



IQAC EXTERNAL PEER TEAM REVIEW REPORT



**Shri Vile Parle Kelavani Mandal's
DWARKADAS J. SANGHVI COLLEGE OF ENGINEERING**
(Autonomous College Affiliated to the University of Mumbai)
NAAC Accredited with "A" Grade (CGPA: 3.18)

Report on

Performance of the Institution for the
Academic Year 2020 - 2021

by

External Peer Team of IQAC

**IQAC-EXTERNAL PEER TEAM REPORT ON
PERFORMANCE OF THE COLLEGE FOR THE
ACADEMIC YEAR 2020-21**

A meeting to review the performance of the Internal Quality Assurance Cell (IQAC) of Dwarkadas J. Sanghvi college of Engineering was held on 27th August 2021 (Friday), 11.00 a.m. in the college premises. The committee initially took a round of the college premises to see the facilities as part of evaluation. The following internal members were met with and their presentations seen as part of the day-long review process.

Members of External Peer Team:

1. Dr. G. T. Thampi Principal, Thadomal Shahani Engineering College, Mumbai
2. Dr. Srija Unnikrishnan Principal, Fr. Conceicao Rodrigues College of Engineering, Mumbai
3. Dr. V. M. Phalle Associate Professor, Department of Mechanical Engineering, VJTI, Mumbai

The committee interacted with the following internal members:

1. Dr. Hari Vasudevan, Principal and Chairman
2. Dr. A.C. Daptardar, VP(Admin) and Member
3. Dr. M. J. Godse, VP (Acad) and Member
4. Dr. K. N. Vijaya Kumar, IQAC Coordinator and Head - Mech Engg.
5. Dr. R. S. Khavkar, TPO and Member
6. Dr. P.S. Joshi, Head - Electronics Engg. and Member
7. Dr. Amit Deshmukh, Head - EXTC Engg. and Member
8. Dr. Meera Narvekar, Head - Computer Engg. and Member
9. Dr. Vinaya Sawant, Head - IT dept. and Member
10. Prof. Rupali Karande, I/C Head - Chemical Engg. and Member
11. Dr. Atul Dhale, Professor and Member

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12. Dr. Trupti Paradkar, Member
13. Dr. Mrunal Rane, Member
14. Dr. A. R. Joshi, Professor, IT Dept. and Convener EEC.
15. Dr. S. N. Taklikar, Professor, Mechanical Engg.
16. Dr. Vinayak Khatawate, Associate Professor, Mechanical Engg.
17. Dr. Sunil Karamchandani, Associate Professor, EXTC Engg.
18. Prof. Prashant Patankar, Member
19. Ms. Suchetra Kabra, Alumni of the Department of Mechanical Engg.
20. Mr. Ramesh Sutar, Sr. Librarian
21. Mrs. Shreya Hadkar, Registrar

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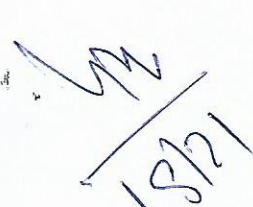
Introduction and Background of the Institution


SVKM's Dwarkadas J. Sanghvi College of Engineering (DJSCE), was established in the year 1994. The College is an Autonomous Institution, granted autonomy by the University Grants Commission (UGC) for a period of 10 years, with effect from the A.Y. 2019-20. All the undergraduate programs run by the college are accredited by the national Board of Accreditation (NBA). The college is also accredited with a CGPA of 3.18 out of 4, ("A" Grade) by NAAC for a period of 5 years with effect from October 2019.

The college runs 9 undergraduate programmes, 3 post graduate programmes and 3 Ph.D. courses, all affiliated to the University of Mumbai. Students of the college, after passing out have always performed exceedingly well in industries and academic institutes, where they pursue higher studies.

The Internal Quality Assurance Cell (IQAC) of Dwarkadas J. Sanghvi College of Engineering was established in the year 2015 and conducts various curricular, co-curricular, extra-curricular, extension activities, so as to improve the academics and administrative performance of the college on regular basis. The IQAC team has always been making sustained efforts to maintain quality education in the institution.

