HEARTY WELCOME

Hon'ble Chairperson and Members of the NAAC Peer Team

4th – 6th November, 2023

Prof. V P Mahadevan Pillai,
Hon'ble Chairperson

Prof. Charu Lata Mahanta,
Member Coordinator

Prof. Bharathi P Salimath,
Member

Prof. Anuradha Gajjar,
Member

Prof. Manju Jaidka,
Member

Prof. Jaswant Singh,
Member

Prof. Maya Ingle,
Member

Department of Mechanical Engineering
AUCE, Andhra University, Visakhapatnam

4th November, 2023

OVERVIEW

- Vision & Mission
- Department Profile/History/Achievement
- Curricular Aspects
- Teaching & learning
- Research, Innovation and Extensions
- Students support and Progression
- Infrastructure and learning resources
- Governance, leadership and Management
- Institutional values and best practices
- Progressive Plan

Vision and Mission:
Mechanical Engineering Department

Vision

- To be a premier department where the best of teaching-learning and research synergize to excellence in the field of Design, Manufacturing, Thermal and Industrial Engineering.

- To train the students to become world class professional graduates with academic excellence and all round personality.

- To collaborate with top grade institutions in India and Abroad for exchange of Knowledge, research and consultancy activity.

- Catalyzing absorption, innovation, diffusion and transfer of high technology for improved productivity, quality of life and empowerment, thereby affecting regional growth.

Vision and Mission: Mechanical Engineering Department

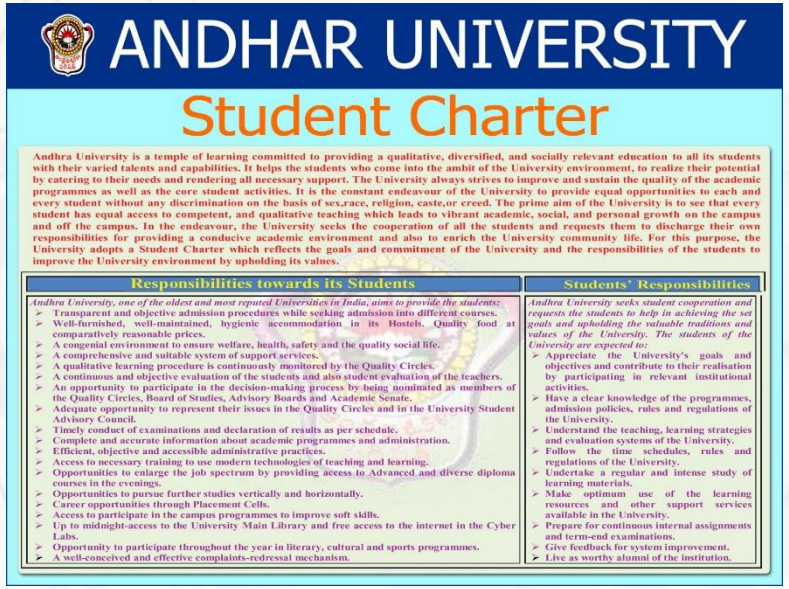
Mission

- To Foster quality engineers, equipped with creativity, Entrepreneurial and professional skills required to integrate excellent technical skills and a value-based employable education system .
- To create passion for life-long learning, promote research & development and innovative skills.
- Establish effective interface with industry and community to reach out to the Society and also inculcate skills to meet the future global challenges.

QUALITY POLICY

Excellence in teaching, research and consultancy by:

- Imparting globally focused education
- Creating world-class professionals
- Establishing synergic relationships with industry and society
- Developing state of art infrastructure and well-endowed faculty
- Imparting knowledge through teamwork and incessant efforts.



ANDHAR UNIVERSITY

Student Charter

Andhra University is a temple of learning committed to providing a qualitative, diversified, and socially relevant education to all its students with their varied talents and capabilities. It helps the students who come into the ambit of the University environment, to realize their potential by catering to their needs and rendering all necessary support. The University always strives to improve and sustain the quality of the academic programmes as well as the core student activities. It is the constant endeavour of the University to provide equal opportunities to each and every student without any discrimination on the basis of sex,race, religion, caste,or creed. The prime aim of the University is to see that every student has equal access to competent, and qualitative teaching which leads to vibrant academic, social, and personal growth on the campus and off the campus. In the endeavour, the University seeks the cooperation of all the students and requests them to discharge their own responsibilities for providing a conducive academic environment and also to enrich the University community life. For this purpose, the University adopts a Student Charter which reflects the goals and commitment of the University and the responsibilities of the students to improve the University environment by upholding its values.

