

SELF STUDY REPORT

FOR

2nd CYCLE OF ACCREDITATION

**SWARNANDHRA COLLEGE OF ENGINEERING &
TECHNOLOGY**

**SEETHARAMAPURAM WEST GODAVARI DISTRICT
534280**

www.swarnandhra.ac.in

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1. EXECUTIVE SUMMARY

1.1 INTRODUCTION

Swarnandhra College of Engineering and Technology (SCET) was established in the year 2001 by The Vasista Educational Society with a vision to empower the students to become technologically sound, innovative and emotionally matured to face the challenges of globalized world economy.

SCET offers six UG B.Tech. programmes in Civil Engineering, Mechanical Engineering, Electrical and Electronics Engineering, Computer Science and Engineering, Electronics and Communication Engineering and Information Technology and five PG M.Tech programmes in CAD/CAM, Power Electronics, VLSISD, Computer Science & Engineering and Nanotechnology along with Master of Business Administration and Master of Computer Applications.

B.Tech-ECE, CSE, IT and EEE programs were accredited by NBA in 2008, B.Tech-ME was accredited in 2013 and B.Tech-ECE, CSE, EEE programs were re-accredited in 2013. B.Tech-ECE was accredited third time in 2017. The institution is accredited by NAAC at 'A' Grade with CGPA 3.32/4.00 in 2013 and got UGC autonomy in 2014.

The institution is always ahead in the pursuit of excellence. The Management of the institution believe in adopting the changes time to time by introducing latest advanced technologies in curriculum by providing all necessary infrastructural and instructional facilities. The institution adopted Outcome Based Education (OBE) and Choice Based Credit System (CBCS) for academic enhancement. It has well qualified and experienced faculty involved in innovative, quality pedagogy and R & D activities. Presently, the institution has three research projects worth Rs. 25 lakhs sponsored by DST, DRDO and UGC. The institution has three recognised research centers, among which Mechanical Engineering department is recognised by JNTUK, Kakinada.

Vision

To provide the society with Center of Learning in Technical Education and Research that motivates the students to evolve into dynamic professionals.

Mission

- **Providing quality education, student centered teaching Learning process and state of the art infrastructure for professional aspirants hailing from both rural and urban areas.**
- **Evolving this organization into a center of Academic and Research Excellence.**
- **Imparting Technical Education that encourages independent thinking, develops strong domain knowledge and positive attitude towards holistic growth of young minds.**

1.2 Strength, Weakness, Opportunity and Challenges(SWOC)

Institutional Strength

- One of the best engineering colleges located in rural area to serve the society.
- Visionary, learned and proactive management to cater to the needs and aspirations of all stakeholders.
- The campus is sprawling over 25 acres with lots of greenery, excellent landscaping.
- The institute has state-of-the art laboratories, workshops, well stocked library with digital facilities and internet with Wi-Fi connectivity.
- The institute has a strong faculty pool with 196 faculty members who have passion to update their knowledge in emerging areas.
- The institute is recognized as training center by CISCO Network Academy for academic enhancement activities and has functional MoUs with Cyient, APSSDC, IBM, Microsoft, Oracle, ICT academy, Falcon Systems, CPLR, AXIS, Codetantra, Conduira etc.
- Effective teaching learning process with use of ICT tools and student centric methods.
- Efficient and transparent evaluation system
- The institution is permanently affiliated to JNTUK Kakinada for a period of three years from the academic year 2017-18.
- B.Tech-ECE, CSE, IT and EEE programs were accredited by NBA in 2008. B.Tech-ECE, CSE, EEE programs were accredited second time by NBA in 2013. B.Tech-Mech was accredited by NBA in 2013. B.Tech-ECE was accredited third time by NBA in 2017.
- The Institution is accredited by NAAC with 'A' Grade of CGPA 3.32/4.00 in 2013.
- Acquired UGC autonomy in 2014.
- Enriched curriculum with Outcome Based Education (OBE) and Choice Based Credit System (CBCS).

Institutional Weakness

- Geographically located in remote area.
- Limited industry – institution interaction and limited association with R&D organizations.
- Lack of communication skills in english among the students as they hail from rural back ground.
- Getting the Ph. D holders from premier institutions is difficult as the institution is located in remote area.
- Low consultancy output

Institutional Opportunity

- Inculcating the culture of enterprenuership to rural youth through technology.
- To elicit students' skills through training facilities with functional MoUs and collaborations with external bodies.
- Involving more faculty members in consultancy through incentives that increases the revenue of the institute.
- Developing leadership qualities among the students
- Flexibility in curriculum design and development

Institutional Challenge

- Retaining the experienced faculty with Ph.D qualification.

- Transforming the rural students to evolve as dynamic professionals.
- Growing competition of near by private universities.
- Sustaining competitive capabilities with the help of reputed organizations and universities.
- Strengthening the industry institute interaction.

1.3 CRITERIA WISE SUMMARY

Curricular Aspects

The institution is committed to provide accessible, quality technical education to the students. It is essential to develop employability and entrepreneurship skills of the students along with imparting technical education. In view of that, the curriculum of all the 13 programmes offered by the institute are revised in last five years in line with Outcome Based Education (OBE). The institution designed and has implemented new regulations and curriculum, following the Choice Based Credit System (CBCS) consists of 180 credits. It enriches the curriculum and helpful for the over all development of the students. As per the guidelines of UGC and AICTE, institution has been offerering CBCS since 2016.

The objective of the new curriculum is to provide challenging and supportive environment for student learning. Around 60% of courses in the college are focused on the development of employability skills of the students. In latest revision of syllabus, 11% of new courses are introduced based on the needs of the industry. The institution also offers many value-added courses imparting transferrable life skills during the last five years. The institution promotes safe, healthy and sustainable environment where the students can flourish at the personal and community levels. To reach that, the institution has introduced courses like Professional Ethics and Intellectual Property Rights as mandatory for all UG programs. The institution has its own effective feedback mechanism to get the inputs from the stakeholders time to time for review, design and development of the curriculum and take necessary measures.

Teaching-learning and Evaluation

The institution adopts the policy of imparting quality technical education to the students. Admissions in various programs under category A seats are made through common entrance examinations (EAMCET - UG B.Tech Program, ECET-UG B.Tech Three year program, ICET- PG -MBA & MCA, PGCET- PG-MTech) conducted by Andhra Pradesh State Council of Higher Education (APSCHE) and category B seats are filled as per the guidelines of the state government.

Remedial and special classes are conducted for slow learners and coaching for various competitive examinations are conducted for advanced learners. The institution has the policy of recruiting well qualified and experienced faculty as per AICTE and UGC norms.

The institution prepares and follows a well-planned academic calendar. The faculty members prepare lesson plans and course information sheets which are verified by the HoD and the Principal. The faculty members of the institution adopts student-centric methods such as experiential learning, participative learning, problem solving methodologies and ICT tools which are helpful to enhance the skills of students. Some of the faculty members in the institution received awards, recognition and fellowships from government and recognized bodies. The Internal Quality Assurance Cell (IQAC) verifies the implementation of lesson plan with adherence to academic calendar.

Fair practices and transparency are maintained in conducting the examinations as well as in evaluation process. The institution follows Outcome Based Education (OBE). All the programs offered by the college have well defined POs, PSOs and COs. The outcomes are assessed through direct and indirect methods.

Research, Innovations and Extension

The institution has well defined research, development and consultancy policy. Having a distinguished centre for higher learning, this institution encourages research in all areas and provides financial support as seed money to the faculty. One of the departments of this institution has been recognized as research centre by the JNTUK, Kakinada. The established research centres have well equipped centralized facilities.

Six funded projects, worth Rs. 80 lakhs has been sanctioned by UGC, AICTE, UGC-DAE, DST, DRDO and IACQER for the research projects and many of them have been successfully completed. Further, some research projects worth Rs.1 crore are in the pipeline with various funding agencies.

The research activity is progressive and proactive with more than 60 publications in peer reviewed and referred journals (SCOPUS/WOS). Nine books and three chapters were published. This institution has collaborations with various national and international institutes to access the fabrication and characterization facilities. The institution has well established IPR Cell for conducting various workshops on patent rights.

The prime focus of this institution is committed to transfer empirical knowledge to applicable and reliable practices which replaces individual brilliance with collective, collaborative and societal utility through extension activities (NSS).

Infrastructure and Learning Resources

Swarnandhra College of Engineering and Technology has a strategy of creating conducive environment for the overall development of the students. It possesses a well maintained campus with number of trees, greenish lawns and blossoming flowers which has a serene effect on the students. The infrastructural facilities like cosy classrooms (70), well equipped laboratories (85), e-class rooms (9), seminar halls (3), smart class room, computers (1000) connected in LAN etc, aids to impart knowledge in an appropriate manner to the students. The institution provides an internet facility with a capacity of 140 Mbps band width and also covered with Wi-Fi facility.

The central library consists of 41110 volumes, 6249 titles and digital library with an exceptional collection of journals, magazines and rare books.

The institution provides an internet center to cater to the global and professional needs of the students. The campus is under the CCTV surveillance. The facilities and infrastructure are provided by the institution tend to regular maintenance with a provision in the annual budget.

The institution believes in promotion of physical education for the well being of the student folk. It consists of gymnasium, outdoor and indoor courts to facilitate motor skills. The institution provides proper facilities for yoga. It also creates an opportunity for the students to exhibit their interest in cultural activities and fine arts by

conducting co-curricular and extra-curricular activities.

Student Support and Progression

The Government has been reimbursing fee and issuing scholarships to the eligible students of the institution. The institution also provides financial assistance to the needy students.

The institution puts special efforts to reduce its dropout rate and to increase its pass percentage. Personal enhancement and development schemes such as coaching classes for competitive examinations, career counselling, soft skill development, etc. are arranged to the students. The institution has a training and placement cell which helps to identify job opportunities and develop entrepreneurship skills of the students. On-campus selections are an essential mechanism, to ensure student placement.

The institution has a mechanism for timely redressal of student grievances and for prevention of sexual (gender) harassment. Students play active role in academic and administrative bodies of the institution. The institution has an anti-ragging committee in which students are included as members to monitor students interactions effectively.

Students are encouraged to participate in sports and games at state, national and international levels. Student participation in co-curricular and extra-curricular activities are encouraged. The alumni association contributes significantly to the development plans of the institution. Feedback from students is used for planning and developing supporting services.

Governance, Leadership and Management

Institution has a well-structured and good governance with accountability to the rules and regulations, which reflects an effective leadership in accordance with its vision and mission. The institution maintains transparency through its governance in implementation of policies and practices.

The institution has adopted the practice of decentralization, where the governance structure has a culture of involving faculty members at different levels of decision making and implementation.

The institution works with the involvement of various stake holders in different committees like institution advisory committee, IQAC, purchase committee and other administrative wings of the governance. The practice of decentralization leads to a productive management, where the deployment of information flows in a strategic manner and further leads to a good governance.

The institution provides financial support for the faculty members to attend seminars, conferences, workshops, research programs and also takes up effective welfare measures for its employees. It has adopted a transparent self-appraisal system for teaching and non-teaching staff to assess their credentials for increments and promotions.

The institution has adopted a fair and efficient financial management to accomplish the objectives of the organization. Internal and external financial audits take place regularly, to monitor the budget allocation, income and expenditure, and optimum utilization of the financial resources.

The institution has Internal Quality Assurance Cell (IQAC) to administer quality management strategies in all the academic and administrative aspects.

Institutional Values and Best Practices

The institution's core values are aligned with its mission and vision, and are reflected in the curricular and professional growth of the students. The institution promotes gender sensitivity among all stakeholders. Safety, security and waiting room facilities are provided to the girl students. Women grievance committee ensures fast decisions, in any case of sexual harassment issue arises.

The institution's focus is on green practices, renewable energy, waste management and rainwater utilization. The aim is to develop awareness of environmental issues and sustainability. The budget for green initiatives is allocated annually.

The institution has a strong commitment to divyangans and provides facilities like ramps, washrooms etc. Code of conduct is prescribed separately for staff and students and are exhibited in institution website. Academic, administration and financial informations are updated on the website. The institution celebrates national and international important days and conducts activities to promote patriotic values. Institution provides quality technical education to the rural students.

The best practices of the institute are course coordinator-ship and employability skills enhancement program. Research in the area of nanotechnology is the distinctive feature of the institution.

2. PROFILE

2.1 BASIC INFORMATION

Name and Address of the College	
Name	SWARNANDHRA COLLEGE OF ENGINEERING & TECHNOLOGY
Address	Seetharamapuram West Godavari District
City	Narsapur
State	Andhra Pradesh
Pin	534280
Website	www.swarnandhra.ac.in

Contacts for Communication					
Designation	Name	Telephone with STD Code	Mobile	Fax	Email
Professor	V Swaminadham	08814-240599	9346610099	08814-240638	swamiji_v@yahoo.com
Principal(in-charge)	A GOPI CHAND	08814-240588	9121214503	08814-240538	principal@swarnandhra.ac.in

Status of the Institution	
Institution Status	Self Financing and Private

Type of Institution	
By Gender	Co-education
By Shift	Regular Day

Recognized Minority institution	
If it is a recognized minority institution	No

Establishment Details	
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Date of Establishment, Prior to the Grant of 'Autonomy'	01-01-2001
Date of grant of 'Autonomy' to the College by UGC	19-06-2014

University to which the college is affiliated

State	University name	Document
Andhra Pradesh	Jawaharlal Nehru Technological University, Kakinada	View Document

Details of UGC recognition

Under Section	Date	View Document
2f of UGC	23-01-2012	View Document
12B of UGC	21-03-2013	View Document

Details of recognition/approval by stationary/regulatory bodies like AICTE, NCTE, MCI, DCI, PCI, RCI etc (other than UGC)

Statutory Regulatory Authority	Recognition/Approval details Institution/Department programme	Day, Month and year (dd-mm-yyyy)	Validity in months	Remarks
AICTE	View Document	04-04-2018	12	

Recognitions

Is the College recognized by UGC as a College with Potential for Excellence (CPE)?	No
Is the College recognized for its performance by any other governmental agency?	Yes
If yes, name of the agency	APSCHE VIJAYAWADA
Date of recognition	01-08-2016

Location and Area of Campus				
Campus Type	Address	Location*	Campus Area in Acres	Built up Area in sq.mts.
Main campus area	Seetharamapuram West Godavari District	Rural	25.06	38243

2.2 ACADEMIC INFORMATION

Details of Programmes Offered by the College (Give Data for Current Academic year)						
Programme Level	Name of Programme/Course	Duration in Months	Entry Qualification	Medium of Instruction	Sanctioned Strength	No.of Students Admitted
UG	BTech,Civil Engineering	48	Intermediate or its equivalent	English	60	54
UG	BTech,Electrical And Electronincs Engineering	48	Intermediate or its equivalent	English	120	24
UG	BTech,Mechanical Engineering	48	intermediate or its equivalent	English	180	94
UG	BTech,Electronics And Communication Engineering	48	intermediate or its equivalent	English	240	211
UG	BTech,Computer Science And Engineering	48	intermediate or its equivalent	English	180	178
UG	BTech,Information Technology	48	intermediate or its equivalent	English	60	55
PG	Mtech,Electrical And Electronincs Engineering	24	BTech Electrical and Electronics Engineering	English	18	2

PG	Mtech,Mechanical Engineering	24	BTech Mechanical Engineering	English	18	6
PG	Mtech,Electronics And Communication Engineering	24	BTech Electronics and Communication or MSc Electronics or its equivalent	English	18	0
PG	Mtech,Electronics And Communication Engineering	24	BTech Electronics and Communication Engineering	English	18	2
PG	Mtech,Computer Science And Engineering	24	BTech CSE or BTech IT or MSc CS or its equivalent	English	18	7
PG	MBA,Master Of Business Administration	24	Any Bachelors Degree	English	60	42
PG	MCA,Master Of Computer Applications	36	Any Bachelors Degree with mathematics background in either intermediate or graduation	English	60	31

Position Details of Faculty & Staff in the College

Teaching Faculty												
	Professor				Associate Professor				Assistant Professor			
	Male	Female	Others	Total	Male	Female	Others	Total	Male	Female	Others	Total
Sanctioned by the UGC /University State Government	0				0				0			
Recruited	0	0	0	0	0	0	0	0	0	0	0	0
Yet to Recruit	0				0				0			
Sanctioned by the Management/Society or Other Authorized Bodies	25				50				154			
Recruited	15	2	0	17	25	3	0	28	93	58	0	151
Yet to Recruit	8				22				3			

Non-Teaching Staff				
	Male	Female	Others	Total
Sanctioned by the UGC /University State Government				0
Recruited	0	0	0	0
Yet to Recruit				0
Sanctioned by the Management/Society or Other Authorized Bodies				37
Recruited	37	0	0	37
Yet to Recruit				0

Technical Staff				
	Male	Female	Others	Total
Sanctioned by the UGC /University State Government				0
Recruited	0	0	0	0
Yet to Recruit				0
Sanctioned by the Management/Society or Other Authorized Bodies				53
Recruited	36	17	0	53
Yet to Recruit				0

Qualification Details of the Teaching Staff

Permanent Teachers										
Highest Qualification	Professor			Associate Professor			Assistant Professor			Total
	Male	Female	Others	Male	Female	Others	Male	Female	Others	
D.sc/D.Litt.	0	0	0	0	0	0	0	0	0	0
Ph.D.	15	2	0	3	1	0	0	0	0	21
M.Phil.	0	0	0	2	2	0	3	3	0	10
PG	0	0	0	20	0	0	91	54	0	165

