# CURRICULAM VITAE

Dr.. Ramesh R Lekurwale
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**Academics** **:Ph. D.** "**A Framework to Evaluate Strategic Options in Manufacturing System**" in Department of Production Engineering V.J.T.I. Matunga, Mumbai-400019.

Master of Technology (**M. Tech**) in Mechanical Engineering from Indian Institute of Technology Bombay with 7.69 CPI on a scale of 10.

**Academic Detail**

| Sr. No. | Details of Exam | University / Board | Year of Passing | % CPI |
|---|---|---|---|---|
| 1 | Ph.D.(Production Engineering) | Department of Production Engineering V.J.T.I. Matunga, Mumbai-400019. | 2015 | 9/10 |
| 2 | M. Tech (Mechanical Engineering) | Indian Institute of Technology Bombay, Powai, Mumbai | 2001 | 7.69 /10 |
| 3 | B.E. (Production) | SGGSCE&T, Nanded (An Autonomous institute) | 1993 | 61.93% |

**Total Experience: 26 Years And 06 Month**

1. Teaching: 26 years and 01 months
2. Industry: 1 Year

**Achievement:**

Availed an UGC travel grant (File No. 6-412/2013 (TG)) of Rs. 82,803 dated 06/12/2014 for presenting an a research paper in IEEE international conference at **Bangkok, Thailand**

**University Approvals**

1 ***Lecturer:*** CONCOL/SA/1587/2009 date: 01/04/1997 (University of Mumbai)
CONCOL/SA/730/2011 date: 07/01/2009 (University of Mumbai)

2 ***PG Teacher Approval:*** No. PG/I.C.D./2012-13/4246 (University of Mumbai)

3 ***Ph.D Teacher Approval:*** No. PG/I.C.D./2015-16/6431 (University of Mumbai)

4 ***Ph.D Teacher Approval:*** Somaiya Vidyavihar University, March 2020

**Current Position: •** At K.J.Somaiya College of Engineering (KJSCE), Vidyavihar (E), Mumbai 400077.

- Professor in Department of Mechanical Engineering w.e.f. 8-5-2018
- 'Head' Department of Mechanical Engineering w.e.f 13-8-2018
- Associate Head Department of Mechanical Engineering w.e.f 20-7-2015 to 12-8-2018
- Associate Professor in department of Mechanical Engineering w.e.f. 1-1-2012 to 7-5-2018

**Research Proposal/Patent Submitted to UGC/DST/Govt of India**

1 Patent filed for "A SUTURE DEVICE" Application number E-137/4473/2020/MUM, Form Number FORM 30/S7(2)/R10, EntryNumber:137, dated 23/09/2020, Governmmnet of India, Ministry of Commerece and Industry, Controller General of Patents, Designs & Trade Marks S.M.Road,Antop Hill, Mumbai-400037

2 Received Minor research Grant of Mumbai University Rs. 40,000 dated 17/03/2020 (2019-20) APD/ICD/2019-20/762 for Development of "**Automatic Guided Machine For Physiotherapist Exercise"**

3 Design and Development of Craniotome Device for Skull Cutting. PACE, BIRAC DST, 36 lakhs 30/03/2019

4 Design and development of a Physical Working Prototype to showcase an optimized algorithm and software for Mapping Elevation (Geo-referencing) using Swarm of Autonomous UAVs (Drones) (**Co-Investigator)** Rs 10.95 lakhs (approved) NESAC-ISRO, April 2019

5 Design and development of low cost abrasive water jet machine (Principal Investigator) submitted on 3/8/2016 of **4,10,000**.

6 Optimization of process parameter of wire cut EDM using multi criteria decision making methods, **18,25000** submitted to UGC on 17-8-2016

**Session chair:**

1. " National Conference on Sustainable Manufacturing & Waste Management (NCSMWM-2019)" on 16th April 2019 (NCSMWM-2019), Saraswati College of Engineering (SCOE) Navi Mumbai.
2. "International Conference on Sustainable Development in Design and Manufacturing (ICSDDM-2017)" on 13th Jan 2017 at Saraswati College of Engineering, Khargar, Navi Mumbai
3. Global on meet on Advances in Design Materials and Thermal engineering 2018 on 11th Jan 2018 at Saraswati College of Engineering, Khargar, Navi Mumbai
4. 3nd National Conference on Recent Trends In Mechanical Engineering at Walchand College of Engineering) on, ISSN/ISBN No. . 978-81-931546-9-4 , 21,22nd June 2018
5. Equinox 2018 – 4th International Conference on Engineering Confluence, 26 September to 28 September, 2018..
6. 3rd National Conference on Industrial Engineering & Technology Management National Institute of Industrial Engineering, (NITIE) Mumbai 1/12/2018

