Sri Chandrasekarendra Saraswati Vidyapuram, Plot 1C-E, Sector V, Nerul, Navi Mumbai – 400 706.

DEPARTMENT OF MECHANICAL ENGINEERING Annual Report 2021-22

1. Academic achievements:

- BE student Shantanu Thorat (218A6079) from 2017-21 passout batch got selected as 'Scientific Officer' in BARC, Mumbai in November 2021.
- 23 BE students from 2018-22 batch got selected through campus placements.
- 1 BE student started a starup related to beauty products.
- 2 BE students cleared GRE and TOEFL exams.

2. Department Initiatives:

- Conducted online lectures and practicals for SE, TE and BE using exclusive MS Teams platforms.
- Conducted offline lectures and practicals for SE, TE and BE from 14th February 2022 onwards.
- Conducted special lectures for DSE students for Sem-III in online as well as offline mode.
- Faculties incorporated different innovative teaching methods like digital tablet, pen tablet, digital board, interactive sessions, quizzes, etc. during online teaching sessions through MS teams.
- Conducted special extra lectures for Sem-III DSE admitted students.
- Provided guidance and orientation to SE and TE students for selection of topics for second year mini-projects.
- Provided guidance and orientation to BE students for selection of topics for final year projects.
- Department organised various SDPs for SE, TE and BE students.
- Department organised inhouse internship for SE, TE and BE students.
- Assisted UoM for paper setting, conduction and evaluation of University End Semester Exams.
- Assisted in exam results preparation.
- Assisted and supervised MH-CET duties.
- Motivated and facilitated students of SE, TE and BE to attend webinars, online sessions and online
 workshops related to technical topics, internships, higher eduction and job opportunities, and the
 information for the same were provided from time-to-time.
- IQAC audit
- NAAC and AQAR data uploading.
- ISHRAE student chapter installation 2021-22.
- IIIE student chapter installation 2021-22.
- Orientation for DSE students.
- Organised ISTE approved STTP
- Organized Parents-Teachers Meet.
- Faculty-Alumni interaction.
- Training and Placement.

3. Academic/technical achievements of students:

• BE student Shantanu Thorat (218A6079) from 2017-21 passout batch got selected as 'Scientific Officer' in BARC, Mumbai in November 2021.

Graduate School of Technology RISE WITH EDUCATION

SIES GRADUATE SCHOOL OF TECHNOLOGY

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- Total no. of BE students placed in campus placements = 23
- Total no. of students gone for higher studies = 4
- BE student project group (Atish Patil, Vedant Gaikwad, Sidharth Vijayaramesh, Vaishanavi Wani) got 3rd prize in Innovative Project Poster Competition 2022 in March 2022.

5. Cultural/sports achievements:

- Faculties and students participated online in Independence Day celebration on 15th August, 2021.
- Faculties and students participated online in Republic Day celebration on 26th January, 2022.

6. Faculty achievements/Research grants:

- Prof. Ajay Hundiwale and Prof. Chandan Chaudhari mentored and conducted online in-house internship for students of SE to BE on the topic 'Simulation using ANSYS and CFD' scheduled from 21st June to 3rd July 2021.
- Prof. Siddique Ahmed and Prof. Prashant Ambadekar mentored and conducting online in-house internship for students of SE to BE on the topic '3D Modeling and Printing' scheduled from 21st June to 3rd July 2021.
- Dr. R.S. Nehete and Dr. Pradip Patil published paper entitled 'Root cause analysis of failure of suspension spring used in fiat bogie of indian railways' in Industrial Engineering Journal in June 2021.
- Dr. Pradip Patil presented and published paper entitled 'Methodology for Identification of Quality of clean-Cut surface for IS2062HR sheet metal blanking using Random Forest' in 2021 5th Conference on Information and Communication Technology (CICT) by IIIT, Kurnool, India in 2021.
- Dr. R.S. Nehete and Dr. Pradip Patil presented and published paper entitled 'Investigation of Blanking Clearance for IS277GI by Artificial Neural Network (ANN)' in 2021 4th Biennial International Conference on Nascent Technologies in Engineering (ICNTE) by Fr FRCRIT, Vashi, Navi Mumbai in 2021.
- Dr. R.S. Nehete and Dr. Pradip Patil published paper entitled 'Invesigation of blanking clearance for IS277GI by Artificial Neural Network (ANN)' in IEEE Xplore in August 2021.
- Prof. Lokpriya Gaikwad published paper entitled 'Effect of green practices on organizational performance: An empirical study' in Journal of Basic and Applied Sciences in August 2021.
- Prof. Ganesh Kadam was conferred 'Ph.D. (Mechanical) Degree in Engineering and Technology' by Dr. Babasaheb Ambedkar Technological University (DBATU), Lonere (Government-aided Autonomous – Maharashtra State's Technological University) in the 23rd Convocation Ceremony on 4th September, 2021.
- Prof. Lokpriya Gaikwad won best teacher award in Academistan on 7th September, 2021.
- Prof. Lokpriya Gaikwad presented paper entitled 'Implementation of Six Sigma DMADV to gain a competitive advantage: A case study' in international conference ICMMSE:IR 2021 organised by Sandip Institute of Technology and Research Centre Nashik during 18th-19th September, 2021.
- Dr. Pradip Patil's paper entitled 'An Approach to Improvement in Heat Flow Analysis of Continuously Variable Transmission (CVT)' got published in International Journal of Engineering and Applied Physics on 25th September 2021.
- Prof. Prashant Ambadekar published patent on 'Method and process to identify tool wear through image processing' on 29th October, 2021.

