



**INSTITUTIONAL ASSESSMENT AND ACCREDITATION
(Effective from July 2017)**

Accreditation - (Cycle - 1)

**PEER TEAM REPORT ON
INSTITUTIONAL ACCREDITATION OF
ST. JOSEPH'S COLLEGE OF ENGINEERING**

**CHENNAI
Tamil Nadu
600119**

**NATIONAL ASSESSMENT AND ACCREDITATION COUNCIL
An Autonomous Institution of the University Grants Commission
P.O. Box No. 1075, Nagarbhavi, Bengaluru - 560 072, INDIA**

Section I:GENERAL INFORMATION

1.Name & Address of the institution:	ST. JOSEPH'S COLLEGE OF ENGINEERING CHENNAI Tamil Nadu 600119	
2.Year of Establishment	1994	
3.Current Academic Activities at the Institution(Numbers):		
Faculties/Schools:	2	
Departments/Centres:	11	
Programmes/Course offered:	21	
Permanent Faculty Members:	325	
Permanent Support Staff:	223	
Students:	5653	
4.Three major features in the institutional Context (Asperceived by the Peer Team):	1. 25 Years old institution offering contemporary technical education program 2. Most of the Programme are accredited by NBA 3. Good infrastructure with good mix of boys and girls students in the Chennai city	
5.Dates of visit of the Peer Team (A detailed visit schedule may be included as Annexure):	From : 07-08-2019 To : 08-08-2019	
6.Composition of Peer Team which undertook the on site visit:		
	Name	Designation & Organisation Name
Chairperson	DR. GOPAL MUGERAYA	Director,NATIONAL INSTITUTE OF TECHNOLOGY GOA
Member Co-ordinator:	DR. TEJINDER PAUL SINGH	Professor,THAPAR INSTITUTE OF ENGINEERING TECHNOLOGY DEEMED UNIVERSITY
Member:	DR. ANIL KUMAR MITTAL	Professor,UNIVERSITY SCHOOL OF MANAGEMENT KURUKSHETRA UNIVERSITY KURUKSHETRA
NAAC Co - ordinator:	DR. VINITA SAHU	

Section II: CRITERION WISE ANALYSIS

Observations (Strengths and/or Weaknesses) on each qualitative metrics of the key Indicator under the respective criterion (This will be a qualitative analysis of descriptive nature aimed at critical analysis presenting strength and weakness of HEI under each criteria)

Criterion 1 - Curricular Aspects (Key Indicator and Qualitative Metrics(QIM) in Criterion 1)	
1.1	Curricular Planning and Implementation
1.1.1 QIM	The institution ensures effective curriculum delivery through a well planned and documented process
1.2	Academic Flexibility
1.3	Curriculum Enrichment
1.3.1 QIM	Institution integrates cross-cutting issues relevant to Gender, Environment and Sustainability, Human Values and Professional Ethics into the Curriculum
1.4	Feedback System

Qualitative analysis of Criterion 1

St. Joseph's College of Engineering is an affiliated institute follows the curriculum developed by the Anna University. Few faculty members play a role in designing the curriculum as members of Board of Studies and Academic Council of affiliating Anna university.

The college offers 21 programs (10UG & 11PG programs) with CBCS, wherein most of the courses are accredited by NBA. The students also have the flexibility to choose electives across departments.

Academic calendar is prepared before the start of the academic year which includes curricular, co-curricular and extra-curricular activities and schedule for NPTEL lectures. Allotment of subjects including open electives is done by the Head of the department based on the faculty expertise and the preferences obtained from them.

Detailed lesson plan is prepared by the faculty members focusing on outcome based education and Bloom's taxonomy. Teaching aids such as projectors, ICT class rooms are used to support regular class room lectures.

In order to bridge the gap between curriculum and industrial needs the institute arrange for certificate courses, industrial visits and guest lectures. Most of the students have taken up internship/external projects at different organizations.

Various activities to support human values, environment and sustainability and gender sensitisation are organized by departments to enhance and hone individual talents and ensure overall development of the student.