Responsibilities towards its Students	Students' Responsibilities
Andhra University, one of the oldest and most reputed Universities in India, aims to provide the students: ➢ Transparent and objective admission procedures while seeking admission into different courses. ➢ Well-furnished, well-maintained, hygienic accommodation in its Hostels. Quality food at comparatively reasonable prices. ➢ A congenial environment to ensure welfare, health, safety and the quality social life. ➢ A comprehensive and suitable system of support services. ➢ A qualitative learning procedure is continuously monitored by the Quality Circles. ➢ A continuous and objective evaluation of the students and also student evaluation of the teachers. ➢ An opportunity to participate in the decision-making process by being nominated as members of the Quality Circles, Board of Studies, Advisory Boards and Academic Senate. ➢ Adequate opportunity to represent their issues in the Quality Circles and in the University Student Advisory Council. ➢ Timely conduct of examinations and declaration of results as per schedule. ➢ Complete and accurate information about academic programmes and administration. ➢ Efficient, objective and accessible administrative practices. ➢ Access to necessary training to use modern technologies of teaching and learning. ➢ Opportunities to enlarge the job spectrum by providing access to Advanced and diverse diploma courses in the evenings. ➢ Opportunities to pursue further studies vertically and horizontally. ➢ Career opportunities through Placement Cells. ➢ Access to participate in the campus programmes to improve soft skills. ➢ Up to midnight-access to the University Main Library and free access to the internet in the Cyber Labs. ➢ Opportunity to participate throughout the year in literary, cultural and sports programmes. ➢ A well-conceived and effective complaints-redressal mechanism.	*Andhra University seeks student cooperation and requests the students to help in achieving the set goals and upholding the valuable traditions and values of the University. The students of the University are expected to:* ➢ Appreciate the University's goals and objectives and contribute to their realisation by participating in relevant institutional activities. ➢ Have a clear knowledge of the programmes, admission policies, rules and regulations of the University. ➢ Understand the teaching, learning strategies and evaluation systems of the University. ➢ Follow the time schedules, rules and regulations of the University. ➢ Undertake a regular and intense study of learning materials. ➢ Make optimum use of the learning resources and other support services available in the University. ➢ Prepare for continuous internal assignments and term-end examinations. ➢ Give feedback for system improvement. ➢ Live as worthy alumni of the institution.

ANDHRA UNIVERSITY

NAME OF THE DEPARTMENT: MECHANICAL ENGINEERING

QUALITY OBJECTIVES / PERFORMANCE INDICATORS STATUS

Sl. No.	Objective / Performance Indicator	Target 2022-23	Achievement status		Target 2023-24
			1st Half	2nd Half	
1.	Students Seminars (No.)	01	--	01	01
2.	Student Attendance (Average%)	94%	94%	93%	94%
3.	First Classes Awarded (%)	92%	93%	94%	94%
4.	Student Events Conducted (No.)	01	--	01	01
5.	Distinguished Faculty Visits (No.)	04	02	03	05
6.	Student Placements (%)	54	20	31	70
7.	Research Papers Published (No.)	12	06	07	20
8.	Ph.D. Degrees Awarded (No.)	30	18	12	36
9.	Conferences / Seminars / Symposia / Workshops Conducted (No.)	02	01	01	03
10.	Faculty members participated in the Conferences / Seminars / Symposia / Workshops (No.)	03	02	01	04
11.	Research / Consultancy Projects (No.)	02	01	01	03

Programme Educational Objectives (PEOs) – UG B.Tech. Programme

Programme Educational Objectives are long term statements to educate the students about objectives of Mechanical Engineering Programme

PEO1:
The graduates of the mechanical engineering program will have solid fundamental technical knowledge and will be able to use software tools to expand their knowledge horizon and cultivate a lifelong learning culture while also developing core competencies in a variety of fields, including design, production, thermal, industrial, and allied fields.

PEO2:
The Graduates will maintain ethical conduct, sense of responsibility to serve the society and protect the environment

PEO3:
The Graduates will be able to work in project teams with effective communication skills, soft skills, managerial skills, leadership qualities and knowledge of contemporary issues for successful professional career and for higher studies too.

PEO4:
Graduates will demonstrate professional development by pursuing higher education and professional certification in the areas of mechanical engineering