Graduate School of Technology

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- Dr. R.S. Nehete presented and published paper entitled 'Developing a Novel Approach for Crack detection in Metal Sheet through frequency analysis' in Equinox 2021 6th International conference by Terna Engineering College, Navi Mumbai.
- Dr. R.S. Nehete and Dr. Pradip Patil published paper entitled 'Developing a Novel Approach for Crack detection through frequency analysis' in International Journal of Emerging Technologies and Innovative Research in October 2021.
- Dr. Pradip Patil published paper entitled 'Dynamic response prosthetic leg' in International Journal of Emerging Technologies and Innovative Research in October 2021.
- Dr. Pradip Patil published paper entitled 'Condition Monitoring and Diagnosis of an IC Engine using Vibration Recognition' in International Journal of Emerging Technologies and Innovative Research in October 2021.
- Dr. Pradip Patil presented and published paper entitled 'An Approach for Predictive Maintenance and Monitoring of IC Engine Health for Future Cities' in Concference for Future Cities(CTFC 2021) by Pillai College of Engineering, Panvel, Navi Mumbai, India in 2021.
- Dr. Pradip Patil presented and published paper entitled 'Investigation of quality of clean-cut surface for sheet metal' in Concference for Future Cities(CTFC 2021) by Pillai College ,of Engineering, Panvel, Navi Mumbai, India in 2021.
- Prof. Ajay Hundiwale presented and published paper 'Design of Pancake Heat Exchanger for Waste Heat Recovery' in IEEE CTFC 2021 Conference and Xplore by Pillai College of Engineering, Panvel.
- Dr. Rupendra Nehete presented and published paper entitled 'Numerical Analysis to investigate the
 effect of solidification' in AICTE sponsored third international conference on computing in
 Mechanical engineering (ICCME 21) by SCMS school of engineering and technology, Ernakulam in
 2021.
- Prof. Ajay Hundiwale published paper entitled 'Liquid Desiccant based Hybrid Air Conditioner:
 Offers High Performance while Maintaining Both Desired DBT and RH'in Air Conditioning and
 Refrigeration Journal (ISHRAE magazine) in October 2021.
- Prof. Prashant Ambadekar acted as a reviewer and reviewed papers for international conference on 'Future cities' organized by PCOE, Panvel. On 8th October, 2021.
- Prof. Prashant Ambadekar and Dr. Rupendra Nehete filed patent on 'Telescopic shaft for four-wheeler terrain vehicles' on 21st October, 2021.
- Prof. Lokpriya Gaikwad published chapter having title 'Effect of Lean practices on organizational performance' in the book 'Lean Manufacturing' by Intechopen publications on 3rd November, 2021.
- Prof. Lokpriya Gaikwad was invited as an expert and gave a Guest/Expert lecture for Third year students on topic 'Robust Design Methods' at Mechanical Engineering department of G. M. Vedak Institute of Technology, Tala on 20th November, 2021.
- Dr. Pradip Patil published paper entitled 'Methodology for Identification of Quality of clean-Cut surface for IS2062HR sheet metal blanking using Random Forest' in IEEE Xplore 2021 5th Conference on Information and Communication Technology (CICT) in December 2021.
- Dr. Rupendra Nehete, Dr. Pradip Patil, Dr. Ganesh Kadam, Dr. Kaustubh Chavan, Prof. Prashant Ambadekar and Prof. Lokpriya Gaikwad gave expert talk in ISTE approved STTP on 'Advance Research Technique for Industry 4.0' organized by Mechanical Engg. Department, SIES GST from 6-11th December, 2021.

