



UNIVERSITY COLLEGE OF TECHNOLOGY
(AUTONOMOUS)



GOOD GOVERNANCE DOCUMENT

OSMANIA UNIVERSITY, HYDERABAD-500 007
TELANGANA, INDIA

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1. THE INSTITUTION

It is one of the premier and the oldest colleges offering Chemical Engineering and Chemical Technology education in the country. University College of Technology is a constituent (one of the campus) college of Osmania University accorded with autonomous status. Established in the year 1969, which offers programs both at UG and PG levels including Ph.D programs and established a reputation of academic excellence progressing through innovation. It has been setup with a mandate to offer the courses that contribute significantly in product development through science, engineering, technology and innovation programs that contribute for the social future and economic growth of the region, state and country. It has come a long way in emerging as one of the leading and sought-after Institutes with more number of disciplines and produced distinguished alumni who emerged as leaders in different walks of life.

The College of Technology had a modest beginning in 1943 as a post- graduate section of Applied Chemistry in the Department of Chemistry, Osmania University. Later in 1945, it was upgraded to the Department of Applied Chemistry. In 1951, the subject of Chemical Engineering was introduced and the Department was designated as the Department of Chemical Technology. In 1954, four year degree courses were introduced leading to the Bachelors' degrees in Chemical Technology and Chemical Engineering. Further, in 1959, Post Graduate Programs in M.Tech Chemical Engg with specializations Chemical Reaction Engineering, Plant Design, Process Dynamics & Control and M.Tech Chemical Technology of Pharmaceuticals and fine Chemicals were started.

In 1965 it was recognized as Department of Technology. In September 1969, the University upgraded the Department of Technology to University College of Technology to form a strong academic nucleus of Chemical Engineering / Chemical Technology and also to serve as a nodal point for disseminating the technical know-how to various research institutions and industries. The College is known for its excellence in teaching and training the students in Chemical Engineering and Chemical Technology at the under-graduate and post-graduate levels. Over the years, the College has expanded and grown by leaps and bounds and the alumni of this college have excelled themselves all over the Globe.

To meet the changing requirements of the country, the B.Tech programs in Food Processing and Preservation Technology, Textile Technology were started in the College during 1994-95. The importance of these courses is self-evident as there are rich resources in cereals, fruits and vegetables, cotton, silk and other fibers. Further, no other University or College in Telangana State is offering full-fledged four year B.Tech Degree programs in these technologies to exploit the available resources. B. Tech Food Processing & Preservation Technology has been changed to B.Tech Food Technology. The college started a Two year P.G program in M.Tech Bio Chemical Engg & Biotechnology during the academic year 2006-2007 with new innovative concepts such as SAILS (Self access and interactive learning study). During 2009-10 Two – Two year P.G. Programs in M.Pharmacy, (a) Pharmaceutical Chemistry (b) Pharmaceutical Analysis & Quality Assurance were started. After examining the presence of Gamut of Textile Industries in and around Hyderabad, a three year PG Part Time Programme in Textile Technology leading to M.Tech (Apparel Technology) was started during 2010. Also M.Tech Chemical Engineering (Plant Design) part time was started during Academic year 2014-2015 to cater the needs of personnel from Industry, Research & Academia. M.Tech (Food Processing Technology) part time program in Food Technology was started in 2012. M.Tech Chemical Engineering with a Specialization of Environmental Engineering under TEQIP-II was started during the Academic Year 2013-14. M.Tech regular program for Food Technology and Textile Technology were started during 2014-2015. The college also offers Doctoral programs in Chemical Engineering, Chemical Technology, Food Technology, Bio Chemical & Biotechnology, Textile Technology and Pharmacy.

The college is functioning as an autonomous institute with academic autonomy since the year 1995 under the Osmania University. Further it has been granted financial, managerial and administrative autonomy in 2003. The college has established various statutory committees such as Board of Governors, Academic Council, Board of Studies, Finance Committee, Anti Ragging Committee, Civil Works Committee, Purchase committee, Grievance redressal committee, etc., in addition to various supporting functional units. The college has been following the practice of annual budget, auditing of accounts and decentralized management since long time and further it is strengthened through automation of certain services during the TEQIP – I Phase. The institution is utilizing the opportunity provided under TEQIP – II to scale up of Post Graduate Education and Demand Driven Research & Development and Innovation with an initiative to enhance the existing capacities and capabilities to respond for challenges of rapid economic

and technological developments taking place at Local, Regional, State, National and International levels.

The long term objective of the institution is to identify itself as a Center of Excellence Progressing through Innovations and imparting the technical education of highest standards in India on par with the institutions that are known for intellectual property gains for conducting high-end research and developing appropriate technologies involving the Departments of Chemical Engineering, Chemical Technology, Food Technology, Textile Technology, Materials Science and Technology, Biochemical Engineering & Biotechnology, Basic Engineering Disciplines (Mechanical, Electrical and Civil Engineering) and Basic Sciences (Computer Science, Mathematics, Physics and Chemistry).

