION

Verified that the contents of this affidavit are true to the best of my knowledge and no part of the affidavit is false and nothing has been concealed or misstated therein.

Verified at _____ (place) on this the _____ (day) of _____ (month) _____ (year).

Signature of deponent

Solemnly affirmed and signed in my presence on this the (day) of (month) (year) after reading the contents of this affidavit.

OATH COMMISSIONER

Format 10.4 Sample Format - Declaration by Parent/Guardian

ANNEXURE II

DECLARATION BY PARENT/ GUARDIAN

I, Mr./Mrs./Ms. -----(full name of parent/guardian) father/mother/guardian of -----
----- (full name of student with admission/ registration/ enrolment number having been admitted to Hostel INSTITUTE NAME , have received a copy of the AICTE Regulation on curbing the menace of Ragging in Higher Educational institutions, 2009, (hereinafter called the Regulations”), carefully understood the provisions contained in the said Regulations.

1) I have, in particular, perused clause 4 of the Regulations and am aware as to what constitutes ragging.

2) I have also in particular, perused clause 8 and clause 8.4 (a) of the Regulations and am fully aware of the penal and administrative action that is liable to be taken my ward in case he/she found guilty of or abetting ragging, active or passively, or being part of a conspiracy to promote ragging.

3) I hereby solemnly aware and undertake that

- a) My ward will not indulge in any behaviour or act that may be constituted as ragging under clause 4 of the Regulations.
- b) My ward will not participate in or abet or propagate through any act of commission or omission that may be constituted as ragging under clause 4 of the Regulations.

4) I hereby affirm that, if found guilty of ragging, my ward is liable for punishment according clause 8.4(a) of the Regulations, without prejudice to any other criminal action that may be taken against my ward under any penal law or any law for the time being in force.

5) I hereby declare that my ward has not been expelled or debarred from admission in the country on account affirm that, in case the declaration to be untrue, the admission of my ward is liable to be cancelled.

Declared this----- day of-----month of----- year.

Signature of deponent

Name:

Address:

Telephone/Mobile No:

VERIFICATION

Verified that the contents of this affidavit are true to the best of my knowledge and no part of the affidavit is false and nothing has been concealed or misstated therein. Verified at (place) on this the ----- (day) of ----- (month) , ----- (year).

Signature of deponent

Solemnly affirmed and signed in my presence on this the (day) of (month) , (year) after reading the contents of this affidavit.

OATH COMMISSIONER

Format 10.5 Sample Format - Hostel Deposit Refund

Hostel Deposit Refund

Date: - -20

Application No.

COURSE	DIPLOMA/C2D	DEPARTMENT	
ENROLLMENT NO			
NAME OF STUDENT			
E-mail			
Mobile No.			
Home Address			
Bank Detail			
Bank Name			
Account No			
IFSC Code			

No Due from Hostel

HOSTEL		ROOM NO:	
REMARK	NO DUE		
SIGN-NAME & STAMP COMPULSORY FROM WARDEN			
Rector Sign & Stamp			

ATTACHMENT

1. Hostel Deposit Paid Receipt
2. Bank Detail Account passbook page

Student Section
Section

Account

Student Acknowledge Slip

Application No

ENROLL NO		NAME	
-----------	--	------	--

Chapter 11 - ICT and Computing Facilities

11.1 Introduction

The use of Information and Communication facilities for smooth and effective administration is becoming common place now. This includes the use of CCTV network, Video conferencing, Internet and networking, and Management Information System (MIS), placement and Student portals and other IT services.

CCTV and Video Conference units have become mandatory part of infrastructure of any Institute. CCTV cameras are installed in classes as well as in laboratory rooms of Institute for monitoring of teaching work taking place in the Institute. CCTV system has also become mandatory to observe and implement smooth conduct of all exams and from security point of view. Video conference unit has also become integral part of administration system to conduct meetings of Institutes and head office. Training to faculty and staff are also provided through video conference system. There are certain tasks and activities to be carried out as listed below for smooth functioning of these systems.

The institute performs various academic, administrative and extension activities. Performing these functions in effective manner is possible with the use of the Information and Communication Technology. The institute needs to connect to the outer world by means of Internet connectivity with sufficient bandwidth provided by NKN. The effective communication with stakeholders needs through institutes website. The MIS (Management Information System) helps the institute for storing and utilizing information in effective manner with easy access and sharing of information with head office.

The needs of the users of engineering institute libraries have become complex due to the tremendous amount of publications and interdisciplinary researches that are being promoted at the level of higher education. The library in-charge officer need to pay sincere attention to acquire appropriate and need based literature in the relevant subjects and to the utmost satisfaction of faculty and students. In this critical situation, library officer should have a clear understanding of the users' needs and their information seeking preference so that the libraries can satisfy as well as improve the existing services accordingly.

Information and Communication Technologies are increasingly used to collect, store, retrieve and disseminate a great amount of information to help engineering professionals in modern libraries.

The library resources are broadly classified in three categories, text books, reference books and journals; each category comprises of print and digital resources. In addition to these basic components video lectures, Internet and software are becoming important components in the age of ICT. Reading room is an internal part of library.

11.2 CCTV and Video Conference Systems

1. Maintenance and setup of CCTV system and video conference units.
2. Liaison with the supplier of the CCTV and video conferencing for periodic and incidental maintenance.
3. Monitoring and backup of CCTV videos.
4. Integration of CCTV network with CWAN.

11.3 NKN Internet connectivity and Institute Website

1. Liaison with the NKN authorities for the smooth functioning of the lease line.
2. Creating and managing the user accounts for the staff and faculties for Internet access through CWAN.
3. Configuring the firewall for effective and secured use of the Internet bandwidth.
4. Registration of domain name and purchasing the Web space for the website.
5. Design and development of the Institute Website.
6. Regular updates of the Website content.
7. Uploading important notifications for the students on the website.
8. Use of social media platform such as Face book, Twitter, WhatsApp to circulate information and connect with outside world in the benefit of students.
9. Publishing the institute newsletter quarterly on the institute website.

11.4 MIS (Management Information System)

1. Installation of the MIS software and updates of the versions as provided by DTEoffice.
2. Performing administrative functions including creating user accounts as per roles, configuring regularly as per needs.
3. Uploading of the data in MIS by the department and sections.
4. Generating the various reports from the MIS by department and sections.

11.5 IT Services and Infrastructure:

1. Registration, entry of various details of institute and its periodic updates on KYC (Know Your College) portal.
2. Development and maintenance of student portal for providing smooth services to students including their registration, issuing certificates and forms.
3. Development and maintenance of the Placement portal for registration of students, generating eligible student lists as per need of recruiting industry, declaring selected students and maintaining year wise placement records.
4. Updating and maintaining the account details including salary using the accounting software.
5. Maintenance of the IT infrastructure including Computers, Servers, LAN infrastructure including WiFi in consultation with supplier during warranty period and through store procedure after expiry of warranty.

11.6 Guidelines

1. Principal/HoDs should monitor the academic activities using the CCTV network for proper academic work.
2. Faculty and laboratory technician from Electronics/ Computer/ Information Technology Departments for routine maintenance and setup of CCTV, Video Conference Units, Computers, LAN, Wi-Fi.
3. Institute committee for CCTV and video conferencing should carry out the activities for effective utilization of facilities.
4. Institute should have the Internet and network committee under the senior faculty to look after the requirements, extensions, maintenance and effective utilization of the Internet bandwidth and CWAN infrastructure as per the GIL norms/NKN norms.
5. Institute should have the Website committee to design, develop and regular updates of the content of the website.
6. Institute should have MIS committee with coordinators from each department for smooth functioning and use of the MIS in liaison with the DTE MIS committee.
7. The institute ICT committee should help the respective section for using IT services including placement cell, student section and others.

11.7 References

1. GIL Guidelines for purchase and maintenance
www.gujaratinformatics.com
2. NKN lease line - <http://nkn.gov.in>
3. https://www.aicte-india.org/downloads/Final-Approval-Process-Handbook-2017_18.pdf
4. Know Your College - <http://www.knowyourcollege-gov.in>

Chapter 12 - Affiliation and Approval Processes

12.1 Introduction

Getting Gujarat Technological University (GTU) affiliation and Extension of Approval (EoA) from All India Council for Technical Education (AICTE) is a mandatory requirement for any technical institute affiliated presently with GTU in the State of Gujarat. National Institutional Ranking Framework (NIRF), All India Survey on Higher Education (AISHE) etc. collects information considering different aspects. The information collected by all these may be overlapping due to different requirements.

12.2 AICTE (All India Council for Technical Education)

AICTE imposes rules/ requirements and various critical requirements based on government policy and planning on technical institutes. The institute is given Extension of Approval (EoA) certificate every year based on fulfilment of these criteria. Failing to obtain EoA from AICTE may result in zero admissions for the next academic year. Thus every institute must apply for EoA on AICTE web portal.

12.3 GTU (Gujarat Technological University)

Different academic aspects of technical institutes are monitored by GTU. Every institute, affiliated with GTU, must fulfil criteria and requirements laid down by GTU. For this they must fill up online data and submit required documents to GTU. Based on this data and documents submitted, GTU may physically verify the details and then institute is given affiliation for next academic year. Without affiliation letter from GTU, technical institute cannot get fresh admission for the next academic year.

12.4 AISHE (All India Survey on Higher Education)

Higher education is of vital importance for the country, as it is a powerful tool to build knowledge based society of the 21st Century. India possesses a highly developed higher education system which offers facility of education and training in almost all aspects of human creative and intellectual endeavours. The official statistical system plays a key role in any society, especially, in a large and diverse democracy. A key principle of the system is that it must be completely independent and transparent. In view of the above, Ministry of Human Resource Development (MHRD) initiated an All India Survey on Higher Education (AISHE) to build a robust database and to assess the correct picture of higher Education in the country. The main objectives of the survey are to - identify & capture all the institutions of higher learning in the country - Collect the data from all the higher education institutions on various aspects of higher education.

12.5 NIRF (National Institutional Ranking Framework)

Every institute works in different situation and adopts different practices and methods for achieving different goals at national level. The institutes may be getting different outputs considering different aspects. Thus in order to have a common mechanism for ranking of institutes at National level ranking framework has been put in place. This ranking process is carried out every year. Institute should take due care to apply to these organizations.

12.6 AICTE and GTU approvals

There are various tasks and activities to be carried out for obtaining EoA from AICTE as mentioned under:

12.7 Monitoring AICTE web portal

1. AICTE notifies a Public Notice in the leading newspapers and on the AICTE Web-Portal during the month of December every year.
2. Following the time schedule of the AICTE Public Notice for approval process.
3. Important documents like Application Process Handbook, guideline for data entry, document uploading etc. published by AICTE ,should be downloaded and initially studied before application process starts.