Temporary Teachers										
Highest Qualification	Professor			Associate Professor			Assistant Professor			Total
	Male	Female	Others	Male	Female	Others	Male	Female	Others	
D.sc/D.Litt.	0	0	0	0	0	0	0	0	0	0
Ph.D.	0	0	0	0	0	0	0	0	0	0
M.Phil.	0	0	0	0	0	0	0	0	0	0
PG	0	0	0	0	0	0	0	0	0	0

Part Time Teachers										
Highest Qualification	Professor			Associate Professor			Assistant Professor			Total
	Male	Female	Others	Male	Female	Others	Male	Female	Others	
D.sc/D.Litt.	0	0	0	0	0	0	0	0	0	0
Ph.D.	0	0	0	0	0	0	0	0	0	0
M.Phil.	0	0	0	0	0	0	0	0	0	0
PG	0	0	0	0	0	0	0	0	0	0

Details of Visting/Guest Faculties					
Number of Visiting/Guest Faculty engaged with the college?	Male		Female		Total
	0	0	0	0	0

Provide the Following Details of Students Enrolled in the College During the Current Academic Year

Programme		From the State Where College is Located	From Other States of India	NRI Students	Foreign Students	Total
UG	Male	1722	0	0	0	1722
	Female	726	0	0	0	726
	Others	0	0	0	0	0
PG	Male	77	0	0	0	77
	Female	91	0	0	0	91
	Others	0	0	0	0	0

Provide the Following Details of Students admitted to the College During the last four Academic Years						
Programme		Year 1	Year 2	Year 3	Year 4	
SC	Male	66	61	57	42	
	Female	38	25	19	19	
	Others	0	0	0	0	
ST	Male	1	0	1	0	
	Female	0	0	0	0	
	Others	0	0	0	0	
OBC	Male	226	182	171	93	
	Female	77	67	51	22	
	Others	0	0	0	0	
General	Male	310	273	310	217	
	Female	163	159	137	80	
	Others	0	0	0	0	
Others	Male	0	0	0	0	
	Female	0	0	0	0	
	Others	0	0	0	0	
Total		881	767	746	473	

2.3 EVALUATIVE REPORT OF THE DEPARTMENTS

Department Name	Upload Report
Civil Engineering	View Document
Computer Science And Engineering	View Document
Electrical And Electronincs Engineering	View Document
Electronics And Communication Engineering	View Document
Information Technology	View Document
Master Of Business Administration	View Document
Master Of Computer Applications	View Document
Mechanical Engineering	View Document

3. Extended Profile

3.1 Program

Number of programs offered year-wise for last five years

2017-18	2016-17	2015-16	2014-15	2013-14
13	13	13	13	13

File Description	Document
Institutional Data in Prescribed Format	View Document

3.2 Students

Number of students year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
2684	2454	2420	2527	2812

Number of outgoing / final year students year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
419	409	560	717	655

File Description	Document
Institutional Data in Prescribed Format	View Document

Number of students appeared in the examination conducted by the Institution, year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
2599	2431	2362	2449	2767

File Description	Document
Institutional Data in Prescribed Format	View Document

Number of revaluation applications year-wise during the last 5 years

2017-18	2016-17	2015-16	2014-15	2013-14
836	979	940	1259	1568

3.3 Teachers

Number of courses in all programs year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
609	648	635	612	619

File Description	Document
Institutional Data in Prescribed Format	View Document

Number of full time teachers year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
196	200	200	198	195

Number of sanctioned posts year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
229	223	217	211	207

File Description	Document
Institutional Data in Prescribed Format	View Document

3.4 Institution

Number of eligible applications received for admissions to all the programs year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
882	773	804	563	671

File Description	Document
Institutional Data in Prescribed Format	View Document

Number of seats earmarked for reserved category as per GOI/State Govt rule year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
458	458	458	377	377
File Description		Document		
Institutional Data in Prescribed Format		View Document		

Total number of classrooms and seminar halls**Response : 73****Total number of computers in the campus for academic purpose****Response : 1000****Total Expenditure excluding salary year-wise during the last five years (INR in Lakhs)**

2017-18	2016-17	2015-16	2014-15	2013-14
1363.28	820.65	883.06	836.69	1038.33

4. Quality Indicator Framework(QIF)

Criterion 1 - Curricular Aspects

1.1 Curriculum Design and Development

1.1.1 Curricula developed /adopted have relevance to the local/ national / regional/global developmental needs with learning objectives including program outcomes, program specific outcomes and course outcomes of all the program offered by the Institution

Response:

Successful learning and teaching depends on curriculum that is transparent and effective in terms of goals, learning activities and assessment of learning outcomes. The institution is committed to provide programs of study that are career oriented and are a foundation for long-term study and progression, producing graduates/post-graduates who are engaged, resilient and lifelong learners.

The institution and the departments are guided and monitored in the preparation of course curriculum by two bodies, namely Board of Studies (BoS) and Academic Council. The step wise procedure for curriculum, syllabi development is given below.

Step1: A series of faculty meetings are conducted to monitor the Outcome Based Education (OBE), stated POs, PSOs and COs are identified and checked in line with the Vision, Mission of the institution and the departments also have a relevance to the local/regional/national/global developmental and professional needs. A major review of curriculum takes place for every two years and minor review may take place as per the changes in regulatory requirements and industry needs.

Step2: The curriculum has been revised on a regular basis to meet the professional and industrial needs of the present day global world on par with a few leading institutions in India and Abroad.

Step3: The institution hosts alumni meetings and takes views and suggestions with respect to the changes required in curriculum as per the global/local arena.

Step 4: In order to have the right mixture of curriculum, pedagogy, and assessment to achieve the desired outcomes a meeting of Board of Studies (BoS) is convened. This body comprises the senior faculty of the department and five experts, one JNTUK nominee, one alumni representative, two from academia and one from the industry. During this meeting, the feedback and suggestions made by stake holders are discussed and a scheme of instruction along with detailed syllabi, credits and other details are prepared and submitted to the academic council for its approval.

Step 5: The academic council, headed by principal, university representatives, comprising of eminent professors, industrial experts and heads of all departments as its members discuss and evaluate the scheme and syllabi and approve the same with necessary modifications.

The process used to identify the extent of compliance of the curriculum for attaining the Program Outcomes and Program Specific Outcomes are mentioned below:

1. Alumni gives their feedback and suggestions during annual meets.

2. Training & Placement Officer interacts with officials from industry who visit for recruitment and obtain their feedback on the quality of the competencies of the students and the deficiencies of the curriculum being offered in relation to weakness and strengths of the programme.
3. Outgoing students give feedback during programme exit survey.
4. The information from all the above is discussed and deliberated in faculty meetings, BoS meetings and academic council/Governing Body meetings to incorporate required and feasible modifications to improve the quality of curriculum.

File Description	Document
Any additional information	View Document

1.1.2 Percentage of programs where syllabus revision was carried out during the last five years

Response: 100

1.1.2.1 How many programs were revised out of total number of programs offered during the last five years

Response: 13

1.1.2.2 Number of all programs offered by the institution during the last five years

Response: 13

File Description	Document
Minutes of relevant Academic Council/BOS meeting	View Document
Details of program syllabus revision in last 5 years	View Document
Any additional information	View Document

1.1.3 Average percentage of courses having focus on Employability/ Entrepreneurship/ Skill development during the last five years

Response: 57.47

1.1.3.1 Number of courses having focus on employability/ entrepreneurship/ skill development year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
358	377	377	358	325

File Description	Document
Program/ Curriculum/ Syllabus of the courses	View Document
Minutes of the Boards of Studies/ Academic Council meetings with approvals for these courses	View Document
Average percentage of courses having focus on employability/ entrepreneurship	View Document

1.2 Academic Flexibility

1.2.1 Percentage of new Courses introduced out of the total number of courses across all Programs offered during last five years	
Response: 11.04	
1.2.1.1 How many new courses are introduced within the last five years	
Response: 328	
1.2.1.2 Number of courses offered by the institution across all programs during the last five years	
Response: 2970	
File Description	Document
Minutes of relevant Academic Council/BOS meetings	View Document
Institutional data in prescribed format	View Document

1.2.2 Percentage of programs in which Choice Based Credit System (CBCS)/Elective course system has been implemented	
Response: 100	
1.2.2.1 Number of programs in which CBCS/ Elective course system implemented.	
Response: 13	
File Description	Document
Minutes of relevant Academic Council/BOS meetings	View Document
Institutional data in prescribed format	View Document
Any additional information	View Document

1.3 Curriculum Enrichment

1.3.1 Institution integrates cross cutting issues relevant to Gender, Environment and Sustainability, Human Values and Professional Ethics into the Curriculum

Response:

The Institution incorporates several cross cutting societal issues into the curriculum. Following are the efforts made by Swarnandhra College of Engineering and Technology in this direction.

1. Professional Ethics & Intellectual Property Rights

A course on Professional Ethics & Intellectual Property Rights is offered as a mandatory to all the students during the programme of study. The issues in professional ethics are analyzed in the context of right understanding with the main focus on the development of ethical competence in the individuals. The course concludes by proposing several salient steps to undertake the journey towards holistic and value-based living.

Engineering is the one of professional studies which helps to produce many useful products to foster a comfortable life for the human beings. Engineers do an earnest and industrious job which leaves a profound impact on life while they reflect their responsibilities. It is supposed that engineers should follow a set of ethical values in making decisions in an organization.

This course has been designed in a way to impart ethical values among the young engineers which is further liable to develop clarity in thought and decision making. It also makes them to think logically and sensibly to reflect their work as an engineer at their workplace. By the end of this course students will be equipped with qualities required for the protection of the intellectual property which is being a major concern of many companies today. Thus it is a course, which makes an individual to acquire the psychological ability through understanding, thought, experience and perception.

2. Environment and Sustainability

This course introduces the academic approach of sustainability by covering the general understanding of what constitutes to the rates of renewable resource and non-renewable resource, Environmental Studies, Ecosystems, Pollution, Waste management, and where these processes can be continued indefinitely without sacrificing the needs of future generations. It is a course to equip students in a better way for making informed decisions and taking economically feasible actions that are in the interests of protecting the nature. The curriculum provides the opportunity of going through Environmental Impact Assessment process as well.

Over the past three decades National resources management has emerged to manage and sustain the natural resources particularly, focusing on the quality of life for the future generations. The course has been designed in line with the ways of sustainability of the natural environment. It is the need of the hour that every individual has to feel responsible to manage, maintain and sustain the natural wealth to avoid it to be jeopardized.

File Description	Document
Any additional information	View Document

1.3.2 Number of value-added courses imparting transferable and life skills offered during the last five years

Response: 64

1.3.2.1 How many new value-added courses are added within the last 5 years

Response: 64

File Description	Document
List of value added courses	View Document
Brochure or any other document relating to value added courses	View Document

1.3.3 Average percentage of students enrolled in the courses under 1.3.2 above

Response: 40.95

1.3.3.1 Number of students enrolled in value-added courses imparting transferable and life skills offered year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
1530	906	835	884	1162

File Description	Document
Any additional information	View Document

1.3.4 Percentage of students undertaking field projects / internships

Response: 10.54

1.3.4.1 Number of students undertaking field projects or internships

Response: 283

File Description	Document
List of programs and number of students undertaking field projects / internships	View Document
Any additional information	View Document

1.4 Feedback System

<p>1.4.1 Structured feedback received from 1) Students, 2) Teachers, 3) Employers, 4) Alumni 5) Parents for design and review of syllabus Semester wise /year-wise</p> <p>A. Any 4 of above</p> <p>B. Any 3 of above</p> <p>C. Any 2 of above</p> <p>D. Any 1 of above</p> <p>Response: A. Any 4 of above</p>	
File Description	Document
Action taken report of the Institution on feedback report as stated in the minutes of the Governing Council, Syndicate, Board of Management	View Document
URL for stakeholder feedback report	View Document

<p>1.4.2 Feedback processes of the institution may be classified as follows:</p> <p>A. Feedback collected, analysed and action taken and feedback available on website</p> <p>B. Feedback collected, analysed and action has been taken</p> <p>C. Feedback collected and analysed</p> <p>D. Feedback collected</p> <p>Response: A. Feedback collected, analysed and action taken and feedback available on website</p>	
File Description	Document
URL for feedback report	View Document

Criterion 2 - Teaching-learning and Evaluation

2.1 Student Enrollment and Profile

2.1.1 Average percentage of students from other States and Countries during the last five years

Response: 0.04

2.1.1.1 Number of students from other states and countries year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
1	0	4	0	0

File Description	Document
List of students (other states and countries)	View Document
Institutional data in prescribed format	View Document
Any additional information	View Document

2.1.2 Demand Ratio(Average of last five years)

Response: 0.65

2.1.2.1 Number of seats available year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
1218	1218	1218	1002	1002

File Description	Document
Demand Ratio (Average of Last five years)	View Document
Any additional information	View Document

2.1.3 Average percentage of seats filled against seats reserved for various categories as per applicable reservation policy during the last five years

Response: 66.37

2.1.3.1 Number of actual students admitted from the reserved categories year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
354	301	300	195	270

File Description	Document
Average percentage of seats filled against seats reserved	View Document
Any additional information	View Document

2.2 Catering to Student Diversity

2.2.1 The institution assesses the learning levels of the students, after admission and organises special programs for advanced learners and slow learners

Response:

Assessment of learning levels of students:

After the admission of the students into the institution they are categorized as advanced learners and slow learners based on their performance in internal and external examinations. This process is also adopted in the remaining semesters.

Special programs offered for slow learners:

Accordingly, the slow learners are given additional learning assignments and corresponding arrangements are made in the form of special classes.

Special Classes are being conducted regularly by the respective faculty members beyond their working hours. In view of the difficulties faced by the slow learners more emphasis has been given in the form of allotting more time for the concerned subjects.

A **bridge course** is being conducted in Mathematical Foundation and Essential of Programming after the regular class work for students.

Apart from the above, **remedial classes** are being conducted for the students who have backlogs.

Mentoring System:

To extend a proper guidance, students are assigned to a mentor. The main objective is to keep the track of the progress of the students and accordingly an academic and career guidance have been extended in the form of counseling. Parents are informed timely whenever the necessity arises such as attendance shortage, poor academic performance and psycho-social problems.

Special programs for the advanced learners:

Professional guidance has been extended through the Training and Placement cell and Entrepreneurship Development cell. Soft skill training programs and career counselling programs are arranged for advanced learners. In addition to the regular classroom teaching a prospective professional guidance has been provided by the faculty. The Training and Placement cell offers job awareness and training to the students. Special coaching classes are offered for GATE and other competitive exams for advanced learners. The institution encourages the meritorious students for participating in workshops and internship programs. In order to develop a research bent of mind among the students they are encouraged to publish research articles along with the faculty in journals.

Overall Development:

The college puts efforts to foster the overall development of the students. In addition to the above said academic programs, literary, cultural and sports activities are conducted to encourage leadership qualities, decision making ability, team spirit, precision, analytical capability, socio-psychological awareness etc., which makes an individual to emerge as an intellectually mature being.

The system developed by the college has been proved effective. Students are taking more interest in studies, publishing papers in journals, paper presentations, preparation of models, participation in extra and co-curricular activities. The academic result has also been well improved.

File Description	Document
link for additional information	View Document

2.2.2 Student - Full time teacher ratio

Response: 13.69

File Description	Document
Any additional information	View Document

2.2.3 Percentage of differently abled students (Divyangjan) on rolls

Response: 0.04

2.2.3.1 Number of differently abled students on rolls

Response: 1

File Description	Document
List of students(differently abled)	View Document
Institutional data in prescribed format	View Document
Any additional information	View Document

2.3 Teaching- Learning Process

2.3.1 Student centric methods, such as experiential learning, participative learning and problem solving methodologies are used for enhancing learning experiences

Response:

Student-centric methods:

Swarnandhra College of Engineering and Technology has adopted an unconventional teaching methodology to foster skill-based and outcome based education. The objective of the institution is to enhance learning by creating and supplying the students with adequate stimulus in order to mould them to be independent and grab the opportunity to participate in a student-centered learning. The institution adopts the student-centric methods in the following ways.

Experiential Learning:

Through experiential learning, the institution provides the following opportunities to the students to attain knowledge.

Laboratory:

The institution provides learning environment to the students in the laboratory to acquire practical knowledge. The faculty members encourage the students and give autonomy to discuss, revise, modify and access while doing experiments. In order to provide better learning experience students are encouraged to do experiments using virtual labs and add on experiments.

Mini Projects:

The faculty members encourage the students to prepare mini projects for developing their learning skills and innovative skills.

Internships:

The institution helps the students to go for internships which are helpful to get work experience. The students utilize these internships and develop their skills and get real life industrial life experience.

Case studies:

The faculty members encourage the students to observe case studies which are helpful to improve the skills of critical thinking in diverse fields of Management marketing and Finance. The students of the College participate actively and acquire practical knowledge.

Participatory Learning:

Participatory learning makes learning accessible and offers open participation and progression through different stages of achievement. The faculty members encourage the students to participate actively. It

further establishes a healthy learning environment for the students. The institute adopted the following methods to transform the learning environment.

Active learning:

The students are encouraged to participate actively in activities like think pair share, in class team and Jigsaw etc. These activities are helpful to the students to sharpen their critical thinking and problem solving activities.

Learning Management System (LMS):

The institution adopts the LMS. The faculty members utilize the ICT enabled teaching including E-learning resources like Canvass, Google class room which are helpful to share the material and encourage the students to participate in discussions and clarify their doubts.