1.1 Academic Information:- Programs offered

S.No	Title of the Program	Level	Intake
1	B.Tech in Chemical Engineering	UG	60
2	B.Tech in Food Technology	UG	20
3	B.Tech in Textile Technology	UG	20
4	M.Tech in Chemical Engineering (Plant Design)	PG	18 + 18*
5	M.Tech in Chemical Engineering (Chemical Reaction Engineering)	PG	18
6	M.Tech in Chemical Engineering (Process Dynamics and Control)	PG	18
7	M.Tech in Chemical Engineering (Environmental Engineering)	PG	18
8	M.Tech in Food Technology (Food Processing Technology)	PG	18 + 18*
9	M.Tech in Textile Technology (Textile and Apparel Technology)	PG	18 + 18*
10	M.Tech in Chemical Technology (Material Science and Technology)	PG	18
11	M.Tech in Chemical Technology (Pharmaceuticals and Fine Chemicals)	PG	15
12	M.Tech in Bio Chemical Engineering and Biotechnology	PG	18
13	M.Pharm in Pharmaceuticals Chemistry	PG	18

14	M.Pharm in Pharmaceuticals Quality and Analysis	PG	18
15	Ph D in Chemical Engineering	Doctoral	
16	Ph D in Chemical Technology	Doctoral	
17	Ph D in Bio Chemical Engineering and Biotechnology	Doctoral	
18	Ph D in Food Technology	Doctoral	
19	Ph D in Textile Technology	Doctoral	
20	Ph D in Pharmacy	Doctoral	
*Part Time			

1.2 Board of Governors

Osmania University via its order No 416/Stat./Acad/2012 dated March 3, 2015 has reconstituted a Board of Governors as per the guidelines of UGC/AICTE. All stakeholders are adequately represented in the Board of Governors. There are representatives from the statutory bodies, Government, faculty and Industry.

List of BoG members are given below;

S.No	Name	BOG Designation	Address
1	Dr. K.V Raghavan, INAE, Distinguished Professor,	Chairman	Former Director, IICT, Tarnaka, Hyderabad - 500007
2	Prof. D. P Rao (Former Professor, IIT, Kanpur)	Member	Managing Partner, M/sProcess Intensification Consultants, Flat No.201, Varshini Mansion, DeepthiSree Nagar, Beside CBR Estates, Madinaguda, Hyderabad – 49
3	Sri. Sambaru Prasad	Member	CEO, M/s Lipicard Technologies Ltd., F-1, Plot # 38, UBI Colony, Road No.3, Banjara Hills, Hyderabad – 500 034.
4	Prof. K. S. K Rao Patnaik	Member	UCT, OU
5	Prof. J. Hayavadana	Member	UCT, OU
6	Prof. T. Sankarshana	Member	UCT,OU

	Dean, Faculty of Technology		
7	Prof. R. Shyam Sunder Dean, Faculty of Pharmacy	Member	UCT, OU
8	Prof. A. RavinderNath Dean, Development & UCG Affairs	Member	OU
9	The Regional Joint Director of Technical Education (N.Narayana Reddy)	Member	Govt. of A.P, 7 th Floor, GaganVihar, Nampally, Hyderabad
10	Addl. Secretary State Board of Technical Education and Training (J.Satyanarayana Reddy)	Member	Govt. of A.P, 7 th Floor, BRKR Bhavan, Tank Bund, Hyderabad
11	Prof. Mahfooz – Ur – Rehman	UGC - Nominee	Former Chairman and Dean, Faculty of Commerce, Aligarh Muslim University, Salma Mansion, 4/714 – Friends Colony, Dodhpur , Civil Lines, Aligarh – 202002
12	Prof. Ch. Sailu Principal, UCT, OU	Member Secretary	UCT, OU

1.3 Regulating Authorities

The Institution (College) is regulated by multiple authorities of Osmania University and the Telangana State Government. The approval is done by All India Council for Technical Education (AICTE), and the Degrees are awarded by Osmania University, Hyderabad,

2. GOVERNANCE VISION AND MISSION

2.1 VISION

To achieve excellence in the country in Demand driven, Clean and Green technologies through interdisciplinary academics, research, consultancy and extension activities with an attitude of serving the society in professional and ethical way

2.2 MISSION

- To train the youth by imparting quality technical education of highest standards in attaining excellence in skills and competence.
- To create state of art facilities for innovative research in Industry demand driven areas.
- To develop heightened intellectual, Cultural, Ethical, Humane, sensitivities to foster a Scientific temper among the youth.
- To serve the society by producing employable, prosperous and productive youth with motivation towards innovative thinking and leadership qualities.

2.3 VALUES

Accountability, Integrity, Democracy

2.4 STRATEGIC GOALS

Basic goals of the Institute are Excellence in Education, Enhanced RDI and Effective Partnerships

Further, the following Goals of the Institution are formulated based on the vision and mission guided by the above core values practiced by the College;

1. Strengthen the academic and physical infrastructure for achieving excellence in teaching, learning, research and governance
2. Introduce flexible credit based modular curricular practices and a whole range of innovations in academics, research and governance system currently accepted across the world

3. Disseminate scientific information, knowledge and technical know-how through public awareness programs, seminars, symposia, conferences, workshops, trainings etc.,
4. Provide required man power in emerging areas of technology that contribute for innovations, development, creative solutions to the industrial problems and needs.
5. Facilitate the availability of scientific and technical human resource in all disciplines relevant to these programs and utilize its core strength to the best possible extent to create an effective interface across disciplines.
6. Start demand-driven and socially relevant PG courses in Environmental Engineering, Energy Engineering and Nanotechnology to address the needs of the Nation in general and the region in particular.
7. Identify as a ‘Center of Excellence Progressing through Innovation’ imparting the technical education of highest standards on par with the institutions that are known for intellectual property gains for conducting high end research and developing appropriate technologies and establish incubation facilities to promote creativity and innovation.
8. Develop an effective Industry – Institute interaction, it is envisaged, to expand the frontiers of knowledge base, to device newer and more efficient methods of solving problems of the society.
9. Provide required man power in emerging areas of technology that contribute for innovations, development, creative solutions to the industrial problems and needs.
10. Continuous quality Improvement of Faculty and Staff in the demand driven and thematic areas to improve the Research and consultancy activities
11. Supporting academically and/or financially weaker students by providing the remedial and supplementary teaching, skill development programs.
12. Develop financially as a self –sustenance autonomous institution.
13. Improve the quality of life of common man in villages through transfer of technology.