12.8 Data / documents preparation prior to AICTE public notice

Following data/ documents should be prepared and kept ready before the new application is generated.

1. Changes in infrastructure information like land, constructed buildings, laboratories, amenities, instructional area, administrative area, circulation area, common facility, hostel facility, solar power generation, computational facility, institute location etc. and documents in support of these changes.
2. Changes in technical/ supporting staff and faculty
3. Soft copy of documents and thumb impression for newly recruited/ transferred technical/ supporting staff and faculty.
4. Soft copy of existing faculty who have obtained higher degree
5. Appointment of OMBUDSMAN and Grievance Redressal Committee
6. Establishment of anti-ragging committee
7. Establishment of SC/ST committee
8. Establishment of Internal Complaint Committee (ICC)
9. Institute Affidavit to be submitted
10. Various certificates from Government agencies like Municipal Corporation, PWD etc.
11. Information and documents related to financial resources, salary, amount spent for laboratory, books etc for the previous financial year
12. Details of number of titles and volumes of books in library.
13. Details of journal subscription

12.9 Data entry prior to AICTE approval process starting

1. Verification and modification of information like details of Principal/Director, institute contact details, faculty details.
2. Removing details of retired / transferred faculty.
3. Adding information of newly recruited faculty
4. Modifying student enrolment details considering course, categories (General, PwD, SC/ST, OBC, minority), gender etc.
5. Entering quality education mandate like, institute details, teachers' training details, revision of curriculum, innovation drives, industry readiness, summer Internship, start-up etc.

12.10 New Application generation, data entry and documents uploading

1. Answering questionnaire asking for basic information related to approval type. This should be done carefully. A new application number is generated which should be noted down.
2. Modifying basic details of institute if required, along with supporting documents.
3. Entering collected data on AICTE web portal at appropriate place.
4. Modification of details related to supporting/ technical staff on portal.
5. Uploading documents of newly recruited/transferred supporting/ technical staff.
6. Uploading documents of faculty who have obtained higher degree
7. Uploading documents of newly recruited faculty

12.11 Submission of application

1. Reverification of entered data
2. Submission of application on web portal
3. Getting print of the application with necessary documents in 4 copies
4. Preparing and Submitting copy of application to CTE and GTU and getting receipt of the same from them.
5. Submitting the original application to CRO, AICTE, Bhopal along with receipt of submission of application to CTE and GTU.

12.12 Guidelines

1. Senior faculty to coordinate all approval related activities at the Institute level should be assigned as coordinator.
2. A good team of faculty/ technical staff should be formed at institute level for approval process. The team should comprise of faculty from each department. GTU affiliation and AICTE approval process run in parallel. Hence, sufficient faculty should be assigned this duty.
3. One faculty from the team should be assigned as co-coordinator. The co-coordinator will assist coordinator in monitoring the data entered/ uploaded on website and will coordinate the work in absence of coordinator.
4. Two to three faculty in the team should have very good skill in spreadsheet for extracting data from excel, google sheets etc. as required to save time.

5. The coordinator should assign work to relevant faculty. e.g. infrastructure related information and documents can be compiled, entered and uploaded by faculty of Civil engineering.
6. The coordinator should frequently verify the data entered for correctness. If there is any doubtful data, it should be discussed and verified with concerned faculty.
7. The faculty/ staff assigned some duty related to approval process, it should be given higher priority by the faculty as getting approval from AICTE and affiliation with GTU are mandatory requirements for institute to get new \ admissions for next academic year.
8. Normally, online application process starts in 1st week of January and ends on 31st January. So, the coordinator and co-coordinator should start watching AICTE web portal during the month of December for advance preparation as mentioned earlier.
9. The approval process handbook (1) should be studied by each team member for clarity and understanding of the process.
10. All documents and help manual available on AICTE web portal should be studied by coordinator and co-coordinator for proper implementation.
11. The coordinator should address the problems arising during the data preparation, entry etc. with concerned person. If required, the issues may be raised to AICTE through helpdesk or grievance mechanism given in Appendix - 4.

12.13 References

1. AICTE Application Process Hand Book 2018-19 - <https://www.aicte-india.org/sites/default/files/APH%202018-19%20Modified.pdf>
2. Gazette notification of ACITE dated 30/11/2016 - <https://www.aicte-india.org/sites/default/files/Gazette%20notification%2030.11.2016.pdf>
3. Regulations for establishment of mechanism for Grievance Redressal Committee and OMBUDSMAN for all the AICTE approved Technical Institutions No. 37-3/ Legal/ 2012 dated 25.05.2012
4. AICTE online grievance mechanism for EoA process
<http://www.facilities.aicte-india.org/ApprovalProcess/apformEmail.php>
5. <http://aishe.nic.in/aishe/surveyguideline>
6. https://nirfcdn.azureedge.net/rankingpdf2017/IR2017_Report.pdf

Chapter 13 - Extra-curricular Activities

13.1 Introduction

Technical education is central to any Degree or Diploma Engineering Institute. However, activities like NSS, NCC, Sports, and Cultural Activities are essential collaborated for overall development. Purpose of these activities is to develop personalities through their inherent talent & liking. The success of an Institute depends on how carefully curricular and co-curricular activities are planned and executed. It is advisable to list out various co-curricular activities in advance and plan them along with academic calendar, so that there are no conflicts.

Appropriate faculty coordinator must be appointed to take care of different co-curricular activities and sufficient power and support should be given to him to execute these events. Coordinator should calculate the requirement of the supporting staff for the various co-curricular activities. Committees should be formed for these activities. Faculty members should be assigned additional duties through these committees. Coordination among all the departments of the Institute is required to execute all these activities.

Required items (Equipment & consumable items) shall be purchased by following proper purchase procedure. They should be properly maintained. Facilities shall be created which are required to excel in these areas. Students should also be given exposure to best available facilities existing nearby. Coaching facilities may be arranged for the better output as and when required. Allocation of required infrastructure shall be done on priority basis. Dedicated work space shall be allotted for the smooth conduct of the activities. Attendance records of students should be properly maintained event wise & respective department shall be informed regarding participation of these students. Presence of the students in co-curricular activities shall be encouraged by granting attendance in academic up to certain percentage. Faculty shall be given permission to accompany students during these activities when they are conducted out of campus. Faculty should make alternate arrangement for engagement of classes when he/she is assigned such additional duties out of campus.

Interaction with students should be carried out on regular basis to understand their problems and to improve his/her performance. It is also required that students who are participating in co-curricular activities should not perform badly in academics. Weak students should be given extra guidance to improve performance and necessary actions must be taken to improve the result. Separate exams shall be conducted for the students who are representing institute for various activities. Prior permission shall be taken from the head of institution.

Students & faculty members shall be encouraged for their achievement & dedication. The summary of activities along with guidelines to perform various tasks is outlined in the following sections.

13.2 National Service Scheme

There are various tasks and activities underneath each task to be carried out as mentioned under:

13.2.1 Formation of the Committee&Calendar for NSS activities

1. Appointment of the Programme Officer
2. Formation of Institute level advisory committee
3. Assignment of duties to every member of the committee
4. Conduct meeting of Institute level advisory committee for the planning and review of various activities under NSS, once a year.
5. Define Regular activities & Special Camp requirements.
6. Define compulsory & optional activities under regular activities.
7. Select the appropriate village for the special camp
8. Prepare calendar of NSS activities in line with academic calendar
9. Display of calendar of NSS activities on website & notice board
10. Organize orientation programme for the students
11. Conduct drive for the enrolment of the students
12. Assign various activities to different students

13.2.2 Financial Management

1. Open separate account in the bank for the NSS
2. Deposition of the financial grant from University in the NSS bank account
3. Prepare the budget of the institute & allocate the fund for each activity
4. Purchase of required items & equipment for various activities through proper purchase procedure.
5. Submission of bills of expenditure at the end of the year
6. Conduct the audit of the NSS account by CA.
7. Submit grant utilization certificate to University
8. Address the query in financial transactions

13.2.3 Participation in various events & Maintenance of record of participation

1. Maintain record of student participation in various activities.
2. PO will sign the volunteer's diary on regular basis.
3. Encourage volunteers to participate in University, State, National and International events.
4. Separate exam shall be conducted in case of conflict of exams with extremely important scheduled event such as Republic Day Parade.
5. Publication of various activities in Institute's newsletter on regular basis
6. Nomination for the University level/State/National awards within time limit.
7. Motivating faculty and students for their outstanding work

13.2.4 Guidelines

1. NSS Manual shall be referred prior to all activities.
2. Program Officer interested in NSS activities shall be appointed at the Institute level
3. Institute level Advisory Committee shall be formed as per the NSS Manual
4. Department coordinator shall be appointed to take of problem of volunteer
5. Enrolment of the volunteers shall be done on priority basis.
6. Data of students in standard format shall be shared with the university.
7. Calendar shall be displayed well in advance

8. All activities shall be coordinated by the PO with their team.
9. Appointment of volunteers in-charge for each activity of NSS
10. Concerned faculty members shall be relieved to coordinate various university/state/national & international event
11. Reporting of all activities shall be done regularly & shall be published in the Institute magazine on regular basis with special mention of all achievements of students and faculty.

13.2.5 Reference

1. NSS Manual

13.3 National Cadet Corps (NCC)

There are various tasks and activities underneath each task to be carried out as mentioned under:

13.3.1 Formation of the Committee and Calendar for NCC activities

1. Appointment of the Associate NCC Officer
2. Prepare calendar of NCC activities in line with academic calendar
3. Display of calendar of NCC activities on website & notice board
4. Organize orientation programme for the students
5. Conduct drive for the enrolment of the students
6. Assign various activities to different students

13.3.2 Financial Management

1. Deposition of the allowances from NCC unit in the bank account of cadet
2. Prepare the budget of the institute level activities and allocate the fund for each activity.
3. Purchase of required items and equipment for various activities through proper purchase procedure.
4. Timely submission of bills of expenditure at the end of every activity and settling account.