Graduate School of Technology RISE WITH EDUCATION

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- Prof. Prashant Ambadekar was coordinator for SDP on 'Structural modeling and 3D printing' in collaboration with PPT department conducted for SE, TE and BE students from 13-20th December, 2021.
- Prof. Prashant Ambadekar and Prof. M. Ali Ansari conducted and delivered expert sessions in SDP on 'Structural modeling and 3D printing' in collaboration with PPT department for SE, TE and BE students from 13-20th December, 2021.
- Prof. Lokpriya Gaikwad published paper on 'Implementation of Lean Six Sigma in Manufacturing Firm for Competitive Advantage' in the Journal of Recent Activities in Production, Volume 6, Issue 3, December 2021, ISSN: 2581-9771.
- Prof. Lokpriya Gaikwad received 'Academic Excellence Award 2021-2022' by the Novel Research Academy on 28th December, 2021.
- Prof. Lokpriya Gaikwad completed Ph.D. Degree from Mumbai University (SPCE, Andheri) on 31st December, 2021.
- Dr. Rupendra Nehete and Dr. Pradip Patil published paper 'Investigation of failure of double suspension spring of railway coach in Industrial Engineering Journal in January 2022.
- Dr. Lokpriya Gaikwad participated in FDP online workshop on 'Do's and Don'ts of Research and Technical Publications' by Dr. Y.S. Rao, Vice-Principal & Dean R&D SPIT Andheri organized by SIES CTD and IQAC SIES GST on 6th, 13th, 20th and 27th February, 2022.
- Prof. Prashant Ambadekar started 'Alumni Interaction Series' for providing students a platform to directly interact with our graduated students (Alumni) in February 2022.
- Dr. Lokpriya Gaikwad presented paper on 'Implementation of Six Sigma methodologies to gain a competitive advantage: A case study approach' in International conference on Logistics and Industrial system engineering (ASET 2022) at Higher Colleges of Technology, Dubai Men's campus, Dubai -UAE, 21-24th February, 2022.
- Dr. Ganesh Kadam was Member of Scientific Committee and also acted as Reviewer (Elsevier) for the 3rd International Conference on Aspects of Materials Science and Engineering (ICAMSE2022) organized by Panjab University Chandigarh from 4-5th March, 2022.
- Dr. Rupendra Nehete and Dr. Pradip Patil filed copyright Optimization of process plant layout diary no. 10027/2022-CO/SW on 13th May 2022.
- Dr. R.S. Nehete delivered and expert talk in workshop on 'Innovation and entrepreneurship' organized by BVIT on 16th March, 2022.
- Dr. Ganesh Kadam chaired as expert and judge in National Level Innovative Project Poster Competition under the head of IIIE SIES GST student chapter on 31st March, 2022.
- Dr. Ganesh Kadam published paper as book chapter entitled 'Cutting Force assessment in HSM of Inconel 718 aided with Water vapour as an Eco-friendly Cutting Fluid' in Recent Advances in Manufacturing Processes and Systems Springer in March 2022.
- Prof. Prashant Ambadekar published paper as book chapter entitled 'Machine Learning Application for Prediction of Surface Roughness of Milled Surface' in book Recent Advances in Manufacturing Modelling and Optimization by Springer in April 2022.
- Dr. Ganesh Kadam published paper entitled 'Comparative assessment of machining induced hardening in HSM of Inconel 718 with aid of Eco-friendly cutting fluids' in International journal Materials Today Pro. Elsevier in April 2022.