Seminars:

The student seminars are organized in the college on subjects and contemporary topics to enrich their knowledge and enhance their learning experience.

Massive Open Online Courses (MOOCs):

The students are encouraged to enroll themselves MOOCs like NPTEL and have got the access to video lectures for effective teaching learning practice.

Problem- Based Learning:

The faculty members conduct tutorial classes to clarify the doubts of the students. They interact with the students in a friendly way and explain the difficult topics whenever required and improve their performance. Students are given problems from prescribed books and reference books as assignment in a group.

By following the student-centric learning methods in the institution, the students are encouraged towards performance based learning which is helpful to explore their inner spirit and to reach their goals.

File Description	Document
Link for Additional Information	View Document

2.3.2 Percentage of teachers using ICT for effective teaching with Learning Management Systems (LMS), E-learning resources etc.

Response: 100

2.3.2.1 Number of teachers using ICT

Response: 196	
File Description	Document
List of teachers (using ICT for teaching)	View Document
Provide link for webpage describing the " LMS/ Academic management system"	View Document

2.3.3 Ratio of students to mentor for academic and stress related issues	
Response: 15.98	
2.3.3.1 Number of mentors	
Response: 168	
File Description	Document
Any additional information	View Document

2.3.4 Preparation and adherence to Academic Calendar and Teaching plans by the institution	
Response:	
<p>The objective of Swarnandhra College of Engineering and Technology is to impart the best technical education to the students. To reach the objective, the institution follows a well –planned academic calendar. The academic calendar is prepared by College Academic Committee which includes the Principal, Head of departments and Controller of Examinations. The Academic Council reviews the calendar and recommendations for the revision if required to the academic calendar. The academic calendar provides adequate balance between academic and non-academic activities, teaching and examination schedule. The academic calendar shows the details about number of instruction weeks to be conducted for each semester, details of Mid Examinations, Preparation and End practical Examinations and End theory Examinations. The Program Coordinator of every department prepares department academic calendar in line with institution academic calendar which shows the details of academic events like workshops, conferences, visiting faculty lectures, seminars, industrial visits etc.</p> <p>According to Academic Calendar, every faculty member prepares a lesson plan and course information sheet. The lesson plan shows the details about the number of hours to be taken for each unit, course outcomes, delivering methods and reference text books. Lesson plans are made available in the college website at the beginning of the semester duly approved by the Head of the department and Principal. Internal Quality Assurance Cell (IQAC) verifies the implementation of lesson plan.</p>	
URL: View Link	

2.4 Teacher Profile and Quality

2.4.1 Average percentage of full time teachers against sanctioned posts during the last five years

Response: 91.1

File Description	Document
Year wise full time teachers and sanctioned posts for 5 years	View Document
List of the faculty members authenticated by the Head of HEI	View Document
Any additional information	View Document

2.4.2 Average percentage of full time teachers with Ph.D. during the last five years

Response: 8.5

2.4.2.1 Number of full time teachers with Ph.D. year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
20	15	16	17	16

File Description	Document
List of number of full time teachers with PhD and number of full time teachers for 5 years	View Document
Any additional information	View Document

2.4.3 Teaching experience per full time teacher in number of years

Response: 9.14

2.4.3.1 Total experience of full-time teachers

Response: 1791

File Description	Document
Any additional information	View Document

2.4.4 Percentage of full time teachers who received awards, recognition, fellowships at State, National, International level from Government, recognised bodies during the last five years

Response: 26.79

2.4.4.1 Number of full time teachers receiving awards from state /national /international level from Government recognised bodies year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
23	14	2	11	3

File Description	Document
Institutional data in prescribed format	View Document
e-copies of award letters (scanned or soft copy)	View Document

2.4.5 Average percentage of full time teachers from other States against sanctioned posts during the last five years**Response:** 6.04

2.4.5.1 Number of full time teachers from other states year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
17	14	14	12	9

File Description	Document
List of full time teachers from other state and state from which qualifying degree was obtained	View Document
Any additional information	View Document

2.5 Evaluation Process and Reforms

2.5.1 Average number of days from the date of last semester-end/ year- end examination till the declaration of results during the last five years**Response:** 45.8

2.5.1.1 Number of days from the date of last semester-end/ year- end examination till the declaration of results year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
23	29	41	50	86

File Description	Document
List of programs and date of last semester and date of declaration of result	View Document
Any additional information	View Document

2.5.2 Average percentage of student complaints/grievances about evaluation against total number appeared in the examinations during the last five years

Response: 0.07

2.5.2.1 Number of complaints/grievances about evaluation year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
7	2	0	0	0

2.5.3 Average percentage of applications for revaluation leading to change in marks during the last five years

Response: 34.63

2.5.3.1 Number of applications for revaluation leading to change in marks year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
189	313	363	512	616

File Description	Document
Any additional information	View Document

2.5.4 Positive impact of reforms on the examination procedures and processes including IT integration and continuous internal assessment on the examination management system

Response:

Rules and Regulations for Examinations and Evaluation System of U.G. and P.G. Programs Approved by Academic Council

Continuous Internal Examinations (CIE) for U.G and P.G

1. CIEs of theory and laboratory are conducted by the course teacher all through the semester as per the rules and regulations mentioned in academic regulations.
2. The marks obtained by the student in CIE displays in the respective departments for verification.

Semester End Examinations (SEE) for U.G and P.G

1. The external theory examinations are conducted at the end of the semester.
2. The external examiner sets the question paper as per the rules prescribed in academic regulations.
Duration of Semester End Examination is 180 minutes.

Appointment of Paper Setters and Examiners:

The question paper for SEE theory exam is set by the external faculty having minimum 8 years of experience as Associate Professor Level or above, who is teaching that course.

Selection of Question Paper:

On each day of examination, CCE and CE draw at random one of the sealed covers containing Question Papers (6 Sets) and open the required number of packets of question papers at least one hour before the start of examination.

Semester End Examination for Lab courses and Project Work

1. Semester End Examination for lab shall be conducted as per the examination schedule approved by EC and the guidelines given in academic regulations.
2. For external evaluation of UG project and PG project, external examiner from other college is mandatory.
3. HOD of concerned department shall send the required panels of external examiners for UG and PG projects to the exam cell through proper channel.
4. After the lab examination of the course is over, internal examiner along with the other examiner shall prepare the mark list, and submit it in sealed envelope to exam cell on the same day.

Supplementary Examinations:

Supplementary examinations are conducted as per the academic regulations

Central Assessment / Evaluation:

Assessment of answer books of semester end examination shall be done by external evaluators. Evaluation shall be done as per scheme of valuation prepared by paper by paper setter.

Semester End Examination Result:

Results are usually declared within three weeks from the date of the last examination.

Revaluation of Answer books:

Candidates can apply for revaluation of the answer scripts. Revaluation will be done only for Theory subjects.

Integration of IT in Examination System:

Entire Examination Process is automated starting from Registration to result declaration.

Positive Impacts of Reforms in Examination System:

1. Confidentiality in question paper selection and prevention of leakage.
2. Uniformity in the evaluation and fair justification to the students.
3. Eliminates the possibilities of unfair things during the examination.
4. Data processing is accurate and no human errors.
5. Reliable and no scope for manipulations.
6. Considerable improvement in the speed, reliability, efficiency, security, transparency, confidentiality and accuracy in the entire process of examination.
7. Access of result of their ward by parents.

File Description	Document
Link for Additional Information	View Document

2.5.5 Status of automation of Examination division along with approved Examination Manual

A. 100% automation of entire division & implementation of Examination Management System (EMS)

B. Only student registration, Hall ticket issue & Result Processing

C. Only student registration and result processing

D. Only result processing

Response: A. 100% automation of entire division & implementation of Examination Management System (EMS)

File Description	Document
Current manual of examination automation system and Annual reports of examination including the present status of automation	View Document
Current Manual of examination automation system	View Document
Annual reports of examination including the present status of automation	View Document

2.6 Student Performance and Learning Outcomes

2.6.1 Program outcomes, program specific outcomes and course outcomes for all programs offered by the Institution are stated and displayed on website and communicated to teachers and students

Response:

The Program Outcomes (POs) are defined by the statutory body (NBA) to meet the global standards of education. Twelve POs are defined for the UG & PG programs. Two or three Program Specific Outcomes (PSOs) are identified based on the strengths and expertise of the department.

A Course Outcome (CO) is the expectation of the performance by the learner in a course. The course outcomes are mapped to the program outcomes and program specific outcomes.

The Course outcomes are prepared by concerned faculty for their course using Blooms Taxonomy Levels (BTLs) with the guidance of Course coordinator and ratified by the module coordinator.

The course outcomes are identified as per the content and intent of the course or topics. The course outcomes are planned and designed so as to cover the entire syllabus. The course outcomes approved by the Board of Studies.

The POs, PSOs and COs are published in the Curriculum book and departmental website. They are made accessible to all the stakeholders of the program through website.

Mechanism of Communication

Lesson plans and Course Information Sheets are prepared for every course by the respective faculty and circulated to students. Lesson plan contains COs and the topic in the course to which each CO is mapped to. POs are listed in the Course Information Sheet. The Course Information Sheet also contains the CO-PO mapping matrix. Handouts are circulated also contain respective COs. Even in internal Examinations, it has been made a practice to indicate the Bloom's Taxonomy Level of each question and the CO to which the question is mapped. This is done so as to help in CO attainment computation.

File Description	Document
Link for Additional Information	View Document

2.6.2 Attainment of program outcomes, program specific outcomes and course outcomes are evaluated by the institution

Response:

RESPONSE:

Course Outcome(CO) Attainment :

Step I:

COs for the respective subject are defined by course coordinator four to six COs are defined per course. Knowledge Level is also specified against respective CO.

Step II:

The defined COs are then mapped to Program Outcomes (POs) and Program Specific Outcomes (PSOs). This mapping is performed by course coordinator. Mapping is done on four levels 0,1, 2 & 3 with 3 being excellent and 0 being poor.

Step III:

Course attainment is computed using a predefined rubric. The assessment process is based on direct and indirect methods. Direct method involves three assessment tools, namely, Internal Examinations, Assignments, End Examinations. Indirect Assessment involves one assessment tool, which is Course End Survey. Rubric defines the levels in each tool. For instance, considering internal examination, the attainment per student per CO is defined based on the percentage of marks secured by that student for that CO. If the student's secured percentage is greater than or equal to 60% for that respective CO, his/her level is 3, else if the same is greater than or equal to 50% and less than 60%, then the level is 2, else if the secured percentage is greater than or equal to 40% and less than 50%, the level is 1, else the level is 0. The attainment levels are defined similarly for other assessment tools.

Net CO attainment per student is computed as the sum of 40% of attainment in Internal Examination, 20% in assignment, 10% of Course End Survey and 30% of his/her attainment in University examination. Class attainment for each CO is computed by averaging the individual student attainments for that CO. Course Attainment is computed by averaging CO attainments for total class.

PO & PSO Attainment

PO & PSO attainment is computed using two methods: (1) Direct Method and (2) Indirect Method.

In Direct Method, PO & PSO attainment of each course is used. PO attainment for each course is computed by normalizing the course attainment for that PO. All the PO attainment for each course are documented. Average of all the contributing courses is calculated.

In indirect method, program exit survey is performed.

Final PO attainment is computed as 80% of direct method and 20% of indirect method.

File Description	Document
Any additional information	View Document
Link for Additional Information	View Document

2.6.3 Average pass percentage of Students

Response: 81.68

2.6.3.1 Total number of final year students who passed the examination conducted by Institution.

Response: 419

2.6.3.2 Total number of final year students who appeared for the examination conducted by the institution

Response: 513

File Description	Document
List of programs and number of students passed and appeared in the final year examination	View Document
Any additional information	View Document
Link for annual report	View Document

2.7 Student Satisfaction Survey

2.7.1 Online student satisfaction survey regarding teaching learning process

Response:

Criterion 3 - Research, Innovations and Extension

3.1 Promotion of Research and Facilities

3.1.1 The institution has a well defined policy for promotion of research and the same is uploaded on the institutional website

Response: Yes

File Description	Document
Minutes of the Governing Council/ Syndicate/Board of Management related to research promotion policy adoption	View Document
URL of Policy document on promotion of research uploaded on website	View Document

3.1.2 The institution provides seed money to its teachers for research (average per year)

Response: 2.1

3.1.2.1 The amount of seed money provided by institution to its faculty year-wise during the last five years(INR in Lakhs)

2017-18	2016-17	2015-16	2014-15	2013-14
2.50	2.00	2.00	2.50	1.50

File Description	Document
Minutes of the relevant bodies of the Institution	View Document
List of teachers receiving grant and details of grant received	View Document
Budget and expenditure statements signed by the Finance Officer indicating seed money provided and utilized	View Document

3.1.3 Number of teachers awarded international fellowship for advanced studies/ research during the last five years

Response: 3

3.1.3.1 The number of teachers awarded international fellowship for advanced studies / research year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
0	1	1	0	1

File Description	Document
List of teachers and their international fellowship details	View Document
e-copies of the award letters of the teachers.	View Document

3.1.4 Institution has the following facilities

1. Central Instrumentation Centre
2. Animal House/Green House / Museum
3. Central Fabrication facility
4. Media laboratory/Business Lab/Studios
5. Research / Statistical Databases

A. Any four facilities exist

B. Three of the facilities exist

C. Two of the facilities exist

D. One of the facilities exist

Response: A. Any four facilities exist

File Description	Document
Institutional data in prescribed format	View Document

3.2 Resource Mobilization for Research

3.2.1 Grants for research projects sponsored by the government/non-government sources such as industry, corporate houses, international bodies, endowments, Chairs in the institution during the last five years(INR in Lakhs)

Response: 74.26

3.2.1.1 Total Grants for research projects sponsored by the government/non-government sources such as industry, corporate houses, international bodies, endowments, Chairs in the institution year-wise during the last five years(INR in Lakhs)

2017-18	2016-17	2015-16	2014-15	2013-14
0	0	14.30	11.70	48.26

File Description	Document
List of project and grant details	View Document
e-copies of the grant award letters for research projects sponsored by non-government	View Document

3.2.2 Number of research centres recognised by University and National/ International Bodies

Response: 3

3.2.2.1 Number of research centres recognised by University and National/ International Bodies

Response: 3

File Description	Document
Names of research centres	View Document
Any additional information	View Document

3.2.3 Percentage of teachers recognised as research guides

Response: 2.04

3.2.3.1 Number of teachers recognised as research guides

Response: 4

3.2.3.2 Number of full time teachers worked in the institution during the last 5 years

Response: 196

File Description	Document
Details of teachers recognized as research guide	View Document
Any additional information	View Document

3.2.4 Number of research projects per teacher funded, by government and non-government agencies, during the last five year

Response: 0.15

3.2.4.1 Number of research projects funded by government and non-government agencies during the last five years

Response: 6

File Description	Document
Supporting document from Funding Agency	View Document
link to funding agency website	View Document

3.3 Innovation Ecosystem

3.3.1 Institution has created an eco system for innovations including Incubation centre and other initiatives for creation and transfer of knowledge

Response:

The institution promotes innovative incubation centres in the campus to encourage students towards innovative ideas. It aims to be a pivot for novel ventures in the domains of science and technology, and education. To enhance the learning process towards an ingenious way of education, institution has conducted various workshops and seminars through incubation centre. In order to reinforce entrepreneurship among the student community an incubation centre has been established with the support of Andhra Pradesh State Skill Development Corporation (APSSDC). The various programs organized by the institution through incubation centre are as follows:

- Embedded with IoT
- Web development powered by Python
- Mobile App development
- Google Android development

Further the centre, arranging lectures, seminars, workshops and value added programs to the students with the necessary professional skills to meet the global standards. The institution also recognizes the students who come up with an innovative idea and make them job ready, the institution offers foreign university certification courses for a subsidized fee to the students through this Centre.