3. GOVERNANCE PURPOSE

The College is offering the programs which have social relevance, contribute for the economic development and meet the emerging current needs of the Nation. Also, the college has lot of importance in promoting the demand driven research and innovation in the areas of national priorities and community needs. To reach the higher standards in quality technical education at UG, PG and Doctoral levels by building on existing strengths and exploiting the emerging opportunities, the good governance will be very useful.

The institution governance is to strengthen its infrastructure, human resources and facilities; to improve learning outcomes and skills; to establish strong interaction with industry, R&D organizations and other NGOs; to enhance the employability of graduates and to uplift the standard of technical education through the support from Govt. of India, Govt of Telangana and other Statutory agencies, by way of generating a Strategic Plan in good governance.

3.1 The Beneficiaries

The main beneficiaries are all three types of Stakeholders, (i) Primary, (ii) Secondary and (iii) Tertiary. Some of the benefits for each of the stakeholders are described in brief as follows:

3.1.1 Primary Stakeholders

(a) Students

- Improved quality employability
- Enhanced Industry Training
- Continuous skill development
- Scope for good research
- Exposed to State of Art equipment in the Labs
- Better Academic Ambience
- Good Carrier guidance and counseling
- Remedial support to academically weak students

(b) Faculty

- Continuous development in quality of teaching and research
- Management capacity building
- Better Industry interaction
- Collaborative and joint research with other Institutions

- Consultancy, Testing and R&D opportunities
- Good teaching and Learning methods
- Getting Funds and Research Projects
- Better Publications in reputed Journals
- Foreign visits

3.1.2 Secondary Stakeholders

(a) Institution

- Motivation, creative and qualified faculty
- Improving the Brand Image for recognition in National and International levels
- Sustained efforts to accomplish the Vision
- Better adaptability to Global needs
- Academic autonomy
- Attracting attention of Funding agencies
- Improvement in IRG

(b) Industry

- Availability of Skilled and high quality manpower
- Technology transfer and Problem solving
- Result based sponsored R & D Projects
- Exposure to the academic environment and expertise

3.1.3 Tertiary Stakeholders

(a) Society

- Service to the community in training the need based technologies
- Opportunity for quality education
- Better Accessibility to Technical Environment
- Improvement in Living Standards

4. GOVERNANCE VALUES

4.1 Primary Accountabilities

- To approve and ratify the Institution activities which are linked to objectives of the Vision and Mission of the Institute
- To guide the Institution in enabling to achieve their mission and primary objectives for learning, teaching and research through strategic planning
- To ensure the establishment and monitoring of proper, effective and efficient systems of control and accountability
- To monitor institutional performance and quality assurance arrangements
- To ensure by putting system in place to regulate financial requirement
- To supervise the performance of the Institute by setting certain Indicators

4.2 Openness and Transparency in the Governance

- Providing as much information as possible to students, faculty, public and potential employers on all aspects of institutional activity related to academic performance, finance and management
- Publishing an annual report on institutional performance
- Ensuring that all reported information is truthful
- Conducting proceedings of governing bodies in an open manner as much as possible that is permissible by statutes
- Student performance information to ensure wards trust and confidence
- Staff grievance cell and student technical society to discuss pertaining issues
- Easy accessibility information for all stakeholders

4.3 Effectiveness and Performance Review of Governing Body

- Effectiveness is measured and reviewed by setting performance indicators against institution primary accountabilities
- Continuous review of student Feedbacks, Experts feedbacks and Alumni feedbacks for further improvement
- Structure and processes will be revised accordingly, as part of the governing body's ongoing regular review processes

4.4 Regulatory Compliance

- The Governing body ensures compliance with the statutes, ordinances and provisions regulating the institution, including regulations by statutory bodies, such as the AICTE and UGC as well as regulations laid out by the State Government and Osmania University and takes all final decisions on matters of fundamental concern of the Institution.

- The regulatory Compliance includes demonstrating compliance with **Non-Profit** purpose of education

5. SWOT ANALYSIS

A detailed SWOT analysis has been conducted by collecting the feedback data from various reliable sources and adopting the two methodologies (i) answering the questions provided in the questionnaires and (ii) interviewing & chatting with alumni through internet. The sources from which the data have been collected are Students feedback, Faculty Self-Appraisal Forms, NAAC Peer Team Report, TEQIP - I & II Audit Reports

5.1 STRENGTHS

The college has been functioning as an autonomous institution and has expertise in technical education at UG, PG and Ph.D., levels and pursuing RID (Research Innovation and Development) activities of relevance to process industries. The institution is accredited with five stars by NAAC in the year 2002 and then with Grade 'A' in the year 2008. The college has upgraded its facilities during TEQIP – I&II Phases and being subjected to accreditation regularly. Established four funds as per the requirements of TEQIP, and well the financial status to a satisfactory level for its sustenance.

5.1.1 Academic:

The college is placed among top five engineering institutions that were subjected to academic audit and grading by APSCHE (Andhra Pradesh State Council for Higher Education), Government of Andhra Pradesh.

(i) Well qualified and experienced faculty

- a. Sufficient number
 - Permanent Faculty (17 Professors + 10 Associate Professors + 04Assistant Professor)
 - Contract Faculty (18 Academic Consultants)
- b. Excellent academic backgrounds
 - 80% of the permanent faculty possesses Ph.D. degrees and some of them pursued Post Doctoral Fellowships in esteemed foreign universities and IITs.
- c. A strong professional component
 - The faculty is pursuing research in advanced thrust areas and some of them acquired training abroad in the proposed areas of PG programs and Research.