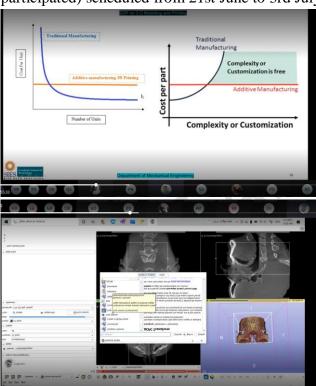


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- Prof. Prashant Ambadekar, Dr. Rupendra Nehete and Mr. Yogesh Panchal conducted two week SDP value-added course on 'Computer-Aided Manufacturing' for SE, TE and BE students from 20th June to 1st July, 2022.
- Prof. Prashant Ambadekar, Dr. Rupendra Nehete and Mr. Yogesh Panchal conducted one week inhouse internship on 'Machine Maintenance' for SE, TE and BE students from 4th July to 9th July, 2022.
- Dr. Rupendra Nehete, Dr. Pradip Patil and Prof. Prashant Amabadekar got patent on 'Telescopic shaft for four-wheeler terrain vehicles' on 21st October, 2021 Patent application no. 351656-001.
- Prof. Prashant Ambadekar got patent on 'Method and Process to Identify Tool Wear Through Image Processing' Published on 29/10/2021.
- Dr. Rupendra Nehete, Dr. Pradip Patil copy right filed on Optimization of process plant layout diary no. 10027/2022-CO/SW Filed on 13-05-2022.

7. Seminars/workshops/industry visits organised by departments:

• Conducted online in-house internship for students of SE to BE on two topics – 'Simulation using ANSYS and CFD' (78 students participated) and '3D Modeling and Printing' (17 students participated) scheduled from 21st June to 3rd July 2021.





- Conducted online meeting in MS Teams with BE students for selection of final year project topics on 15th and 16th July 2021.
- SE students participated in webinar and interactive session on 'Future Scope of Engineering' by Dr.
 Jonathan Joshi, Co-founder & CEO Eduvance organized by admission team SIESGST on 28th
 August, 2021.
- SE students participated in webinar on 'Tools for Cyber Security for Youth' by Dr. Varun Kapoor, ADGP, Madhya Pradesh organized by CE department SIES GST on 11th September, 2021.
- Organized and conducted Parents-Teacher meeting on 17th September, 2021.

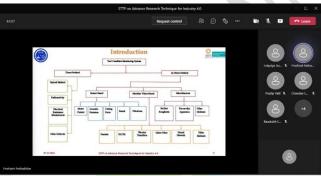


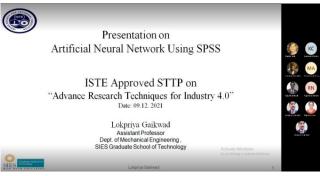
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- Organized and conducted seminar on 'Writing a conference/journal paper based on projects' for TE and BE students on 5th October, 2021.
- Students participated in webinar on 'Gender Sensitization' by Ms. Shruthi, Fellowship Lead at The Gender Lab and Mr. Aniket Wakankar, Co-leading at The Gender Lab organized by WDC SIES GST on 14th October, 2021.
- Conducted an online session on 'Resume Building' by Prof. Rakhee Das, CE department for SE students on 13th November, 2021.
- Conducted orientation program for DSE admitted students on 10th December, 2021.
- Department organized and conducted ISTE approved STTP on 'Advance Research Technique for Industry 4.0' from 6-11th December, 2021.











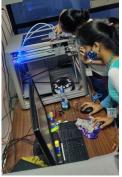


• Organized and conducted SDP on 'Structural modeling and 3D printing' in collaboration with PPT department for SE, TE and BE students from 13-20th December, 2021.



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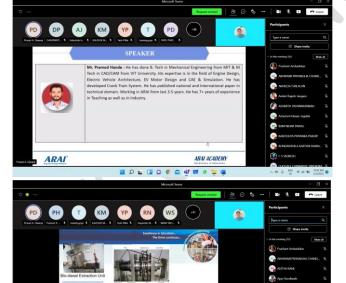


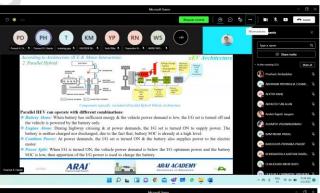






- Department organized and conducted in-house internships for SE, TE and BE students in December 2021.
- Organized and conducted SDP webinar on 'Electric & Hybrid Electric Vehicles' organized by ARAI, Pune for SE, TE and BE on 2nd February 2022.







 Organized and conducted industry visit for ISHRAE students at Kubic India Solutions, Bhiwandi, Thane on 5th February, 2022.