**7. Interaction with Outside world: Visited as Expert to other Institute**

1. Expert Talk on ‘’Multi Criteria Decision Making in Manufacturing: A VIKOR Method, K K Wagh Institute of Engineering Education Research, Nashik, India in association with Indian Institution of Production Engineers (IIPE),Nashik Local Chapter, held on 26-28th May 2020.
2. Expert Talk on “Additive Manufacturing” in STTP on "Industry 4.0" held during 30/12/2019 to 3/1/2020
3. Expert talk on NBA on 12th December 2019 at A. C. Patil college of Engineering Kharghar, Navi- Mumbai
4. Expert talk “Fundamentals of Experimental Design” at Rajiv Gandhi Institute of Technology in STTP Titled as Research Methodology scheduled from 1st july to 5th july 2019.
5. As subject expert for the interviews of the post of Assistant Professor in Mechanical Engineering department of MCT’s Rajiv Gandhi Institute of Technology on 3/5/2019
1. Mock NAAC expert evaluator at Rajiv Gandhi Institute of Technology Andheri Mumbai on 26/02/2019
2. Advisory committee member National Conference on Sustainable Manufacturing & Waste Management (NCSMWM-2019)” on 16th April 2019 (NCSMWM-2019), Saraswati College of Engineering (SCOE) Navi Mumbai,

3. Leader/Collaborator at International Conference on Transformations in Engineering Education (ICTIEE 2019) Chitkara University, Patiala Chandigarh,Panjab on 10th and 11th January 2019
4. Technical Committee Member 3rd National Conference on Industrial Engineering & Technology Management National Institute of Industrial Engineering, (NITIE) Mumbai 30/11/2018 to 1/12/2018
5. Member of External Peer Team of Academic and Administrative Audit at Vishwakarma Institute of Information Technology, Pune 11/09/2018
6. Equinox 2018 – 4th International Conference on Engineering Confluence, 26 September to 28 September, 2018, Technical Advisory committee member.
7. National Work Shop Role K.J.E.T Trinity COE Pune, 15-12-2017
8. **Editorial Team Member,** MMF, 2017

**Judge:**

1. Medical Devices Innovation Camp IITB, 02/10/2018
2. Worked as a Judge for the Project Competition for "INNOVISION 2017 on 11/3/2017 at Rajiv Gandhi Institute of Technology, Andheri, Mumbai.
3. Medical Devices Innovation Camp COE Pune, 16/09/2017

**Paper Publication**

- **International Journal Publications:**

1 Ramesh Lekurwale and N.R.Gilke (2017) "Outcome based education- A cased Approach" Journal of Engineering Education Transformations (JEET) , Volume 30, No. 3, January 2017, ISSN 2349-2473, eISSN 2394-1707. DOI 10.16920/jeet/2017/v30i3/110607

2 Srishti Sharma, Ramesh R. Lekurwale, Amith Masade, (2015) "Design Procedure of An Electrohydraulic Drive", *International Journal of Research in Engineering and Technology*,Vol. 4, No. 6, pp. 242-247.

3 Ramesh R. Lekurwale, D. N. Raut, and Milind M. Akarte, (2015) "Framework to Evaluate Manufacturing Capability Using Analytical Hierarchy Process" *International Journal of Advanced Manufacturing Technology*, Vol. 76, No. 1-4, pp. 565-575. (Published by **Springer-Verlag London)**, **Impact Factor 2013, 1.779**, DOI: 10.1007/s00170-014-6284-7).

4 Ramesh R. Lekurwale, and D. N. Raut, (2014) "A Case Base Approach for Evaluation of Manufacturing Effectiveness of a Firm Using Analytical Hierarchical Process", *International Journal of Supply and Operation Management*, Vol. 3, No. 2, pp, 63-69.