- They participated in national and international conferences to present papers and chair the sessions.
- Some of faculties have been honoured with prestigious awards of state, national and international reputation.

(ii) A well balanced curriculum designed to meet both local needs and international standards

- a. Strong engineering science component
 - Curriculum is composed 60-80% of engineering component, 40 – 20 % of science component making the outcome of graduates with knowledge and skills of relevance to process industries.
- b. Availability of a good variety of courses catering the manufacturing sector
 - The college offers versatile courses in chemical, biotech, material science, pharmacy, textile and food technologies.
 - Capacity to offer “add on” courses to supplement the finishing school needs.
 - Introduced Self – learning concept at PG level through Web based learning equivalent to 2 credits in each semester.
 - Follows the Credit and Grade based evaluation to get equate with the International Practices.
- c. A well structured laboratory with GLP norms
 - The college has state of art equipment in the central analytical facility laboratory to conduct advanced research work in chemical engineering, chemical technology, biotechnology, materials science, pharmacy, textile and food technology and their allied areas.
- d. Teaching improvement
 - The faculty use new teaching aids apart from chalk and talk.
 - Periodic Guest Lectures are arranged with expert from outside the institution.
 - The students are encouraged for research and industry training as a part of summer internship.
 - Handouts and Manuals are provided to students to carryout UG research.

5.1.2 Research and Consultancy:

(i) Adequate funding

- The college has been securing assistance in the form of grants to the tune of Rs. 3.00 crores from various funding agencies such as MHRD, MFP, UGC (Special Assistance Program, Innovative Program), DST (FIST Program), DBT and AICTE
- The college has signed MOU with IICT, Hyderabad under which 10 students have been registered for integrated MS PhD program.
- A well-structured Sponsored Research and Consultancy Cell is functioning to spin off the research atmosphere for collaborative research and industry-institute-interaction promotion and generated revenue to the tune of Rs. 8.00 lakhs in the last three years from Consultancy and Testing Services.

(ii) Hiring adequate human resources

- As a campus college of Osmania University, it can utilize the expertise of the sister departments for inter disciplinary programs and has access to the central facilities of the university.
- Alumni employed in industries, R & D and academic institutions in India and abroad developed expertise in frontier areas are sharing with their Alma matter.

(iii) Location Advantage

- The city of Hyderabad has several CSIR and Defence laboratories with whom in the past, the institution has developed strong academic and R & D network, whereby projects of National importance can be pursued

5.1.3 Infrastructure:

(i) Well equipped Library and IT facilities

- The college has a Seminar Library equipped with around 19,205 books (Including text and reference books) and is currently subscribing to around 24 journals relating to chemical engineering, chemical technology, biotechnology, materials science, pharmacy, food and textile technologies. Further, additional reference facilities are available at University Library situated on the campus. The Seminar Library is further strengthening by procuring the latest books on the thrust areas.
- College has been networked with 24 X 7 internet facility with an access to online journals through AICTE-INDEST and UGC – INFLIBNET

(ii) Maintaining and upgrading facilities,

- The college has created more than 1500 Sq. M additional area to house library and central analytical facility with a state of art equipment during TEQIP – I Phase.
- All the class rooms were equipped with modern gadgets of teaching, especially LCD projectors, OHP's etc.,
- An e- class room is established with Virtual Learning facility.
- Being partially residential campus the resources can be used for longer time.
- Developed adequate base during TEQIP – I Phase in terms of infrastructure to increase the intake in existing PG and Doctoral programs.

5.2 WEAKNESSES

(i) Deficiencies in certain outcomes in graduating students

- a. Communication and soft skills
- b. Problem based learning for real world applications

(ii) Quality and quantity of current students (Undergraduate and Post Graduate)

- a. The lack of motivation to excel
- b. The culture of being “spoon-fed”
- c. Inadequate preparation and training in critical or analytical thinking
- d. Insufficient number of full-time PG students

(iii) Selective use of modern tools of teaching

- a. Insufficient exposure to advanced learning resources
- b. Inadequate classroom assessment
- c. Increasing proportion of new faculty with limited teaching experience
- d. changing mix of urban and non-urban background of students without corresponding modifications/orientation of educational methods contributing to the detriment of the non- urban element;

(iv) Large proportion of faculty with limited industrial and applied research exposure

(v) Limited Sponsored Research and Industrial Consultancy only in selected areas

(vi) Retiring of senior faculty and knowledge gap between requirement and existence

(vii) Inadequate merit based incentives for promoting excellence

(viii) Inconsistencies in the quality of support staff

5.3 OPPORTUNITIES

(i) Autonomy, Alumni and Scope for enhanced Intake

- a. The flexibility to incorporate local needs into educational objectives through academic reforms.
- b. Large Alumni base in industry, research and academia around the globe.
- c. Increased output of UG students of private colleges contributing to a steady and higher quality input of students for PG programs

(ii) Available faculty development opportunities

- a. Sufficient funding
- b. Institutional support for sabbaticals, travels etc
- c. Availability of international workshops, seminars etc
- d. Possibility of utilizing local expertise for teaching and research

(iii) Location

- a. Hyderabad's location with an easy access to all Indian and Foreigners
- b. Potential of being a research, trade and industrial hub
- c. A good pool of potential students can be involved in sponsored projects.

(iv) Emerging Knowledge based technologies and industries have a great potential and are poised for spectacular growth.