Keywords

a. Fundamental Knowledge
b. Lifelong Learning

a. Ethics and Values
b. Society Concern

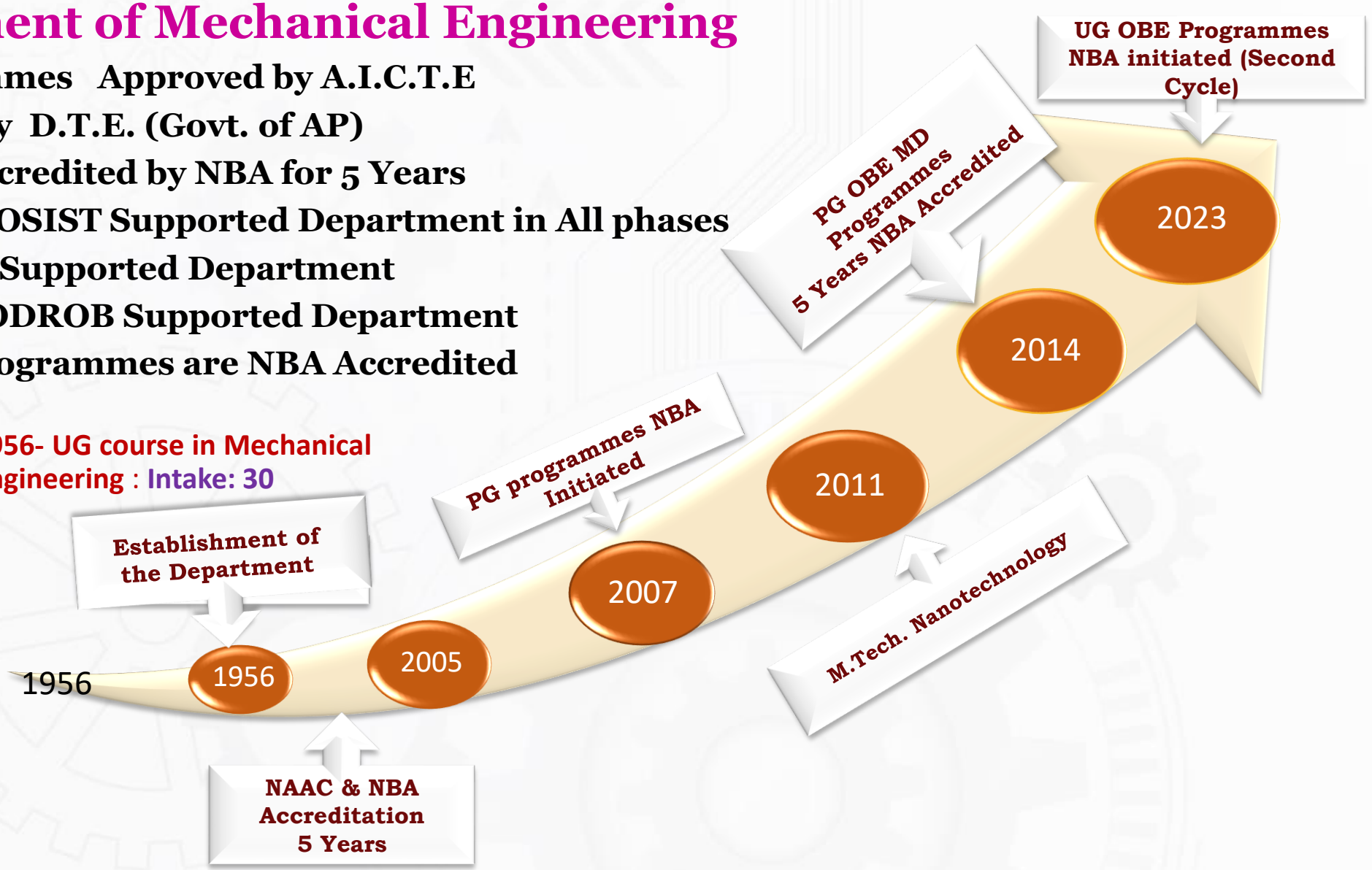
a. Team work
b. 21st Century Skills

a. Professional Development
b. Higher Studies

Department profile & Milestones achieved

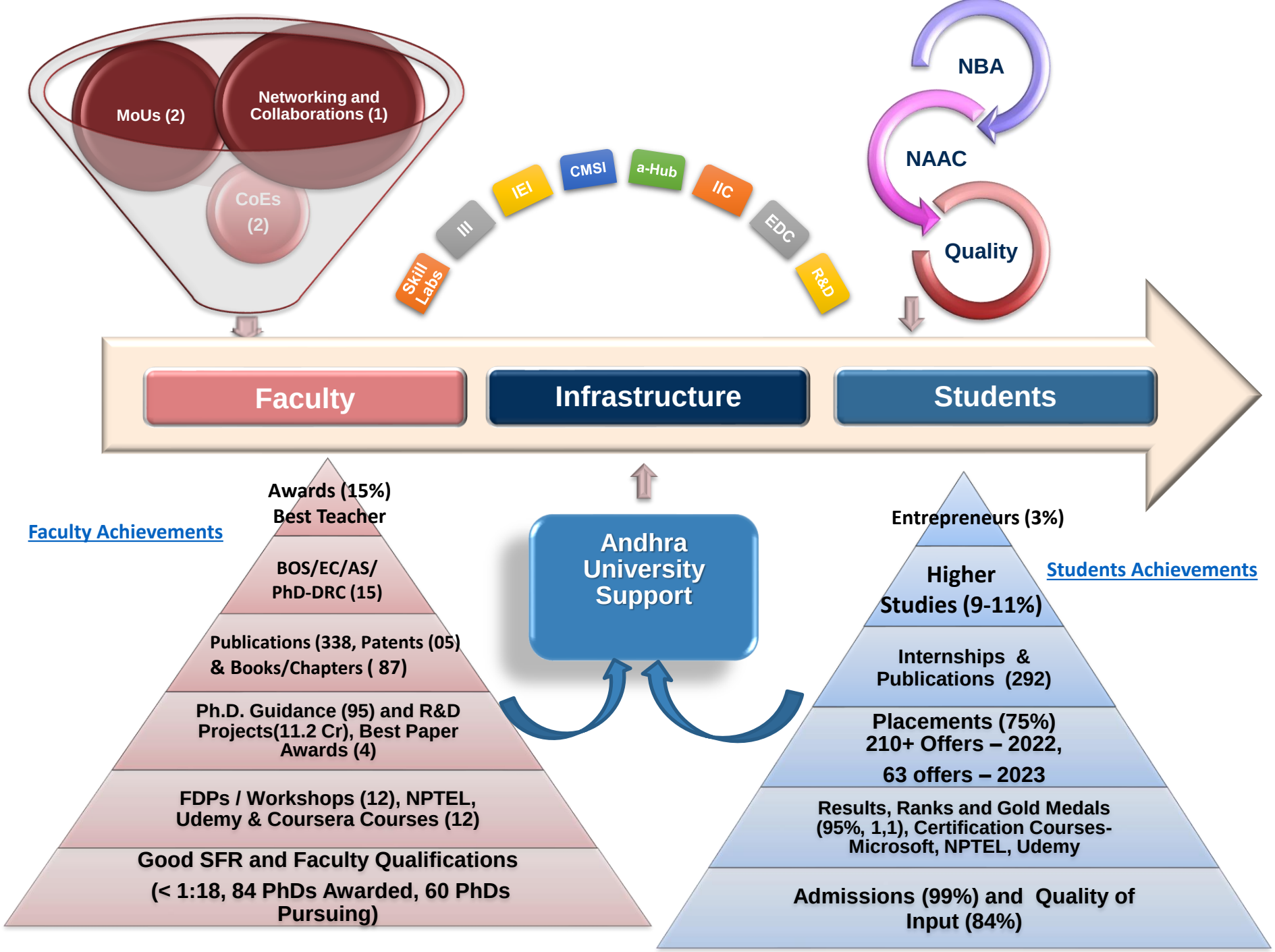
Department of Mechanical Engineering

- All Programmes Approved by A.I.C.T.E
- Approved by D.T.E. (Govt. of AP)
- UG & PG Accredited by NBA for 5 Years
- UGC-SAP-COSIST Supported Department in All phases
- DST – FIST Supported Department
- AICTE – MODROB Supported Department
- UG & PG Programmes are NBA Accredited