13.3.3 Participation in various events & Maintenance of record of participation

1. ANO will maintain record of cadet participation in various activities.
2. Encourage cadets to participate in State, National and International events.
3. Separate exam shall be conducted in case of conflict of exams with extremely important scheduled event.
4. Publication of various activities in Institute's newsletter on regular basis
5. Nomination for the University level/State/National award
6. Motivate faculty and cadets for their outstanding work

13.3.4 Guidelines

1. NCC Manual shall be referred prior to all activities.
2. Department coordinator shall be appointed to take care of problem of volunteer
3. Enrolment of the cadets shall be done on priority basis.
4. Data of cadets in standard format shall be shared with Group HQ.
5. Calendar of activities shall be displayed well in advance
6. All activities shall be coordinated by the ANO and his team.
7. Appointment of cadets in-charge for each activity of NCC
8. Cadet shall be encouraged to participate in University/State/National & International events.
9. Concerned faculty members shall be relieved to coordinate various university/state/national & international event
10. Reporting of all activities shall be done regularly & shall be published in the Institute magazine on regular basis achievements of faculty and cadets shall also be published regularly.
11. Nomination for the University level/State/National awards shall be made in time

13.3.5 Reference

1. NCC Manual

13.4 Sports

There are various tasks and activities underneath each task to be carried out as mentioned under:

13.4.1 Formation of the Committee & Sports Calendar

1. Appointment of the Sports Officer
2. Formation of Institute level committee for sports events, equipment purchase
3. Assignment of duties to every member of the committee
4. Conduct a meeting Institute level committee for the planning of various sports activities
 - College level sports events
 - University level sports events
5. List out sports events in which institute will participate at University level.
6. Prepare sports calendar in line with university calendar
7. Display of sports calendar on website & notice board
8. Encourage students to participate in sports events

13.4.2 Financial Management

1. Prepare the budget of the institute & allocate the fund for each activity from Gymkhana
2. Preparation of the ground if required

3. Purchase of required items & equipment for various activities through proper purchase procedure.
4. Settlement of account through submission of bills of expenditure at the end of each event.

13.4.3 Participation in various events & Maintenance of record of participation

1. Sport Coordinator will maintain record of student participation in various activities.
2. Encourage student volunteers to participate in University, State and National level important events.
3. Separate exam shall be conducted in case of conflict of exams with scheduled event
4. Publication of various activities in Institute's newsletter on regular basis
5. Nomination for the University level/State/National award within time limit.
6. Motivating faculty and students for their outstanding work

13.4.4 Guidelines

1. AIU Manual for sports shall be referred prior to all activities.
2. Activities shall be appointed at the Institute level
3. Institute level Committee shall be formed for sports
4. Department coordinator shall be appointed to take care of problems of volunteers
5. Data of students in standard format shall be shared with the university.
6. Sports Calendar shall be displayed well in advance
7. All activities shall be coordinated by the Sports Coordinator
8. Appointment of volunteers in-charge for each sports event
9. Selection of the eligible students shall be made as per different sports event
10. Concerned faculty members shall be relieved to coordinate various university/state/national & international event
11. Reporting of all activities shall be done regularly and shall be published in the Institute magazine on regular basis.
12. Nomination for the University level/State/National awards shall be made in time
13. Achievements of faculty and students shall also be published regularly.

13.4.5 References

1. AIU Manual

13.5 Cultural Activities

13.5.1 Formation of the Committee & Sports Calendar

1. Appointment of the Coordinator for Cultural activities
2. Formation of Institute level committee for Cultural activities
3. Assignment of duties to every members of the committee
4. Conduct a meeting of Institute level committee for the planning of various Cultural activities

5. College level Cultural activities
6. University level Cultural activities
7. List out Cultural activities in which institute will participate at University level through Youth Festival.
8. Prepare Cultural event calendar in line with university calendar
9. Display of Cultural events calendar on website & notice board
10. Encourage students to participate in Cultural activities

13.5.2 Financial Management

1. Prepare the budget of the institute & allocate the fund for each activities from Gymkhana
2. Purchase of required items & equipment for various activities through proper purchase procedure.
3. Settlement of account through submission of bills of expenditure at the end of each event.

13.5.3 Participation in various events & Maintenance of record of participation

1. Coordinator of Cultural activities will maintain record of student participation in various activities.
2. Encourage students to participate in University, State and National very important events.
3. Separate exam shall be conducted in case of conflict of exams with scheduled event
4. Publication of various activities in Institute's newsletter on regular basis
5. Nomination for the University level/State/National award within time limit.
6. Motivating faculty and students for their outstanding work

13.5.4 Guidelines

1. AIU Manual for Cultural activities shall be referred prior to all activities.
2. Department coordinator shall be appointed to take care of problems of volunteers
3. Data of students in standard format shall be shared with the university.
4. Cultural activities calendar shall be displayed well in advance
5. All activities shall be coordinated by the Coordinator
6. Appointment of students in-charge for each Cultural activity
7. Selection of the eligible students shall be made as per different sports event
8. Students shall be encouraged to participate in University/State/National & International events.
9. Concerned faculty members shall be relieved to coordinate various university/state/national & international event
10. Reporting of all activities shall be done regularly and shall be published in the Institute magazine on regular basis.
11. Nomination for the University level/State/National awards shall be made in time
12. Achievements of faculty and students shall also be published regularly.

13.5.5 References

1. AIU Manual

13.6 Techfest

Techfest is the annual Science & Technology Festival initiated by IIT-Bombay in the year 1998 and since then spread among all Technical Institutes & Technological Universities. Independent body of students who organize this event with many other social initiatives and outreach programs round the year. Techfest is known for hosting a variety of events that include competitions, exhibitions, lectures as well as workshops.

With mere intention to provide a platform for Indian students' community to develop & showcase their technical expertise, this event is accepted by all technical institutions. Competitions serve the backbone for fulfilling the basic motto of Techfest - spreading science and technology. Over the years, this segment has grown to become a stage for international exchange too. Competitions such as Full Throttle, Submerge, Skylark, Skyscraper, Boeing Aeromodelling Competition and many more have been instrumental in encouraging students to work in the technical field. From the Techfest student will learn following skills during the engineering.

13.6.1 Knowledge of the core subject

The most basic ingredient that identifies you as an engineer is the knowledge in your field of study. A Mechanical Engineer, for example, needs to know the basics of Thermodynamics, Fluid Mechanics, Solid Mechanics, Machine Design, Manufacturing Processes, CAD/CAE, etc. An awareness of the latest technological developments in your own field of study, like 3D printing & Alternative Energy techniques for Mechanical Engineers, will build your identity as an engineer further. We suggest you to be updated on the developments in your field of engineering, irrespective of the career you choose.

13.6.2 Application of the knowledge

Good grades on your graduation certificate are a reflection of your (curriculum-based) core knowledge, howsoever vague. In spite of that, why do you think the correlation between job opportunities and grades is very less? It is because of the fact that a good knowledge on any subject does not warrant the ability to apply it to solve real-time problems. Employers are keen for engineers, who prove that they can call upon the relevant skills as and when required. We strongly recommend you to start developing projects “that work” to make your application skills evident.

13.6.3 Information Literacy

We, and also the employers, understand very well (from personal experience, of course!) that a limited time of 4 years is not sufficient to learn and excel in everything that the industry demands from an engineer. Moreover, new "jobs" demanding new skills are being created every year. It is, therefore, very essential to be an information literate. Information literacy is the ability to identify the need for information and find resources (online/offline) to start and finish a project from scratch.

13.6.4 Analytical & Creative thinking

Look around. Some of the most amazing gadgets and technologies are creative and, sometimes, simple engineering solutions to daily problems, starting from the smartphone to e-commerce. As engineers, you are expected to be creative enough to come up with innovative ideas and analytical enough to link knowledge from different areas to solve problems. Tinker with every new idea you encounter. Experiment!

13.6.5 Multi-disciplinary exposure

The contemporary workplace makes it inevitable for engineers to work in interdisciplinary teams with projects that involve skills and tasks that are multi-disciplinary in nature. For example, an electronics engineer needs to work in a team consisting of computer engineers, designers, project managers and marketing managers etc. for a project in mobile technology. A basic understanding of these different divisions in the work will make his/her life easier.

13.6.6 Acquaintance with Computers & IT

The world is now transformed into a place where an understanding of computers and gadgets is no more a trade-skill, but a life-skill. A working knowledge in at least one programming language, the internet, mobile and web apps, social media etc. is as essential as proficiency in English.

13.6.7 Familiarity with Industry Standards

There is an evident gap, reported by numerous studies, between the academic standards in engineering colleges and the actual operating conditions in the industry. Young engineers feel overwhelmed due to the sudden change in working conditions right from the technologies being used to the operating procedures of the organization they (want to) become part of and it reflects in their performance. Learning industry-certified courses is one elegant solution to handle this misalignment.

13.6.8 Passion for learning

The last and the most important characteristic that will make you not only a better engineer, but a better person is the never-ending spirit for learning. Many eminent personalities (and "gods") are of the opinion that the day a human being stops learning is the day he dies! Let this single mantra drive your life and you will be successful at whatever you take up.

13.6.9 How to achieve above skills?

Building projects hands-on and learning while building the projects will increase your experience on the theoretical concepts that you have learnt. Building projects is a great way to achieve the above skills and you get to acquire all of them through the incremental learning and have fun at the same time too. For this, we at Skyfi Labs have launched online project-based courses through which you can learn and build exciting projects at your own convenience.

Chapter 14 - Community Development Through Polytechnics (CDTP)

14.1 Introduction

India is a very vast country with a population of approximately 135 crores. 70 % of India's population lives in villages and 30 % lives in urban. Out of 30 % urban population, approximately 66 % population lives in slum areas. Those living in urban areas have access to better education and professional training but vast majority of those living in rural areas and slums are lesser educated and hardly undergo any technical, professional and vocational training. For most of such people, quality education and higher technical and professional education is unaffordable. In terms of career options, such lesser educated people tend to work in low paid unorganized sector. Per person productivity of such persons works out to be a small fraction of productivity in comparisons to educated and professionally persons who works in organized sector.

In an increasingly competitive economic environment of a company, the unorganized sector needs to increase the productivity of its manpower for its survival and growth. Therefore, there is an urgent need to train millions of persons every year through a countrywide network of non-formal skill development. Such non-formal skill training attract beneficiaries from all cross-sections of Indian society with special emphasis on women, SCs/STs, OBCs, school dropouts, minorities, physically disabled, economically weaker sections of society and other under-privileged persons.

Polytechnics can render vital assistance in the community development work. This, they can do partly by utilizing their own resources and partly by mobilizing the resources available at villages and slum areas. AICTE approved polytechnics can render useful service in adoption of appropriate technologies and providing technical and support services to rural people and slum dwellers by establishing centres in collaboration with ITI's, KVKs, Vocational institutes and NGOs.

Department of Higher Education, Ministry of Human Resource Development (MHRD), Government of India introduced the scheme of community development through polytechnics (CDTP) in the year 2009.

The scheme is for the people who live in rural and slums for providing them technology demonstration, repair & maintenance services & consultancy services. In Gujarat, scheme of CDTP is run by 18 polytechnics. This is a direct central assistance scheme under which non-recurring and recurring grant is provided by Ministry of Human Resource Development (Department of Higher Education) directly to the Principal of the polytechnics selected for implementation of the scheme of CDTP.

14.2 Objective of the scheme

1. To carry out need assessment surveys to assess the technology and training needs.
2. To impart skill development training to the intended target group.

3. To provide technical and support services to rural masses and slum dwellers.
4. To disseminate appropriate technologies for productivity enhancement.
5. To create awareness among the target groups about technological advancement and contemporary issues of importance.