A comprehensive feedback is collected from stake holders which include development aspects of curriculum, course delivery, faculty, infrastructural facilities, laboratories, etc. However, the aspect of taking corrective measures based on the feedback has a scope for improvement on analysis of the feedback. Curriculum gaps if any are identified and these gaps are filled by conducting value added courses, workshops, seminars and industrial visits etc.

Criterion2 - Teaching-learning and Evaluation (Key Indicator and Qualitative Metrics(QIM) in Criterion2)	
2.1	Student Enrollment and Profile
2.2	Catering to Student Diversity
2.2.1 QIM	The institution assesses the learning levels of the students, after admission and organises special programs for advanced learners and slow learners
2.3	Teaching- Learning Process
2.3.1 QIM	Student centric methods, such as experiential learning, participative learning and problem solving methodologies are used for enhancing learning experiences
2.3.4 QIM	Innovation and creativity in teaching-learning
2.4	Teacher Profile and Quality
2.5	Evaluation Process and Reforms
2.5.1 QIM	Reforms in Continuous Internal Evaluation(CIE) system at the institutional level
2.5.2 QIM	Mechanism of internal assessment is transparent and robust in terms of frequency and variety
2.5.3 QIM	Mechanism to deal with examination related grievances is transparent, time-bound and efficient
2.5.4 QIM	The institution adheres to the academic calendar for the conduct of CIE
2.6	Student Performance and Learning Outcomes
2.6.1 QIM	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
2.6.2 QIM	Attainment of program outcomes, program specific outcomes and course outcomes are evaluated by the institution
2.7	Student Satisfaction Survey

Qualitative analysis of Criterion 2

The admission to UG programmes is by Single Window Admission System through Directorate of Technical Education, and Consortium (Consortium of Self Financing Professional, Arts and Science Colleges in Tamilnadu) and for PG courses by Anna University through Tamil Nadu Common Entrance Test and Consortium. Student enrolment for the last five years is above 95% in U.G courses and MBA. The PG admissions in Engineering and MBA integrated are less and need to be improvised against sanctioned intake.

Several initiatives have been taken to address needy students such as bridge courses, remedial classes and computer programming courses during first year and for Lateral entry students. Based on the student performance in internal assessment, remedial classes are conducted for slow learners. Advanced learners are encouraged to give seminars and do mini projects. Institution encourages teachers to use innovative pedagogies of teaching and learning with ICT tools for teaching.

Mentoring system with the faculty student ratio of 1:14 has been followed. College has highly qualified faculty members comprising of 136 of Doctorate and 75 pursuing Doctoral degree. The average faculty retention ratio is about 10 years.

College follows 'Outcome Based Education' to develop the requisite knowledge, skills of the students. Various supplemental instructional methods such as smart classes, demonstration classes, PPT, etc., have been utilized along with the regular teaching-learning practice to develop the critical and analytical ability of the

students. Every semester industrial visits, Guest lectures and value added courses are arranged to get practical exposure and enhance their knowledge

Many students of the Institute regularly secure high positions in the Anna University Examinations. Program outcomes, Program specific outcomes and course outcomes for all programme are communicated to all stakeholders through publicizing and dissemination. The attainments of Course Outcomes are measured by direct and indirect assessment tools. The preparation of question bank, lab manual and internal assessment question paper generations follows blooms taxonomy.

The students are assessed by continuous assessment through internal assessment examination and end semester examination as per Anna University norms. Evaluation process, reforms and transparency are followed as per Affiliating University procedures. Students are provided with feedback for the above assessment of learning in view of improving their performance and students assess the teaching learning process through online using a structured Feedback Mechanism.