5 Ramesh R. Lekurwale, and D. N. Raut, (2014) "Manufacturing Capability Evaluation in a Job Shop Production System: A Case Base Approach" *International Journal of Engineering Research & Technology*, Vol. 3, No. 4, pp-576-584.

6 Prasanna. P. Raut and Ramesh R. Lekurwale, (2014) "Evaluation of Competitive Priorities of Manufacturing System," *International Journal of Engineering Research & Technology*, Vol. 3, No. 08, pp. 1325- 1331.

7 Kapil Manoharan and Ramesh R. Lekurwale (2014), "Design and Development of a micro-mixer-reactor for a LoC application", *International Journal of Advances in Science Engineering and Technology*, Vol- 2, No.- 4, pp. 47-50.

8 Pratik Soni and Ramesh Lekurwale (2014), "Complete Automation of Machining Cycle For A Particular Object and The Algorithm" *Proceedings International Journal of Mechanical And Production Engineering, Volume- 2, Issue-8, Aug.-2014, pp, 4-7*

- **National Journals**

1 Sachin Shinde and Ramesh R. Lekurwale (2019) "Behavioural Study of Spiral Flexure Disc by Design of Experiments and Contour Plots", *Industrial Engineering Journal***,** Vol. VII, No. 8, pp-05-10.

2 Ramesh R. Lekurwale, D. N. Raut, and B. E. Narkhede (2014) "World class manufacturing in make to order environment – A review of literature", *Industrial Engineering Journal***,** Vol. VII, No. 5, pp-09-16.

- **International Conferences:**

1 Sayali Patkar and Lekurwale R.R. (June-2019), "Review on Gait Analysis Techniques", International Conference on Recent Innovations in Science, Engineering and Technology. 19th June 2019 Pune.

2 Thete P.V., Lekurwale R.R. (2019) Application of Discrete-Event Simulation to Increase Throughput of Manufacturing System—A Case Study. In: Vasudevan H., Kottur V., Raina A. (eds) Proceedings of International Conference on Intelligent Manufacturing and Automation. Lecture Notes in Mechanical Engineering. **Springer,** Singapore,

DOI:https://doi.org/10.1007/978-981-13-2490-1_49, Print ISBN978-981-13-2489-5, Online ISBN978-981-13-2490-1, pp 531-539

3 Jadav S.M., Lekurwale R.R. (2019) Effect of Process Parameters While Machining Using Abrasive Jet Machine (AJM). In: Vasudevan H., Kottur V., Raina A. (eds) Proceedings of International Conference on Intelligent Manufacturing and Automation. Lecture Notes in Mechanical Engineering. **Springer**, Singapore, DOIhttps://doi.org/10.1007/978-981-13-2490-1_53, Print ISBN978-981-13-2489-5, Online ISBN978-981-13-2490-1, pp 575-581

4 N.R.Gilke and Ramesh Lekurwale (2018), "Engineering education Research: Current Trends", International Conference held abroad (India): Fourth International Conference on Transformations in Engineering Education, 7-January 2018, Madurai Pg.1-4, .*ISSN 2349-17*

5 Shinde, Sachin M. and Lekurwale, Ramesh R., Parametric Mathematical Modelling and Aspect Ratio Optimization of Eccentric Spiral Profile Flexural Bearing Through Finite Element Analysis Studies (December 21, 2017). International Conference on Advances in Thermal Systems, Materials and Design Engineering (ATSMDE2017). Available at SSRN(Elsevier): https://ssrn.com/abstract=3101366 or http://dx.doi.org/10.2139/ssrn.3101366

6 Rajesh Pansare and Ramesh Lekurwale, (2018), "Selection of manufacturing process parameters using DoE", International Conference held abroad (India): Int. Conf. on Advances in science, tech and Engg, A.P Shah Institute of Technology

7 Sagar Talele and Ramesh Lekurwale (2017), "Different actuation mechanism for end effector of laparoscopic surgery instrument," Int. Conf. on manufacturing and industrial engineering, JNEC Aurangabad, Page 52

8 Pankaj Shelar and Ramesh R. Lekurwale (2016) "Selecting Appropriate Cutting Tool Inserts for Turning Using Analytical Hierarchical Process and Weighted Product Method" International Conference on Computer Science and Mechanical Engineering (ICCSME) Pune on 3/4/2016.