14.3 Activities

1. To carry out need assessment surveys to assess the technology and training needs.
2. Need assessment surveys to be carried out by Community Development Consultant (CDC) to cater the needs of local unemployed youths of villages and slum dwellers area. As per need an extension centre is to be established with the help of local instructor. A short term training course (technical or non technical) for 3 months period is to be started for 15 to 20 trainees. Project head and CDC will visit the centre and give permission to start the course. A formal syllabus for course is framed by project head and Instructor has to follow the syllabus. At the end of each month Instructor has to submit attendance sheet of trainees and his/her monthly remuneration bill. Internal coordinator/CDC/Project head take monthly visit of centre to supervise and observe the activity of centre. At the end of course, certificate to trainees of course is to be given and feedback of course, its outcome etc. is to be received by CDC. After some time feedback surveys is to be conducted by CDC and information of wage employment or self employment is gathered. This data is to be send to NITTTTR on monthly and quarterly basis.
3. To provide technical and support services to rural masses and slum dwellers.
4. Regular technical and support service camp for different technical knowhow like servicing and repairing of sewing machine, house hold electrical appliances, computer hardware is to be organised with the help of Instructor of local extension centre. Local people may understand how to find minor technical fault and rectify it.
5. To create awareness among the target groups about technological advancement and contemporary issues of importance.
6. As per convenience and availability of subject expert, awareness program on technological advancement like Cash less transaction, Safety for LPG gas, application of non conventional energy sources, contemporary issues of importance like BetiBachavo, BetiPadhavo, Water conservation, Energy conservation, Sanitation related program , Malnutrition among women etc. are to be organised at villages and slum dweller areas. In each program 40 to 50 participants took part and got acquainted with technical advancement and contemporary issues.
7. Apart from these activities, man power survey, socio economic survey, feedback survey, need base survey etc. is to be carried out in selected villages and slum areas. These surveys is to be helpful to start the extension centre, types of training course, to conduct awareness program, technical service camp etc.
8. Monthly and quarterly data related to activities carried out is to be prepared in given format and submit to NITTTTR, Bhopal.
9. At the end of respective financial year statement of accounts (SOA), Utilization certificate (UC) is to be prepared and audited by appointed auditor and same is sent to NITTTTR, Bhopal and DTE, Gandhinagar.

10. At the end of respective financial year a detailed presentation is to be prepared regarding all the activities carried out during year, financial information etc. and the same is present before the representative of DTE, Gandhinagar and NITTTR, Bhopal. Operational plan for next financial year is also prepared and is to be submitting to NITTTR, Bhopal.

14.4 Guidelines of the scheme

1. For successfully implementation of this scheme the Principal of the Polytechnic appoint different manpower like internal coordinator, project head, and instructor to carry out different objectives of the scheme.
2. Principal also appoint various staffs on contract basis like community development consultant, junior consultant, guest trainers, and instructors for extension centres. Every staff inducted under the scheme should be taken on contract basis for a limited period. The honorarium paid to different categories of staff engaged on contract basis under the scheme as per guidelines given by MHRD.
3. Different heads under which non-recurring grant is to be utilised are to purchase tools and equipments, computer peripherals, creation of infrastructure, furniture and other physical facilities for main centre and extension centre. The heads under which recurring grant is to be utilised are like total honorarium bills including functionaries engaged at main centre and extension centres, training contingency, maintenance and equipment at extension centres, travel charges and other project expenditure and office contingencies.
4. In order to impart skill development training and accomplish ground level physical delivery of new technologies at the doorstep of the intended target group, polytechnic should establish 5 to 10 extension centres in the villages and slum dweller areas with the help of NGOs, ITIs, Vocational Schools, Village Panchayats etc.
5. After need base surveys conducted at rural and slum dwellers areas, short term non-formal, modular courses of 3 months duration depending on the local needs should be conducted with the help of guest trainer or instructor. The skill development programs offered should be flexible and non-formal with open access to all, without precondition of age, sex and educational qualification. There is no provision of any kind of stipend for the trainees/beneficiaries of this scheme.
6. No course fee/Caution money shall be charged from the trainees/beneficiaries under any circumstances.
7. The infrastructure available in own polytechnic should be used and main centre for skill development programs should be established with the help of staff and instructor of own institute.
8. For fulfilment of the objective of technical and support services to the intended target groups a service camp should be organized with the help of instructor of extension centre for minor repairs and services of the various equipment like farm equipments, electrical house hold appliances, computers, sewing machines etc.

Chapter 15 - Alumni Association

15.1 Introduction

Alumni Association is a bridge between Institute and pass out students. The mission of the Association is to foster strong bonds between alumni, students and the Institute, to keep alumni informed, and create a network enabling them to remain engaged with their alma mater and help shape its future through the Association's programmes and services.

Alumni relations are an important part of an institution's advancement activities for many reasons:

- Alumni are an institution's most loyal supporters. They are institute's ambassadors.
- Alumni help in fundraising projects.
- Alumni generate invaluable word-of-mouth branding among their social and professional networks.
- By engaging alumni, an institution can continue to benefit from their skills and experience.
- Alumni are great role models for current students and are often well placed to offer practical support to students as they start their careers.

Good alumni relation benefits alumni as well as the institution. If institute can support alumni in their professional and personal lives through activities such as the facilitation of social and professional networks, preferential access to on-campus expertise and facilities and negotiated benefits with third-party suppliers. Such support may help alumni achieve positions of success and influence, which will in turn benefit the institution as they begin to give back.

15.1.1 Objectives of the Alumni Association

- To encourage, foster and promote close relation between institute and its Alumni and among the Alumni themselves.
- To provide and disseminate information regarding the institution, its graduates, facilities and students to Alumni.
- To ensure that programs are initiated and developed for the benefit of the Alumni.
- To guide and assist Alumni who have recently completed the courses of study to obtain employment and to engage in productive pursuits useful to the society.
- To establish and maintain a link with all the students and with the stakeholders at large.
- To preserve and promote the interest of the Alma Mater through Alumni involvement in its future and governance.

15.2 Alumni Association officers - Roles and Responsibilities

1. Participate actively in strategic and long term program planning to promote alumni awareness, engagement and commitment to the institute;
2. Enthusiastically communicate the mission and purpose of the institute and Alumni Association to the wider alumni population;

3. Support a strong relationship between the Alumni Association and current students;
4. Serve actively on at least one Alumni Council committee;
5. Remain constantly informed about the institute and the Alumni Association's mission, services, priorities and programs;
6. Recognize fellow alumni who are distinguished by their loyalty, professional achievement and community service;
7. Assist current students and alumni in career planning and placement.
8. Encourage highly qualified and diverse prospective alumni to visit institute regularly;

15.3 Formation of Association

1. Preferably register Alumni Association as a charitable trust.
2. A memorandum/by laws of trust should be properly framed.
3. Decide various types of membership and their fees.
4. Provide space and other facilities to the office of the association.
5. Principal should be part of the apex committee. Apex committee should be framed with faculties and alumni for smooth functioning of Association.
6. The committee should organise regular meetings to review and work for continuous improvement of alma mater and its relations with stakeholder.
7. A separate bank account should be there for financial activities of association.
8. Financial audit of the association should be carried out by chartered accountant and audited statement / utilization certificate should be submitted to The office of Charity Commissioner on yearly basis.

15.3.1 Registration of Members

1. The institute should motivate all pass out students to join the association.
2. Preferably provide an online registration portal with online fee payment facility.

15.4 Registration of Members

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15.5 Other Activities

1. Invite alumni to conduct skill development programme for current students.
2. With the help of alumni provide internship opportunities to the final/pre-final year students.
3. Ask alumni to provide their support in campus placement.
4. Put efforts to get financial help from alumni for the support of innovative projects, laboratory advancement, modern technology and others.
5. Develop website, portal and social media to provide continuous updates about the activities of Association.
6. Develop programs that support the goals and objectives of the Institute.

7. Provide platform for activities, services, and programs for alumni, including organizing on-campus events such as reunions and homecoming activities, travel opportunities, networking, and printed and electronic communications.
8. Maintain up-to-date contact details of Alumni.

15.6 Guidelines

1. Prepare strong database of pass out students.
2. Regular meetings of the committee should be called. Continuous interaction of the academia-industry should always be one of the agenda points.
3. Alumni members should be motivated for cooperation in terms of student visit / training / project / placement.
4. Social activities such as get-together with family members may be organized to improve bonding of pass outs from various batches.
5. Principal should attend major meetings and interact with all committee members.
6. Potential donors should be identified with help of the alumni members to raise funds for the development purpose.
7. Create opportunities for alumni to actively continue their involvement with the institute through lifelong learning and the ability to participate in aspects of campus life such as mentoring and becoming institute advocates; foster and build ongoing relationships with Faculties to showcase the Institute's achievements and provide opportunities for faculty to leverage off activities; facilitate teaching, learning, research and fund scholarship and programs via sourcing of philanthropic donations; identify and profile prominent alumni; and provide substantial input in the development of institute, help expanding the database to assist in communication, engagement and fundraising.

Chapter 16 - Roles and Responsibilities of a Teaching Faculty

16.1 Introduction

A teacher is constantly under the scrutiny of students and the society at large. Adopting teaching as a profession assumes the obligation to conduct himself /herself in accordance with the ideal of the profession. Therefore, every teacher should see that there is no incompatibility between his precepts and practice. The national ideals of education which have already been set forth and which he/she should seek to inculcate among students must also be his/her own ideals.

The profession further requires that the teachers should be calm, patient and communicative by temperament and amiable in disposition. The teaching faculty, consisting of, various cadres have duties and work functions which are similar with differences only in the level of participation in each.

16.2 Academic Work

16.2.1 Work for a 40 Hrs during a week

The faculty should work for at least 40 Hrs/week for a period of 180 or more teaching days during an academic year. The nature of responsibilities that faculty has to perform during these 40 hrs/week includes Direct teaching, Professional development, Student project and co-curricular activities, Industry interactions, Research and publications, Consultancy and outreach. Weekly work load distribution of 40 hours shall be as under:-

Faculty Activity	Hours per week			
	Principal	Head of Department	Senior Lecturer	Lecturer
Teaching	6	14	16	18
Preparation & Evaluation	6	6	10	12
Administrative Planning & Monitoring	20	12	6	2
Research, Consultancy, Developmental Activities, Community programs	6	6	6	4
Student Counselling	2	2	2	4

16.2.2 Direct teaching

This is the main function of a teacher. For effective teaching, a teacher must plan, teach, evaluate and take remedial action.

16.2.3 Planning and Preparation

1. Selecting the teaching method e.g. class room lectures, tutorial, group discussions, projects, industrial visits etc.
2. Organizing and sequencing the contents.
3. Preparation of teaching aids, assignments.
4. Identifying and collecting resources.
5. Contacting industries, identifying industrial learning situations and resources.
6. Designing strategies for student's evaluation.
7. Planning special learning situations for differential capabilities.