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Criterion3 - Research, Innovations and Extension (Key Indicator and Qualitative Metrics(QIM) in Criterion3)	
3.1	Resource Mobilization for Research
3.2	Innovation Ecosystem
3.2.1 QIM	Institution has created an ecosystem for innovations including incubation centre and other initiatives for creation and transfer of knowledge
3.3	Research Publications and Awards
3.4	Extension Activities
3.4.1 QIM	Extension activities in the neighbourhood community in terms of impact and sensitising students to social issues and holistic development during the last five years
3.5	Collaboration

Qualitative analysis of Criterion 3

College has good infrastructure with research laboratories and computational facilities to carry out research and development activities. CSE, ECE, EEE, BIO-TECH and MECH departments are recognized as research center and 40 faculty members are recognized as research supervisors by Anna university. Under their guidance and supervision 59 candidates have completed their Ph.D and 87 are pursuing Ph.D. The college library has a collection of rare books, 144 subscription for hard copies and 712 e-journals to facilitate research.

College is recognized as a Scientific Industrial Research Organization by DST, Government of India.

College has received sponsored research projects worth of Rupees one crore from various funding agencies such as DST, DBT, AICTE, Tamil Nadu state Council for Science and Technology, CTS etc. College provided up to Rs.1 Lakh per department to present research work in national and international conferences.

College has Scopus h-Index of 31. Faculties have published around 400 research papers in UGC/Web of Science journals during last five years. Faculties have published 5 books 52 book chapters in reputed publishers.

College has organized several workshops/seminars towards Industry-Academia innovative practices and Intellectual Property Rights. An IPR cell is established to guide faculty and students for patent filing and so far 19 patents have been filed. The Institution has a stated code of ethics to check malpractices and plagiarism in research.

The institution encourages promotion of community services through setting-up of various forums. In the past 5 years, good numbers of extension and outreach programs were conducted through NSS, YRC, St. Joseph's foundation etc.

Institution has several collaborative works in the form of internship, field-trip and research activities through department collaborations with industries and professional bodies. Institution has signed MOUs with organizations like CTS, MSME, ORACLE, ICT ACADEMY, BSNL, etc which spread an ecosystem for innovation and other initiatives for creation and transfer of knowledge.

Criterion4 - Infrastructure and Learning Resources (Key Indicator and Qualitative Metrics(QIM) in Criterion4)	
4.1	Physical Facilities
4.1.1 QIM	The institution has adequate facilities for teaching- learning. viz., classrooms, laboratories, computing equipment, etc.
4.1.2 QIM	The institution has adequate facilities for sports, games (indoor, outdoor),gymnasium, yoga centre etc., and cultural activities
4.2	Library as a Learning Resource
4.2.1 QIM	Library is automated using Integrated Library Management System (ILMS)
4.2.2 QIM	Collection of rare books, manuscripts, special reports or any other knowledge resources for library enrichment
4.3	IT Infrastructure
4.3.1 QIM	Institution frequently updates its IT facilities including Wi-Fi
4.4	Maintenance of Campus Infrastructure
4.4.2 QIM	There are established systems and procedures for maintaining and utilizing physical, academic and support facilities - laboratory, library, sports complex, computers, classrooms etc.

Qualitative analysis of Criterion 4

The institute has campus spread over 28.16 acres with modern buildings, technology-enabled classrooms, well equipped laboratories, Faculty rooms, Seminar, Tutorial , Conference halls, Examination cell, Restrooms. The administrative block houses offices for Chairman, Managing Director, Director and Principal, Board meeting hall and Conference hall etc.

The student support facilities such as Reprographic, Co-operative store, ATMs, Separate centres with doctor and nurse for Counseling and Medical facility for boys and girls, Spacious hostels, Guest rooms, Canteens, Intercom facilities, Gymnasiums, Indoor auditoriums, Spacious play fields for outdoor and indoor games are available in the campus.

Guaranteed, un-interrupted power supply through generator sets with total installed capacity of 1450 KVA are provided for the campus needs. RO treated purified drinking water is supplied to staff and students. Special facilities such as Ramps, exclusive restrooms are provided to assist students with physical disabilities.

Computerized, fully air-conditioned central library has 47,454 volumes of books and 152 National Journals, 712 online journals from IEEE-IEL and Science direct and huge repository of NPTEL videos. Access to MALIBNET and DELNET Library Networks are also available for the staff and students. The separate Book bank with 13,223 titles of text books is available for students.