Department Achievements

"The reputation of the Department is decided by its Faculty and students' and quality of research"



Infrastructural Highlights

Department

- Aesthetically planned
- Ergonomically Designed
- Eco- friendly class rooms & labs

Ergonomically Designed Infrastructure

- Class Rooms: 12
  Tutorial rooms: 03
- Laboratories: 18
  Workshop:01
  Drawing Hall: 01
- Seminar hall: 02
  e-Class Rooms: 04
- Board Rooms: 01
- Computer Centers: 03
- Dept. Library and Reading Room: 01

Equipment

Total cost :
Rs. 33 Crores

- CNC Milling M/c
- Wire - EDM
- Network Analyzer
- Computerized 4 stroke petrol engine test rig
- Computerized 4stroke, Diesel engine test rig
- CVD, PVD, Milling etc.
- AFM, STM, SEM, XRD etc.
- IM, Scratch, UTM, EM, DSC, Creep, Fatigue, Wear etc.

Library

Titles : 2400
Volumes: 3145
Journals: H: 18
S: 61

Digital Library:

- Books, Journals and magazines
- Video lectures
- Syllabus/Previous Question Papers
- Educational CDs and DVDs
- Intranet / internet facility
- E books

Feathers in The Cap : MED, AUCE, AU

Mechanical Engineering Department

- R & D Funding (Rs. 11.2 Crores)
- Collaborations (Major: 1 & Minor: 1)
- Six Research Labs
- UG & PG NBA Accredited for 5 Years
- More Peer Reviewed publications & Ph.Ds
- UGC-SAP-All phases-Supported Department
- DST-FIST-Level B SUPPORTED DEPARTMENT AND APPLIED FOR LEVEL C
- AICTE - MODROB SUPPORTED DEPARTMENT

Department Profile & Milestone

Programs	Sanctioned Intake in 2022-23	Students Strength in 2017-22	Faculty Strength in 2017-22
1. B.Tech. in Mechanical Engineering	30	268	16+04
2. M.Tech. in Machine Design	18	81	
3. M.Tech. in Industrial Engineering	18	73	
4. M.Tech. in Heat Power Engineering	18	77	
5. M.Tech. in Nanotechnology	18	71	
6. Ph.D. Programme in Mechanical Engineering	12	36	

Started B.Tech. in Mechanical Engineering — **1956**

Started M.Tech. in Machine Design — **1963**

Started M.Tech. in Industrial Engineering — **1973**

1982 — *Started M.Tech. in Heat Transfer*

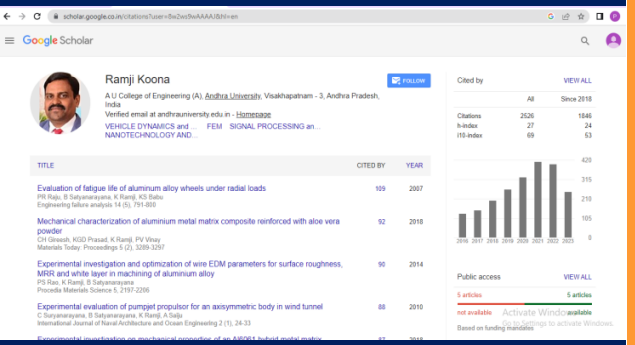
2001 — *Started M.Tech. in Nanotechnology*

2005 — *Accredited by NBA & NAAC*

Leadership

Prof. Koona Ramji

HoD, Dept. of Mech. Engg.



Education	Experience	Professional Experience	Funded Projects / Books
• B.E., in MEE ✓ 1991, AU, 78% • M.E., in MD ✓ 1993, AU, 79% • PhD in IIT Roorkee ✓ 2003, IITR • M.Tech., in NT ✓ 2013, AU, 79%	• Teaching ✓ 30 years • Research ✓ 21 years • Industry ✓ 1 year	• Vice - Chancellor • Asst. Principal • HoD, Professor • BOG, AS, BoS, BoM • Academic Council • Key Note/Invited Speaker • Subject Expert • Reviewer, Chairperson • NBA & NAAC Expert	• 520 Lakhs (PI) ✓ 2008-23, R &D&I • 450 Lakhs (PI) ✓ 2011-23, Consultancy • 700 Lakhs (PI) ✓ 2016-23, CoE Project • 3 Text. Books

Research Contributions

- Produced 45 PhDs
- Published 395+ Papers
- Guiding 12 Scholars
- 3 Patents Filed

FDPs/Talks/ Conferences

- Organized
  - 75+ FDPs
  - 15 International Conferences
- Attended
  - 172 FDPs
  - 145+ Conf
- 155+ Tech Talks

Projects Guided/Pursue

Guided
- UG – 27
- PG – 105
- Ph.D – 45

Guiding
- UG – 02
- PG – 06
- Ph.D – 12

Awards

- Best Teacher Award (2010), Govt. of AP
- Best Engineer of the Year (2010) , IEI & AP
- Life time Excellence Achievement Award (2021)

a) Google Scholar: H-index : 27 & i-10 Index : 73 b) Vidwan: Citations: 1148 & H-index : 20

c) Web of Sciences: Citations: 926 & H-index : 18 d) Scopus: Citations: 1451 & H-index : 21