16.2.4 Assessment and Evaluation

1. Assessing student's achievements on a progressive as well as periodical basis through tests.
2. Assignments, interviews, observations, etc. appropriate to learning situations and learning outcomes.
3. Diagnosing remedial needs for students.
4. Maintenance, compilation and submission of student's performance records in prescribed preformed required for academic-administrative purposes.
5. Participation and conduct of examination work.

16.2.5 Remedial Action

1. Counselling and guiding students.
2. Encouraging slow learners to cope with their pace.
3. Arranging special classes based upon evaluation.

16.3 Development Work

This includes activities for improved instructions, faculty development and future growth (self and Institutional).

16.3.1 Improved Instructions

1. Preparation of learning package, and modules for students.
2. Designing and fabricating models having high learning outcomes.
3. Experimenting with alternate methods of teaching and learning.
4. Updating teaching/learning materials.
5. Involvement in curriculum Development activities.
6. Innovative and suggestive approach in instructional strategies, evaluation techniques, resources planning, allocation and utilization.
7. Updating with latest technological development and trends in technical education.

16.3.2 Faculty Development

1. Developing capability by participating in need-based career development programmes organized by various agencies.

2. Contributing to professional growth by publishing papers/articles and participation in seminars, conferences.
3. Providing and seeking professional guidance, support and critical review to and from colleagues.
4. Liaison with the industry for professional development.
5. Developing and applying for projects with research institutes, Centres of Excellence such as DST, ISRO, PRL, CSIR, IITs, IISc, and institutes of repute.
6. Filing patents and publishing in reputed, peer reviewed journals regularly.
7. Interaction with professional bodies like Institution of Engineers, ISTE,IEEE and such other domain specific associations

16.3.3 Future Growth Activities

1. Self appraisal leading to identification of goals and strategies for future growth.
2. Coordinating and implementing plans for institutional growth and development.
3. Contributing on teams and working on future growth projects.

16.4 Institutional Work

16.4.1 Student Co-curricular and extra-curricular activities

1. Outdoor and Indoor games and sports.
2. Institution Magazine, Bulletins, New letters etc.
3. N.C.C. and N.S.S.
4. Hostel Management.
5. Student Clubs / Hobby Centers/Exhibition activities.
6. Student's Canteen /Mess / Store.
7. Literary and cultural activities, annual Day Celebrations.
8. Educational tours.
9. Guidance and counseling
10. Alumni Association

16.4.2 Administrative Activities

Some of the major institutional level activities include:

1. Works related with efficient functioning and up keep of laboratories,workshops, networking and internet/computing facilities and stores.
2. Maintenance of - Plant and equipment, buildings, services, etc.
3. Work related to estate.
4. Procurement of equipments, books, journals and stores as per needs.
5. Admission, Transfer, and other activities of students.
6. Supervision and Invigilation of tests and examinations.

16.5 Responsibilities of various Cadres of Faculty

16.5.1 Principal

1 General:

1. Lead the HoDs and various committees/councils for continuous development of the institute
2. Co-ordinate and motivate the faculties, administrative authorities and the supporting staff, so that they perform their respective roles more effectively.
3. Work for the common goal of providing effective and relevant technical education to enable the students to achieve promising career and lifelong learning.
4. Establish networks with industry, research centres, and eminent academicians for farthening the horizons of institution outreach.
5. Represent the institute at regional, national and international events and serve the cause of development of technical education.
6. Should ensures that all the criteria required by the University, State \ Government, AICTE/UGC, students and parents for the smooth and effective functioning of the college are met with.

2 Academic Administration:

1. On academic matters the Principal is generally guided by the rules and regulation laid down by University, AICTE, UGC, and State Government.
2. Will be assisted by various Heads of the departments, Head(Admin.), Head (R&D), Head (Student Affairs), Head(Outreach), senior faculty members and various committees mentioned in the manual.
3. In matters related to policy decision and interpretation Principal should consult senior colleagues.
4. An integrated time table of the entire institution should be prepared and available with the Principal. In this endeavour, coordinator of time-tables, first year coordinators along with the various heads of the departments extend support to the Principal.
5. Closely monitor the class work as per the time tables and the almanac with assistance of class work coordinators and other faculty incharges.
6. Develop an ecosystem for institute as well as departments to conduct technical fests, conferences, seminars, workshops etc on a regular basis.
7. Hold meetings of Heads of departments to review the progress of academic work and suggest effective measures to achieve good results, desired academic outcomes and placements.
8. Plan with class work coordinators and Heads of the departments to conduct remedial classes academically to support the slow learners.
9. In matters related to internal examinations, semester end examinations, result analysis, detained students, Principal will be assisted by Coordinator of examinations.
10. In matters related to student attendance, drop outs, compensation of attendance, will be assisted by HoDs.
11. Plan for training need analysis (TNA) of faculty and staff and devise training programmes such as refresher courses, orientation courses, quality enhancement programmes etc.
12. Ensure quality assurance parameters with the help of Head, IQAC.

13. Monitor and evaluate research, development and consultancy activities assisted by Head, R&D. Shall advise the faculty members to get sponsored research projects from various funding agencies.
14. Should continuously network to promote industry-institute interaction for better training, employability, and placements of the students.
15. Should conduct meetings/activities in smaller groups to build close rapport between staff, students and management for effective functioning of institute.
16. Shall ensure discipline among all the staff and students and maintain high quality academic environment in the campus.
17. Shall regularly send reports, and interact with government, AICTE, University, State Council of technical education, Department of Technical Education authorities.
18. Shall involve all faculty members at different levels for various institutional activities.

3 General Administration

In Administration matters Principal shall be assisted by Head (Administration), Head (Student Section) and all Heads of Departments.

1. Proposal for sanction and appointment to all posts of all cadres.
2. Regularization of services, declaration of probation, and release of increments.
3. Performance appraisal of faculty and supporting staff.
4. Sanction any kind of leave up to the level of Heads of departments. Approval of Principals leave should be taken from Director.
5. Disciplinary proceedings (by constitution of enquiry committee) and impose punishments of minor and major character such as warning, censure, fine, withholding increments, promotion and recovery from pay whole or part of financial loss to the government.
6. All such cases requiring suspension, removal, from the services shall be referred to the Head Office.
7. Head (Estate) with various coordinators and committee shall assist principal for development, repairs, maintenance of civil, mechanical, electrical, security, housekeeping, and gardening on campus. They shall also assist in appointment of agency, payment and penalty on bills.
8. Head Administration, Head (Stores) and Head (Accounts) with coordinators will, submit budget estimates, grants requirements, new items for equipment, books, furniture, and any other such as A.C., LAN, CCTV etc., to Principal, attend and effectively answer audit authorities, work to make timely salaries and all payments, maintain all records and book of accounts, GPR and other registers.
9. Head (Student affairs) and Head (Exams) shall manage all student related activities, scholarships, and exams.

4 Hostel Administration

1. Hostel rector and wardens shall be responsible for reporting and assisting Principal in administration, discipline and maintenance of hostels of the institute.

2. Regular visits, inspections, and meetings with wardens, hostel staff and students should be conducted by Principal, Heads of Departments and WDC faculty, for resolving any problems and discipline issues.
3. Periodic meetings with PWD, Civil, Mechanical, Electrical, Housekeeping and all outsourced agencies should be conducted by rector and Head(Estate) along with Principal. Regular reports and follow up action should be taken by Principal and rector.
4. Facilitation for food, health and Hygiene.
5. Security coordinator should regularly keep check on personnel, and entry-exit along with Rector. All complaints to civic and state authorities should be done immediately by institute security coordinator through security agency supervisor as per contract and intimate Principal for further actions.
6. Rector and Head (Estate) along with wardens and coordinators shall assist Principal for development, repair and maintenance.

5 Financial Administration

1. Principal is assisted by the Drawing and Disbursing Officer (DDO), Purchase and Finance committee in financial administration.
2. Subject to the budget allocations for a specific area of expenditure, Principal is empowered to incur expenditure within the stipulated limits and adhering to the related procedure as laid down by the CTE/GOG from time to time.
3. Empowered to incur recurring contingent expenditure as per the norms prescribed by the CTE/GOG from time to time.
4. All contracts for and on behalf of the college (except himself and the college) when authorized by a CTE/GOG from time to time passed in writing and expressed to be made in the name of the college shall be executed by the Principal.
5. The Principal or the officer delegated with such powers shall counter sign all kinds of scholarship bills in respect of students of the college.
6. Shall have power to sanction the purchase of stationery, library books, periodicals, consumables for laboratories, workshops etc subject to the limit of powers delegated in respective areas and subject to the prescribed procedures, budget provisions under the respective heads of budget. Shall countersign bills as a controlling officer

16.5.2 Head of the Department

1. Take proactive steps for academic growth of the Department and College.
2. Prepare and implement time-tables, improving teaching-learning process, maintaining high standards of results, projects, placements, student engagements and contribution, collaboration among senior and junior students and faculties.
3. Conduct performance appraisal of faculty and staff. Plan and help them to achieve the targets and scale up every year.
4. Initiate research, and training programmes of the Department/College.
5. Planning and implementation of academic programmes such as orientation courses, seminars, conferencers, training programmes/workshops for academic competence of the Faculty Members, industry personnel training etc.

6. Admission of students and maintenance of discipline of the Department/College.
7. Development and Management of Department Library/College Libraries, Laboratory, Gymkhana and Hostels.
8. Receipts, expenditures and maintenance of registers and submission of data, reports, spreadsheets, in required formats and well within time limits.
9. Observance of provisions of Accounts, Finance, Administration and General Code of conduct.
10. Correspondence relating to the administration of the Department/College.
11. Administration and supervision of curricular, co-curricular/extra-curricular and related activities on and off campus. Activities, and welfare of the Department/College, and maintenance of records.
12. Observance of the Act, Statutes, Ordinances, Regulations, Rules and other Orders issued by authorities.
13. Conducting and supervise exams.
14. Setting of question papers, for the Department/ College and University Examinations, Moderation and assessment of answer papers and such other work pertaining to the Examinations.
15. Assessing reports of teachers.
16. Assisting principal in academic, hostel, campus and overall administration as per the delegated work.

16.5.3 Lecturer Selection Grade

1. Teaching including laboratory work.
2. Evaluation including administering tests, invigilation, paper setter
3. Innovation in teaching, laboratory work and instructional materials, continuing education activities, academic and administrative planning and development work at departmental level and assisting at institution level.
4. Leading consultancy projects and extension services.
5. Curriculum development and learning resource materials.
6. Assisting and organizing seminars/workshops/guest lecturers etc.
7. Conceptualizing and guiding student Projects for industry and social needs.