File Description	Document
Any additional information	View Document
link for additional information	View Document

3.3.2 Number of workshops/seminars conducted on Intellectual Property Rights (IPR) and Industry - Academia Innovative practices during the last five years

Response: 9

3.3.2.1 Total number of workshops/seminars conducted on Intellectual Property Rights (IPR) and Industry-Academia Innovative practices year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
2	2	2	2	1

File Description	Document
Report of the event	View Document
List of workshops/seminars during the last 5 years	View Document
Any additional information	View Document

3.3.3 Number of awards for innovation won by institution/ teachers/ research scholars/students during the last five years

Response: 50

3.3.3.1 Total number of awards for innovation won by institution/teachers/research scholars/students year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
21	16	4	4	5

File Description	Document
List of innovation and award details	View Document
e- copies of award letters	View Document

3.3.4 Number of start-ups incubated on campus during the last five years

Response: 0

3.3.4.1 Total number of start-ups incubated on campus year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
0	0	0	0	0

File Description	Document
List of startups details like name of startup, nature, year of commencement etc	View Document

3.4 Research Publications and Awards

3.4.1 The institution has a stated Code of Ethics to check malpractices and plagiarism in Research	
Response: Yes	
File Description	Document
Institutional data in prescribed format	View Document

3.4.2 The institution provides incentives to teachers who receive state, national and international recognition/awards	
Response: Yes	
File Description	Document
e- copies of the letters of awards	View Document

3.4.3 Number of Patents published/awarded during the last five years				
Response: 0				
3.4.3.1 Total number of Patents published/awarded year-wise during the last five years				
2017-18	2016-17	2015-16	2014-15	2013-14
0	0	0	0	0
File Description	Document			
List of patents and year it was awarded	View Document			

3.4.4 Number of Ph.D.s awarded per teacher during the last five years	
Response: 0.25	
3.4.4.1 How many Ph.Ds are awarded within last 5 years	
Response: 1	

3.4.4.2 Total number of teachers recognised as guides during the last 5 years

Response: 4

File Description	Document
List of PhD scholars and their details like name of the guide , title of thesis, year of award etc	View Document
URL to the research page on HEI web site	View Document

3.4.5 Number of research papers per teacher in the Journals notified on UGC website during the last five years

Response: 0.39

3.4.5.1 Number of research papers in the Journals notified on UGC website during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
44	8	12	10	4

File Description	Document
List of research papers by title, author, department, name and year of publication	View Document

3.4.6 Number of books and chapters in edited volumes / books published, and papers in national/international conference-proceedings per teacher during the last five years

Response: 0.55

3.4.6.1 Total number of books and chapters in edited volumes / books published, and papers in national/international conference-proceedings year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
30	18	25	13	22

File Description	Document
List books and chapters in edited volumes / books published	View Document
Any additional information	View Document

3.4.7 Bibliometrics of the publications during the last five years based on average citation index in Scopus/ Web of Science or PubMed/ Indian Citation Index**Response:**

File Description	Document
BiblioMetrics of the publications during the last five years	View Document

3.4.8 Bibliometrics of the publications during the last five years based on Scopus/ Web of Science - h-index of the Institution**Response:**

File Description	Document
Bibliometrics of publications based on Scopus/ Web of Science - h-index of the Institution	View Document

3.5 Consultancy**3.5.1 Institution has a policy on consultancy including revenue sharing between the institution and the individual****Response:** Yes

File Description	Document
Soft copy of the Consultancy Policy	View Document
URL of the consultancy policy document	View Document

3.5.2 Revenue generated from consultancy during the last five years**Response:** 0.8**3.5.2.1 Total amount generated from consultancy year-wise during the last five years (INR in Lakhs)**

2017-18	2016-17	2015-16	2014-15	2013-14
0	0.30	0.50	0	0

File Description	Document
List of consultants and revenue generated by them	View Document
Any additional information	View Document

3.5.3 Revenue generated from corporate training by the institution during the last five years

Response: 0

3.5.3.1 Total amount generated from corporate training by the institution year-wise during the last five years (INR in Lakhs)

2017-18	2016-17	2015-16	2014-15	2013-14
0	0	0	0	0

File Description	Document
List of teacher consultants and revenue generated by them	View Document

3.6 Extension Activities

3.6.1 Extension activities in the neighbourhood community in terms of impact and sensitising students to social issues and holistic development during the last five years

Response:

Swarnandhra College of Engineering and Technology endeavoured to provoke the social conscience among the students besides imparting a quality education. The institution has aimed at developing the personality of the students through community service. It creates an opportunity for the students to realize the realities of life for eliciting a change in their social perception.

- NSS volunteers of SCET have worked in different rural areas by adopting a few villages and schools. They extend their services by conducting health related programs such as eye & dental checkup, blood testing & Donation etc. As a part of this special camping program such as '10K Run, Healthy Youth for Healthy India' etc. was organized. It created an impact on their perception towards the troubles facing by the people from rural areas.
- The NSS undertook various programs like Aids Day, Voters Day, Rally for Rivers, Road-Safety, Corruptionless Election, etc. in the adopted villages and schools to bring awareness on the burning social evils. Thus the students themselves became aware of social evils.
- Awareness programs, related to the severe economic crunch in India, to make aware of the Indian Economy such as The Usage of Indian Products, Cashless Transaction, Digital India, Digital Literacy at schools, Fund Raising programme for Blind & Physically Challenged Persons are organized. It left an impact on the villagers to go cashless hustle free transactions.

- The institution celebrates Sankranthi Sambaralu to inculcate a taste for traditional ways of living among students.
- The institution involves the students Swachh Bharat, Mass plantation, Conservation of the water, programme against the usage of plastic etc., to make them feel responsible for the society. It has an effect on the citizens to maintain cleanliness and to curb pollution.
- The institution attempted to make students sensible towards the societal issues by celebrating different International & National days such as World Water Day, International Women's Day, Yoga Day, Aids Day etc. Apart from these birthdays of the eminent personalities such as Teachers' Day, Engineers' Day, Mathematics Day etc. were also celebrated.
- Awareness activities like Women Empowerment, Traffic Safety, drug-abuse, legal literacy etc. conducted by the institution left an impact with a sound knowledge in traffic rules and affect of drugs.

The institution has adopted different villages under the NSS campaign to enhance the standard of their living through a couple of awareness programs. The people from those villages appreciated and expressed their happiness for leading a life of dignity. Blood donation camps were organized on different occasions, to donate blood to the District General Hospital, Eluru and Palakol Voluntary blood bank, to use in emergency situations. The College NSS unit received appreciations from the concerned organizations.

Student of the institution received "Best Ambassador Award" from the district Collector S. A. Jain on Republic Day 2014 for his active participation in the voter registration campaign. One of NSS volunteers received "Best Voluntary Award" from the Endowment Minister of AP for the service rendered during Godavari Pushkaralu held from 12th to 23rd July 2015.

File Description	Document
link for additional information	View Document

3.6.2 Number of awards and recognition received for extension activities from Government /recognised bodies during the last five years

Response: 37

3.6.2.1 Total number of awards and recognition received for extension activities from Government /recognised bodies year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
18	13	2	2	2

File Description	Document
Number of awards for extension activities in last 5 years	View Document
e-copy of the award letters	View Document

3.6.3 Number of extension and outreach Programs conducted in collaboration with Industry, Community and Non- Government Organizations through NSS/ NCC/ Red Cross/ YRC etc., during the last five years

Response: 95

3.6.3.1 Number of extension and outreach Programs conducted in collaboration with Industry, Community and Non- Government Organizations through NSS/ NCC/ Red Cross/ YRC etc., year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
22	22	14	19	18

File Description	Document
Reports of the event organized	View Document
Number of extension and outreach programs conducted with industry,community etc for the last five years	View Document

3.6.4 Average percentage of students participating in extension activities with Government Organisations, Non-Government Organisations and programs such as Swachh Bharat, Aids Awareness, Gender Issue, etc. during the last five years

Response: 51.89

3.6.4.1 Total number of students participating in extension activities with Government Organisations, Non-Government Organisations and programs such as Swachh Bharat, Aids Awareness, Gender Issue, etc. year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
1675	1215	1100	1490	1213

File Description	Document
Report of the event	View Document
Average percentage of students participating in extension activities with Government or NGO etc	View Document

3.7 Collaboration

3.7.1 Number of Collaborative activities for research, faculty exchange, student exchange per year				
Response: 1.8				
3.7.1.1 Total number of Collaborative activities for research, faculty exchange, student exchange year-wise during the last five years				
2017-18	2016-17	2015-16	2014-15	2013-14
0	1	0	2	6
File Description	Document			
Number of Collaborative activities for research, faculty etc	View Document			
Copies of collaboration	View Document			

3.7.2 Number of linkages with institutions/industries for internship, on-the-job training, project work, sharing of research facilities etc. during the last five years				
Response: 30				
3.7.2.1 Number of linkages for faculty exchange, student exchange, internship, field trip, on-the-job training, research, etc year-wise during the last five years				
2017-18	2016-17	2015-16	2014-15	2013-14
14	6	7	1	2
File Description	Document			
e-copies of linkage related Document	View Document			
Details of linkages with institutions/industries for internship	View Document			

3.7.3 Number of functional MoUs with institutions of National/ International importance, Other Institutions, Industries, Corporate houses etc., during the last five years (only functional MoUs with ongoing activities to be considered)

Response: 20

3.7.3.1 Number of functional MoUs with institutions of national, international importance, other universities, industries, corporate houses etc. year-wise during the last five years (only functional MoUs with ongoing activities to be considered)

2017-18	2016-17	2015-16	2014-15	2013-14
6	2	2	3	7

File Description	Document
e-copies of the MoUs with institution/ industry/ corporate house	View Document
Details of functional MoUs with institutions of national, international importance, other universities etc during the last five years	View Document

Criterion 4 - Infrastructure and Learning Resources

4.1 Physical Facilities

4.1.1 The institution has adequate facilities for teaching - learning. viz., classrooms, laboratories, computing equipment, etc

Response:

Swarnandhra College of Engineering & Technology (SCET) has a policy to create required infrastructure for the existing academic programs and administrative functions. The College possesses a well-maintained campus spread over 25.06 acres of serene green land. The existing infrastructural facilities are utilized for conducting theory and practical classes. There are altogether 20 buildings. The college has 70 well furnished classrooms, three AC Seminar Halls, one AC Conference Hall, 84 Well-equipped Laboratories, four Drawing Halls, two English communication skills labs, Six Research Laboratories, nine e-class rooms, one Smart Class room, 36 LCD Projectors, Central Library along with Departmental Libraries, Digital Library, Internet Center, Student Rest Rooms, Staff Rooms with Computers, Laptops, ICT Web facilities, Intercom, Campus under CC TV surveillance, internet with Wi-Fi Connectivity and uninterrupted power supply facility.

The institution buildings and other infrastructure are well maintained under the supervision of the Principal with the assistance of the Management and Staff. The college has academic infrastructural facilities in compliance with AICTE norms. The Central library is equipped with facilities like reprography, computers, printers and Internet. It has a separate digital library. It is fully automated with EZ library software. The Central library has a collection of 6,249 titles and 41,110 volumes. It subscribes 125 National and 220 International journals. Digital library provides online material to staff and students throughout the year.

The College has adequate computer facilities and other learning resources, which are extensively used for academic and administrative purposes. It has twelve computer laboratories for the students with 1000 computers and nine servers for their maintenance. In the computer center, 150 computers have been earmarked exclusively for conducting online examinations, internet facility along with digital library. All the computers are interconnected with Local Area Network (LAN) in respective labs. There are three full-time computer networking centers and a system administrator along with his team for the maintenance of all the computers in the college.

All the departments of the college are fully equipped with latest technology. Every department faculty members have their own computing facility with latest softwares to meet their requirements of major/mini projects and research activities. The college has established Advanced Research Laboratory facilities in specific areas to inculcate research habits among the student fraternity. The examination section has sufficient computers and high-speed printers to cater to the requirement of Electronic Distribution of Examination Papers (EDEP) facility for conducting examinations in the college.

File Description	Document
Link for Additional Information	View Document

4.1.2 The institution has adequate facilities for sports, games (indoor, outdoor),gymnasium, yoga centre etc., and cultural activities

Response:

OUTDOOR COURTS:

The institution has a big playground consists of excellent outdoor courts which are useful to play sports and games, viz., cricket, football, volley ball and athletics etc. Students who are interested in these sports and games are given special training by trainers along with the Physical Education Department staff to elicit and develop the skills of students.

Different sports activities have been performed at institution level, inter-collegiate, inter-university, inter-state and national level. Many students have participated in different events at inter-university. Many of them received awards in different events.

S.No	Description of Sport/Game	Year of Establishment	Total Area in Sq. Mtrs.	Utilization by the Students Per day
1	Athletics Non-standard Track 200 (mtrs)	2007	3200	15
2	High jump and long jump Pit	2003	540	6
3	Cricket	2003	6400	40
4	Volley Ball Court	2003	1265	30
5	Throw Ball Court	2007	510	20
6	Basket Ball Court	2007	1760	20
7	Tennikoit Court	2005	270	15
8	Kabaddi Court	2005	676	30
9	Badminton Court (Boys)	2007	405	12
10	Badminton Court (Girls)	2007	567	10

INDOOR COURTS:

The institution provides the required facilities to the students and faculty in the indoor courts for playing Chess, Carroms and Table tennis.

S. No	Description of Sport/Game	Year of Establishment	Total Area in Sq. Mtrs.	Utilization by the Students per day
1	Chess	2007	24	10
2	Carroms	2007	16	24
3	Table Tennis	2007	77	16

YOGA:

The institution often conducts Yoga Classes to the students and the staff. It also observes International Yoga Day under the guidance of eminent persons in Yoga. The Seminar hall accommodates 200 students for doing Yoga. Mats are also provided to the students and staff. The Seminar hall is equipped with AC, Audio, Visual and PA System.

GYM FACILITIES:

The institution has twelve station Gymnasium along with all facilities and equipment to the students and the staff. It also has steam bath facility. Boys and Girls are allowed to the Gym on separate days and timings.

S. No.	Description of Equipment	Year of Establishment	Total Area in Sq.Mtrs.	No of students participating per day
1	Twister Stand	2007	4	50
2	Walkers	2007	9	60
3	Pushups Stand	2007	4	20
4	Cycles	2007	12	30
5	Abs Pro	2007	4	10
6	Weight Lifting Stands and Dumbles	2007	15	55
7	Vibration Machine	2007	4	25
8	Steam Bath	2007	15	6
9	Twelve Station Multi Gymnasium	2007	40	60
10	Treadmill	2007	9	40

CULTURAL ACTIVITIES:

The institution has various platforms in the fields of co-curricular and extra-curricular activities for the overall development of the students. Swarnandhra celebrates Sankranti Sambaralu (Pongal Celebrations) in the campus. Many clubs such as Vivekananda study circle, Bhuvanavijayam, Painting & Photography club, Models & Prototype club, Nature club and ALECS club are initiated in the campus to energize the passion for the art and culture in students. The institution has Open Auditorium, spacious seminar halls and capacious open place for conducting the cultural activities.

File Description	Document
link for additional information	View Document

4.1.3 Percentage of classrooms and seminar halls with ICT - enabled facilities such as smart class, LMS, etc**Response:** 56.16

4.1.3.1 Number of classrooms and seminar halls with ICT facilities

Response: 41

File Description	Document
Number of classrooms and seminar halls with ICT enabled facilities	View Document
Link for additional information which is optional	View Document

4.1.4 Average percentage of budget allocation, excluding salary for infrastructure augmentation during the last five years.**Response:** 19.59

4.1.4.1 Budget allocation for infrastructure augmentation, excluding salary year-wise during the last five years (INR in Lakhs)

2017-18	2016-17	2015-16	2014-15	2013-14
194.53	59.16	35.00	319.50	356.24

File Description	Document
Audited utilization statements	View Document

4.2 Library as a Learning Resource**4.2.1 Library is automated using Integrated Library Management System (ILMS)****Response:**

Knowledge and skills are the traditional outcomes of any mainstream of Engineering. The institution provides all facilities to the students to enhance their knowledge and skills through central library, which is one of the sources for the students to update their knowledge and has many features which are necessary for the students as well as faculty members. It was fully automated with Integrated Library Management System(ILMS) software EZ library in 2006.

EZ library server configurations are as follows:

- Processor Intel (R) Xenon(P) X 3430,
- Hard disk capacity 250 GB,
- Speed 2.4 GHz,
- RAM capacity 8GB
- Server name IBM X 3200 M3
- Version V 10.0.9.19-EZ library.

The central library consists of features like ILMS which is very useful to the students as well as faculty members. With the introduction of Integrated Library Management System software EZ library in the College Central Library, one can easily access the account information like books taken and due to return through student and staff members database, which is linked with ILMS software. The librarian enters number of books available and names of the books, authors name, purchase details, issue books details, reference books available in data base. Every book is given a barcode with number and it is linked with College ILMS system. The College Central Library has Online Public Access Cataloguing System (OPAC) which is helpful to search the book availability and its location in the library. It is helpful to the students and staff members to avoid the time wastage. The ILMS system in library provides better and efficient services to the students and faculty members.

The central library also includes digital library with 20 computer terminals with 20 Mbps internet facility for the students and faculty members to access online journals and NPTEL lectures. The digital library is a member of DELNET which is very useful to the students. Researchers and faculty members utilize all the facilities in the central library.

File Description	Document
Any additional information	View Document
link for additional information	View Document

4.2.2 Collection of rare books, manuscripts, special reports or any other knowledge resource for library enrichment

Response:

The central library of the institution has a wide variety of rare books ranging from religious to science and technology. The significant feature of the library is evident by its broad variety of collection of rare books being procured for the outreach of the students. The collections of rare books 80 in number are also available as e-book collection which constitutes to be a great repository of the institution. The collection comprises a varied variety of topics which are enlisted below;

1] General Books: The library has a reserve of general books on Indian Railways, civilization, economy, industry, archaeology, arts, governance etc., which kindle an interest among the students to know about their country. In a way, it also motivates the students folk to know about other countries. These general books can be an aid for the students who aspire to attend the competitive exams in future.

2] Books on History: There is a collection of books related to Indian history which cover the topics on the

history of India and Asia. Books in this category create an opportunity for the students of science and technology to become aware of their own history. These collection of books can be an aid to the students who opt for history in civil service examinations.

3] Devotional Books: Books on religion, culture and temples are also included in the college. Those are helpful in a way to extend a spiritual guidance to the students in the global world. These can be a support to impart an ethical education and can be a part of counseling for the students in the busy world. This section covers the topics on hymns of saints, life of Buddha and Mahavira, The Setu and Rameswara etc.

4] Books on Ancient Science: A stockpile of books on Indian ancient science are available in the library. They are on Vedic grammar, ancient science, ancient Hindu culture, Indian astronomy etc. These books constitute a very rare collection and provides the student folk with the knowledge of their ancient India. In a way this collection can help to develop a research bent of mind among the students. The science followed by the ancient Indians can make the students to come up or merge it with the innovative scientific approach.

5] Books on Yoga and Meditation: The collection of books on yoga and meditation helps the students to maintain physical and psychological fitness by providing tips on yoga and meditation. Yoga and meditation has been a rescue factor for the present day youth to overcome stress in education and in their lifestyle. It acts as a factor that boosts their strengths to achieve success in professional life.