9 Ramesh R. Lekurwale, , Milind M. Akarte, and D. N. Raut, (2013) "Measurement of Manufacturing Effectiveness of a Company Using Analytical Hierarchical Process: A Case Study" *Proceeding of The IEEE International Conference on Industrial Engineering and Engineering Management (IEEM),* 10-13 Dec 2013, **Bangkok**, Thailand DOI: 10.1109/IEEM.2013.6962680, pp. 1602 - 1606. (Published in **IEEE Xplore digital library**)

10 Ramesh R. Lekurwale, , Milind M. Akarte, and D. N. Raut, (2013) "Decisions in High Volume Low Variety Manufacturing System" , *Proceedings of the International Conference on Advanced Engineering Optimization Through Intelligent Techniques* (AEOTIT), S.V. National Institute of Technology, Surat – 395 007, Gujarat, India. July 01-03, 2013,pp. 300-304.

11 Ramesh R. Lekurwale, D. N. Raut, and Milind M. Akarte, (2012) "Decisions in manufacturing strategy for competitive advantages: A review" , *International Conference on Recent Advances in Engineering, Technology, and Management*, Sardar Patel College of Engineering, Andheri, Mumbai, 31st May- 2nd June, 2012, pp. 260-267.

12 Ramesh R. Lekurwale, G. V. Shah, S. Ruparel (2011) "Life Cycle Issues in Product Design and Manufacturing" *International Conference on Sustainable Manufacturing : Issues, Trends, and Practices*. BITS Pillani, November 10-12. pp. 105-109.

- **National Conferences:**

1. Anurag Tagare and Ramesh Lekurwale, (2018), "Design and development of safer Craintone for skull cutting", 3nd National Conference on Recent Trends In Mechanical Engineering at Walchand College of Engineering) on 21st and 22nd June 2018, ISSN/ISBN No. . 978-81-931546-9-4
2. Vinayak Lohar and Ramesh Lekurwale, (2018), "Design and development of smart Dermatoscope" 3nd National Conference on Recent Trends In Mechanical Engineering at Walchand College of Engineering) on 21st and 22nd June 2018, ISSN/ISBN No. . 978-81-931546-9-4
3. Mitesh Gada, Nehal Patankar and Ramesh Lekurwale (2018),"Optimization of layout of Boggy shop using flexsim" 3nd National Conference on Recent Trends In Mechanical Engineering at Walchand College of Engineering) on 21st and 22nd June 2018, ISSN/ISBN No. . 978-81-931546-9-4
4. Momin Shumeel Ansar Siraj Ahmad and Lekurwale R.R. *"Design And Fabrication Of Abrasive Jet Machine For Machining Glass Using Sea Sand" Proceedings of 2nd National Conference on Recent Trends in Mechanical Engineering (NCRTME–2017),ISBN: 978-81-931546-5-6, pp 269-273.*

5. Achalkar A.S and Lekurwale R.R. *"Optimization Of Wire-Cut Electric Discharge Machining Process Parameter For Inconel 718 Using Grey Relational Analysis" Proceedings of 2nd National Conference on Recent Trends in Mechanical Engineering (NCRTME– 2017),ISBN: 978-81-931546-5-6, pp 263-268.*
6. Ansari Anwaar e Mustafa and Lekurwale R.R. *"Use Of Smart Material For Biomedical Application" Proceedings of 2nd National Conference on Recent Trends in Mechanical Engineering (NCRTME– 2017),ISBN: 978-81-931546-5-6, pp 310-314.*
7. Participated in Agricon-2016-*Conference on Precision Agriculture Technology* organized by Tamilnadu Development and Promotion Center of Confederation of Indian Industry (CII) on 4-3-2016 at Chennai.
8. Prasanna. P. Raut and Ramesh R. Lekurwale, (2014), "Study of Various Manufacturing Strategy Objects and Manufacturing Practices", *Proceedings of National Conference on Challenges and Opportunities for Production and Industrial Engineering, VJTI, Mumbai.*
9. Kapil Manoharan and Ramesh R. Lekurwale, (2014), "UV curable adhesive NOA61 bonding strength study for Lab on Chip application", *Proceedings of National Conference on Challenges and Opportunities for Production and Industrial Engineering, VJTI, Mumbai*
10. Ramesh R. Lekurwale, (2010), "Recent Trends of The Implant Material", *National Conference on Materials Science, Trends and Future,* at Vidyabharati College, Amravati.