(v) New trends in multi-disciplinary professional education and new teaching methods

- a. Curricular Development in tune with the industrial needs.
- b. Possibility of utilizing e-learning and distance education
- c. Readiness to accept changes in teaching, learning and evaluation

(vi) Access to Resources and Industrial consultancy

- a. Skilled Man Power from Industry and R & D institutions
- b. Interaction with sister departments in the same campus
- c. IRG through Sponsored research and consultancy

5.4 THREATS

(i) Competition (local, regional and global)

- a. Mushrooming local and regional private colleges, which might take away the faculty, students by offering attractive terms.
- b. Accessibility of international schools via distance education

- c. Fast pace of developments in technology (e.g. IT, emerging new fields)
- (ii) Declining enrollment (interest) in engineering**
 - a. Reluctant to join PG programs as good opportunities exists in the form of job immediately after B.Tech.,
 - b. Lack of sufficient number of quality students with strong interest in engineering
 - c. No special attraction in the form of job opportunity for fresh M.Tech./Ph.D's
- (iii) Quality of incoming students (language, analytical thinking, motivation)**
 - a. Admission to the course by chance rather than choice.
 - b. lack of necessary aptitude for the course among the concerned students;
 - c. Sustaining the quality of education compare with NITs and IITs
- (iv) Rapid technological developments and tie-ups**
 - a. Results in faster obsolescence
 - b. Delays in implementing efficient decisions.
 - c. Faster tie-up of other institutions with foreign universities.

5.5 Strategic Plan

After a careful review of SWOT analysis, following strategic objectives have been established to address the weaknesses and threats identified and specific actions are developed which exploits the strengths and opportunities.

1. Strengthening of existing programs through curricular reforms, flexibility and wide choices for electives by enhancing the intake in PG programs.
2. Introduction of new PG programs that addresses the regional, national and global needs.
3. Starting flexible integrated PG and Ph.D., programs.
4. Develop bridge / add on courses to meet the industry needs.
5. Improve teaching, learning and evaluation through continuous trainings.
6. Promote research and consultation that address the immediate and long-term needs of the society and establish a strong relationship with industry
7. Strengthening the Industry-Institute – Interaction through student projects, summer internship, sponsored projects, consultancy and testing services.
8. Continue to develop and maintain adequate assets in terms of tangible and intangible forms.

9. Transmit the gains and experience to sister institutes through e- network medium and video conferencing.
10. Establish and strengthen the network with international institutes for academic and research activities through MoU's.
11. Conduct workshops/seminars to highlight on the dissemination of information on technological advancement and relevance of interdisciplinary approach for the development of clean, productive and efficient technologies.
12. The Internal Quality Assurance Cell will be entrusted to monitor the compliance of the project objectives in respect of Equity Action Plan, Environment and Disclosure Management Framework by the institution.

The College will focus on the objectives of transformation to improve the quality and standards of technical education using its tangible and intangible assets of resources and expertise developed through TEQIP – I&II for furthering the learning outcomes to provide an enabling environment for research, development and innovation.

The following are the main challenges identified from SWOT Analysis for the Institution;

- Motivate, Admit, Nurture and Retain outstanding students
- Attract, Recruit, Nurture and Retain outstanding faculty and staff
- Promote a strong sense of community, collegiality and team work concept among the students, faculty, staff and alumni.
- Create and sustain strong relationship with society in particular with industry to cooperate in the advancement of the country's economy.
- Continue to develop and maintain an adequate infrastructure
- Diversification of research activities of interdisciplinary nature.

5.5.1 Linkage of Key Activities based on the SWOT Analysis results

The college has necessary expertise and facilities to start the proposed key activities:

1. Faculty:

Faculty were involved in teaching with revision of curricula to the current trends, undergone training and performed research activities in relevant areas

2. Research:

Institute and Departments were involved in sponsored research and consultancy activities in the proposed areas of new PG programs.

3. Equipment:

Adequate equipment is available and procured during TEQIP – I Phase and also from the projects supported by different funding agencies

4. Curriculum:

The programs proposed are either part of core or elective courses of existing programs at UG and PG levels.

No	Key Activities	Linkage based on SWOT Analysis
1	Strengthening of Existing Programs	The existing programs need to be strengthened with curricular reforms with flexibility for more options of electives in terms of choosing the career of academics, research and industry. Also to make courses more attractive in terms of knowledge and skills up-gradation to meet the employer needs.
2	Starting of New PG Programs	These programs are conceived based on the faculty expertise, research projects completed, equipment availability, trainings acquired, linkages established with industry-institutes in India and abroad. Also based on the demand, social relevance, economic development, emerging needs and national priorities.
3	Introduction of Joint Masters and Doctoral Programs	To strengthen the established collaborations and extend the network among research institutions and industry with scope for optimum utilization of resources in the form of expertise and infrastructure and also to enhance the quality of outcome in terms of training inputs and competency.
4	Promotion of Demand Driven Research	80% of the faculty possesses Doctorate degrees and some of them have Post-Doctoral experience and the institution is known for its research excellence having secured large quantum of funds for research activities from various funding agencies. Laboratories are equipped with the state of art instruments.
5	Enhancing the Quality & Relevance of Creativity & Innovation	To strengthen the networking activities and collaborations with industry and institute, promote the innovation and creative ideas of talented pool of students admitted in the institution.