File Description	Document
Any additional information	View Document
link for additional information	View Document

4.2.3 Does the institution have the following

- 1.e-journals
- 2.e-ShodhSindhu
- 3.Shodhganga Membership
- 4.e-books
- 5.Databases

Any 4 of the above

Any 3 of the above

Any 2 of the above

Any 1 of the above

Response: Any 3 of the above

File Description	Document
Details of subscriptions like e-journals,e-ShodhSindhu,Shodhganga Membership etc	View Document

4.2.4 Average annual expenditure for purchase of books and journals during the last five years (INR in Lakhs)

Response: 5.98

4.2.4.1 Annual expenditure for purchase of books and journals year-wise during the last five years (INR in Lakhs)

2017-18	2016-17	2015-16	2014-15	2013-14
3.3	8.97	3.00	3.99	10.62

File Description	Document
Details of annual expenditure for purchase of books and journals during the last five years	View Document
Audited statements of accounts	View Document
Any additional information	View Document

4.2.5 Availability of remote access to e-resources of the library

Response: Yes

File Description	Document
Any additional information	View Document

4.2.6 Percentage per day usage of library by teachers and students

Response: 7.12

4.2.6.1 Number of teachers and students using library per day over last one year

Response: 205

File Description	Document
Any additional information	View Document

4.3 IT Infrastructure

4.3.1 Institution frequently updates its IT facilities including Wi-Fi

Response:

Swarnandhra College of Engineering and Technology has a policy to establish and update IT facilities to promote ICT activities in teaching-learning process and extensive mobility for Research.

The institution has a total of 1000 computer systems with different configurations and 3 servers. A centralized server is available and operational 24x7 round the clock to provide internet services for institutional activities. Internet facility with a bandwidth of 140 Mbps is available.

The infrastructure in the campus provides a wide range of web services. It provides a free access to the students and staff to work on their academics and research projects.

Some of the facilities are:

1. All the departments are equipped with LCD projectors, printers, scanners and upgraded with latest software tools to promote ICT infrastructure.
2. The institution administrative block, departments and laboratories are connected with Local Area Network (LAN) and Wi-Fi facility.
3. Institution has IT infrastructure enabled seminar halls and each department has separate e - classroom to foster a better teaching learning experience.

File Description	Document
Any additional information	View Document
link for additional information	View Document

4.3.2 Student - Computer ratio

Response: 2.68

File Description	Document
Any additional information	View Document

4.3.3 Available bandwidth of internet connection in the Institution (Lease line) ?50 MBPS

35 MBPS - 50 MBPS

20 MBPS - 35 MBPS

5 MBPS - 20 MBPS

Response: 750 MBPS

File Description	Document
Any additional information	View Document

4.3.4 Facilities for e-content development such as Media Centre, Recording facility, Lecture Capturing System (LCS)

Response: Yes

File Description	Document
Facilities for e-content development such as Media Centre, Recording facility,LCS	View Document
Any additional information	View Document
Link to photographs	View Document

4.4 Maintenance of Campus Infrastructure

4.4.1 Average Expenditure incurred on maintenance of physical facilities and academic support facilities excluding salary component, as a percentage during the last five years

Response: 39.73

4.4.1.1 Expenditure incurred on maintenance of physical facilities and academic support facilities excluding salary component year-wise during the last five years (INR in Lakhs)

2017-18	2016-17	2015-16	2014-15	2013-14
486.825	419.035	389.614	366.325	249.095

File Description	Document
Details about assigned budget and expenditure on physical facilities and academic facilities	View Document
Audited statements of accounts.	View Document

4.4.2 There are established systems and procedures for maintaining and utilizing physical, academic and support facilities - laboratory, library, sports complex, computers, classrooms etc.

Response:

Swarnandhra College of Engineering and Technology (SCET) has Maintenance Management System is subdivided as Physical, Academic and Support facilities.

Institution made a provision in the budget for maintenance of its physical and academic support facilities. Routine maintenance of the infrastructure facilities are carried out by the supervision of the Estate Officer and Superintendent.

Class Rooms:

- Use of non-dust chalks.
- Daily sweeping of class rooms
- Wet cloth cleaning of benches (at least twice a week).
- Black board cleaning (with wet cloth daily).
- Common dust bins are provided at various locations in each floor and in every class room.

Laboratories - Maintenance & Utilization:

Preventive maintenance plan is followed in laboratories. Periodical checkups and calibration of equipment in all laboratories are often takes place. The repairs and servicing of the equipment is done by the Lab technicians and concerned technical persons under the supervision of lab in-charge. Stock verification is conducted in all laboratories every year. Provision for maintenance is provided in Annual budget of the institution.

Library:

The institution has a central library along with departmental libraries. The maintenance of library includes shelving, shifting, sorting, binding, searching for missing items, preservation and making sure the stacks are presentable and organized. Verification of books and replacing/ordering new books are done once in every six months.

Sports Activities:

Students are well encouraged to participate in extra curricular activities, sports and games. Institution has excellent infrastructure for various sports and games, viz., Cricket, Football, Table Tennis, Badminton, Shuttle, Volley Ball, Athletics etc. The sports and games equipment is monitored by physical director. A proper record is maintained in the department for physical count of sports material for the future use.

Hostels:

Institution has separate hostel facility for boys and girls along with gymnasium. The superintendent and hostel wardens look after the maintenance of the hostels and mess assuring the quality and hygiene in the surroundings. Systematic and well organized management principles are applied for the students to

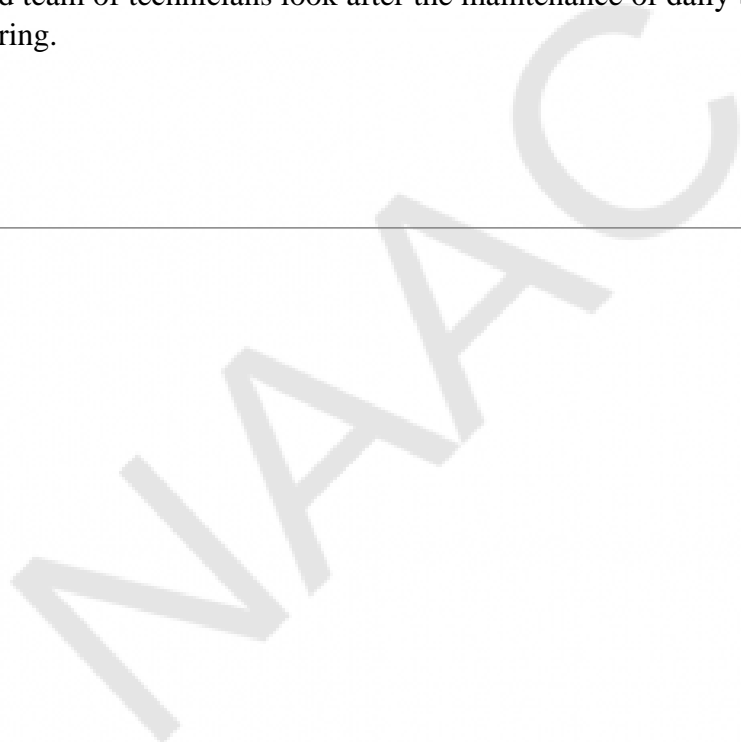
maintain time, discipline in the hostels.

Computer Systems Maintenance:

There is a group of system maintenance committee, headed by a senior faculty, with a mandate to recommend to the management the need for upgrading existing machines, replacing the obsolete ones with new ones, maintenance of the networking system, purchase of accessories such as switches, routers, printers etc.

Internet and Wi-Fi:

System administrator and team of technicians look after the maintenance of daily band width, usage, band width allocation and sharing.



Criterion 5 - Student Support and Progression

5.1 Student Support

5.1.1 Average percentage of students benefited by scholarships and freeships provided by the Government during the last five years

Response: 74.62

5.1.1.1 Number of students benefited by scholarships and freeships provided by the Government year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
2118	1959	1859	1768	1900

File Description	Document
Upload self attested letter with the list of students sanctioned scholarships	View Document
Average percentage of students benefited by scholarships and freeships provided by the Government during the last five years	View Document
Any additional information	View Document

5.1.2 Average percentage of students benefited by scholarships, freeships, etc. provided by the institution besides government schemes during the last five years

Response: 5.1

5.1.2.1 Total number of students benefited by scholarships, freeships, etc provided by the institution besides government schemes year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
81	115	207	118	128

File Description	Document
Any additional information	View Document

5.1.3 Number of capability enhancement and development schemes –

- 1.Guidance for competitive examinations
- 2.Career Counselling
- 3.Soft skill development
- 4.Remedial coaching
- 5.Language lab
- 6.Bridge courses
- 7.Yoga and Meditation
- 8.Personal Counselling

7 or more of the above

Any 6 of the above

Any 5 of the above

Any 4 of the above

Response: 7 or more of the above

File Description	Document
Details of capability enhancement and development schemes	View Document
Any additional information	View Document
Link to Institutional website	View Document

5.1.4 Average percentage of students benefited by guidance for competitive examinations and career counselling offered by the institution during the last five years

Response: 4.3

5.1.4.1 Number of students benefited by guidance for competitive examinations and career counselling offered by the institution year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
115	95	140	92	110

File Description	Document
Number of students benefited by guidance for competitive examinations and career counselling during the last five years	View Document
Any additional information	View Document

5.1.5 Average percentage of students benefited by Vocational Education and Training (VET) during the last five years**Response:** 5.17

5.1.5.1 Number of students attending VET year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
694	0	0	0	0

File Description	Document
Details of of students benefited by Vocational Education and Training (VET)	View Document
Any additional information	View Document

5.1.6 The institution has a transparent mechanism for timely redressal of student grievances including sexual harassment and ragging cases**Response:** Yes

File Description	Document
Minutes of the meetings of student redressal committee, prevention of sexual harassment committee and Anti Ragging committee	View Document
Details of student grievances including sexual harassment and ragging cases	View Document

5.2 Student Progression**5.2.1 Average percentage of placement of outgoing students during the last five years****Response:** 50.05

5.2.1.1 Number of outgoing students placed year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
258	249	330	265	209

File Description	Document
Self attested list of students placed	View Document
Details of student placement during the last five years	View Document
Any additional information	View Document

5.2.2 Percentage of student progression to higher education (previous graduating batch)

Response: 5.73

5.2.2.1 Number of outgoing students progressing to higher education

Response: 24

File Description	Document
Upload supporting data for student/alumni	View Document
Details of student progression to higher education	View Document
Any additional information	View Document

5.2.3 Average percentage of students qualifying in State/ National/ International level examinations during the last five years (eg: NET/ SLET/ GATE/ GMAT/ CAT/ GRE/ TOEFL/ Civil Services/State government examinations)

Response: 49.11

5.2.3.1 Number of students qualifying in state/ national/ international level examinations (eg: NET/ SLET/ GATE/ GMAT/ CAT/ GRE/ TOEFL/ Civil services/ State government examinations) year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
43	26	15	12	9

5.2.3.2 Number of students appearing in state/ national/ international level examinations (eg: NET/SLET/GATE/GMAT/CAT, GRE/TOEFL/ Civil Services/State government examinations) year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
75	45	33	30	20

File Description	Document
Upload supporting data for the same	View Document
Number of students qualifying in state/ national/ international level examinations during the last five years	View Document
Any additional information	View Document

5.3 Student Participation and Activities

5.3.1 Number of awards/medals for outstanding performance in sports/cultural activities at national/international level (award for a team event should be counted as one) during the last five years

Response: 16

5.3.1.1 Number of awards/medals for outstanding performance in sports/cultural activities at national/international level (award for a team event should be counted as one) year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
7	2	4	0	3

File Description	Document
Number of awards/medals for outstanding performance in sports/cultural activities at national/international level during the last five years	View Document
e-copies of award letters and certificates	View Document
Any additional information	View Document

5.3.2 Presence of an active Student Council & representation of students on academic & administrative bodies/committees of the institution

Response:

STUDENT COUNCIL

The Institution has a student council for which students are selected depending on their Academic Performance. Some students are nominated by the respective heads of the departments. Student council is a central body which monitors the academic, co-curricular and cultural events like the activities of Vivekananda study circle, Bhuvanavijayam club, NSS and all the other events organized in and around

the institution campus. The student council plays an active role in scheduling and implementing these programmes and also in mobilizing the infrastructural and manpower requirements for the conduct of various events.

MESS & CANTEEN ADVISORY COMMITTEE (BOYS & GIRLS)

Mess & Canteen Advisory Committee monitors food quality, sanitation or inconvenience faced by students inside the mess & canteen is being sorted out.

HOSTEL COMMITTEE

The boys and girls hostels have a committee of nine members. The members including one management member, four wardens (2 Girls hostel wardens & 2 Boys hostel Wardens) & four students (2 boys & 2 Girls) representatives meet to ensure proper functioning of the hostels and to discuss problems inside the hostel.

SPORTS ADVISORY COMMITTEE

Members of the committee, including student representatives, take up agenda items like existing facilities, forthcoming tournaments, scheduling of practice timings to various departments, coaching facilities, etc.

LIBRARY ADVISORY COMMITTEE

The Library Advisory Committee members meet once every month to discuss the availability of books, periodicals and journals, and procurement of new titles. Students from all branches are made members. The opinion of the students on matters related to the adequacy and availability of books, e-resources, new titles and other facilities are considered.

TRANSPORT ADVISORY COMMITTEE (Girls & Boys)

The Transport Advisory Committee including Transport In charge and student representatives to sort out the grievances like inadequacy of seating, timings, extension of service, providing additional stops, etc.

ANTI RAGGING COMMITTEE

Anti ragging committee includes D.S.P, C.I, news paper reporter, all department heads, two management members, physical director, transport in-charge, boys and girls hostel wardens, local prominent people (Advocate, 2 Parents). If any student faces a problem with the ragging, he/she will intimate to this committee and complaint will be filed and necessary action is taken.

ALUMNI COMMITTEE

Institution has an alumni committee, which conducts alumni meets with graduated students. Alumni meet maintains a relationship with each other and review previous meeting activities, interacts with the alumni members and considers the feedback and suggestions for the development of the institution. Alumni members are involved in the Board of Studies.

INTERNAL QUALITY ASSURANCE CELL (IQAC)

The institution established an Internal Quality Assurance Cell (IQAC). IQAC works under the chairmanship of the head of the institution and convener with faculty members from each department. Students are also members of institutional IQAC. Suggestions and feedback are considered by Student members for IQAC.

File Description	Document
Any additional information	View Document
Link for Additional Information	View Document

5.3.3 Average number of sports and cultural activities / competitions organised at the institution level per year

Response: 7.8

5.3.3.1 Number of sports and cultural activities / competitions organised at the institution level year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
8	18	5	4	4

File Description	Document
Report of the event	View Document
Number of sports and cultural activities / competitions organised per year	View Document
Any additional information	View Document

5.4 Alumni Engagement

5.4.1 The Alumni Association/Chapters (registered and functional) contributes significantly to the

development of the institution through financial and non financial means during the last five years**Response:**

The alumni association is one of the stakeholders of the Swarnandhra College of Engineering and Technology (SCET). They contribute immensely to the development of the college in multiple dimensions. SCET conducts Alumni meeting every year.

SCET Alumni association is contributing to the college financially, academically in exploring new opportunities. The funds contributed by the Alumni are utilized towards the development of labs, medals, awards to students, other amenities etc. Alumni have also contributed immensely as members of BOS, delivering Guest lectures, offering Intern-ships, assisting in Placement, organizing Industry visits and also assisting students to get admissions into reputed Universities Abroad.

Mentoring services have been provided by the Alumni to the students by holding one to one interaction with the students. They have become influential in making the students understand the industry institute gap and also the way to plan and shape up one's own career in right direction. SCET Alumni have been influential in making the students to understand various business opportunities and providing all the support required for preparing them to become entrepreneurs and to know the current dynamics of the industry.

Alumni profiles and their growth verticals are being showcased to the present students for guidance. Alumni are influential in introducing the outcome based education in the University and nurturing professionalism and Industry-readiness among the students.

Alumni are invited to participate in their respective BOS. Alumni contributed extensively in bridging the gap between industry requirements and academics by reviewing and restructuring the syllabi. They recommended moderating the delivery of Academics such as experiential learning. Their contribution leads to a change from a faculty-centered learning to a student-centered learning.

Alumni have been deliberately concentrating on the industry-oriented research projects and undertaking consultancy services based on the expertise of the faculty and the kind of research labs supported by the college. The Alumni working at reputed organizations located globally are also helping the outgoing students in their internships. Alumni are providing necessary support and encouragement to develop quality standards that could be used to enhance and raise the quality of delivery of the educational system.

File Description	Document
Any additional information	View Document
Link for Additional Information	View Document

5.4.2 Alumni contribution during the last five years(INR in Lakhs)**? 15 Lakhs****10Lakhs - 15 Lakhs**

5 Lakhs - 10 Lakhs

2 Lakhs - 5 Lakhs

Response: 5 Lakhs - 10 Lakhs

File Description	Document
Any additional information	View Document
Alumni association audited statements	View Document

5.4.3 Number of Alumni Association / Chapters meetings held during the last five years

Response: 5

5.4.3.1 Number of Alumni Association /Chapters meetings held year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
1	1	1	1	1

File Description	Document
Report of the event	View Document
Number of Alumni Association / Chapters meetings conducted during the last five years	View Document
Any additional information	View Document

Criterion 6 - Governance, Leadership and Management

6.1 Institutional Vision and Leadership

6.1.1 The governance of the institution is reflective of an effective leadership in tune with the vision and mission of the institution

Response:

The Vasista Educational Society, Narsapur, West Godavari District, Andhra Pradesh was established in 2000 by technocrats and architects. The society has initiated an institution by name “Swarnandhra College of Engineering & Technology” in 2001 to provide quality technical education to students hailing from both rural and urban areas to evolve them as dynamic professionals.