**Short Term Program/Workshop Conducted/organised**

1. Medical Device Hackathon (2018) on 7-8 July 2018 at K. J. Somaiya College of Engineering Vidyavihar, Mumbai
2. Medical Device Hackathon (2017) on 14-16 July 2018 at K. J. Somaiya College of Engineering Vidyavihar, Mumbai
3. ISTE Approved short Term Training Programme Conducted on "Renewable Energy Systems and Technology" at K. J. Somaiya College of Engineering Vidyavihar, Mumbai on 29/06/2009 to 03/07/2009.
4. University of Mumbai Approved short Term Training Programme Conducted on "Manufacturing process and system: An IT perspective" at K. J. Somaiya College of Engineering Vidyavihar, Mumbai on 06/07/2009 to 10/07/2009.

**Invited Talk:**

1) "Ph.D Admission process" organized by ISTE, KJSCE chapter on 17-3-2012
2) "How to write a technical paper" organized by SAE, KJSCE chapter on 24-3-2015.
3) "Fundamentals of manufacturing strategy" at IIIE Belapur on 17-8-2015.
4) "Decision analysis in operation research" in Department of Computer Engineering at K. J. Somaiya College of Engineering Vidyavihar, Mumbai on 1-4-2016

**Poster Presentation**

1. Presented a Poster on "Measurement of Manufacturing Effectiveness of a Company Using Analytical Hierarchical Process: A Case Study" in Ph.D Colloquium organized by VJTI Mumbai in collaboration with Indian Institute of Industrial Engineering held during 03-03-2014 to 04-03-2014
2. Presented a Poster on "Application of Hayes and Wheelwright Model to Find Strategic Orientation of a Company" in Ph.D Colloquium organized by VJTI Mumbai in collaboration with Indian Institute of Industrial Engineering held during 15-04-2013 to 16-04-2013
3. Participated in A National Level Doctorial Consortium organized by VJTI Mumbai in association with Indian Institute of Industrial Engineering, EDUC-ASIA ltd and Shiksha 'O' Anusandhan University of Bhubneshwar held on 11-01-2013.
4. Presented a Poster on "Decision Areas in Manufacturing Environment and Its Impact on Competitive Priorities" on National Science Day organized by VJTI Mumbai held on 29-02-2012.

**Journal/Conference Reviewer**

1. International Journal of Supply and Operation Management ( Print ISSN 2383-1359 Online ISSN 2383-2525)
2. International Journal of Industrial and Systems Engineering (Inderscience Publication) ISSN online: 1748-5045 ISSN print: 1748-5037
3. 4$^{th}$ International Conference on Transformation in Engineering Education (ICTIEE) organized by Vardhaman College of Engineering, Hyderabad, in collaboration with IUCEE (Indo-Universal Collaboration of Engineering Education) held on 6,7,8 January 2017.

4. ICMIE :Reviewer, MGM Aurangabad, 14-09-2017
5. 2nd National Conference on Recent Trends In Mechanical Engineering at Walchand College of Engineering) on, ISSN/ISBN No. 29th June 2017

**Short Term Program/Conferences Attended**

1. NPTEL course Completed on Modelling of Manufacturing Processes from July-November 2019, IIT Madras
2. NPTEL course Completed on Design and Analysis of Experiments, Jan-April 2018 (12 weeks) , IIT Kharagpur
3. Academic Audit For effective Curriculum Implementation and Evaluation, NITTTR Bhopal (NITTTR Pune Centre) 18-12-2017 to 22-12-2017 (one week)
4. Two day AICTE Sponsored seminar on "Industrial Internet of Things (IIoT) Indian Context" at Department of Industrial Engineering and Management, R.V. College of Engineering, from 10-11 November 2017
5. CEP Workshop on "3D Printing" in IIT Bombay During August .22-23,2016
6. Attended a one day work shop on "Rapid Manufacturing and its Applications" held on February 27, 2016 at AMCE, NITIE, Mumbai.
7. Completed one week training (in the month of January 2015) on Solidworks design, Validation software and MasterCAM for Solidwoks at K. J. Somaiya College of Engineering, Vidyavihar, Mumbai.
8. Attended a work shop on NBA's Outcome Based Accreditation at K. J. Somaiya College of Engineering, Vidyavihar, Mumbai. (Phase I – June 7, 2014; Phase –II June 25-27, 2014).
9. Two days workshops on "Practice Leaders Forum" organized by National Institute of Industrial Engineering (NITIE) and Production and Operations Management Society (POMS), USA on 23-12-2013 to 24-12-2013.
10. Three days Workshop on "Scientific /Research Paper Writing" organized by The National Academy of Science, India (NASI) on 8 -10 June, 2012 at Central Institute of Fisheries Education – CIFE, Mumbai.
11. Two weeks workshop on "Introduction to Research Methodologies", by Indian Institute of Technology Bombay 25 -06-2012 to 4 -07-2012, which was held under the National Mission on Education through ICT (MHRD).