The IQAC Team has been quite innovative in adopting to the online-mode, while initiating various activities and programmes for the year. Overall, the efforts put in by the team during the pandemic time is noteworthy and significant.


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Profile of the Institution

1. **Name of the College** : Dwarkadas J. Sanghvi College of Engineering,
No. U-15, J.V.P.D. Scheme, Bhaktivedanta Swami Road, Opp. Cooper Hospital, Vile Parle, Mumbai, Maharashtra 400056
2. **Name of the Principal** : Dr. Hari Vasudevan
3. **Telephone/Fax /Email** : Phone No: 022 42335000
Mobile No: 9821464696
4. **Email** : 1) info@djsce.ac.in
2) principal@djsce.ac.in,
5. **Year of Establishment** : 1994
6. **Whether private or government or University maintained** : Private and Self-Financing
7. **Autonomous Status** : UGC has conferred the Autonomous Status in the year 2019 for a period of 10 years from the A.Y. 2019-2020.
8. **Name of the Affiliating University** : University of Mumbai, Fort, Mumbai.

UG Programmes run by the college during the A.Y. 2020-21:

Sr. No	Name of the Programme	Sanctioned Intake
1	B.Tech. Chemical Engineering	60
2	B.Tech. Electronics Engineering	60
3	B.Tech. Computer Engineering	120
4	B.Tech. Electronics and Telecommunication Engineering	120
5	B.Tech. Information Technology	120
6	B.Tech. Mechanical Engineering	120
7	B.Tech. Computer Science and Engineering (Data Science)	60
8	B.Tech. Production Engineering	60
9	B.Tech. Biomedical Engineering	30

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PG Programmes run by the college during the A.Y. 2020-21:

Sr. No	Name of the Programme	Sanctioned Intake
1	M.Tech. Electronics and Telecommunication Engineering	18
2	M.Tech. Computer Engineering	18
3	M.Tech. Mechanical Engineering (Manufacturing Systems Engineering)	18

PhD Programmes run by the college during the A.Y. 2020-21:

Sr. No	Name of the Programme	Sanctioned Intake
1	Ph.D. Electronics and Telecommunication Engineering	10
2	Ph.D. Computer Engineering	10
3	Ph.D. Mechanical Engineering	10

Student Strength:

Sr. No	Course	No of students
1	UG courses	2940
2	PG courses	06
3	Ph.D. courses	26

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The number of faculty members, cadre-wise is as follows:

Sr. No.	Name of the Programme	Asst. Professor	Associate Professor	Professor
1	B.Tech. Chemical Engineering	8	1	--
2	B.Tech. Electronics Engineering	11	--	1
3	B.Tech Production Engineering	14	--	2
4	B.Tech Biomedical Engineering	7	--	1
5	B.Tech. Computer Engineering	21	1	2
6	B.Tech. Electronics and Telecommunication Engineering	21	1	1
7	B.Tech. Information Technology	10	--	1
8	B.Tech. Mechanical Engineering	22	1	2
9	B.Tech. Computer Engineering (Data Science)	1	--	--
10	First Year & General Section	23	1	--

The Chairman of the IQAC, Dr. K.N. Vijaya Kumar along with the Principal, Dr. Hari Vasudevan welcomed the external members of the evaluation team for the meeting. The committee members, after the brief initial introduction, went through the documents, verified the same and further evaluated the following key parameters with respect to the overall performance of the college for the year. This was preceded with an initial visit to all the facilities in the college.

1. Curricular Aspects
2. Teaching Learning and Evaluation
3. Research, Innovations and Extension
4. Infrastructure and Learning Resources
5. Student Support and Progression
6. Governance, Leadership and Management
7. Institutional Values and Best Practices

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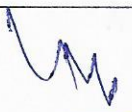
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Dr. K.N. Vijaya Kumar
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1. CURRICULAR ASPECTS

- The committee observed that the syllabus of all the third year UG programmes have been updated and the curriculum meets industry standards. Syllabus scheme and detailed syllabus preparation are meticulously done with the help of the experts from both academia and industry. Eminent alumni of the institute were also involved in the process.
- The institution strictly follows the academic calendar created at the start of the academic year, after the brainstorming sessions among senior faculty members and authorities in the institute.
- Faculty members from various departments underwent training through SAS & IBM courses, to get updated with the emerging technologies, such as Visual Analytics, BaseSas & Predictive Modelling during the period.