Vision

To provide the society with Center of Learning in Technical Education and Research that motivates the students to evolve into dynamic professionals.

Mission

- Providing quality education, student centered teaching Learning process and state of the art infrastructure for professional aspirants hailing from both rural and urban areas.
- Evolving this organization into a center of Academic and Research Excellence.
- Imparting Technical Education that encourages independent thinking develops strong domain knowledge and positive attitude towards holistic growth of young minds.

Governance:

Swarnandhra College of Engineering and Technology has listed its governance plan by keeping in view of the mentioned above vision and mission. The institution strives to achieve its vision by working through its mission with key factors such as good governance, quality academic processes and infrastructure. A good governance brings the best out of the management, employees, parents, students and alumni. In order to have better governance every stakeholder of the institution is given an opportunity to contribute through various administrative and academic committees. Good governance requires dissemination of information to students, faculty, parents and potential employers on all aspects of institutional activity related to academic performance and management.

The institution has an academic council, chaired by principal, comprising members from affiliating university, industry, eminent people in academia and heads of all the departments. It provides expert advice in formulating academic policies, regulations, goals and objectives to promote career opportunities of the students.

Board of Studies (BoS) is formulated in each department by the external subject experts from affiliating university, other premier institutions, industry expert, alumni and experienced faculty members in the department with HOD as chairman. Its objective is to design and envision curricular development that can keep up with changing industry needs, research and cutting edge technologies by giving due emphasis to feedback of the stakeholders.

Internal Quality Assurance Cell (IQAC) has been established as per the guidelines with a view to promote quality academic standards. It helps in effective and efficient usage of the resources available and to safe guard the assets of the institution. The IQAC conducts a self-review to examine the impact of its governance from time to time.

Perspective Plan: The perspective plan for next five years includes continuing the status of accreditations, permanent affiliation to JNTUK, UGC autonomy, establishment of research & innovation centres, incubation centers, centre of excellence, consultancy, startups and collaborations for higher studies and placements.

Participation of the teachers: Through participative management system, the faculty are involved in various decision making bodies like governing body, academic council, board of studies, institute advisory committee, disciplinary committee etc. of the institution.

File Description	Document
Any additional information	View Document
Link for Additional Information	View Document

6.1.2 The institution practices decentralization and participative management

Response:

The management is highly committed and dedicated to the service of catering to the contemporary requirements to impart quality education. The management gives freedom to the principal to function in order to fulfil the vision and mission of the college. The management provides required infrastructure for proper functioning of the institution. The responsibilities of each faculty member are communicated through principal and HODs in regular staff meetings. The management, principal and faculty of the college are committed towards strategic work, its implementation and maintain a perfect documentation; and extend further efforts to continue effectiveness of the plans through a Quality Management System. The Management is committed to ensure conformity and compliance to standards.

Decentralization

Decentralization has a significant impact on planning, policy making and the management of the institution. The principal and hods have been delegated financial powers upto Rs 2 lakhs and Rs 10,000/- respectively. The institution follows decentralization and participative management which promotes quality in education system.

Participative Management

The institution promotes a culture of participative management by involving the staff and students in various activities. Every decision of the institution is governed by the management by considering facts, information and objectives. Both students and faculty members are allowed to express themselves of any suggestions to improve the excellence in any aspect of the Institution.

Case Study on Maintenance of Surveying Laboratory

The in-charge of the surveying lab informed the head of Civil Engineering department about the servicing and maintenance of survey instruments on 18/11/2017. The head of the department has verified the lab equipment, maintenance register and student log book on 20/11/2017. The requirements of the items such as (Alidade, Theodolite, Prismatic compass, though compass etc.) and necessary repairs were noted and reported to the principal on 22/11/2017 through proper channel as a proposal of requisition for Servicing Instruments of the surveying lab.

The proposal has been forwarded to the Secretary and Correspondent through principal for further approval. The management responded fairly and asked the respective head of the department to call for quotations. The requirements and quotations were forwarded to various surveying equipment manufacturing companies by the HOD and invited quotations for the said requirements servicing the surveying lab. The HOD was satisfied with the quotation given by 'Four Cube Instrumentation & Technology, Visakhapatnam' and the same had been forwarded to the Internal Quality Assurance Cell (IQAC). They have checked for the authorised quality parameters and then the issue had been forwarded again to the principal. It was then decided to sanction the proposal for "Four Cube Instrumentation & Technology" by the Secretary and Correspondent.

The HOD conveyed the information to Four Cube instrumentation & Technology and further schedule has been prepared to carry out servicing. The Surveying Lab equipment was repaired and serviced on 10-01-2018 for the well-functioning of the lab. The expenditure bills were verified by the purchase committee and paid to the Four Cube instrumentation & Technology, Visakhapatnam.

File Description	Document
Any additional information	View Document
Link for Additional Information	View Document

6.2 Strategy Development and Deployment

6.2.1 Perspective/Strategic plan and Deployment documents are available in the institution

Response:

The Institution has formally stated quality policy and it is developed, driven, deployed and reviewed. All the courses are approved by All India Council of Technical Education (AICTE), New Delhi. The institution is permanently affiliated to Jawaharlal Nehru Technological University Kakinada, Kakinada. The department of ECE has been accredited thrice by NBA. Institution has accredited by NAAC with 'A' grade at 3.32 CGPA in 2013 and attained the status of UGC autonomy in 2014. There is special emphasis on **Outcome Based Education (OBE) and Experiential Learning from 2014 onwards**. The IQAC takes into account the vision and mission and several other aspects of the institution and formulates processes to ensure quality outcome.

The prominent resources that the institution currently has

- Well qualified and experienced faculty members
- State-of-the art Central Library
- Good infrastructure facilities with well-equipped laboratories and computer centres in every department
- Advanced Nano Research Centre, Big Data Analytics lab and 3-D printing Lab
- Training and Placement Cell

Perspective Plan for the development of college:

- Strengthen industry-institute interaction.
- Improvement of consultancy services.
- Increasing value added certification courses.
- To be ranked in top 150 at prestigious NIRF Ranking.
- Extension of Academic Autonomy and continuation of accreditations.
- Getting the status of Deemed- to- be- University.
- Establishment of new innovation and incubation centres.
- Centre of Excellence.
- Creating an intense research ambiance in terms of establishing recognised R&D centres in all the departments.

The following major deployments have been taken place after the accreditation

- Standardizing the OBE based teaching-learning processes
- The department of ECE has been accredited third time by NBA.
- Establishment of Advanced Labs like 3D printing, IOT, etc..
- Functional MOUs.
- Increase of intake in B.Tech-ECE,CSE and MECH. branches.
- Strengthen the alumni association.
- Recognised as NPTEL Local Chapter.
- Adoption of Choice Based Credit System (CBCS) in curriculum
- Recognized research centre for mechanical engineering department by JNTUK, Kakinada.

File Description	Document
Link for Additional Information	View Document
Strategic Plan and deployment documents on the website	View Document

6.2.2 Organizational structure of the institution including governing body, administrative setup, and functions of various bodies, service rules, procedures, recruitment, promotional policies as well as grievance redressal mechanism

Response:

The college has a well framed internal organizational structure for decision making processes

and developed efficient internal coordinating and monitoring mechanisms. In cognizance with the educational needs and demands of the nation in general and beneficiaries of the college in particular, the goals are set through collaborative and collective efforts of various components of the institution. Thereafter, the responsibilities are assigned to individual faculty and departments. The governing body is the apex body, which defines academic and administrative policies. It discusses and approves the annual budget. Minutes of the meetings are recorded and are available to the staff and students. Governing body communicates decisions to the faculty and staff through principal. Academic Council, chaired by the Principal, is a statutory body, which approves curriculum, examination schemes with the approval of governing body. BoS of each department works under the guidance of the HOD as chairman. Faculty members and experts of the BoS frame the curriculum. Other committees such as Institution Advisory Committee, College Academic Committee, Grievances Redressal Cell, Finance Committee, IQAC, Library Committee, Placement Committee, Anti-ragging committee etc., work under the guidance of the head of the institution. Effectiveness of the organizational structure is monitored through feedback from stake holders.

The powers and the functions of each authority are well defined to ensure administrative decentralization. The proposals are generated at the department level and after careful consideration and deliberations, the proposals prepared by head of the departments are submitted to the Secretary & Correspondent through Principal. The proposals are finalized in the management committee meeting. The decisions of the governing body are implemented through principal by various departments and other sections (Administrative, Academic and Finance) without any interference or hindrance. The governing body frames and approves the service rules, recruitment and promotional policies.

Finally, all the administrative, academic, and the financial activities are reviewed by the governing body to ensure administrative and academic accountability of the institution through IQAC. The resources of the college, both intellectual and infrastructural are readily made available for the head of the department and the teachers concerned to carry out the programme successfully. The college has a democratic set-up, where each unit is given freedom to innovate and plan its perspectives of development, yet it operates through a structured organization for disciplined and smooth functioning of the system. The line of hierarchy is maintained and the code of conduct is implemented to bring harmony and unity.

File Description	Document
Link to Organogram of the Institution webpage	View Document
Link for Additional Information	View Document

6.2.3 Implementation of e-governance in areas of operation

1. Planning and Development
2. Administration
3. Finance and Accounts
4. Student Admission and Support
5. Examination

All 5 of the above

Any 4 of the above

Any 3 of the above

Any 2 of the above

Response: Any 4 of the above

File Description	Document
Screen shots of user interfaces	View Document
Details of implementation of e-governance in areas of operation Planning and Development,Administration etc	View Document
Any additional information	View Document

6.2.4 Effectiveness of various bodies/cells/committees is evident through minutes of meetings and implementation of their resolutions

Response:

After attaining the status of autonomy, first academic council meeting of Swarnandhra College of Engineering and Technology was held on 28-08-2014 at 11:00 A.M. The key agenda of the meeting is to constitute the Board of Studies (BoS) as per the guidelines provided by UGC. At this juncture the members of the meeting have decided to nominate four members representing different categories, two from academia, one from industry and one from alumni in each Board of Studies.

The second Academic Council meeting was held by the institution on 7-9-2014. Minutes of the first Academic Council has been read and ratified. The first Board of Studies meeting was conducted in different departments of the college on 31-8-2014, 2-9-2014, 3-9-2014 and 4-9-2014, and their minutes have been read and endorsed by the members of the Academic Council. A resolution has been passed that the number of theory and practical courses for the four or more semesters for all the departments is six theory and three labs. It was also decided to include five theory and three labs beyond the fourth semester for a few departments such as CSE and EEE.

The academic regulations for UG courses were decided to be observed from the academic year 2014-15. A resolution was passed to have a continuous internal assessment for the UG courses with three cycle tests for every semester. The academic guidelines like the details of the course, conduct of exams, continuous internal assessment and its weightage of marks for the PG courses like M.Tech. MBA and MCA have been discussed and approved by the Committee and a resolution has been taken to start the courses from the academic year 2014-15.

The academic calendar prepared by the institution has been approved by the members of the committee for B.Tech., first and second semesters of the academic year 2014-2015. The resolutions made by the respective Board of Studies of all the departments have been approved by the council. A resolution was

passed by the council to follow the guidelines of JNTUK, Kakinada, for conduct, discipline and rules for all practices in examinations. The course structures and detailed syllabus of all the branches for both UG and PG courses have been followed by considering the view points suggested by its members. The Academic Council has laid a great emphasis on Outcome Based Education (OBE) and experimental learning since it attained the status of autonomy in 2014. To foster student centric learning in the institution, it has set up the Institution Advisory Committee and Board of Studies.

File Description	Document
Any additional information	View Document
Link for Additional Information	View Document

6.3 Faculty Empowerment Strategies

6.3.1 The institution has effective welfare measures for teaching and non-teaching staff

Response:

Welfare measures for teaching and non-teaching members are not only for the development of staff but also for the organization development. Swarnandhra College of Engineering Technology offers various schemes to all the employees with the motive to promote the efficiency and efficacy.

Following are the welfare measures provided to teaching and non-teaching staff by the institution:

1. Employees Provident Fund as per PF rules

Keeping in view the future safety of employees, the institution contributes specific amount towards provident fund of an employee as per PF rules.

2. Group Insurance for staff members

The college offers affordable group insurance to all employees that is uniform in nature, offering the same benefits.

3. Maternity Leave

A pregnant woman employee in our college is entitled to avail a maximum of 90 days full paid maternity leave. The employees will be normally paid on the same date as their salary would be paid.

4. Fee concession policy to staff children

This policy aims to promote education of wards of the staff. Tuition fee concession will be given to the wards of staff who are studying in this institution.

5. Encashment of Earned Leaves

Employee in the institution is eligible to avail 10 earned leaves after completion of every year. These earned leaves are accumulated in the employees account and can be encashed as per the institute service rules.

6. Fee concession for Bus Transportation

Fee concession scheme is being implemented for the staff travelling in college buses. The scheme is applicable to all teaching and non-teaching staff.

7. Support to staff for higher education /research

Sponsorship is provided to the faculty members to pursue research degrees and leave will be granted to pursue research, to ensure and encourage the faculty in knowledge up gradation.

8. Support to staff for attending workshops /conferences

Faculty members are encouraged to participate Conferences / Workshops to enhance their quality in academics and to help pursue their research by giving the sponsorships from the institution.

9. Awards

Cash awards are given to faculty in recognition to outstanding contributions in paper publications in reputed journals

10. Subsidized food facility

Institution offers subsidized food facility to the staff with a reasonable charge that covers the cost of food, its preparation and service.

11. Subsidised accommodation

Subsidised accommodation is provided to both teaching and non-teaching staff of the institution in the hostels.

File Description	Document
Any additional information	View Document
Link for Additional Information	View Document

6.3.2 Average percentage of teachers provided with financial support to attend conferences / workshops and towards membership fee of professional bodies during the last five years

Response: 20.63

6.3.2.1 Number of teachers provided with financial support to attend conferences / workshops and towards membership fee of professional bodies year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
50	38	50	24	42

File Description	Document
Details of teachers provided with financial support to attend conferences,workshops etc during the last five years	View Document
Any additional information	View Document

6.3.3 Average number of professional development /administrative training programs organized by the institution for teaching and non teaching staff during the last five years

Response: 12

6.3.3.1 Total number of professional development / administrative training programs organized by the Institution for teaching and non teaching staff year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
11	20	15	6	8

File Description	Document
Details of professional development / administrative training programs organized by the Institution for teaching and non teaching staff	View Document
Any additional information	View Document

6.3.4 Average percentage of teachers attending professional development programs viz., Orientation Program, Refresher Course, Short Term Course, Faculty Development Program during the last five years

Response: 15.13

6.3.4.1 Total number of teachers attending professional development programs, viz., Orientation Program, Refresher Course, Short Term Course, Faculty Development Programs year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
27	49	36	17	21

File Description	Document
IQAC report summary	View Document
Details of teachers attending professional development programs during the last five years	View Document
Any additional information	View Document

6.3.5 Institution has Performance Appraisal System for teaching and non-teaching staff

Response:

The institution has performance based appraisal system for the assessment of teaching and non-teaching staff. The appraisal report is based on the annual performance of the employees on the basis of their academic, research and other extra- curricular activities.

Performance appraisal system for teaching staff:

The teacher, as a person and teacher as performer, is also one of the mandatory assessment for his/her performance is appraised through his/her implementation of innovative methodologies in classroom lectures, seminars, tutorials, course delivery, question paper setting and evaluation, updating of materials etc. Besides, student feedback and pass percentage of the course are also considered.

The performance of the faculty is evaluated based on professional contribution to academics, contribution to short term training courses, performing invigilation duties, contribution to College administrative bodies such as college academic council, R&D council, planning and development committee, NBA, NAAC, BOS, etc.

Financial support to the faculty is rendered with the motive to enhance or upgrade their knowledge through their participation in conferences, workshops, publications in Scopus indexed journals, book publication, sponsored projects consultancy, research supervision, awards, honours, fellowships etc.

The above set performance appraisal report is filled by employee in a given prescribed proforma which includes all the above set related to points and sub points. Filled in the prescribed format is revised by HOD to assess the attitudinal / behavioral / professional aspects of the faculty concerned.

Performance appraisal system for non- teaching staff:

A few strategies are observed in appraising non-teaching staffs performance this includes technical contribution of individuals such as subject knowledge, awareness, productivity, quality, innovation willingness to learn, diligence etc besides they also assess the behavioral aspects like group behavior, acceptability, punctuality etc.

File Description	Document
Any additional information	View Document
Link for Additional Information	View Document

6.4 Financial Management and Resource Mobilization

6.4.1 Institution conducts internal and external financial audits regularly

Response:

The Institution has established a mechanism for conducting internal and external audits on the financial transactions every year to ensure financial compliance. Internal audit is conducted half yearly by the internal financial committee of the institution. The committee thoroughly verifies the income and expenditure details and the compliance report of internal audit is submitted to the management of the institution through principal. External audit is conducted once in every year by an external agency.