6	Initiating . Finishing School Concept	To enhance the employability and passing rate of the students with innovative practices of learning and use of modern teaching aids as supplements in developing knowledge and skills in the subject and domain areas in addition to communication and soft skills. The required infrastructure is procured during TEQIP – I&II
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5.5.2 STRATEGIC PLAN LINKED WITH OBJECTIVES

S.No.	Goals	Objectives	Strategies
1	Academics i. Programs ii. Curriculum iii. Pedagogy	Social relevance Knowledge, Skills & Competency Teaching and Learning methods	Identification of Gaps between the planning and implementation Designed based on expert inputs from secondary and tertiary stakeholders Allowable mix of Formal and Non-formal mode of learning Use of modern tools of teaching methods
2	Research and Development	Cutting Edge Research with Industry Orientation	Demand Driven and Thematic Areas with Problem based Solutions and Intellectual Property
3	Collaborations	MoU's / MoA's	Joint Academic and Research Programs Summer Internships and Trainings
4	Governance	Decentralization mode	Planning, Implementation and Monitoring with a reasonable tenure for authorities
5	Sustenance	Financial Soundness	Funding Based – Grants from Government and Funding

			Agencies, Philanthropic Support, Sponsored Research and Consultancy Fee Based – Add on Courses, Continuing Education Programs, Testing Services
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5.5.3 Action plan with Targets for 2020

1. Improving the student-teacher ratio by recruiting quality teachers
2. Publishing 30 technical papers annually in very reputed and high impact factor journals
3. Getting 95% quality placements by 2020
4. Attracting research funding to the tune of Rs.200 Lakhs by 2020
5. Collaborating with MoUs to reputed industry and R&D Institutions and to enhance IRG to the tune of Rs 50 Lakhs by 2020
6. Starting Two PG programs in thematic areas to cater the needs of the Industry and R&D organizations

5.6 Strategic Objectives and Responsibilities

S. No.	Specific Objectives	Responsibility
1	Infrastructure developments for teaching and learning facilities	Nodal Officers, Academic, Civil Works, Procurement and Management
2	Quality improvement of faculty and staff	Nodal Officers- Academic, Monitoring & Evaluation
3	Introducing new full time PG Programs & strengthening of existing PG Program	Nodal Officer- Academic, Monitoring & Evaluation
4	Enhancement of Research and Consultancy Activities	Nodal Officer- Academic, Monitoring & Evaluation
5	Enhanced Institute-Industry-Interaction	Nodal Officer- Academic, Monitoring & Evaluation
6	Enhanced Management Capacity	Principal, TEQIP Coordinator
7	Implementation of Institutional Reforms	Principal, TEQIP Coordinator
8	Support to Academically & financially Weaker Students	Nodal Officer- Academic, Finance, Monitoring & Evaluation

The strategic objectives can be explored in detail considering the thrust areas of the institution. The areas can be grouped to form the following;

- (i) Educational Processes
- (ii) Human Resources
- (iii) Physical Resources
- (iv) Governance
- (v) Building Relationships
- (vi) Financial Resources

5.6.1 Educational Processes

Academic programs are the core functions of the Institute. The institute focuses on the basic activities for education, research and services to the society, which is articulated in the Institute's Mission Statement. The various departments/sections do the academic activities in the institute. The college emphasizes on education at the under graduate, post graduate and doctoral levels and take up the activities that will initiate research environment. The University awards the degree. The institute periodically revises curriculum design. The institute has academic autonomy. Therefore it can diversify its activities related to academics.

The success of teaching–learning process depends ultimately on the effectiveness of the course delivery methods. Radical changes must be affected in the way in which the course matter is delivered in the classroom. The main goals of the educational processes are;

- Improvement in teaching-learning process through continuous assessment that enhances the quality of higher education
- Introducing new fulltime PG programs in demand driven areas & strengthening of existing UG & PG programs
- Enhancement of research and consultancy activities

The main strategic initiatives are

- New PG programs have been proposed so that there must be at least one in each department/section. M.Tech Chemical Engineering with Environmental Engineering Specialization has started from AY 2013-2014
- Bridge and remedial classes and expert talks are arranged for the students
- Industrial visits for students in the respective areas
- Learning environment utilizing QEEE, NPTEL
- Process of NBA Accreditation for all eligible programs

- Modernization of class rooms
- Reforming the course delivery methods

The blended MOOCs (Massive Open Online Courses) model of instruction is being planned to adopt in the institution. Outside class time, students may take a MOOC offered by any of the elite institutions (including IITs, over the QEEE platform) and meet in class with local faculty for discussions, problem-solving, group projects, and lab work. This approach gives students more faculty and peer support than in a conventional lecture session.

5.6.2 Human Resources

The human resources are the important resources for the development of any educational institution. This includes the students, faculty and the staff of the institution. The strategies are focused on the efforts for improving the education and initiating research in the institute with the help of quality faculty and staff. However, the institute has no powers to recruit faculty, which is done by University Authorities with compliance to Government of Telangana State. Student admissions are carried out on the basis of the rank obtained in the EAMCET (Engineering, Agriculture & Medicine Common Entrance Test) conducted by the State Government.

The main goals with regard to the human resources are;

- Improvement in teaching-learning process through continuous assessment by student feedbacks
- Support for academically and/or financially weaker students by conducting remedial classes
- Quality Improvement of Faculty and Staff by Guest Lectures, Workshops, FDPs and Industrial Visits
- Research and consultancy services that address the immediate and long-term needs of the society

The main strategic initiatives are

- Finishing school for students
- Assistance to academically and/or financially weaker students
- Providing seed money to faculty for research
- Deputing faculty for quality improvement programs, workshops, and trainings
- Training need analysis of faculty is done regularly

- In house Short term training programs for faculty in subject domain and pedagogy

5.6.3 Physical Resources

The main goals with regard to the resources are strengthening the present infrastructure for facilitating academic, research and consultancy services, and to maintain it to suit the rapid technological changes

The main strategic initiatives are;

- Establishment of Central Analytical Facility Lab which includes State-of-Art equipment like, XRD, SEM, AAS, AFMC, etc.
- Process for starting in-house facility as a technology incubator for helping the startups'
- Modernizing of the existing class rooms and laboratories with the help of UGC funds
- Starting of new PG laboratories for Environmental, Energy and Nano Technology to improve the quality of research
- Utilizing government grants such as TEQIP, MODROBS, DST etc .for improving the laboratories and research facilities

5.6.4 Building Relationships

The major reason for the failure of teaching-learning process as it exists in a majority of the technical institutions across the country is the undue focus on routine learning, whereas the thrust should have been on problem based (case study based) learning. The problem based learning approach can be implemented successfully, only through sustained interaction with industry or with practicing engineers and technologists.