12. Two days ISTE Workshop on "Writing Effective Conference Papers" conducted by Indian Institute of Technology Bombay 18- 19 February, 2012, which was held under the National Mission on Education through ICT (MHRD)
13. Two days ISTE Workshop on "Aakash for Education" conducted by Indian Institute of Technology Bombay on 10- 11 November, 2012, which was held under the National Mission on Education through ICT (MHRD)
14. One week AICTE Sponsored staff development programme on "Advances in the Manufacturing and Micromachining Techniques" at VJTI, Mumbai on 14-11-2011 to 18-12-2011.
15. One week Training programme on "ANSYS CAE 12.1" at VJTI, Mumbai 13-12-2010 to 18-12-2010.
16. One week Short term training programme sponsored by AICTE –ISTE on "Computer graphics for Mechanical Engineering" at Nirma University Ahmadabad held during 16-06-2008 to 21-06-2008.
17. One week Training on "Autocad 2008" conducted by ADCC Infocad pvt ltd and organized by Thadomal Shahani Engineering College Bandra, Mumbai held during 15-01-208 to 19-01-2008.
18. Two week short term training programme approved by ISTE on "Computer aided solutions for engineering applications" conducted by D. J. Sanghvi College of Engineering, Vile Parle (W) Mumbai, held during 11-12-2006 to 22-12-2006.
19. Completed a certificate course on "Maharashtra State Certificate in Information Technology" (MS-CIT) in July-2005.
20. Two weeks State Level Staff Development Programme on "Special Methods of Teaching Engineering. Mechanics" organized by National Institute of Technical Teachers Training and Research (NITTTR), Bhopal in Collaboration with Rajiv Gandhi Institute of Technology , Versova, Mumbai supported by Director of Technical Education, Maharashtra from 20-12-2004 to 31-12-2004.
21. One day "Orientation course in subject of Engineering Drawing" conducted by Department of Mechanical Engineering, Sardar Patel College of Engineering, Munshi Nagar, Andheri (West) , Mumbai 400058 on 05-04-2002.
22. Completed "Aptech Certified Global Skills on C and $C^{++}$" on 22/06/2001.

23. One day seminar on “Renewable Energy Sources” organized by ISTE Chapter, K. J. Somaiya College of Engineering and Department of Mechanical Engineering conducted on 24-02-2001.
24. One week QIP short term Course on “Engineering Optimization” conducted by Indian Institute of Technology Bombay during 05-06-2000 to 09-06-2000.
25. One day seminar on “Emerging Trend In Dimensional Metrology And Statistical Process Control” conducted by Department of Mechanical Engineering, Sardar Patel College of Engineering, Munshi Nagar, Andheri (West) , Mumbai 400058 and sponsored by Baker Gauges India Limited on 23-01-1999.
26. Three week “Induction Training Programme for Engineering Teacher’s” conducted at Vishwakarma Institute of Technology Pune, sponsored by AICTE Delhi, and approved by ISTE, Delhi from 30-11-1998 to 18-12 1998.