The mechanisms used to monitor effective and efficient use of financial resources are as below:

- Before the commencement of every financial year, principal submits a proposal on budget allocation, by considering the recommendations made by the heads of all the departments, to the management.
- College budget includes recurring expenses such as salary, electricity, internet charges, maintenance cost, stationery, other consumable charges etc., and non – recurring expenses like lab equipment purchases, furniture and other development expenses.
- The expenses will be monitored by the accounts department as per the budget allocated by the management.
- The depreciation costs of various things purchased in the preceding years are also worked out.

Process of the internal audit:

All vouchers are audited by an internal financial committee on half yearly basis. The expenses incurred under different heads are thoroughly checked by verifying the bills and vouchers. If any discrepancy is found, the same is brought to the notice of the principal. The same process is being followed for the last five years.

Process of the external audit:

The accounts of the college are audited by chartered accountant regularly as per the government rules. The auditor ensures that all payments are duly authorized after the audit, the report is sent to the management for review. Any queries, in the process of audit would be attended immediately along with the supporting documents within the prescribed time limits. The institution did not come across with any major audit objection during the preceding years.

All these mechanisms exhibit the transparency being maintained in financial matters and adherence to financial discipline to avoid defalcation of funds or properties of the institution at all levels. The audited statement is duly signed by the authorities of the management and chartered accountant.

The audited income and expenditure statements of the institution for the last five financial years from 2013-14 to 2017-18 have been attached.

File Description	Document
Any additional information	View Document
Link for Additional Information	View Document

6.4.2 Funds / Grants received from non-government bodies, individuals, Philanthropists during the last five years (not covered in Criterion III) (INR in Lakhs)

Response: 5.81

6.4.2.1 Total Grants received from non-government bodies, individuals, philanthropists year-wise during the last five years (INR in Lakhs)

2017-18	2016-17	2015-16	2014-15	2013-14
0.45	0.15	1.65	0.50	3.06

File Description	Document
Details of Funds / Grants received from non-government bodies during the last five years	View Document

6.4.3 Institutional strategies for mobilisation of funds and the optimal utilisation of resources

Response:

The Institution is a self-financed institution, where the funds are generated through tuition fee, admission fee, special fee, non refundable caution deposits and accreditation fee paid by the students . Additional funding is obtained from government funding agencies like AICTE, UGC, DST etc., through various schemes like MODROBS and research promotion schemes. These funds are utilized for the research and laboratory development. The institution has a well-defined mechanism to monitor effective and efficient utilization of available financial resources for the development of the academic processes and infrastructure development.

i) Institutional budget is prepared by Principal every year taking into consideration of recurring and non-recurring expenditures.

ii) Accordingly, all the administrative and academic heads are requested to submit the budget required for the subsequent financial year. Along with this all coordinators of different cells viz., R & D Cell, Exam Cell, T & P Cell, NSS Cell, etc. are instructed to submit their budget to Principal.

iii) All the major financial decisions are taken by the Management and Governing Body (GB).

Utilization of funds:

1. Institution adheres to Utilization of budget approved for academic expenses and administrative expenses by management.
2. After final approval of budget, the purchasing process is initiated by purchase committee which includes all head of departments and account officer, accordingly the quotations called and after the negotiations purchase orders are placed.
3. The payments are released after delivery of the respective goods. It is done as per the terms and conditions mentioned in purchase order.
4. All transactions have transparency through bills and vouchers. The bill payments are passed after testing and verification of items. Only authorized person operates the transaction through bank.
5. The entire process of the procurement of the material is monitored by the purchase committee, principal and the accounts department.
6. Internal and external financial audits are conducted in every financial year to verify the compliance.

File Description	Document
Link for Additional Information	View Document

6.5 Internal Quality Assurance System

6.5.1 Internal Quality Assurance Cell (IQAC) has contributed significantly for institutionalizing the quality assurance strategies and processes

Response:

In pursuance of the National Action Plan of the National Assessment and Accreditation Council (NAAC), Bangalore, for performance evaluation, assessment and accreditation and quality up-gradation of institutions of higher education, it is essential that an Internal Quality Assurance Cell (IQAC) as a quality sustenance measure has to be established. Hence, Swarnandhra College of Engineering and Technology (SCET) has established the IQAC cell in the year 2013. Since quality enhancement is a continuous process, the IQAC becomes a part of institution and works towards realizing the goals of quality enhancement and sustenance. The prime task of the IQAC is to develop a system for conscious, consistent and catalytic improvement in the performance of the institution. The IQAC will make a significant and meaningful contribution to post-accreditation phase of SCET. The IQAC channelizes the efforts and takes appropriate measures to address the issues raised in the earlier cycle and measures to be taken by the institution to reach its ultimate goal of academic excellence.

Objectives Of IQAC

To develop a quality system for conscious, consistent and programmed action to improve the academic and administrative performance of the institution.

To promote measures for driving institutional functioning towards quality enhancement and institutionalization of best practices.

Strategies of IQAC

1. Ensuring timely, efficient and progressive performance of academic, administrative and financial tasks.
2. The relevance and quality of academic and research programmes.
3. Equitable access to and affordability of academic programmes for various sections of society .
4. Optimization and integration of modern methods of teaching and learning.
5. The credibility of evaluation procedures.
6. Ensuring the adequacy, maintenance and functioning of the support structure and services.
7. Research sharing and networking with other institutions in India and abroad.

IQAC has contributed significantly for institutionalizing the quality assurance strategies and processes, the following two practices are the results of IQAC initiatives

1. Study Hours

Swarnandhra College of Engineering and Technology (SCET) has started conducting study hours by which the students can improve their academics. Individual attention is paid to the students to clarify their doubts in difficult subjects. More emphasis is given to solve the numeric problems and experts are invited for further acquisition of knowledge.

2. Collaborative Learning

The institution implements the process of collaborative learning to impart quality technical education to the students. It involves groups of students working together to solve a problem, completes a task, or creates a product. It is based on the idea that learning is a natural and social act in which the participants talk among themselves.

File Description	Document
Link for Additional Information	View Document

6.5.2 The institution reviews its teaching learning process, structures & methodologies of operations and learning outcomes at periodic intervals through IQAC set up as per norms

Response:

IQAC Contribute/Monitor/Evaluate the Teaching & Learning processes:

- The IQAC organizes regular academic audits to ensure effective implementation of teaching learning process and maintenance of course files.
- Verification of internal test analysis, question papers.
- Arrangement of special classes for weak students during evening hours.
- Identifying the new processes/delivery method and recommending the same for improving the quality.
- Analyzing the deviations from the benchmarks and reporting.
- Feedback from the stakeholders (students, alumni, industry experts, research organizations and parents).
- Encouraging faculty for online certification Courses (NPTEL, MOOCS, Etc.)
- Faculty development Programs and Skill Development Training Programs are organized every year.

Reviews and Implementations of Teaching-Learning Reforms through IQAC:

1. Guest lectures on advanced topics by the eminent academicians and industry experts.
2. Practice of emerging technologies through mini projects and term papers.
3. Faculty development through workshops, orientation programs, seminars and conferences.

The teaching learning process, structures & methodologies of operations and learning outcomes at periodic intervals of the institute are as per IQAC set up norms. The two examples of institutional reviews and implementation of teaching learning reforms facilitated by the IQAC.

Example 1: Faculty Conclave

Once in every semester, the faculty come together for the faculty conclave. In this meeting, they share their experience to promote mutual growth. The faculty discuss their course planning, delivery and assessment. Each subject teacher writes a course outcome in the beginning of the year and schedules a 50 to 60 hours plan to deliver it. He/she also makes a day wise schedule to plan which topic is taught on which exact day, what methodology will be used, pedagogies and what is expected out of that lesson. They also collect necessary feedback from the students, measure the extent of their implementation and assess the impact of their activities. All teachers come up with extracts of what went well and what went wrong with their teaching methods. Industry experts are invited to assess and give their valuable feedback.

Example 2: Course files

Course files of every course are prepared and used to bring objectivity and strategize the course of teaching and learning for every topic. The teachers go through the syllabus and ensure that all the registered students fulfill the pre-requisites of the course. Upon cross-checking pre-requisites the teachers start their event schedule that they plan in the beginning of the year. A proper plan for each topic and its delivery is made by the teacher. At the end of every topic, the teacher conducts a pre-planned revision. Mapping of the course outcome is done along with the program outcome. Course files have proven to be great guiding

tools that provide the teacher direction and a sense of clarity while teaching. It is a document containing the basic details of all units in the prescribed syllabus of a course, teaching plan, teaching pedagogies and handouts, revision questions papers, tutorial materials, course beyond syllabus, attainment sheets, mid question banks, internal and external model question papers.

File Description	Document
Any additional information	View Document
Link for Additional Information	View Document

6.5.3 Average number of quality initiatives by IQAC for promoting quality culture per year

Response: 4

6.5.3.1 Number of quality initiatives by IQAC for promoting quality year-wise for the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
5	5	10	0	0

File Description	Document
Number of quality initiatives by IQAC per year for promoting quality culture	View Document
IQAC link	View Document

6.5.4 Quality assurance initiatives of the institution include

- 1.Regular meeting of Internal Quality Assurance Cell (IQAC); timely submission of Annual Quality Assurance Report (AQAR) to NAAC; Feedback collected, analysed and used for improvements**
- 2.Academic Administrative Audit (AAA) and initiation of follow up action**
- 3.Participation in NIRF**
- 4.ISO Certification**
- 5.NBA or any other quality audit**

Any 4 of the above

Any 3 of the above

Any 2 of the above

Any 1 of the above

Response: Any 4 of the above

File Description	Document
e-copies of the accreditations and certifications	View Document
Details of Quality assurance initiatives of the institution	View Document
Annual reports of Institution	View Document

6.5.5 Incremental improvements made during the preceding five years (*in case of first cycle*) Post accreditation quality initiatives (*second and subsequent cycles*)

Response:

Swarnandhra College of Engineering and Technology (SCET) is approved by AICTE, New Delhi and permanently affiliated to JNTUK, Kakinada. The institution was accredited by NAAC with 'A' Grade for the first time in 2013, and conferred with UGC autonomy status in 2014. Some of the programs of the institution are accredited by NBA.

The institution continuously strives to improve and sustain quality in all the aspects of education. The Governing Body, College Academic Council, IQAC, Principal, the teaching fraternity, administration, various departments, students and other stake holders jointly contribute towards making the college as an institution for excellence. The following are the quality initiatives made by the institution.

Curricular Aspects

Outcome based approach has been implemented in the institution. Careful study of the content of the curriculum and syllabi of all the UG/PG programs offered, a set of PEOs, POs, PSOs and COs have been diligently framed for each program.

In the academic year 2014-15 new regulations R14 in the lines of OBE, CBCS are being implemented from 2016-2017.

The student shall fulfill the following academic requirements:

- Secure all the 180 credits
- Foundation courses
- Programme core and elective Courses
- Open elective courses
- Certification courses
- Internship
- Mini project
- Skill based lab elective
- Professional Ethics and Human Values, IPR courses are introduced as Mandatory Courses

Teaching, Learning and Evaluation

- Subject allotment is based on the competency matrix and experience of the teacher. Attainment of the COs, POs and PSOs are the recent additions.
- Faculty/Students are utilizing the NPTEL lectures and e-resources.
- Eminent senior faculty members are appointed to hold key positions.
- Reputed academicians and renowned industry personnel visit the campus to enlighten the faculty and students.
- On-line feedback on each course has been implemented.
- Systematic procedure has been evolved to review the overall performance of the departments annually.

Research and Development

- Advanced research labs have been initiated.
- Progressively increasing number of proposals submitted to various funding agencies.
- Mechanical Engineering Department has been recognized as Research Centre by JNTUK, Kakinada.
- The number of publications in peer reviewed journals with good impact factor has increased.

Recognition for the institution

- Permanent affiliation to JNTUK, Kakinada
- Academic Autonomy sanctioned by UGC
- One program (ECE) is accredited by NBA under Tier-II
- World HRD Congress recognized as the best engineering college
- CISCO recognized as the best performing Institution

Infrastructure and Learning Resources

- New academic blocks, classrooms, labs, staff cabins and seminar halls have been built.
- The internet bandwidth has been increased with Wi-Fi.
- NPTEL, e-journals, spoken tutorials are effectively being used.
- Advanced software tools have been purchased.

File Description	Document
Link for Additional Information	View Document

Criterion 7 - Institutional Values and Best Practices

7.1 Institutional Values and Social Responsibilities

7.1.1 Number of gender equity promotion programs organized by the institution during the last five years

Response: 11

7.1.1.1 Number of gender equity promotion programs organized by the institution year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
04	04	01	01	01

File Description

Document

Report of the event

[View Document](#)

List of gender equity promotion programs organized by the institution

[View Document](#)

7.1.2 Institution shows gender sensitivity in providing facilities such as

a) Safety and Security

b) Counselling

c) Common Room

Response:

Safety and Security

- The Institution follows 33.33% reservation for girls as per Government of Andhra Pradesh norms and has set up a well-structured system in place to look after the safety and security of girl students.
- Inside the campus security is provided by security personnel.
- Students are monitored and provided security under the surveillance of closed circuit cameras.
- Woman wardens are stationed at the girls' hostel round the clock.
- Health awareness programmes have been conducted frequently by women's forum.
- Women Grievance Cell provides a convenient opportunity for girl students to raise the problems of harassment preserving being anonymous.
- A special transport facility has been provided for the occasions like college fest, placement drives etc. for girl students. When the girl students are detained in the college beyond 7 PM they are escorted to the door if parents are unable to turn up at pickup points.
- There are two separate dining halls for girl students.
- Separate sports facility has been arranged for girl students.

Counselling:

The institution has arranged for special counseling of girl students.

- Faculty may call the parent and discuss the academic progress/status of the girl student.
- Slow learners and differently-abled girl students are closely monitored by the lady counselor in consultation with the respective subject faculty.
- To improve the performance of the girl students, special training sessions, group discussions, and mock interview sessions are conducted by the Training & Placement Cell.
- Special training in technical subjects is provided for the girl students to improve the chances of their employability and job readiness.
- Students with depression and abnormal behavior are identified and directed to the counseling cells for special counseling by a psychiatrist.
- The girl club has a mission to empower women and girls in academia through imparting educational, awareness training programmes to strengthen them towards leadership and self-motivation and also to make them competent in their career and life.

Common rooms:

There are common waiting rooms for girl students in the institution. The common rooms are provided with chairs, tables, and beds which are adequately furnished with electric and sanitary fittings.

File Description	Document
Any additional information	View Document
Link for Additional Information	View Document

7.1.3 Percentage of annual power requirement of the Institution met by the renewable energy sources

Response: 0.39

7.1.3.1 Annual power requirement met by renewable energy sources (in KWH)

Response: 2160

7.1.3.2 Total annual power requirement (in KWH)

Response: 547476

File Description	Document
Details of power requirement of the Institution met by renewable energy sources	View Document
Any additional information	View Document

7.1.4 Percentage of annual lighting power requirements met through LED bulbs

Response: 12.97

7.1.4.1 Annual lighting power requirement met through LED bulbs (in KWH)

Response: 15330

7.1.4.2 Annual lighting power requirement (in KWH)

Response: 118194.3

File Description	Document
Details of lighting power requirements met through LED bulbs	View Document
Any additional information	View Document

7.1.5 Waste Management steps including:

- Solid waste management
- Liquid waste management
- E-waste management

Response:

The institution is very conscious of generating less waste and recycling it by passing it through a system that enables the used material to be reused ensuring that less natural resources are consumed.

The Institution has segregated waste into three parts:

1. Solid Waste
2. Liquid Waste
3. Hazardous Lab Waste (E-waste)

Solid Waste:

The Institution is actively involved in the CLEAN-AND-GREEN campaign of national fame, a subject in which it had already taken keen interest from the year of inception in 2001. The trees that line several avenues on the campus are 16-17 years old and maintained with great care.

The waste is generated by all sorts of routine activities carried out in the institution that includes paper, plastics, glass, metals, food waste etc. The waste is segregated at each level at the source itself. The administrative supervisor in each block ensures that the waste in each floor is collected at designated time intervals. The floor safai workers in each floor collect and segregate the waste in dustbins provided on each floor. The floor dustbins are emptied into movable containers/dustbins provided for each block and are taken to the dumping yard within the institution. The vendor collects the waste from the dump site of the institution, segregates them, and disposes of them at the landfill site authorized by the Municipality.

Segregated food waste, vegetable peels etc are collected from the canteens on the campus and is composted. Similarly, the garden waste, dry leaves are also composted. Recyclable wastes like pet bottles, cartons and stationery are collected which is periodically sold to vendors for recycling.

Liquid Waste:

Liquid waste generated in the campus is of two types:

1. Sewage waste
2. Laboratory, bathroom/washroom, and cafeteria effluent waste

The water is used for horticulture and gardening. The proper drainage system is arranged for all the buildings of the campus.

Hazardous Lab Waste (E-waste):

All electrical waste such as tube lights, bulbs, old switches, and wires are stored separately in a shed. The housekeeping team has been trained in handling all categories of waste. An effective system of segregation, collection, storage, and disposal of waste has been practiced in the institution. The Institution has also taken the following steps to reduce the generation of waste. Steel plates are used instead of paper and plastic plates, steel spoons replace of the plastic spoons in the canteen, steel tumblers in place of paper cups. Awareness programmes about waste management are conducted on the campus for students, faculty and housekeeping staff to promote environmentally friendly practices as part of “Swachh Campus” inspired from “Swachh Bharat”

Flip flops, memory chips, motherboard, compact discs, cartridges etc generated by electronic equipment such as computers, radio, TV, phones, printers, Fax and photocopy machines are recycled properly. The e-waste generated from hardware which cannot be reused or recycled is being disposed of centrally to vendors.