An exclusive language lab with 120 computers and internet facility is available for the students to conduct courses for their language skills enhancement

The college is equipped with 1614 high configuration internet connected computers. Servers with high end configuration with latest software are deployed in all computer labs. A dedicated lease line of 215 Mbps bandwidth with Wi-Fi networking is being offered. E-content development center and ICT enabled seminar halls available in the college help the faculty to deliver ICT enabled lectures.

Standardized, well established procedures are implemented for the routine upkeep of the infrastructural facilities. Various maintenance committees that are headed by section heads have been constituted which submits periodical reports on stock verification and maintenance in every year. Based on the recommendations of the committee, provision is made in annual budget.

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Criterion5 - Student Support and Progression (Key Indicator and Qualitative Metrics(QIM) in Criterion5)	
5.1	Student Support
5.2	Student Progression
5.3	Student Participation and Activities
5.3.2 QIM	Presence of an active Student Council & representation of students on academic & administrative bodies/committees of the institution
5.4	Alumni Engagement
5.4.1 QIM	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

Qualitative analysis of Criterion 5

Institution provides a number of Student support activities for academic excellence and overall development of the students.

A student council with nominated student members exists in the institute and meets periodically. Every year about 1800 students avail various State and Central government scholarships and fee waiver benefits.

Support is extended to the students to face competitive examinations. Students, who opt to continue their education, are offered guidance to study in India and abroad through the Advisory Bureau for Higher Studies (ABHS). Every year 1500 students are benefitted in getting prepared for competitive examinations and 900 students undergo Business English Certification training program.

Placement training programs are planned systematically and conducted throughout the course of study for the students. About 75% of students are getting placed in different companies every year through campus placement. Student's performance in curricular, co-curricular and extra-curricular activities are also motivated.

The Students' Counselling, Grievance Redressal Committee and Anti-ragging cell has a transparent mechanism for timely redressal of grievances. The students actively participate in technical events organized by 21 student chapters of professional societies namely IEEE, SAE, CSI, ISTE, IWS, ISHRAE, OSA, BRSI, ISA, IChemE etc. Symposium and cultural competitions are organized for students to compete with department peers, identify their talents and enhance their soft skills. Every year several students win prizes in co-curricular and extra-curricular events that are conducted in various institutions at national level.

The college has a good representation at various levels in sports events. Players at International level-2, National level-18 and University level -46 are in place.

Alumni are a strong support to the institution. The registered alumni association actively contributes towards academic growth by delivering guest lectures, webinars, and workshop throughout the year.

Criterion6 - Governance, Leadership and Management (Key Indicator and Qualitative Metrics(QIM) in Criterion6)	
6.1	Institutional Vision and Leadership
6.1.1 QIM	The governance of the institution is reflective of an effective leadership in tune with the vision and mission of the institution
6.1.2 QIM	The institution practices decentralization and participative management
6.2	Strategy Development and Deployment
6.2.1 QIM	Perspective/Strategic plan and Deployment documents are available in the institution
6.2.2 QIM	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
6.2.4 QIM	Effectiveness of various bodies/cells/committees is evident through minutes of meetings and implementation of their resolutions
6.3	Faculty Empowerment Strategies
6.3.1 QIM	The institution has effective welfare measures for teaching and non-teaching staff
6.3.5 QIM	Institution has Performance Appraisal System for teaching and non-teaching staff
6.4	Financial Management and Resource Mobilization
6.4.1 QIM	Institution conducts internal and external financial audits regularly
6.4.3 QIM	Institutional strategies for mobilisation of funds and the optimal utilisation of resources
6.5	Internal Quality Assurance System
6.5.1 QIM	Internal Quality Assurance Cell (IQAC) has contributed significantly for institutionalizing the quality assurance strategies and processes
6.5.2 QIM	The institution reviews its teaching learning process, structures & methodologies of operations and learning outcomes at periodic intervals through IQAC set up as per norms
6.5.5 QIM	Incremental improvements made during the preceding five years (<i>in case of first cycle</i>) Post accreditation quality initiatives (<i>second and subsequent cycles</i>)

Qualitative analysis of Criterion 6

Institution provides quality technical education with strong fundamentals and moral standards that enable students to excel in their respective field of study. The leadership of the institute believes in participative management and strives to bring excellence by structured organizational system with the involvement of all the stakeholders. All vital decisions regarding the commencement of new courses, expansion of infrastructure, formulation and promulgating of strategy are approved by the Chairman. The implementation process is further discussed with the Principal and Heads of the departments for execution.