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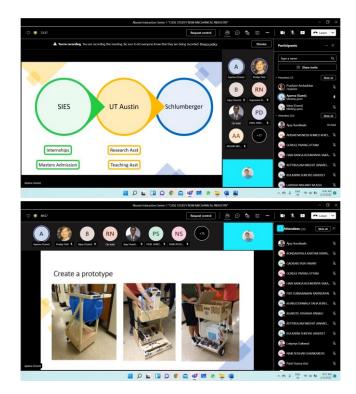






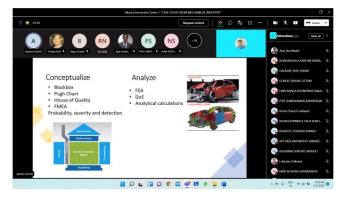
 Organized and conducted SDP under alumni interaction series on 'Case Study from Mechanical Industry' by Alumni Aparna Jayarajan, Mechanical Engineer at Schlumberger, USA and Bijoy Ramakrishnan, Senior Design Engineer, L&T Chennai for SE, TE and BE on 12th February, 2022.





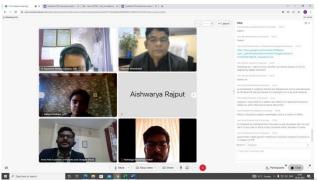


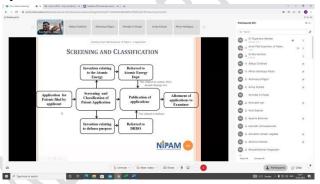
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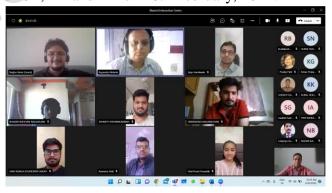
• Organised and conducted online SDP on 'Patent Awareness Program' by Indian patent office Mumbai for SE, TE and BE students on 18th February, 2022.





 Organized and conducted SDP under alumni interaction series on 'Learning Beyond Education' by Raghu Varier, Associate Engineer at TechnipFMC for SE, TE and BE on 26th February, 2022.





• Organized and conducted SDP Expert Talk on 'Business Excellence in Manufacturing' by Mr. Parag Auty, Head Business Excellence, CVBU Tata Motors Ltd. Pune on 21st March, 2022.







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 Organized and conducted industry visit for TE and BE students to GTPS Power Plant Uran on 23rd March, 2022.



- Organized and conducted SDP workshop on Solidworks by TE students open for all students from 24-25th March, 2022.
- Organized and conducted online panel discussion on Electric Vehicles with Alumni of Mechanical Engineering for faculties and students on 26th March, 2022.
- Organized and conducted SDP under alumni interaction series on 'Future cope of polymers and plastics in Mechanical Engineering' by Mr. Aniket Raje, Doctoral Researcher in University of Hamburg, Germany for SE, TE and BE on 26th March, 2022.



 Organized and conducted National Level Innovative Project Poster Competition under the head of IIIE SIES GST student chapter on 31st March, 2022.







- Students from SAE professional body under the leadership of Prof. Prashant Ambadekar organized and conducted three events 'Design wars', 'Shark tank' and 'RC racing' open for participation to all students during college annual event TML 2022 from 31st March to 1st April 2022.
- Organized and conducted industry visit for SE students at Samiri Equipment & Engineers Private Limited on 9th April, 2022.





- Organized and conducted industry visit for TE students at Warna Dairy plant, Nerul on 23rd April, 2022.
- Department organized and conducted two week SDP value-added course on 'Computer-Aided Manufacturing' for SE, TE and BE students from 20th June to 1st July, 2022.
- Department organized and conducted one week in-house internship on 'Machine Maintenance' for SE, TE and BE students from 4th July to 9th July, 2022.