16.5.4 Lecturer Senior Scale

1. Teaching theory and laboratory classes.
2. Assisting and organizing seminars/workshops/guest lecturers etc.
3. Assisting in testing and consultancy works.
4. Attempt to publish books and research papers.
5. Carry out co-curricular activities and extra-curricular activities.
6. Be a member in such student welfare committees as Anti Ragging Committee, Discipline Committee and a proctor.
7. Extend his/her beneficial influence in building up the personality of students
8. Students' Project implementation

16.5.5 Lecturer

1. Teaching including laboratory instruction and academic activities such as Class Review Committee member, invigilator, Lab-In-charge, Coordinator (Attendance), Assistance in conducting seminars, workshops, guest lecturers.
2. Students assessment and evaluation, aside from acting as paper setter
3. Assisting in testing and consultancy.
4. Developing resource material and laboratory development.
5. Co-curricular and extracurricular activities / student welfare activities.
6. Assisting in department/institute administration.
7. Involvement in departmental / institutional developmental activities.
8. Helping in Academic development of the institute.
9. Update their knowledge by attending trainings/seminars/workshops/conference, after obtaining necessary permission from the competent authority.
10. Prepare him/ herself academically learn new technology methodology of teaching so that the input may be useful for the students. The lecturer should associate himself/herself actively with such extra-curricular activities which he / she is interested in or assigned by the department/institute.

16.6 Teaching Learning Activities of Faculty

16.6.1 In department

1. The Faculty Member should always first talk to the HOD and keep the HOD in confidence about the member's professional and personal activities.
2. The teaching load will be allotted by the HOD after taking into account the Faculty Member's preferences, and area of specialization
3. In addition to the teaching, the Faculty Member should take additional responsibilities as assigned by HOD / Principal/ Heads of estate, academic, co-curricular or extracurricular activities.
4. Every Faculty Member should maintain student's attendance records and the absentees in the classes/laboratory should be notified.
5. Whenever a Faculty Member intends to take leave, he/she should get the leave sanctioned in advance and with proper alternate arrangements for class / lab / invigilation. In case of emergency, the HOD must be informed with appropriate alternate arrangements suggested.
6. The Faculty Member should have presentable body language, good command over communication and should be appropriately dressed at all times.
7. The Faculty Member should show no partiality to any segment / individual student.
8. To counsel the students and guide them in academic matters.
9. To bring the students misbehavior to the knowledge of the HOD/ Principal without delay.
10. To carry out the administrative works of the department/institute as given by the HOD.

16.6.2 In Classroom Teaching

1. Once the subject is allotted, the Faculty Member should prepare the lecture and hour wise lesson plan.
2. Get the lesson plan and course file - approved by HOD.
3. The course file is an official record, a compilation of the planning and execution of teaching/learning activities, carried out throughout a semester in an academic year for a particular subject .The course file consists of preface, previous year university question papers, notes, handouts, PPT, test/exam question papers, three model answer scripts for each test/exam (top, middle and bottom), Assignment plan, topics and copy of assignment, feedback analysis report etc. The teaching faculty has to get verified their course file by their HOD at least once in a month and submit it to the concerned HOD within three weeks of the last instruction day of the concerned semester.
4. The Faculty Member's Diary must be regularly updated and put up for inspection by HOD/Principal as the case may be.
5. Reach the class well before time and leave only after other teachers arrives.
6. Delays, leaves etc. should be well communicated by any teacher to college/HoD to ensure that class is not dropped or left without any teacher.
7. Attendance must be taken for each lecture/practical/tutorial preferably at the beginning. Attendance software must be preferred.
8. Use of PPT, Models etc., as teaching aids. The Faculty Member should encourage students to speakup, demonstrate and interact in class.
9. Get the feedback from students and act / adjust the teaching method accordingly.
10. Take care of academically weak students and pay special attention to their needs by conducting special classes.
11. In problem oriented subject, regular tutorials should be conducted. The Tutorial problems should be handed over to the students at least a week in advance of actual class.
12. Give all marking/weightage pattern (5-marks and 15 -marks) of questions in each unit of the subject.
13. Interact with the class counsellor and inform him / her about the habitual absentees, academically weak student, objectionable behaviour etc.
14. Always aim for 100% pass results in his / her subjects and work accordingly.
15. Regularly visit library and read the latest journals / magazines in his / her specialty and keep oneself abreast of latest advancements.
16. Make himself/ herself available for academic discussion beyond classes.
17. Motivate the students and bring out the creativity / originality in the students.

16.6.3 In Laboratory

1. The Faculty Member going for laboratory class must perform the experiments personally and be satisfied with the results before asking the students to conduct the experiments.
2. Whenever possible, additional experiments to clarify complex problems should be given to the students.

4. Students must submit of the required records without fail in every session.
5. Faculty should give clear instruction and demonstrate the practical in simple and easy manner.
6. Prepare lab manuals, instruction guidelines etc.
7. Students shall not be permitted to carry bags into the labs.
8. In case of any missing/damaged item, the matter shall be immediately reported to the Lab In-Charge.

16.7 Code of professional ethics

16.7.1 General Behaviour

A faculty member should:

1. Adhere to a responsible pattern of conduct and demeanour expected of them by the community
2. Manage their private affairs in a manner consistent with the dignity of the profession.
3. Seek to make professional growth continuous through study and research
4. Express continuous opinion based on experience, knowledge and research by participating at professional meetings, seminars, conferences etc. towards the contribution of knowledge.
5. Maintain active membership of professional organizations and strive to improve education and profession through them.
6. Perform their duties in the form of teaching, tutorial, practical, seminar and research work conscientiously and with dedication.
7. Co-operate and assist in carrying out functions relating to the educational responsibilities of the college and the university such as: assisting and appraising applications for admission, advising and counselling students as well as assisting the conduct of university and college examinations, including supervision, invigilation and evaluation.
8. Participate in extension, co-curricular and extra-curricular activities including social service.
9. Demonstrate by example, ideals of professional ethics, national pride, peace and sensibility to environment.

16.7.2 Teachers behaviour with students

1. Create an ecosystem for bonding, trust, and faith in institutional mechanism, strengths and constraints.
2. Help take maximum advantage of institutional strength and take their help in addressing the constraints.
3. Respect the right and dignity of the student in expressing his/her opinion
4. Deal justly and impartially with students regardless of their religion, caste, political, economic, social and physical characteristics;
5. Recognize the difference in aptitude and capabilities among students and strive to meet their individual needs
6. Encourage students to improve their attainments, develop their personalities and contribute to social welfare;

7. Inculcate respect for physical work, self-reliance, and rendering services selflessly.
8. Be affectionate to the students and not behave in a vindictive manner.
9. Make themselves available to the students even beyond class hours in order to help and guide students towards excellence.
10. Refrain from giving opinions on other students, faculty colleagues or administration.

16.7.3. Teachers behaviour with colleagues

Teachers should:

1. Treat other members of the profession in the same manner as they themselves wish to be treated.
2. Speak respectfully of other faculty members and render assistance for professional betterment.
3. Refrain from lodging unsubstantiated allegations against colleagues to higher authorities and try to resolve issues amicably.
4. Refrain from allowing considerations of caste, creed, religion, race or gender in their professional endeavour.

16.7.4 Teachers' behaviour with authorities:

Teachers should:

1. Co-operate in the formulation of policies of the institution in accepting various offices and discharge responsibilities which such offices may demand.
2. Co-operate through their organizations in the, formulation of policies of the Head office and accept such assignments.
3. Discharge their professional responsibilities according to the existing rules and adhere to procedures and methods consistent with their profession in initiating steps through their own institutional bodies and/or professional organizations for change of any such rule detrimental to the professional interest.
4. Co-operate with the authorities for the betterment of the institutions and conform to all values related to the dignity of the profession.
5. Should adhere to the Conditions of contract
6. Give and expect due notice before a change of position is made.
7. Refrain from availing any leave except on unavoidable grounds and without prior intimation, keeping in view their particular responsibility towards the academic schedule.
8. Refrain from undertaking any other employment/ private teaching or consultancy and any other other activity which is likely to Interfere with their professional responsibilities and violates the government norms for code of conduct.

16.7.5. Teachers behaviour with other staff:

1. Teachers should treat the non-teaching staff as colleagues and equal partners in a cooperative undertaking, within every educational Institution.

2. Teachers should help in the function of joint staff-councils covering both teachers and the non-teaching staff.

16.7.6 Teachers behaviour with guardians

1. Try to see through various committees of department and organization, that, institutions maintain contact with the guardians, their students.
2. Send reports of students' performance to the guardians whenever necessary and meet the guardians in meetings convened for the purpose of mutual exchange of ideas and for the benefit of the institution.

16.7.7 Teachers behaviour in society

1. Recognize that education is a public service and strive to keep the public informed of the educational programmes which are being provided;
2. Work to improve education in the community and strengthen the community's moral and intellectual life
3. Be aware of environmental problems and take part in such activities as conducive to the progress of society and hence the country as a whole;
4. Perform the duties of citizenship, participate in community activities and shoulder responsibilities of public offices;
5. Refrain from taking part in or subscribing to or assisting in any way activities which tend to promote feeling of hatred or enmity among citizens, religions or linguistic groups actively work for National Integration.

Part 3

Beyond Instructions

Chapter 1 - Improving Governance Mechanism

1.1 Introduction

The governance mechanism plays a key role in the development of any Institute. Autonomous institutes have a Board of Governors (BoG) which helps Institute to take policy decisions through review, discussions and directives. However, for government institutes an Executive Council would be an equivalent body, to take the institute forward and implement strategies needed as per the current and future trends.

1.2 Members of EC

It is suggested that executive council may comprise of following:

1. Principal of the Institute
2. Two Heads of the Departments from the Institute on rotation
3. Two eminent academicians from Institutes of repute
4. Two eminent industrialists
5. Two successful Alumni

1.3 Role of Executive Council

The executive council can help the Institute in following tasks:

1. Prepare Strategic Plan with Vision, Mission and Objectives, through SWOT (Strength, Weakness, Opportunities, and Threats) analysis for the Institute.
2. Review progress of the Institute and to observe if it is in line with the Strategic Plan
3. Formalize and continuously update Institute's vision and objectives as per the need of society and nation.
4. Strategize future action plan.
5. Increase placement opportunities for the students
6. Promote faculty and students for quality research work and community and societal welfare.
7. Identify experts who can be part of advisory body for each engineering discipline
8. Review and approve proposals by faculty for attending seminar, conferences, workshops and sanction funding from the Institute as per availability
9. Review proposals and sanction funding for development of existing or new laboratories
10. Review proposal of faculty for cutting-edge research and sanction funding
11. Proposals for starting of new courses
12. Assist Institute in accreditation proposals and during accreditation committee visit
13. Expand outreach such as collaboration with eminent Institutes, engagement with Industries, interaction with experts, etc.
14. Assess and approve the need of new infrastructure for future expansion
15. Invite eminent faculty on short-term basis

1.4 Sub Committees and Meetings

The Executive Council may form sub committees to aid it in reviewing and giving approvals such as the Finance Committee, Research promotion committee etc

The meeting of executive council members can be scheduled at least twice in year or earlier if such a need arises.