Sr. No.	Criterion	Rating		
		Very good	Good	Satisfactory
1	Quality of vision and mission statements	Y		
2	Implementation of choice- based credit system (CBCS).	Y		
3	Adequacy of courses having focus on employability/ entrepreneurship/ skill development.			Y
4	Evidence of procedures for framing POs, PSOs and their adequacy.		Y	
5	Evidence of attainment of POs, PSOs against set targets.	Y		
6	Evidence for framing of COs and their attainment against set targets.		Y	
7	Evidence for structured feedback system.		Y	
8	Evidence for NBA Accreditation of UG/PG programs.	Y		
9	Preparation and adherence to Academic Calendar by the institution.	Y		
10	Implementation of examination reforms.	Y		



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2. TEACHING - LEARNING AND EVALUATION

- IQAC encouraged the faculty members to take up Coursera courses in the domain of teaching pedagogy. All the faculty members successfully completed a minimum of 2 courses, from 2 Australian Universities, which helped them to effectively improve the teaching methodology and adapt to new and emerging situations of online teaching learning.
- To ensure and enhance the quality of teaching and learning, IQAC has conducted academic audit every semester and once a year the audit is arranged by an external expert selected by the cell and approved by the principal.
- The institute has a well-structured online feedback mechanism.
- 14 books have been published by faculty members during the academic year.
- The Institution has an effective student mentoring system. Each faculty member is assigned a batch of maximum 20 students and their various educational, personal and professional issues are discussed personally with them.
- Examinations (Apr/May 2021) & projects for the final year students were conducted through the online mode as per the guidelines of the University of Mumbai.
- The institute had an understanding with Coursera online platform on the basis of which faculty members and students were offered access to Coursera courses. A total of 7776 courses were completed by the faculty members and the students of the institute. It was noted in the previous year too that, there were very high number of registrations and course completions.
- Online classes were also conducted by experts for IBM additional certification courses. A total of 141 students were trained for IBM courses, under 3 specializations, such as AI&ML, Data Analytics as well as IoT.


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The following were also observed by the committee:

Sr. No.	Criterion	Rating		
		Very good	Good	Satisfactory
1	Faculty : Student Ratio	Y		
2	Evidence of academic audits bring conducted.		Y	
3	Utilization of ICT for teaching – learning.	Y		
4	Quality of Internal test papers and End semester exam papers.		Y	
5	Student's progression without backlog in any semester.	Y		
6	Students completing the programs in the stipulated time.	Y		
7	Adequacy of workshops/training programs arranged for students.			Y
8	Adequacy of guest/technical lectures arranged for students.			Y
9	Effectiveness of student mentoring system.	Y		
10	Evidence for students completing NPTEL courses.	Y		
11	Evidence for students completing Coursera courses.	Y		
12	Learning beyond the class room.		Y	

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3. RESEARCH, INNOVATIONS AND EXTENSION

- It is also seen that the IQAC cell has played a critical role in the setting up and the process improvement of all student teams in the college. IQAC cell helped the teams to streamline their research and development process. These student teams have won a lot of awards and accolades at various competitions organized by various international bodies.
- 1 seminar on Intellectual property rights (IPR) was also conducted during the year.
- During every 6 months, annual progress seminars are held for research scholars. The Research Assessment Committee (RAC) attached to the respective Research Centers in the college ensure the quality of the reports and synopsis that are prepared by the students.
- 7 faculty members in all the 3 research centers have submitted their thesis to the University of Mumbai during the academic year.
- Faculty members have actively participated in various Seminars/Conferences and have presented papers. A total of 95 papers have been presented & published by Faculty members in various Conference Proceedings during the academic year.
- 120 research papers were published by the faculty members in various UGC notified journals during the academic year.
- A total of 08 Patents and 10 copyrights were awarded during the year 2020-2021.
- 10 extension and outreach programmes were also carried out by the institute in collaboration with NSS.
- IQAC and the departments of Computer engineering as well as Information Technology jointly organised 'DJASCI 2021' to provide a platform for budding engineers and researchers from all over Maharashtra to share and showcase their innovative ideas in latest technologies. A total of 85 projects from diverse domains, such as Artificial Intelligence, Computing, Human Computer Interface, Data Mining and Analytics and Network & Security were received during the competitions.
- An overnight (24 hrs.) hackathon, 'Codeshastra 7.0' was organized jointly by IQAC and the department of Information Technology on 13th and 14th March, 2021. The hackathon received a total of 572 registrations.