**Membership of Professional Bodies:**

1. Indian Society for Technical Education ISTE Life Member-1997 (Life Member: LM 23901)
2. Life Member of Indian Institute of Industrial Engineering-2009, Belapur, Navi Mumbai. (MIIE 9468)

**Courses of Interest:**

1. Engineering Mechanics
2. Engineering Drawing
3. Computer Aided Machine Drawing and Machine Drawing
4. Manufacturing Planning and Control
5. Industrial Engineering and Enterprise Resources Planning
6. Operation Research
7. Project Management
8. Engineering Optimization
9. Computer Integrated Manufacturing
10. Computer Aided Manufacturing

**Undergraduate and postgraduate courses will like to develop in future**

| Sr. No. | Course | Section |
|---|---|---|

| | | |
|---|---|---|
| 1 | Computer Integrated Manufacturing | PG |
| 2 | Computer Numerical Control | PG |
| 3 | Computer Aided Manufacturing | PG |
| 4 | Project Management | UG |

## Courses Taught

| Sr. No. | Course Name | At UG/PG/ Ph.D level | Institute |
|---|---|---|---|
| 1. | Quantitative Methods and Computer Applications in Research | Ph.D | K. J. Somaiya College of Engineering, Vidyavihar, Mumbai -400077 |
| 2. | Research Methodology | | |
| 3. | Engineering Optimization | PG | |
| 4. | Computational Methods and Quantitative Techniques (Audit Course) | | |
| 5. | Computer Aided Manufacturing | | |
| 6. | Rapid Prototyping and Digital Manufacturing | | |
| 7. | Computational Methods and Quantitative Techniques | PG (Audit Course) | |
| 8. | Computer Aided Machine Drawing | UG | |
| 9. | Management Decision Making | | |
| 10. | Machine Drawing | | |
| 11. | Production Process-III | | |
| 12. | Manufacturing Planning and Control | | |
| 13. | Production Planning and Control | | |
| 14. | Industrial Engineering and Enterprise Resources Planning | | |
| 15. | Engineering Mechanics | UG | Shah and Anchor Kutchhi Engineering College Chembur, Mumbai-40088 |
| 16. | Engineering Drawing | | |
| 17. | Basic Work-Shop Practice | | |

**Work experience (Academic, Administrative and Industry)**

**Position held: (Teaching)**

| Sr. No. | Name of the Institute | Position Held | Duration |
|---|---|---|---|
| 1 | K. J. Somaiya College of Engineering, Vidyavihar-77 | Professor | 8-5-2018 till date |
| | | Associate Professor | 1st January 2012 to 7-5-2018 |
| | | Lecturer (Selection Grade) | 7th January 2009 to 31st December 2011 |
| 2 | Shah and Anchor Kutchhi Engineering College, Chembur | Lecturer (Selection Grade) | 1-7-2007 to 6-1-2009 |

| | | | |
|---|---|---|---|
| | Mumbai | Lecturer (on probation) | w.e.f 2-4-1996 |
| | | Lecturer (on Adhoc) | 1-10-1994 to 1-4-1996 |

**Administrative Experience**: (K. J. Somaiya College of Engineering, Vidyavihar-77)

1 Started an incubation cell called as BETiC in collaboration with IIT-BETiC
2 Three MoU technical signed (BETiC IITB, RIT Islampur and MGM Hospital Kalamboli Navi Mumbai)
3 Program Coordinator of Mechanical Engineering ,NBA (July 2015) and NAAC (w.e.f. Jan 18, 2016)
4 Worked as a M. E. ARC (Sub-ARC Officer) for the academic year 2014-15 (letter dated 08/07/2014).
5 Departmental coordinator for Revaluation work at Examination cell (letter dated August 16, 2013, February 25, 2013, January 23, 2014, and September 05, 2014).
6 Departmental coordinator for ME admission (letter dated May 04, 2012-2014).
7 NBA File management committee and Criterion Coordinator for SAR. (NBA 2010-14)
8 Term work coordinator and in-charge of Result Analysis from 2009 to 2014.
9 In-Charge of CAD/CAM Laboratory.
10 In-charge of form verification and acceptance (admission committee 2015-16) of minority, ILS and Vacancy.
11 Football convener for the year 2013 and 2014
12 Cricket convener for the year 2015.

**Administrative Experience (**Shah and Anchor Engineering College Chembur Mumbai.)

1 Set up new laboratory for AUTO CAD 2008
2 Associated with admission work, Time Table Committee and Test Conduction work for First Year Engineering Students from 2001-2009.