Criterion 2

Teaching Faculty Profiles

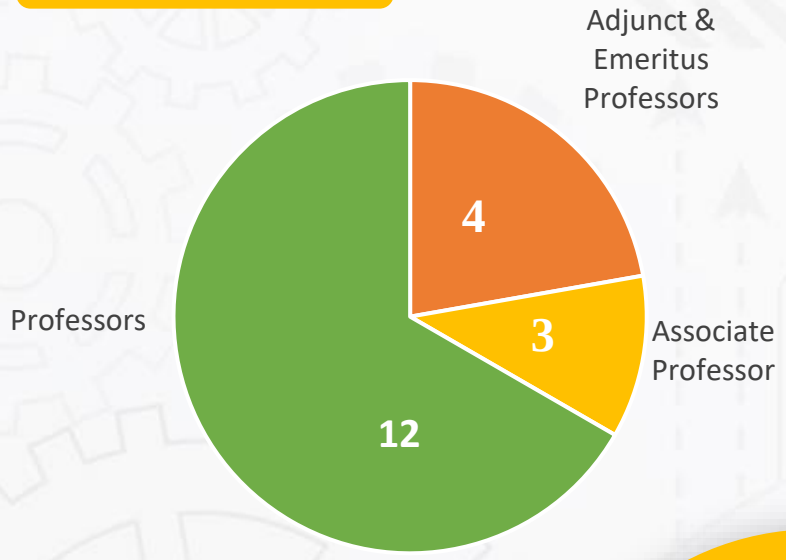
S.No.	Name	Designation	Qualification	Specialization	Experience
1	Prof. K. Venkata Subbaiah	Senior Professor (Vice-Chancellor JNTU-GV)	Ph.D. (A.U)	Industrial Engg.	28
2	Prof. V.V.S. Kesava Rao	Professor	Ph.D. (A.U)	Industrial Engg.	28
3	Prof. K. Ramji	Professor & Head of the Department	Ph.D. (IIT-R)	Machine Design	28
4	Prof. V. Vijaya Babu	Professor	Ph.D. (IIT-KGP)	Industrial Engg.	33
5	Prof. P. Srinivasa Rao	Professor & BOS, Chairman	Ph.D. (A.U)	Machine Design	17
6	Prof. N. Ramanaiah	Professor & Member Academic, APHERMC	Ph.D. (IIT-M)	Manufacturing	17
7	Prof. Ch. Srinivasa Rao	Professor	Ph.D. (A.U)	Manufacturing	17
8	Prof. P. Srinivas Kishore	Professor	Ph.D. (A.U)	Thermal Engg.	17
9	Prof. K. T. Balaram Padal	Professor & Assistant Principal	Ph.D. (A.U)	Machine Design	17
10	Prof. L.S.V. Prasad	Professor	Ph.D. (A.U)	Thermal Engg.	17
11	Prof. R. Madhusudhan	Professor	Ph.D. (A.U)	Manufacturing	17
12	Prof. K.N.S. Suman	Professor	Ph.D. (A.U)	Machine Design	17
13	Prof. Beela Satyanarayana	Emeritus Professor & Former Vice-chancellor, AU	Ph.D. (IIT-D)	Manufacturing	39
14	Prof. Ch. Ratnam	Honorary Professor	Ph.D. (IIT-M)	Machine Design	36
15	Prof. S. K. Bhatti	Adjunct Professor	Ph.D. (A.U)	Thermal Engg.	36
16	Prof. S. Narayana Rao	Adjunct Professor	Ph.D. (A.U)	Industrial Engg.	02
17	Sri. P.Venkateswara Rao	Associate Professor	M.E. (IISc.-B)	Thermal Engg.	28
18	Dr. G. Rambabu	Associate Professor & Assistant Principal	Ph.D. (A.U)	Industrial Engg.	17
19	Dr. M.V. Jagannadha Raju	Associate Professor	Ph.D. (A.U)	CAD/CAM	17