Chapter 2 - Critical Thinking, Adaptability and Graduate Attributes

2.1 Introduction

Institutions progress on a path which they lay out for themselves. Strategy and well-defined processes help define this path. However, the pace, at which technology, its applications as well as implications are changing, needs a deeper insight. Processes cannot be changed and made to adapt overnight, as they evolve with time and then stabilise. This lag is a major factor leading to the question of relevance and effectiveness of technical education vis a vis industry demand.

Education has to be more free form, more flexible and more need based, to be able to deliver the product as per the customised needs of various stakeholders. Tools, strategy and resources have to be geared for this ever-changing scenario.

2.2 Diverse Experiences and Pedagogy

There are three aspects of the 21st century technical education that campuses have to cater to:

- i) Teaching has to be as much experiential as theoretical.
- ii) It has to feature-in individual critical thinking as well as collaborative development at system level.
- iii) It should include business aspects as well as insight into the role of technical executives.

Each of these three aspects needs a different set of knowledge, skill and abilities. But for the student this comprises only one basket of learning through the four years on campus.

It is the faculty that brings these aspects to class and to all related activities such as projects and thesis. All pedagogical interventions should be aimed to achieve these three objectives. This brings us to the need of addressing the role of faculty as core to the education ecosystem. Faculty has to play these diverse roles as a teacher, a researcher and critical thinker and a business executive

Industry internships and industrial experiences in any form for faculty and students, take centre stage, in order to understand and develop these three aspects. Vacations, exam breaks and weekends, should be planned ahead for such short and longer duration internship experiences.

Another important diversity on campus in terms of professional roles, is the global trend of innovation and start-ups. Design thinking, observing and analysing principles in new contexts, applying technology in new and interdisciplinary areas, are some of the pre-conditions that drive the innovation eco system. Faculty will have to immerse their students in diverse situations and hand hold them in cross cutting domains, to enable creative and innovative ideas.

If not teacher driven, a few of the bright students, will definitely chart their own paths on these lines. But the number of students left without such exposure, will be a strong indicator of the effectiveness and relevance of the education system. This will in turn weigh down the scale of performance of individual teachers and the teaching community as a whole.

2.3 Developing Critical Skills

Besides examinations to evaluate student's knowledge, curriculum, technology, institutional resources and industry platforms will all have to be utilized for deeper learning and immersive engineering. Tomorrow's employers and businesses will look for Collaborators, Critical thinkers and Creative problem solvers. Thus, teachers and students will have to delve into engineering problems in a way professional do:

- by observing and analysing
- conducting experiments
- constructing solutions based on the evidence

Institutions will have to create opportunities and prepare teachers to first learn and then impart to students, the critical skills required by job markets:

- i) Inquiry skills: investigating all theoretical conclusions and their applications
- ii) Critical thinking: developing new experiments and their set ups
- iii) Meta cognition: defending their conclusions from results of inquiry and critical thinking

2.4 Way Forward

Students and Faculty will keep interchanging places for centre stage action as the institutions manage their academic priorities. The art of balancing these priorities and creating opportunities for each of these stakeholders, will carve the path of success of technical education to finally align its products with the need of the industry and society. There is no "One solution that fits all ". However, exploring and experimenting to adapt to Change and Technological advancement, is an interesting way to keep students and faculty engaged and motivated to meet the challenges.

Chapter 3 - Expanding Horizons

3.1 Introduction

The routine functionalities of any engineering academic Institute and guidelines for the same are elaborately discussed in chapters 1 to 16 of this manual. Generally, each and every Institute develops vision and mission looking at opportunities available in surrounding and globally as well as in line of nation requirements, available manpower and other resources. In addition, good academic Institutes develop strategic action plan to achieve vision and mission. Highly ranked Institutes also revisit their vision and mission on periodical basis to keep pace with fast changing technologies as well as looking at overall global scenario. Therefore, it is very much required for each and every academic Institute not to remain in very rigid environment, and their leaders must keep a close look on changes taking place at International level and in line with that, new strategies must be planned. It will make their Institute one of the best learning environments and will be able to sustain highly competitive world. The following are some of the categorized areas of focus to expand horizon of the Institute.

1. SWOT analysis
2. Collaboration with reputed academic and research Institutes
3. Strengthening alumni association
4. Government research promotion schemes
5. Planning and execution for future requirements
6. Revenue generation
7. Contribution to society and nation

3.2 SWOT Analysis

Each Institute must carry out a regular survey of its Strength, Weaknesses, Opportunities, and Threats (SWOT). It should be analysed, and future plan must be prepared to rectify weaknesses, grab opportunities and overcome threats.

3.3 Collaboration with reputed academic and research Institutes

The continuous growth of Institute needs tie-ups with best academic Institutes and research organizations across the world. The best practices followed by these Institutes must be studied and if possible, should be incorporated in the working environment of the Institute. Reputed industries in the sector of the engineering programmes offered by the Institute must be identified and, technical as well as non-technical collaboration must be explored.

3.4 Strengthening alumni association

Alumni Association is one of most strong pillars of any academic institute and can play major role in its growth and future expansion. Strong interaction with alumni who are, generally, spread all over the World and working in different domains and having broad spectrum of experience, can be an unmatched source of inputs and support to take any Institute to a height which is beyond the level of imagination. All highly ranked Institutes in the World have unbelievable contributions in all respect in the success story of the Institute. Each Institute must be continuously striving hard in enrichment of its alumni association.

3.5 Government research promotion schemes

Generally, Government launches many schemes on regular basis to modernize laboratory infrastructure as well as to enhance research culture in the Institute. It becomes responsibilities of senior academicians of the Institute to take maximum advantage of such Government policies in the benefit of academic developments as well as to contribute in technological growth of the nation. For example, our country needs efficient technological solutions for waste disposal, clean energy generation, cyber security, defence sector, pollution control, medical field, nano-technology, etc. There are many Government schemes available providing financial support to carry out research work in this domain. Academic Institute must contribute through strong research apart from their regular academic duties by using Government research promotion schemes.

3.6 Planning and execution for future requirements

Institute's infrastructure and resource requirements will always keep on increasing with time as well as its growth in intake and outreach. It is very much essential that administrative and estate managerial to foresee all the requirements and accordingly, submit and execute the plan to avoid critical situations of hindering growth due to lack sufficient available resources. These senior people must study the growth story of highly ranked Institutes for the preparation of proposals for future requirements.

3.7 Revenue generation

The continuous growth of the Institute is not possible without availability of strong revenue. The Institute should always look for opportunities to strengthen revenue generation through consultancy work and arranging training programmes for employees of Industries and other academic Institutes. It will also enhance technical and managerial capabilities of Institute manpower. The part of received revenue can be utilized to upgrade and enhance resources of the Institute.

3.8 Contribution to society and nation

The Institute must establish strong connections with society through contributions other than academics. It could be under NSS (National Service Scheme) to connect young engineers with the motto of the nation and understand responsibilities of educated citizen of the country. It will help Institute to create a brand image across the country as well as to develop socially responsible future generation of technically sound engineers as per the needs of the country.

Chapter 4 Training: Faculties and Staff Development (FSD) Portal

Training plays a vital role for quality enhancement of faculties and Staff. To strengthen training activities and to provide equal opportunities to all faculties uniformly across the institutes from the financial year 2018-19, the planning and coordination of academic training, capacity building and administrative training will be done via Faculty and Staff Development (FSD) Portal and will be regulated through the training cell of Directorate of Technical Education (DTE).

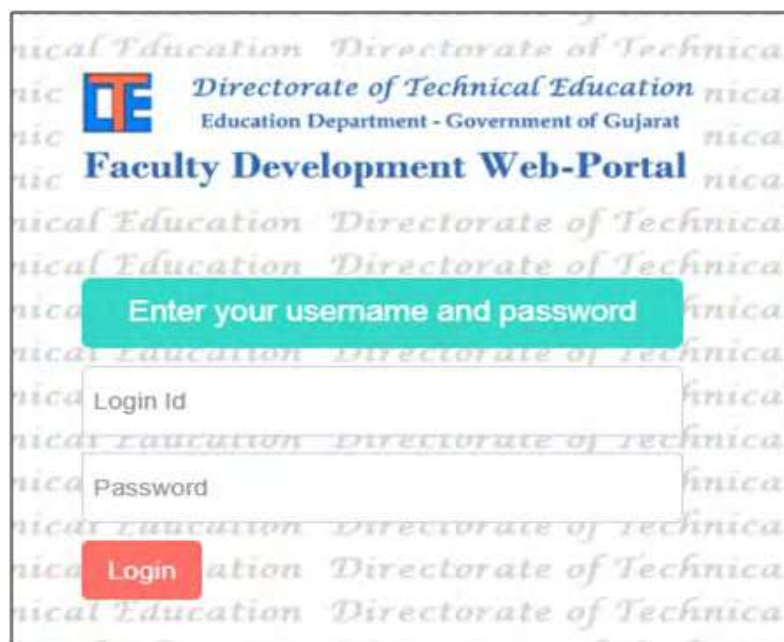


Figure 4.1: Login page of FSD portal

Training of Government and GIA faculties and employees are divided into following categories -

- Free and token based training from National Level Institutions
- Paid Training at the National Institutes (IIT/ NITs /IIITs etc.)
- Training programs at local organizations/institution
- Training organized through Video conferencing (VC)
- MOOC and online based trainings

Training activity of the training cell works in two phases -

1. Providing the Training to the faculties and staff
2. Approval for Organising the training

4.1. Providing the Training to the faculties and staff:

To provide the equal opportunities and to allocate the appropriate trainings to the faculties according to their need the working of FSD portal is divided in to two modules in terms of users -

- A. Administrator module
- B. Faculty and staff module

A. Administrator Module:

Administrator can identify the trainings in various areas across the nation that is innovative as well as worthy for faculties. A total of 461 areas are defined for 45 engineering and pharmacy disciplines so that participants may choose the training of their exact matching need. From the applicants of trainings, they issue the order for some or all the faculties/staff with due reasoning and justification. Following procedure is used by administrator to add and issue the order for training -

1. Login as Admin
2. Identify the trainings that are worth for faculties and staff via various sources
3. Add the training in the add training page with complete details like – hosting body, hosting department, training area, title, date, venue etc.
4. All the added trainings (expired or available) till that date are visible in Training calendar page
5. For a particular training how many faculties has applied can be viewed from Faculty Applied report page.
6. Once it is identified that how may faculties has applied for a particular training, order can be issued to all or some of them with due justification.