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- IQAC and the department of Electronics and Telecommunication Engineering jointly organised 'DJ Spark' and 'DJ Strike', annual project based state level competitions, wherein students were provided with an opportunity to showcase their technical skills and compete at multiple fronts with other fellow students from all over Maharashtra.
- IQAC, ISME and departments of Production Engineering and Mechanical Engineering organised a technical fest, named 'Nirmiti' from 25th March 2021 to 30th March 2021.
- To expand the Machine Learning community and to foster the learning on the latest technologies and cutting edge research, as well as to develop solutions to real-world problems, IQAC and the department of Computer Engineering laid the foundations of Synapse, a Project-based ML and AI club. The club aims to teach the students and give a hands-on experience on working with ML projects based on computer vision, natural language processing and time series analysis etc.

Sr. No.	Criterion	Rating		
		Very Good	Good	Satisfactory
1	Faculty profile and the adequacy of Faculty members as per the norms of AICTE.	Y		
2	Faculty members recognized as research guides.		Y	
3	Faculty members with PhD		Y	
4	Quality of faculty publications			Y
5	Quality of research projects		Y	
6	Evidence for patents/published/awarded.	Y		
7	Adequacy of number of conferences and workshops attended by the faculty members.	Y		
8	Adequacy of number of workshops/ FDPs/ STTPs/Conferences conducted by the department.			Y

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4. INFRASTRUCTURE AND LEARNING RESOURCES

- The institute has excellent infrastructure facilities and it conforms to the requirements of AICTE as well as UGC.
- The college central library has a collection of over 83,000 Engineering books (e-books & printed books) and more than 94,500 e-books of all other disciplines. In addition, each department also has separate libraries.
- The college has invested in licensed version of “Microsoft Teams” to ensure a smooth conduct of online lectures and other activities. A significant number of meetings & webinars/ workshops were conducted during the year.
- The college also has a licensed version of ‘Turnitin’ software to promote academic integrity, deter plagiarism and improve student outcomes.
- IQAC and the department of Electronics Engineering initiated the application for AICTE – IDEA Labs scheme. The scheme envisaged setting up of a state-of-art, design development & tooling, ideation-laboratory for students. The proposal successfully cleared 3 rounds of scrutiny and has fulfilled the conditions for the final round.

Sr. No.	Criterion	Rating		
		Very good	Good	Satisfactory
1	Adequacy of facilities for teaching learning. viz., classrooms, laboratories.	Y		
2	Adequacy of modern equipment in the laboratories.		Y	
3	Adequacy of facilities for sports and cultural activities.			Y
4	Improvements in the library services.		Y	
5	Adequacy of books and journals available in library.	Y		
6	Computerization of administration and the process of admissions and examination results, issue of certificates.	Y		
7	Computer and internet access and Training to teachers, non-teaching staff and students.	Y		
8	Usage of Plagiarism software			Y

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5. STUDENT SUPPORT AND PROGRESSION

- Many student teams from the college, accompanied by the faculty members have participated in various national and international competitions, though majority of them during the year were online.
- During the height of Covid-19 pandemic, the college took action to keep students' learning spirits alive by partnering with Coursera and providing them with a free version of the course. A very high number of students took benefit of the same.
- During the period, the institution has organized various activities/events and other Value added programs online on MS Team platform to support students' performance.
- A series of lectures/webinars were organized periodically for the students to inculcate moral and ethical values in them.