Faculty

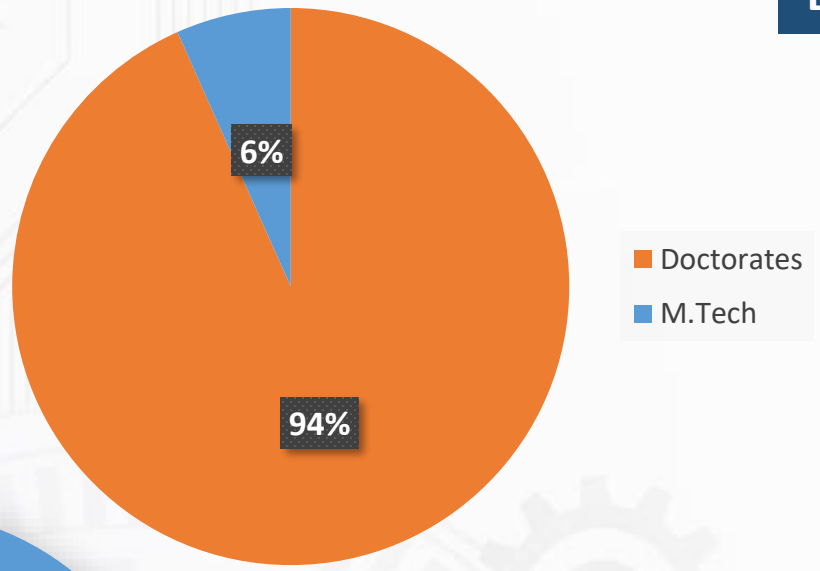
Faculty Information

Faculty Contributions

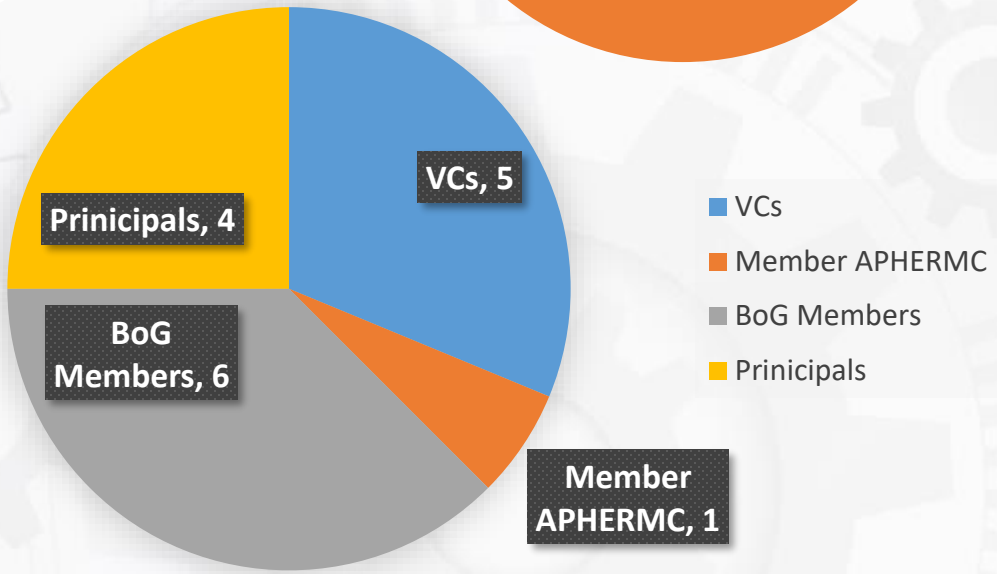
Designation



Qualifications



Administrative Positions



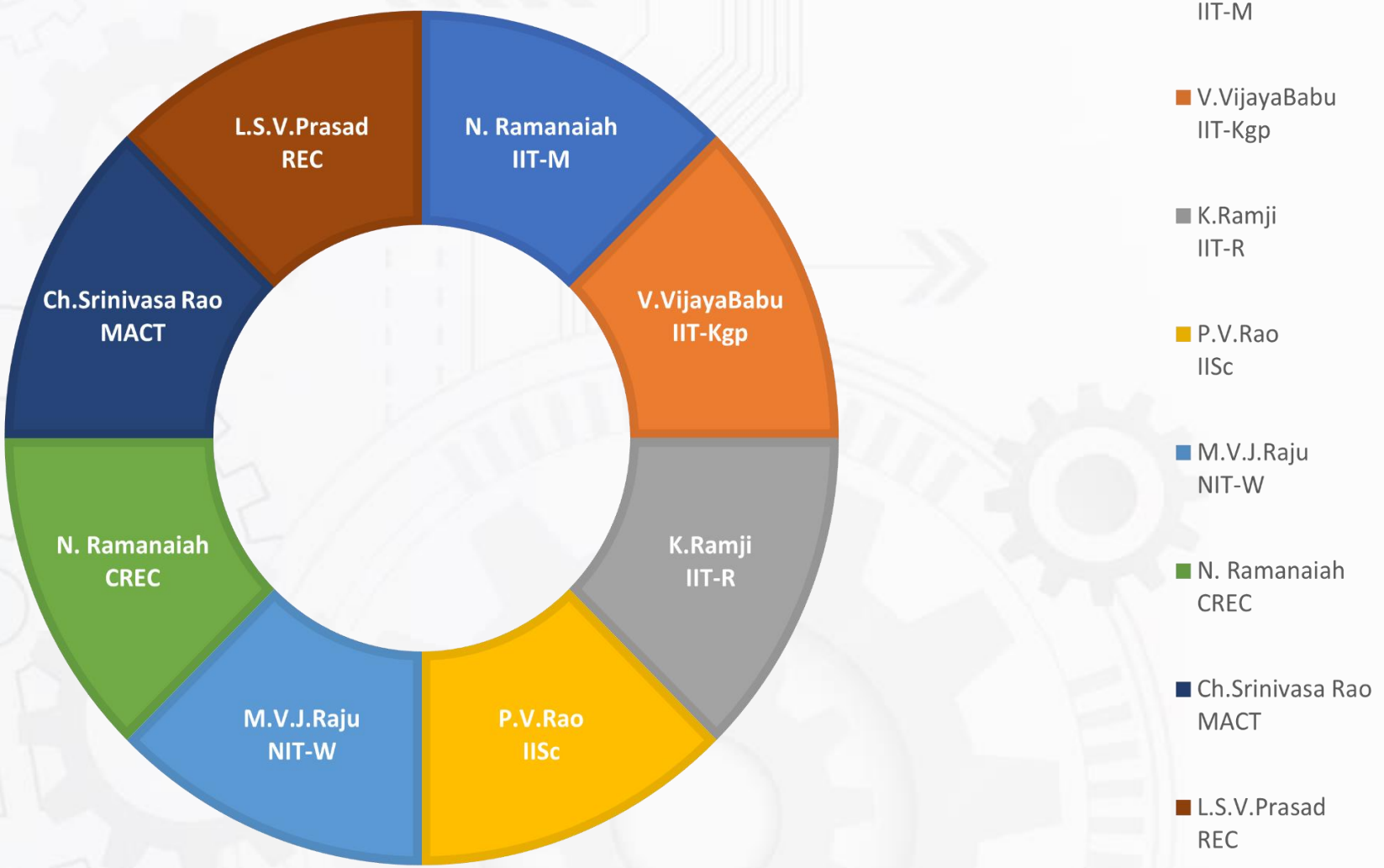
Average Experience:22 Years

Average SFR: 16:1

Current SFR: 20:1

Retention Rate: 100%

FACULTY STUDIED IN PREMIER INSTITUTIONS (PH.D./ M.E./ M.TECH/ B.E./ B.TECH)