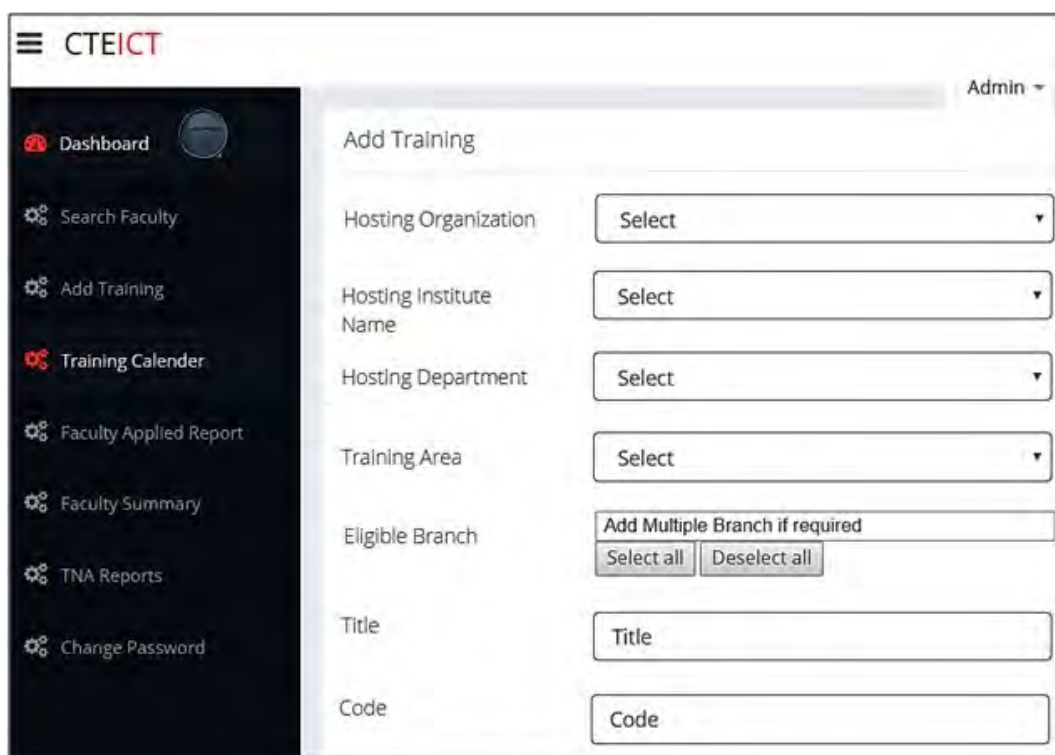


Figure 4.2: Some fields of Add Training page of Administrator module

B. Faculties and Staff Module

Faculties and staff can view the trainings of their respective area and can apply based on their interest –

1. Login at FSD portal
2. Fill the Training need Analysis (TNA) by choosing three trainings with prioritization in their applicable discipline and area. They may choose areas from their own discipline, or from general areas like Computer / IT, Administration, Induction etc. TNA is required to be filled every year for three different choices of trainings.

3. Once the TNA is filled you may view and apply for the trainings from your respective training calendar page
4. No of trainings in which you have applied can be viewed from Applied training Page
5. Once you complete any of your training, update it in your training taken page
6. You may change your password any time form Change Password page

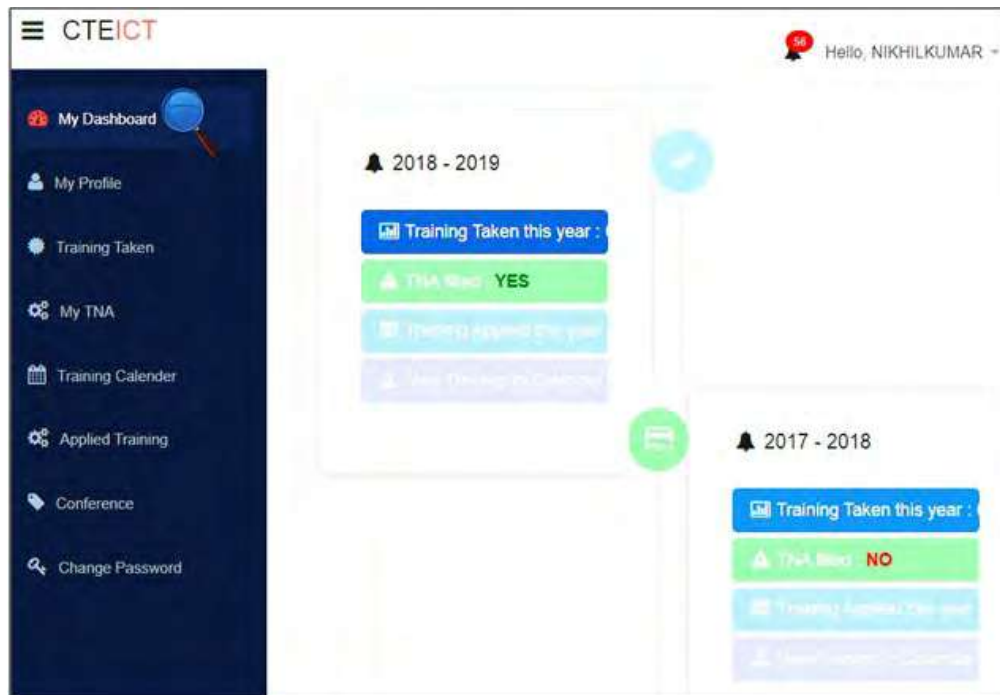


Figure 4.3: After login faculty can view trainings details on yearly basic

4.2. Approval for Organising the training :

Some essential criteria's are designed to ensure the quality of training to be organised. Financial assistance and its getting procedure is also defined for the institutes fulfilling the essential criteria's. Following guidelines and criteria's are decided to be followed to host the trainings –

I. Essential Criteria:

- a) Training proposal should be based on TNA indications. TNA of at least 20% faculties of host institute should match with the proposed training.
- b) Training proposal is to be submitted at least two months before the commencement of training.
- c) Co-ordinators/Co-coordinators should deliver at least 20% of the course.
- d) At least 20% of participation other than faculty of GEC's and GP's to be ensured.
- e) Co-ordinators/Co-coordinators must have published at least two research papers in last two years from UGC approved journals.
- f) Co-ordinators/Co-coordinators must have been invited for at least two talks in a year.
- g) Training shall be planned for 30 participants.
- h) Training duration of course shall be of min. 30 Hrs. (one week)

☰ CTEICT
🔔 Hello, NIKHILKUMAR ▾

- 🏠 My Dashboard
- 👤 My Profile
- 📅 Training Taken
- ⚙️ My TNA
- 📅 Training Calender
- ⚙️ Applied Training
- 📄 Conference
- 🔑 Change Password

MY TRAINING NEED ANALYSIS: 2018-19

According to my academic interest and institutional responsibility, I would prefer to obtain Training during 2018-19 as per the following:

TNA: PRIORITY-1

Training Discipline	Area of Training
Computer Engg. ▾	Machine Learning ▾
🗒️ Justify, Why you required this training?	
🗒️ Justify, How will you use outcome of the training	

TNA: PRIORITY-2

Training Discipline	Area of Training
Select ▾	Select ▾
🗒️ Justify, Why you required this training?	
🗒️ Justify, How will you use outcome of the training	

TNA: PRIORITY-3

Training Discipline	Area of Training
Select ▾	Select ▾
🗒️ Justify, Why you required this training?	
🗒️ Justify, How will you use outcome of the training	

will select the training as per my TNA from Training Calender at least prior to one month.

Save

Figure 4.4: Priority 1 of faculty TNA with their available training disciplines

II. Financial Support:

- a) Financial assistance under TED-7 may be provided to organize the STTP
- b) Institute can apply for financial support from GTU/GUJCOST or other Government Organisations only if all essential criteria are fulfilled.

III. Required submission:

- a) Soft copy of course material in proceeding form.
- b) Training program brochure.
- c) Time table of the training with title of topic name and name of expert.
- d) Bio-data of experts if invited.
- e) Expenditure statement for STTP (Course Material, Working Lunch, Remuneration to external experts, AICTE/ISTE fees if any)
- f) Available financial support (Sponsorship, Registration fees etc.)

Contributors

Editors:

Prof. R.K. Gajjar, VGEC Chandkheda

Prof. R.A. Thakker, VGEC Chandkheda

Prof. N.M. Patel, VGEC Chandkheda

Prof. M.T. Savaliya, VGEC Chandkheda

Prof. D.D. Mandaliya, VGEC Chandkheda

Chapters Prepared By:

Chapter	Name
Part-1	
Ch-1	Prof. D.D. Mandaliya, VGEC Chandkheda
Ch-2	Prof. R.K. Gajjar, VGEC Chandkheda
Part-2	
Ch-1	Prof. R.A. Thakker, VGEC Chandkheda
Ch-2	Prof. R. D. Joshi, RCTI
Ch-3	Prof. D.D. Mandaliya, VGEC Chandkheda
Ch-4	Prof. N.M. Patel, VGEC Chandkheda
Ch-5	Prof. H.C. Patel, LDCE Ahmedabad
	Prof. Vrusang Thekadi, LDCE Ahmedabad
Ch-6	Prof. P.P. Lodha, VGEC Chandkheda
Ch-7	Prof. Y.B. Bhavasar, VGEC Chandkheda
	Prof. R.R. Kapadia, VGEC Chandkheda
Ch-8	Prof. R.K. Patel, VGEC Chandkheda
Ch-9	Prof. N.M. Patel, VGEC Chandkheda
Ch-10	Prof. A.B. Dhruv, VGEC Chandkheda
Ch-11	Prof. R.A. Thakker, VGEC Chandkheda
	Prof. M.T. Savaliya, VGEC Chandkheda
Ch-12	Prof. V.G. Patel, VGEC Chandkheda
Ch-13	Prof. C.S. Sanghavi, LDCE Ahmedabad
	Prof. N.D. Mehata, VGEC Chandkheda
Ch-14	Prof. K. S. Parmar, RCTI
Ch-15	Prof. Milind Shah, VGEC Chandkheda
Ch-16	Prof. R.K. Gajjar, VGEC Chandkheda
	Prof. Vrusang Thekadi, LDCE Ahmedabad
Part-3	
Ch-1	Prof. R.K. Gajjar, VGEC Chandkheda
Ch-2	Prof. R.K. Gajjar, VGEC Chandkheda
	Prof. R.A. Thakker, VGEC Chandkheda
Ch-3	Prof. R.K. Gajjar, VGEC Chandkheda
	Prof. R.A. Thakker, VGEC Chandkheda



Office of the Director, Technical Education,
Block No. 2, 6th Floor, Karmyogi Bhavan,
Sector-10-A Gandhinagar - 382 010



<http://dte.gswan.gov.in>



(079)232 53546



dteguj@gujarat.gov.in
dire-dte@gujarat.gov.in