File Description	Document
Any additional information	View Document

7.1.6 Rain water harvesting structures and utilization in the campus

Response:

Rainwater harvesting is one of the scientific methods that can be followed by the institution as well as individuals as a small through value towards water preservation. Our institution is zero water discharge campus, which means that no water is discharged outside the campus and the water is used for horticultural activities and flushing the toilets etc. This decreases pressure on groundwater. The rainwater collected from catchment areas of buildings, roads, and pavements are flown into soak pits provided at all buildings of the institution and hostels. This ensures the water levels in the bore wells within the institution are maintained at usable levels.

File Description	Document
Any additional information	View Document

7.1.7 Green Practices

- **Students, staff using**
 - a) **Bicycles**
 - b) **Public Transport**
 - c) **Pedestrian friendly roads**
- **Plastic-free campus**
- **Paperless office**
- **Green landscaping with trees and plants**

Response:

The institution is aware of its environmental conservation responsibilities and embrace the principle of sustainable development to ensure that any adverse environmental impact of its activities are minimized through:

Maintenance of Greenary:

The institution has carried out detailed studies of environmental aspects, based on this study, significant impact areas have been identified such as paper usage, use of plastic and polythene, internal transport etc. Based on the analysis *reuse, reduce and recycle* are devised, monitored and implemented. Over the last five years, the following steps were launched by the institution towards creating environmental consciousness on campus.

The institution possesses substantial funds for the maintenance of campus as rich with greenery and well-groomed trees. Lawns, garden and avenue trees are maintained on a daily schedule. Trees and shrubs are planted on both sides of roads connecting various blocks. The trees lining the avenues are over 16-17 years. Important green practices are, using alternate energy, rainwater harvesting, waste management and carbon neutrality. Other initiatives include passive solar building- design, energy efficacy, paperless office, say-no-to-plastic and aquifer recharging.

In order to support Prime Minister's initiative "**AAO CYCLE CHALAO**" to promote the use of the bicycle in the Campus. Faculty and students use bicycles to move from one place to another in the campus.

The institution is well connected with road and railway network, students and staff members uses public transport. The college owns 66 buses and covers more than 43 kilometers peremeter around the institute.

All the inside road of the institute are **pedestrian friendly roads** with zebra crosses and no horn signs.

Students participate in campaigns like "*Adopt a Tree*", "*Plantation Drive*", "*Awareness against deforestation*", "*Conserve native species of plants and trees*". The campus has green landscaping of plants and trees which covers more than 48% of the area, having varieties of plants and trees which include Ashok, Mango, Drumstick, Neem, Coconut etc. The entire open area has been kept green through heavy

foliage of grass, seasonal flowers and is maintained by professional staff.

Carbon Accounting for lowering the gases responsible for Green House effect: All vehicles entering the institution including institution run buses have “Pollution under Control” certificate. All the HVAC equipment are “Freon Free Gases Emission” certified. Campus strictly follows “No Smoking Zone” principle. Switching off all the electrical utilities, the buildings are fitted with glass/mesh windows for maximum utilization of ventilation.

Environment Studies (ES) is compulsory subject with credits in the first year of all UG programmes.

File Description	Document
Any additional information	View Document

7.1.8 Average percentage expenditure on green initiatives and waste management excluding salary component during the last five years

Response: 0.27

7.1.8.1 Total expenditure on green initiatives and waste management excluding salary component year-wise during the last five years(INR in Lakhs)

2017-18	2016-17	2015-16	2014-15	2013-14
3.57	2.43	2.62	1.70	2.78

File Description	Document
Green audit report	View Document
Details of expenditure on green initiatives and waste management during the last five years	View Document

7.1.9 Differently abled (Divyangjan) Friendliness Resources available in the institution:

1. Physical facilities
2. Provision for lift
3. Ramp / Rails
4. Braille Software/facilities
5. Rest Rooms
6. Scribes for examination
7. Special skill development for differently abled students
8. Any other similar facility (Specify)

A. 7 and more of the above

B. At least 6 of the above

C. At least 4 of the above

D. At least 2 of the above

Response: B. At least 6 of the above

File Description	Document
Resources available in the institution for Divyangjan	View Document
Any additional information	View Document
link to photos and videos of facilities for Divyangjan	View Document

7.1.10 Number of Specific initiatives to address locational advantages and disadvantages during the last five years

Response: 8

7.1.10.1 Number of specific initiatives to address locational advantages and disadvantages year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
01	04	00	02	01

File Description	Document
Number of Specific initiatives to address locational advantages and disadvantages	View Document
Any additional information	View Document

7.1.11 Number of initiatives taken to engage with and contribute to local community during the last five years (Not addressed elsewhere)

Response: 15

7.1.11.1 Number of initiatives taken to engage with and contribute to local community year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
06	02	03	02	02

File Description	Document
Report of the event	View Document
Any additional information	View Document

7.1.12

Code of conduct handbook exists for students, teachers, governing body, administration including Vice Chancellor / Director / Principal /Officials and support staff

Response: Yes

File Description	Document
Any additional information	View Document
URL to Handbook on code of conduct for students and teachers , manuals and brochures on human values and professional ethics	View Document

7.1.13 Display of core values in the institution and on its website

Response: Yes

File Description	Document
Any additional information	View Document
Provide URL of website that displays core values	View Document

7.1.14 The institution plans and organizes appropriate activities to increase consciousness about national identities and symbols; Fundamental Duties and Rights of Indian citizens and other constitutional obligations

Response: Yes

File Description	Document
Details of activities organized to increase consciousness about national identities and symbols	View Document
Any additional information	View Document

7.1.15 The institution offers a course on Human Values and professional ethics**Response:** Yes

File Description	Document
Any additional information	View Document
Provide link to Courses on Human Values and professional ethics on Institutional website	View Document

7.1.16 The institution functioning is as per professional code of prescribed / suggested by statutory bodies / regulatory authorities for different professions**Response:** Yes

File Description	Document
Provide URL of supporting documents to prove institution functions as per professional code	View Document

7.1.17 Number of activities conducted for promotion of universal values (Truth, Righteous conduct, Love, Non-Violence and peace); national values, human values, national integration, communal harmony and social cohesion as well as for observance of fundamental duties during the last five years**Response:** 7

7.1.17.1 Number of activities conducted for promotion of universal values (Truth, Righteous conduct, Love, Non-Violence and peace); national values, human values, national integration, communal harmony and social cohesion as well as for observance of fundamental duties year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
01	03	01	02	0

File Description	Document
List of activities conducted for promotion of universal values	View Document
Any additional information	View Document

7.1.18 Institution organizes national festivals and birth / death anniversaries of the great Indian personalities

Response:

National Festivals are celebrated with enthusiasm. Our students are on a mission towards better India. They come together breaking the boundaries of religion and caste. Thoughts of great Indian personalities sowed into the young minds through the different programmes conducted on these days. Every year Swarnandhra College of Engineering and Technology organizes the following national festivals and birth / death anniversaries of the great Indian personalities.

Independence Day: it is annually celebrated on 15th August of every year

Republic Day: *Republic Day* honors the date on which the Constitution of India came into effect from 26 January 1950

Engineers day (Dr.Mokshagundam visvesvaraya Birthday): The Engineer's Day is celebrated to appreciate the contributions of Mokshagundam Visvesvaraya who was born on September 15

Teachers Day (Dr. Sarvepalli Radhakrishnan birthday): is the day which is celebrated to honor the teachers. It is celebrated on 5th September in the memory of Dr. Sarvepalli Radhakrishnan

Gandhi Jyanti: is a national festival celebrated to mark the occasion of the birthday of Mohandas Karamchand Gandhi.

Mathematics Day (Sir Srinivasa Ramanujan's Birthday): is observed on December 22 every year. It is celebrated in order to honor the birth anniversary of the famous mathematician Sir Srinivasa Ramanujan.

The following URL shows different national festivals and birth / death anniversaries of the great Indian personalities and statues of indian personalities in our institution is given:

URL: [View Link](#)

7.1.19 The institution maintains complete transparency in its financial, academic, administrative and auxiliary functions

Response:**Financial System:**

Transparency in financial system is ensured through:

- Details of fee structure of all the courses offered by the institution are on the website.
- Payments of tuition fee, transportation fee etc., can be done through online.
- Salary and other remunerations to employees are disbursed through bank.
- Financial audit is done regularly by external agencies.

- Financial support is available to all faculty for attending national/international conference
- Complete audit report is kept in the website.
- URL of audit reports is available in institute website : <http://www.swarnandhra.ac.in/downloads>

Academic System

- Academic Audit is done regularly by internal and external experts.
- Attendance is posted by the faculty in EZ school after completion of class work. SMSs are sent to the parents for absent students.
- Monthly attendance report is displayed in the notice board and communicated to the parents.
- The complete academic status of any student can be obtained by the concerned parents by visiting following URL of the institution website.

URL: <https://swarnandhraexambranch.com/beteportal/>

Administrative Functions

Transparency in administrative functions is ensured through:

- Well specified duties are assigned to staff members.
- Different Committees, Boards, Councils, Forums and Cells are constituted viz., Board of Management, Academic Council, Board of studies, Research Board, etc.
- Well laid down procedures to be followed while discharging the regular duties.
- Service rules are available in the website.

URL: <http://www.swarnandhra.ac.in/images/downloads/Governance-Leadership-.pdf>

Auxiliary functions of the Institution

Auxiliary functions like conduct of workshops, training programs, seminars, faculty development programmes, conferences, guest lectures etc., are conducted through the following sequence of procedure:

- Proposal by specific department
- Financial approval by the management/administration
- Conduct of the program
- Submission of the accounts
- Submission of the report
- Verification and recording of the proofs and publication in the website of the institution.
- The complete record of these operations is made available in the concerned department.

7.2 Best Practices

7.2.1 Describe at least two institutional best practices (as per NAAC Format)

Response:

Title of the Practice-I: Course Coordinator-Ship: An Effective Mechanism in Outcome Based Education (OBE)

Objectives of the Practice:

To shift the focus of education from educator to learner has been practicing course coordinator ship effectively.

The Context:

In the context of OBE, head of the department is the program coordinator (PC). There are many modules in the program. Module coordinators (MC) were ratified by IQAC. CC is designated wherever the same course is offered by different course lecturers in different sections/classes. The CC is responsible for planning, delivering and assessing the outcomes of the courses offered by him/her during the semester/year.

The Practice:

The department management appoints course coordinators. Generally, the CC encompasses, course planning, course design and development, course delivery, selection of educational resources, assessment, students' learning outcomes and course evaluation.

Evidence of Success:

Rigorous meetings have been convened in coordination with PC, MC, CC/ course lecturer for strengthening the curriculum. It is perceived that the mechanism has ensured the smooth and uniform delivery of a single course in the multi-section scenario. Moreover, attainment of CO and PO have computed collectively and transparently. Thus, CC seems an effective component in the OBE. With the OBE, both educators and learners are benefitted.

Problems Encountered and Resources Required:

Identifying faculty who have the prerequisites to be course coordinators, allocating time, conflict resolution skills and a program with single section. An exclusive faculty development program is required for better understanding and implementation of OBE.

Title of the Practice-II: Employability Skills Enhancement Program- an innovative approach

Objectives of the Practice:

To provide training to all branches of the students during pre-final year semester break and final year to enhance employability skills

The Context:

After graduation, other skills and abilities such as communication skills, leadership, innovation, team building are very much required to become successful in their profession. To address this need a unique certificate course is designed which focuses on self awareness, professional skills, innovation and

communications.

The Practice:

The pre-final semester break course was implemented in 90 hours in three weeks continuously. The 60 hour course was conducted for the final year students of all the branches. Students are divided into five batches. In a week, each batch attends one session of two hours duration. Total 30 sessions are planned throughout the academic year for all batches. At the end of the training program, every student gets course completion certificate.

Evidence of Success:

Following generalized statements can be drawn on the basis of students' feedback. Individual report writing, creative and strategic thinking, overall personality of the students have improved. Mock interviews and group discussion sessions conducted under this program have resulted in positive feedback from the companies visiting the campus

Problems Encountered and Resources Required:

It becomes challenging to identify free time-slots for large groups of students. A separate faculty coordinator had to be assigned for the smooth conduction of the program. An exclusive venue made available for all the sessions and to all the batches.

File Description	Document
Any additional information	View Document
Link for Additional Information	View Document

7.3 Institutional Distinctiveness

7.3.1 Describe/Explain the performance of the institution in one area distinctive to its vision, priority and thrust

Response:

The vision of the institution focuses on the best education and research environment to create the engineers for the next generation. Our institution is the first of its kind institution having "Nanotechnology Research Centre" established by Swarnandhra College of Engineering and Technology and International Accreditation Council of Quality Education and Research throughout the state. Within a short span of time, this college was awarded as the best engineering college in Andhra Pradesh for the year 2013 by Indo - Italian research centre and received excellence award by world HRD congress in academic and industry interface-2013 among various engineering colleges in the state. In 2016 got selected as one of the best top 50 performing college by IBM Bluemix. Besides this continuous encouragement, the institution

management provides financial support as seed money to the faculty and the students for the research activities. Especially, our college has unique and well equipped semi-conductor clean room facility of class 10000 established in the year of 2009 along with advanced equipment for the fabrication and characterization techniques. Faculty members from various departments actively involve on thrust areas of current research projects which include thin film deposition, synthesis of nanomaterials (nanoparticles, nanotubes, nanowire, DSSCs etc.). Some of the research themes are significant as per the funding agency, but in addition major research areas on the basis of contemporary research. The goal of our institution is to involve the entire faculty members on research projects and motivate for further research career by the way of Ph.D.'s on various projects. All these activities are monitored by the strong research advisory committee.

Our institution provides a platform to develop the researcher's ideas in their research projects. The research students participate in the workshop/conference and the best ideas are rewarded. Consequently, this institution provides good infrastructure, equipment, seminars, workshops to meet the needs of research work. The institution's determination is to be transformed into a centre for major research and therefore a commitment to offer high-quality research through:

- Synergies between Research & Education activities
- Research-Based Learning & Teaching

This institution has been focusing the following vision, mission and working methodology for the research community to assure the standard performance through value-added education and interdisciplinary research paying ways to sustainable research development.

Mission

1. Successful training & development of technological infrastructure for nanotechnology
2. Access to Nano-lab facilities

- Increased number of educated/trained people in the field.
- Efficient and optimal uses of facility broaden the knowledge base platform.
- Transmitting interdisciplinary Knowledge for next generation devices.
- Facilitates long testing scientific collaboration.
- Boost the geographical mobility of researchers.

Vision

1. A premier, shared research facility
2. Enabling quality research
3. Wide ranging, multidisciplinary innovative with commercial and societal impact
4. Supporting education and outreach
5. Summer internship and visiting researchers program
6. Serving the industry

Work Methodology

1. Literature review
2. Problem Definition

- 3. Problem Formulation
- 4. Design and Simulation
- 5. Data Interpretation
- 6. Fabrication and Characterization

Nano Science View Link: [Nano Science](#)

File Description	Document
Link for Additional Information	View Document

NAAC

5. CONCLUSION

Additional Information :

Awards Received by Swarnandhra College of Engineering and Technology

- Recognized by "The Knowledge Review Magazine" as the one of the **best 20 Engineering and Technolgy Institutes** in India (2018).
- "The Academic Insights" recognized Swarnandhra College of Engineering and Technology as one of the **Top 50 Engineering Colleges in India** (2018).
- One of the Top 50 performing colleges by **IBM Bluemix** (2016).
- "Excellence in Academia and Industry Interface" by **WORLD HRD CONGRESS** (2013).
- "Best Engineering Institute in West Godavari" award by **Indo-Italian Research Center** (2013).
- "Indira Priyadarshini National Award" by **Health Care International** (2006) at Telugu University, Hyderabad on the eve of Smt. Indira Gandhi Birth Day Celebrations.
- "Rashtriya Vidya Saraswati Puraskar" by **International Institute of Education & Management**, New Delhi (2006).
- "Best Educational Institution" by **Shilpa Art Creations** (2006).
- "Excellence Award for JKC" from Dr. Y.S. Rajasekhar Reddy, Chief Minister, Andhra Pradesh (2005).

Concluding Remarks :

Swarnandhra College of Engineering and Technology (SCET) was established in the year 2001 with an ambition of imparting high-quality technical education to the students. The Campus is surrounded with lush greenish lawns and serene atmosphere. The management has provided all the state-of-the-art infrastructure and amenities.

The institution started with an intake of 180 seats with three UG programmes and gradually reached to 1050 with six UG programmes and seven PG programmes. During its journey, the institution has reached various milestones like NBA, NAAC accreditations, permanent affiliation and UGC autonomy.

The institution has been continuously striving to make the students to meet academic and industry requirements by updating its curriculum from time to time. The institution follows Choice Based Credit System (CBCS) and Outcome Based Education (OBE). The faculty members of the institution adopt student-centric methods with ICT tools. The institution has adopted the practice of decentralization. The institution has defined research and development, and consultancy policy.

The Internal Quality Assurance Cell (IQAC) administers quality management strategies in all the academic and administrative aspects. Fair practices and transparency are maintained in conducting the examinations as well as an evaluation process.

The management has taken initiatives towards the benefits of the society as it is an integral part of institution's Vision. With a perspective to achieve the vision, the institution has prepared a strategic document which states continuing the status of accreditations, permanent affiliation to JNTUK, UGC autonomy, the establishment of research and innovation centers, incubation centers, consultancy, startups, and placements.

NAAC