Research, Innovations and Extensions

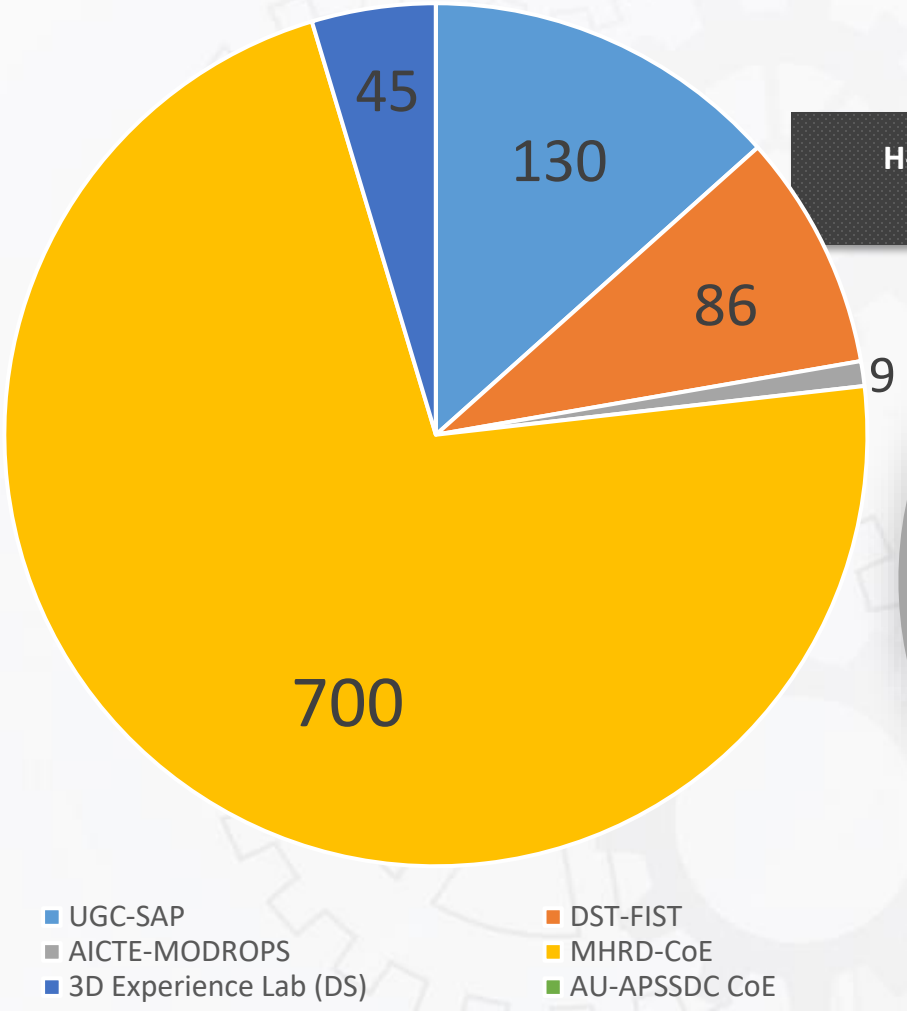
Department of Mechanical Engineering is supported by

S. No.	Agency	Fund received (In Lakhs)	Duration
1	UGC-SAP	₹ 129.6	2017-22
2	DST-FIST	₹ 86	2013-18
3	AICTE-MODROB	₹ 9	2021-23
4	MHRD-Centre of Excellence (Nanotechnology)	₹ 700	2016-23
5	3D Experience Lab (Dassault systems)	₹ 45	2017-22
6	AU Centre of Excellence (Skill Labs)	₹ 150	2017-22
Total		1119.6	2017-2022