The main goals with regard to building relationships are;

- To expose the faculty as well as the students to emerging technologies as well as industrial practices
- To motivate and help engineering graduates to start independent ventures
- To encourage faculty to take up research and development problems of industry as well as government organizations
- The problem based learning approach through sustained interaction with industry
- Collaborative programs with industry
- To keep the value of social commitment as a government institution

The strategic initiatives are;

- Incorporating sandwich learning activities with industry
- Possibility of collaborative programs with industry
- MoU with industries for sharing of resources in possible areas
- Interaction with local self-government bodies
- Outreach programs to the society with the help of National Service Scheme

5.6.5 Financial Resources

The institution is supported financially by the government through block grant, student fees and sponsored funds. There is a mechanism in the budget allocation to various departments towards recurring, nonrecurring and expansion of departments towards R & D.

The main goal of University College of Technology, Osmania University, Hyderabad, is to develop as a financially sustainable institute fostering education and research.

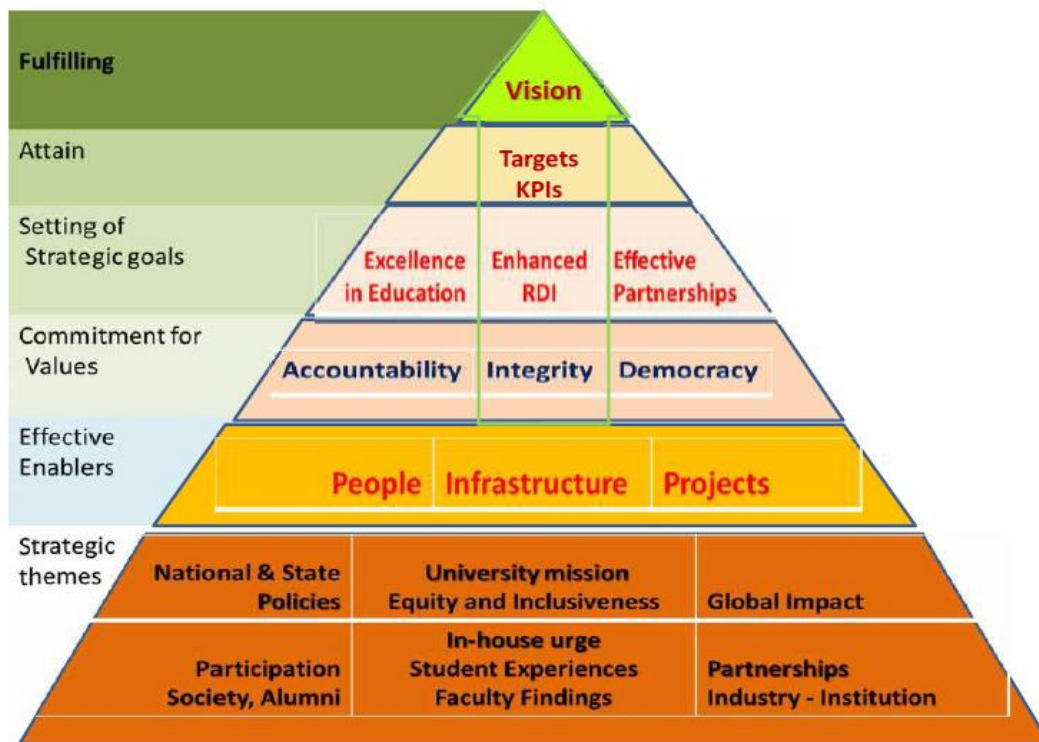
The strategic initiatives in this area are;

- Starting new UG branches in Engineering and new PG programs
- Encouraging research and consultancy for internal revenue generation
- AICTE, UGC(Major), DST-PURSE projects grants to be utilized
- MODROBS grant has been utilized for improving the laboratories and research facilities
- TEQIP grant has been utilizing for overall academic growth
- Established four funds; Corpus fund, Faculty Development fund, Equipment Replacement fund and Maintenance Fund.

6. GOVERNANCE PLAN

Technical Education has gained importance as a consequence of Universal trend for young generation opting careers of Engineering and Professional Education and improved income opportunities for those with better educational credentials may attract the talent pool to extend their student life in an institution, which has long history of offering courses relevant to the society and maintains a legacy of quality standards. The institution has acquired required strengths in demand driven research and innovation activities. Under globalization the local industries are looking for persons having knowledge, skills, competency and values in the areas of emerging and clean development technologies that contribute for the economic growth of the country. The micro, small and medium industry is also giving more importance to quality and better technologies in their processes.

Being a campus college of Osmania University, the institution has an advantage of availing the resources from sister departments for interdisciplinary activities and have an access and potential to the surrounded moderate industrial and national research environment to draw upon the expertise and providing solutions to industrial problems and research needs. Research is an important component of higher education and needs to be addressed to promote creativity, innovation and intellectual property that empower the nation. A specific Action Plan is prepared to strengthen the research activities in the institution. It includes creation of research fund, provision of support for the faculty and students to take up minor research projects and facilitate the research through sponsored research and consultancy cell.