**Industry Experience:**

| Sr. No. | Name of the organization | Department and Nature of work | Position Held | Duration |
|---|---|---|---|---|
| 1 | Bombay Forgings Limited, Kalina Bombay | Design Engineering | Trainee Engineer | 1st July 1994 to 29th September 1994 |

| | | | | |
|---|---|---|---|---|
| 2 | Electron-fab Engineering Pvt. Ltd. SEEPZ Andheri (East) Bombay 400096 | • Vendor Development<br>• Quality Control | Mechanical Engineer | 01/10/1993 to 06/061994 |

**Research Experience:**

**Docotor of Philoshopy (Ph.D).**

*Title:* "A Framework to Evaluate Strategic Options in Manufacturing System"

Manufacturing strategy is defined as a collective pattern of coordinated decisions that act upon the formulation, reformulation and deployment of manufacturing resources to provide a competitive advantage in support of the overall strategic initiatives of the firm. There are five manufacturing strategy objects. These are production systems, manufacturing outputs, manufacturing levers, manufacturing capability and competitive analysis. It contributes to the success of any organization by providing what the business needs to do, survive and prosper (higher margins, innovative new products, unique competencies etc.) by satisfying the customer. When manufacturing strategy exists, decision follows a neat, logical pattern. When no strategy exists, the pattern is erratic and unpredictable. Therefore, with the increase in customer demand for current products or their variants an organization needs to analyze various alternatives generally referred as strategic options. These are capacity expansion, Factory within Factory (FWF), focused factory, switching to next production system or improving the existing production system. Thus for improving the existing production system the measurement of manufacturing capability is essential which depends upon the pattern of decision taken in manufacturing. This pattern of decision consists of decision area, their criteria and their relevant decision choices.

The level of manufacturing capability (MC) is depends on the level of each decision area. Hence the evaluation of these decision areas is a prerequisite to decide the level of MC. The sum of levels of all decision areas defines the overall capability of the production system which forms the primary basis for competition between the firms. Manufacturing capabilities are hard to imitate, which distinguishes a company from its competitors, and are based on the two dimensions of the manufacturing structure. These two dimensions are process innovations and product differentiations which are well explained by the product-process matrix. Thus, adjustment in decision areas should not be made haphazardly. Each adjustment should be appropriate for the existing production system and should help to provide the manufacturing

outputs at the required levels. Small adjustments can be made to one or more decision areas to improve the existing production system. Extensive adjustments to all decision areas are required to change the existing production system to a different production system. Therefore the measurement and evaluation of manufacturing capability is essential to produce a specific output at the level required by the customer. This decision making involves understanding of manufacturing systems, its capability, and current or expected level of manufacturing output to meet the customer expectations. Hence, evaluations of these decision areas are essential to understand the level of manufacturing capability and hence the manufacturing outputs.

The competitive priorities (manufacturing outputs) are defined as a set of goals for manufacturing task. While determining manufacturing task, it is vital to define what manufacturing functions that must accomplish the goals in terms of providing competitive priorities. Consequently, it is obvious that the choices (high profit margin or high output volume) of manufacturing task will state the position a company relative to its competitor in terms of its competitive advantages. A company should identify those criteria which can enhance the level of competitive priorities such as price, delivery, product quality, and variety that win orders against the competition from the market in which it operates. These criteria also called as key success factors. The competitive priorities represent the main manufacturing objectives of an enterprise. The internal and external consistency between the product context and the choices in content of manufacturing strategy are achieved through a pattern of actions.

**Master of Technology (M.Tech.)**

*Title:* Design and Development of Proportional Control Valve (Hydraulic system)

The use of hydraulic proportional valve in industry is becoming increasingly popular as they have better perormance than conventional on-off valve and lower cost than servo valve. However, due to significant time delay in valve dynamics, they are curently used for low accuracy and low dynamic operation.

In this work, a prototype of single disc, electro-hydraulic proportional valve has ben developed; to achive accurate set flow rate control. The theory for the steady state linearlised analysis of both the fluid and electromagnetic charcteristics is well explained. This valve operates directly on variable resisitance, and results are obtined by giving a movement to disc, manually as well as with the help of elctromagnet. The test result which are obtained are

comparable with the theoretical description. The use of pulse width modulation amplifier improves the response charectristics of valve and also elimintes the limitation of spool type valve as well as servo valves.

**References:**

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(Dr. Ramesh Ramkisan Lekurwale)