Sr. No	Criterion	Rating		
		Very good	Good	Satisfactory
1	Student's participations in various competitions held online.		Y	
2	Prize achievements in various online events.	Y		
3	Institutional mechanism for students' grievances, addressing of sexual harassment and ragging cases.		Y	
4	Participants in social awareness activities (online activities).		Y	
5	Student progression to higher Education.	Y		
6	No of awards/medals for outstanding performance in online competitions activities at national and international levels.			Y
7	Role of alumni in institution development.	Y		

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6. GOVERNANCE, LEADERSHIP AND MANAGEMENT

- The institution has been initiating new quality academic activities every year. The IQAC has been proactive in strengthening the best practices in the college and ensuring the high quality standards in all activities.
- The institution has increasingly focused their attention on the pedagogical training programmes for the teaching staff members. These programmes have been aiming for an understanding of engineering pedagogy, the purpose of which is the targeted design of technical and technologically specific teaching and learning methods & practices.

Sr. No	Criterion	Rating		
		Very good	Good	Satisfactory
1	Functioning of the academic bodies as per UGC guidelines (Governing Body, Academic Council, Finance Committee and Board of Studies etc.).	Y		
2	Evidence of Minutes of the Boards of Studies/Academic Council meetings etc.	Y		
3	Functioning of IQAC		Y	
4	Institution has performance Appraisal system for faculty members.		Y	

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7. INSTITUTIONAL VALUES AND BEST PRACTICES

- During the period of Covid-19 pandemic, NSS team of the college distributed food and blankets for the needy under the name of “Divya daana” and “Sharing Warmth” respectively.
- During the lockdown, faculty members participated in 308 online webinars/seminars by putting their time to good use.
- The institution has separate manuals of best practices, teaching methodologies, manual of professional ethics and clearly stated and integrated pro-development policies.

Sr. No	Criterion	Rating		
		Very good	Good	Satisfactory
1	Adequacy of MoUs signed with institutions /industries.			Y
2	Adequacy of gender equality promotion programs organized by the institution.		Y	
3	Differently abled Friendliness Resources in the institution.	Y		
4	Industry Institute interaction		Y	
5	Institutional best practices	Y		

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CLOSING REMARKS & OBERVATIONS

- Many faculty members have published their research work in good number of reputed journals and conferences.
- A total 16 papers have also been published by students in reputed journals, with the help of faculty support.
- Books published by faculty members in A.Y. 2020-21 have increased to 14, as compared to the last academic year.
- Research papers published by the faculty members in national/International Journals in A.Y. 2020-21 has increased to 120 in total.
- The Internal Quality Assurance Cell (IQAC) has made a substantial contribution to the institutionalization of quality assurance standards, procedures and policies.
- The Institution periodically reviews its teaching-learning process structures, methodologies of operation and learning outcomes through the IQAC.
- The presence of about 30 odd committees cover a wide range of aspects, basically required to enhance the overall grooming of students as well to ensure that faculty members keep themselves updated.
- The college has taken good initiatives to make good use of available time during the Covid-19 pandemic to upgrade the faculty members with the new technologies by conducting seminars and webinars by appropriate industry personnel.
- Student participation in various online competitions are encouraged and have grown to a significantly high level.

SUGGESTIONS / KEY POINTS FOR IMPROVEMENT

- Faculty members may be encouraged to develop e-content modules for their academic courses in all the programmes.
- More courses/seminars may be offered to students as well as faculty members to make them aware of the ongoing emerging and disruptive technologies.
- More attention is required to be given by faculty members towards patenting. Students may be encouraged and motivated for their involvement in the process.

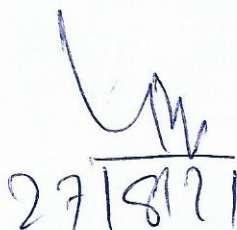
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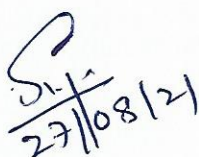
- Faculty members have to take additional initiatives and their attention is needed in getting funds from Government and Semi-Government funding agencies.

Overall, the work done by the IQAC team of the college is found satisfactory, considering that the entire period of assessment falls under the Covid-19 pandemic period.



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