It is to be noted that the Institution is going through a transition phase after it has been admitted into the TEQIP project. The principal aim of TEQIP project is to transform the existing structure into an autonomous one. Then new system has to consider the interest of the various stakeholders in formulating the policies. Also it has to develop an inclusive and sustainable model for growth.

It is assumed that the government will deliver policies, which include a clear place for higher education, create autonomous structures for institutions and establish clear criteria for interventions and formulate in finance policies in tune with TEQIP guide lines as per the Memorandum of Understanding.

The Governing bodies will act as the custodian of values, mission and purpose mentioned in the previous chapters and will guide the institution in asserting its autonomy and accountability.

The governance plan of this institution will have two phases

- Governance during TEQIP phase
 - Successful transformation of the institute into an autonomous one
- Governance during Post TEQIP phase
 - Sustained development as an autonomous Institute

6.1 Governance during TEQIP phase

This phase which extends to the end of TEQIP project is the most crucial in terms of the Development of a successful governance plan in post TEQIP phase. It is assumed that after the successful completion of TEQIP, the institution will have Administrative, Managerial, financial and Academic Autonomy. Presently the institution enjoys, substantial academic autonomy, but lacks managerial and financial autonomy.

TEQIP phase envisages granting of all these autonomy. At the end of TEQIP phase, it is expected that institution will be able to rationalize the fee structure, will receive *Block grant* for recurring expenditure on a generally agreed formula based on the institutional parameters like, no of students, faculty and staff, infrastructural facilities etc.

During this phase the governance of the institution will be done by various committees formed for the institutional development. The following Committees formed for the implementation of the TEQIP project will guide the Transition to an autonomous Institute

S. No	Head & Nodal Officers	Name & Designation of faculty in position	Roles & Responsibilities
1	Head	Principal Prof.ChinthaSailu	Overall Implementation under The guidance of BOG. Will be the chief executive officer
2	Coordinator	Dr. V VBasava Rao Professor	Overall Monitoring, Monitoring of Performance
3	Nodal Officer (Procurement)	Dr. D. Jaya Prakash Professor	Institutional Procurement plan, Procurement Arrangements Procurement audit
4	Nodal Officer (Finance)	Dr. G. Prabhakar Reddy Professor	Financial Plan, Fund Allocation, Finance Audit
5	Nodal Officer (Academic & Civil Works)	Dr. E. Nagabhusan Professor	Academic Plan Implementation of institutional Reforms and Monitoring of

6	Nodal Officer (Monitoring & Evaluation)	Dr. R. Shyam Sunder Professor	Monitoring of Targets for deliverables as per development plan, Performance Audit, Equity
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SUB-COMMITTEES

The following sub-committees are formed under the respective nodal officers for the effective implementation of the development plan

S.	Committee	Responsibilities
1	Academic Committee	Academic Plan, Implementation of Institutional
2	Finance Committee	Financial Plan, Fund allocation, Audit etc.
3	Purchase Committee	To make purchase of goods, works and services as per Procurement guidelines
4	Civil Works Committee	Prepare, plan and coordinate Civil Works
5	Technical Evaluation Committee	To evaluate the procurement proposals technically and commercially
6	Monitoring & Evaluation	Monitoring of Targets for deliverables
7	Library Committee	Plan for digital library, books & LR's, Journals, Softwares needed etc.
7	Research & Development Committee	Promotion of research and consultancy, giving R& D guidance, planning R& D projects and UG/PG sponsored projects
8	Faculty & Staff Development Committee	Training Plan based on TNA, Short Term, Long Term Trainings, Seminars,
9	Continuing Education Programs Committee	Plan and conduct CEP programs as per needs. Conducting skill development programs
10	Committee for Weaker Students	Identify weaker students, Conduct bridge courses, etc as per PIP
11	Career Advancement Monitoring Committee	Planning & Implementing Career advancement programs Conduct of Finishing schools

12	Industry-Institute Interaction Committee	Arranging Lectures by industrial experts Collaborative projects, Field studies Tutoring by Industry experts for Campus Faculty visits to industry Memoranda of Understanding with industries Instituting Scholarships /fellowships and Awards by
13	Equity Assurance Committee	Equality for gender and cast Equal opportunities to staff, faculty, Departments and students

6.2 Governance in Post TEQIP Phase

It is assumed that towards the end of the project the institution will be fully autonomous in all respects as prescribed in the Project Implementation Plan (PIP). Governance plays a major role in achieving the strategies defined by the mission of the institution. Changes in the organizational structure will help in improving work culture, decision making and institutes overall performance.

The institution enjoys substantial autonomy in managerial, administrative and financial are as it is not under direct government. All the internal revenue generated in terms of tuition fee, consultancy etc are retained in the institution. Almost all the academic and administrative matters are done at the institutional level except faculty recruitment. Expecting Managerial autonomy will be achieved towards the end of the project, the activities will be streamlined by introducing the following units.

Institutional Governance is the distribution of authority and functions among the units within a larger entity, the modes of communication and control among them, and the conduct of relationships between the entity and the surrounding environment.

- 6.2.1 Principal**
- 6.2.2 Vice-Principal**
- 6.2.3 Deans**
- 6.2.4 Heads of the Departments**
- 6.2.5 Chairpersons, Board of Studies**
- 6.2.6 Director of Evaluation to look after Conduct of Examination**
- 6.2.7 Director, Training and Placement Cell**
- 6.2.8 Director, Industry-Institution- Interaction Cell**
- 6.2.9 Director, Centre of Excellence in Intensification of Chemical Bio Processes**
- 6.2.10 Assistant, Registrar**
- 6.2.11 Incharge, Purchase and Stores**
- 6.2.12**

KPIs

Implications on academic programs

Implications on organization

Implications on funds and resources