The Institution has implemented e-governance in the following areas to make the process simple, accountable, transparent and better reach.

- administration (college web portal, Bio-Metric attendance salary disbursement)
- examination (generation of question papers for internal assessments, result analysis),
- library (Mylib)
- student support (skill rack, cocubes, myslate portal)

The institution has effective welfare measures for teaching and non-teaching staff. Facilities such as Provident Fund, medical allowances, free transport and mess, marriage and house warming gifts are provided. All non-teaching staff are provided with uniform at free of cost.

Institute has systematic performance appraisal system to assess and review the performance of teaching and non-teaching staff

Faculty development programs are conducted for enhancing technical knowledge. Skill enhancement programs are also organized for technical and administrative staff members.. The Institute provides adequate financial support to the staff for professional development, R&D activities, attending conferences, workshops, publications.

The institution mobilizes the funds through the student fees. The institute makes budgetary provision for recurring and nonrecurring expenditure in advance. As per the budget, financial resources are made available for the effective functioning of the college. A well-defined mechanism prevails to monitor the usage of funds

IQAC cell is established and functioning in the college according to the specified composition of members. It is improving quality procedures and systems of the college through academic and administrative auditing.

Criterion7 - Institutional Values and Best Practices (Key Indicator and Qualitative Metrics(QIM) in Criterion7)	
7.1	Institutional Values and Social Responsibilities
7.1.2 QIM	<p>1. Institution shows gender sensitivity in providing facilities such as:</p> <ol style="list-style-type: none"> 1. Safety and Security 2. Counselling 3. Common Room
7.1.5 QIM	<p>Waste Management steps including:</p> <ul style="list-style-type: none"> • Solid waste management • Liquid waste management • E-waste management
7.1.6 QIM	Rain water harvesting structures and utilization in the campus
7.1.7 QIM	<p>Green Practices</p> <ul style="list-style-type: none"> • Students, staff using <ol style="list-style-type: none"> a) Bicycles b) Public Transport c) Pedestrian friendly roads • Plastic-free campus • Paperless office • Green landscaping with trees and plants
7.1.18 QIM	Institution organizes national festivals and birth / death anniversaries of the great Indian personalities
7.1.19 QIM	The institution maintains complete transparency in its financial, academic, administrative and auxiliary functions
7.2	Best Practices
7.2.1 QIM	Describe at least two institutional best practices (as per NAAC Format)
7.3	Institutional Distinctiveness
7.3.1 QIM	Describe/Explain the performance of the institution in one area distinctive to its vision, priority and thrust

Qualitative analysis of Criterion 7

A gender friendly environment in the campus builds harmonious relations between boys and girls and respect for each other. College conducted gender equity promotion programs and ensures gender sensitivity in providing facilities such as Girls common Room, 100 CCTV Camera for safety and security on the campus, student's counseling and Redressal actions.

The college is also conscious of imbibing Social Responsibilities like climate change and environmental issues

through core values. Green practices include alternate and renewable energy sources like Solar electricity which contributes around 2% of total power requirement and 7% of annual lighting power met by LED light sources in addition to waste management measures such as minimal usage of plastic, solid/liquid waste management, e-waste management, Rain Water Harvesting etc. The institution also facilitates the differently abled, by providing special infrastructure such as ramp for wheel chairs, designated rest rooms etc.