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8. Seminars/workshops/FDPs attended by department faculty:

- Prof. Lokpriya Gaikwad and Prof. Ganesh Kadam participated in orientation program for TE Mech Sem-V departmental level electives 'Optimization techniques' and 'Design of Experiments' organized by PCE Panvel on 10th July, 2020.
- Dr. R.S. Nehete, Lokpriya Gaikwad and Prajakta Kane participated in FDP on 'Procedural aspects of IPR' by Mrs. Rashmi Hingmire, Patent Agent from Great Mission Group Consultancy organized by IQAC and R&D Cell SIES GST on 24th July, 2021.
- Dr. R.S. Nehete, Lokpriya Gaikwad, Ganesh Kadam, Onkar Potadar and Prashant Ambadekar participated in FDP on 'Research paper writing and publishing' by Dr. Y.S. Rao SPIT Andheri and Dr. Pramod P. Bhavarthe VPPCOE & VA Mumbai organized by IQAC and R&D Cell SIES GST on 31st July, 2021.
- Prof. Prashant Ambadekar participated in FDP webinar on 'Data Science for Manufacturing' organized by G.S. Mandal's Maharashtra Institute of Technology, Aurangabad on 31st July, 2021.
- Dr. R.S. Nehete participated in national webinar on 'Research, innovation and ranking' organized by MoE's Innovation Cell and AICTE on 11th August, 2021.
- Prof. Lokpriya Gaikwad and Prof. Prajakta Kane participated in FDP workshop on 'Outcome based education' organized by MGM's College of Engineering & Technology, Navi Mumbai from 20-21 August, 2021.
- Faculties participated in FDP on 'Data Science' by Mr. Subramaniyan Neelakandan, Founder Director, Impactsure Technologies, Mumbai organized by Computer Engineering department on 4th September, 2021.
- Dr. Rupendra Nehete and Prof. Lokpriya Gaikwad participated in one week ATAL FDP on '3D Printing and Design' organized by Sardar Patel College of Engineering, Mumbai from 20-24th September, 2021.
- Prof. Prajakta Kane participated in 7 days National FDP on 'Research Methodology' organized by Dr. Shankar Womens First Grade Government College, Uduppi from 22-28th September, 2021.
- Prof. Prashant Ambadekar participated in FDP on 'Automotive Engineering Systems' jointly organized by SAEINDIA Faculty Development Committee and ARAI Academy from 4-8th October, 2021.
- Prof. Prashant Ambadekar participated in FDP on 'Electric Mobility as future' organized by Dr. D.Y.Patil Institute of Engineering, Management and Research Akurdi, Pune from 25-30th October, 2021.



- Prof. Prashant Ambadekar participated in one week ATAL FDP on 'Augumented Reality / Virtual Reality in Mechanical Engineering' organized by Sree Buddha COE, Pattoor from 8-12th November, 2021.
- Prof. Prashant Ambadekar, Dr. Ganesh Kadam, Prof. M. Ali Ansari, Prof. Ajay Hundiwale and Prof. Prajakta Kane participated in FDP on 'Communication View less heard' by Mr. Jagdish Rattanani, Bharatiya Vidya Bhavan's S P Jain Institute of Management & Research organized by H&AS department, SIES GST on 1st December, 2021.
- Dr. Ganesh Kadam participated in FDP on 'Citation Management Software Mendeley' by Dr. Sarika Sawant, SHPT School of Lib Sc, SNDT Women's University, Mumbai organized by SIES Central Training Department on 3rd December, 2021.
- Faculties participated in ISTE approved STTP on 'Advance Research Technique for Industry 4.0' organized by Mechanical Engg. Department, SIES GST from 6-11th December, 2021.
- Prof. Lokpriya Gaikwad participated in one week ATAL FDP on 'Advances in Industrial & Systems Engineering' organized by Department of Industrial & Production Engineering, Dr B R Ambedkar National Institute of Technology (NIT), Jalandhar, Punjab from 13-17th December, 2021.
- Prof. Lokpriya Gaikwad participated in FDP on 'Research Workshop' organized by Ph.D. Center, SIES College of Commerce and Economics (Autonomous), Sion Mumbai in collaboration with SIES Central Training Department held in December 2021.
- Prof. Lokpriya Gaikwad participated in FDP on 'Excellence in Higher Education: Perspective of NEP' organized by SAE India & IIIE Student chapter Sardar Patel College of Engineering, Mumbai from 18-22nd December, 2021.
- Prof. Lokpriya Gaikwad and Prof. Prashant Ambadekar participated in ATAL FDP on '3D Printing and Design' organized by Department of Mechanical Engineering, Sardar Patel College of Engineering, Mumbai from 20-24th December, 2021.
- Dr. Lokpriya Gaikwad participated in FDP expert talk on 'IPR Awareness & Related Procedures' on 28th January, 2022.