College is highly benefited by locational advantage of being in IT corridor through 75% of placements, getting resources for educational visits and other academic events. It also offers benefit to local community by conducting many techno-social services through NSS and YRC units. College offers true spirit of education with no discrimination against caste, creed and religion by consistently celebrating all religious festivals with equal importance. The birth and death anniversaries of great personalities are also celebrated. Institution maintains complete transparency in its financial, academic and administrative functions. Audited statements are also available in the institutional website.

Institutional Best Practices

College follows many best practices for the quality enhancement and sustenance. Many practices and need based placement support measures are developed internally and resulted in remarkable increase of placements in terms of quality and number. College practice innovative student support activities that catalyses for Co-scholastic achievements of students and helps them to emerge into all-round professionals.

Institutional Distinctiveness

Good Infrastructure sophisticated and advanced research lab/computational equipments and conducive academic ambience are the distinctiveness of St. Joseph's College of Engineering.

Institution is recognized for its academic excellence by securing 1348 university ranks from the inception and placing 10000 + engineering graduates in reputed industries. Institution focuses greater emphasis on imparting engineering education with a sense of self-discipline and accountability among budding professionals which are all explicit in its regular placement, higher education, research and entrepreneurship activities.

Section III: OVERALL ANALYSIS based on Institutional strengths, Weaknesses, Opportunities & Challenges (SWOC) (up to 500 words)

Strength

Best Practices:

- The Institute, even though being a minority Institute, practices a communal harmony in the campus as Temple, Mosque and Church co-exist together. The institute celebrates all religious festivals.
- The Institute has 6 exclusive room/hall to conduct examinations without disturbing the class. Each has a capacity of 250.
- The institute undertakes best practices such as maintain unique IDs for students and maintain exclusive portal related to examination cell.

Strengths

- Visionary Management with commitment
- Dedicated faculty with good number of doctorates
- Good Infrastructure with advanced Lab and Computing equipments
- Good enrollment ratio
- Many Programs are accredited by NBA
- Good Placements initiative and good placement records
- Conduct of value added courses, bridge courses and remedial classes.
- Conduct of a large number of outreach activities and sensitization of students to societal needs.

Weakness

- Less number of consultancy activities
- Minimal Technology Business Incubation Activities
- Limited funding towards research activities from funding agencies
- Poor enrollment in PG admission except MBA
- Publications in SCI indexed journals need improvement
- Minimal number of collaborative activities at international level
- Feedback of students is taken but actions based on this feedback need improvement.

Opportunities

- To become an Autonomous institution
- To have more Industry and Institute interaction
- To have more collaborative research with organizations like CSIR, CLRI, IITs, NITs and IIITs.
- To further strengthen Alumni activities
- To initiate student and faculty exchange program with foreign Universities
- Faculty of the Institute can be sponsored to do their Ph.D from IITs, NITs and other renowned institutes.

Challenges

- To improve students success rate

- To get student enrollment competing with deemed universities and other institutions
- To attract more core companies for placing non circuit students
- To provide industry based curriculum
- To attract more students from other states and Foreign countries

Section IV: Recommendations for Quality Enhancement of the Institution

(Please limit to **ten major ones** and use telegraphic language) (It is not necessary to indicate all the ten bullets)

- More autonomy to faculty and focus on students centric learning should be enhanced
- Participation of students at National and international level to be enhanced
- Alumni corpus fund may be introduced
- Active Industrial consultancy cell to be established
- Seed money to be provided to the faculty for research activities
- Recent technology / techniques related programs to be introduced
- To establish start-ups and business Incubation centers
- Library to be completely automated and more e books to be added
- Vision 2025 / strategic plan documents to be prepared to promote the college to next level

I have gone through the observations of the Peer Team as mentioned in this report

Signature of the Head of the Institution

Seal of the Institution

Sl.No	Name		Signature with date
1	DR. GOPAL MUGERAYA	Chairperson	
2	DR. TEJINDER PAUL SINGH	Member Co-ordinator	
3	DR. ANIL KUMAR MITTAL	Member	
4	DR. VINITA SAHU	NAAC Co - ordinator	

Place

Date

NAAC