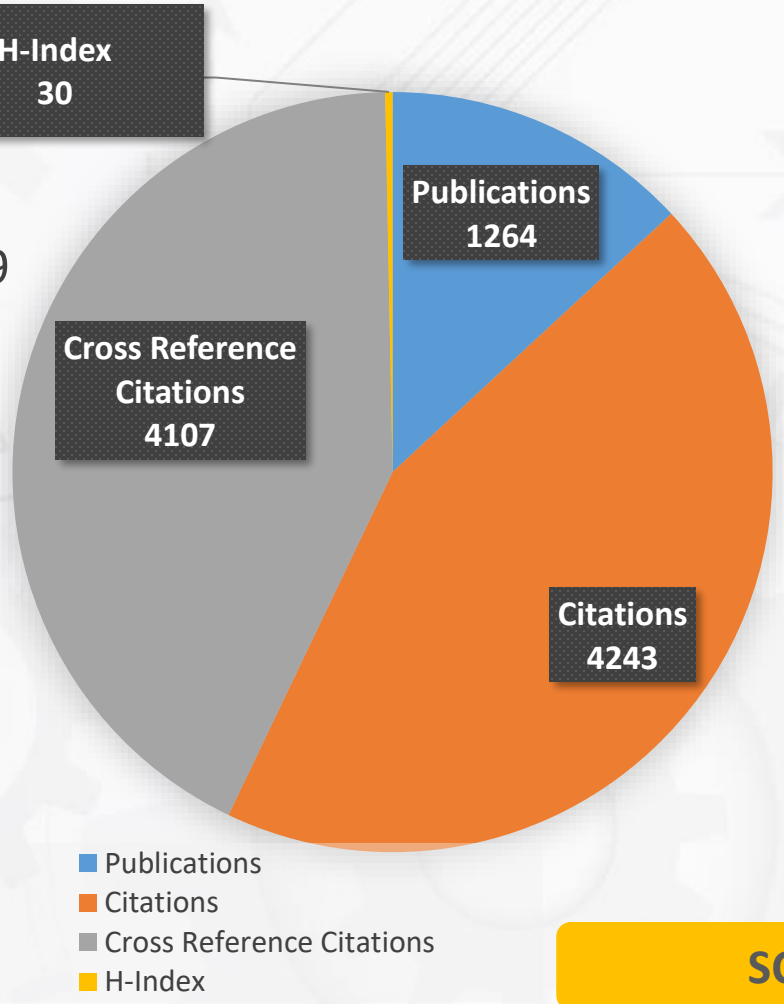
Research, innovations and Extensions

Department Research Status

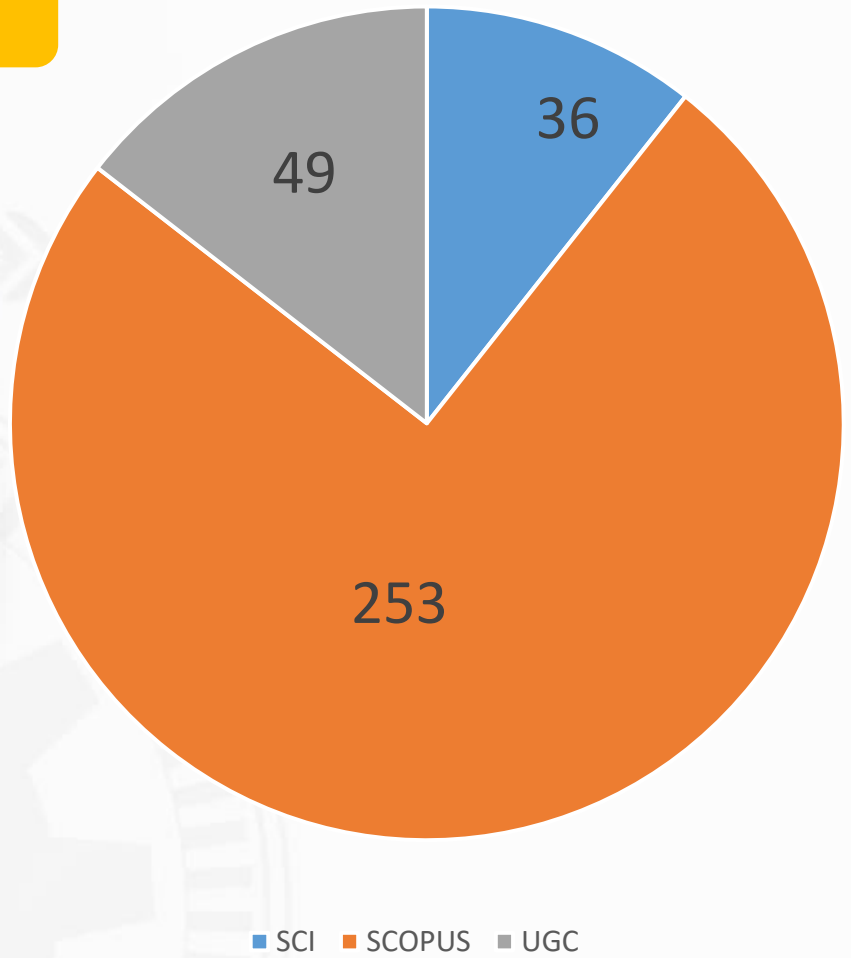
Research, Development & Innovation: R & D Projects



AU – Vidwan: Department of Mechanical Engineering Research Profile of Faculty



Number of High cited & Peer Journal Reviewed Publications



SCI/SCOPUS/UGC Care Publications

C3

Research, Innovations and Extensions

SCI JOURNALS

Optik - International Journal for Light and Electron Optics 245 (2021) 167758

Contents lists available at ScienceDirect

Optik

journal homepage: www.elsevier.com/locate/ijleo

Original research article

A study on the effect of molten pool thermal history and gaseous environment in laser surface alloying of AISI 1020 steel with TiN

Gopala Krishna PN V.[a], Vijayababu Vommi[b], Amit Choudhary[c], Gopinath Muvvala[c,*]

[a] Department of Mechanical Engineering, Sri Vasavi Engineering College, India
[b] Department of Mechanical Engineering, Andhra University, Visakhapatnam, India
[c] Department of Mechanical and Aerospace Engineering, Indian Institute of Technology Hyderabad, India

Chemical Engineering & Processing: Process Intensification 163 (2021) 108362

Contents lists available at ScienceDirect

Chemical Engineering and Processing - Process Intensification

journal homepage: www.elsevier.com/locate/cep

Optimization of performance parameters of a double pipe heat exchanger with cut twisted tapes using CFD and RSM

Poornodaya Venkata Krishna Varma Kola[a,b], Srinivas Kishore Pisipaty[b,*], Siva Subrahmanyam Mendu[c], Rajesh Ghosh[d]

[a] Department of Mechanical Engineering, CMR College of Engineering & Technology, Telangana, India
[b] Department of Mechanical, Engineering, Andhra University College of Engineering (A), Andhra University, Visakhapatnam, Andhra Pradesh, India
[c] Department of Mechanical Engineering, MVGR College of Engineering (A), Vizianagaram, Andhra Pradesh, India
[d] Department of Mechanical Engineering, Anil Neerukonda Institute of Technology and Sciences, Visakhapatnam, Andhra Pradesh, India

Energy 203 (2020) 117821

Contents lists available at ScienceDirect

Energy

journal homepage: www.elsevier.com/locate/energy

An experimental assessment of prospective oxygenated additives on the diverse characteristics of diesel engine powered with waste tamarind biodiesel

V. Dhana Raju[a,*], Harish Venu[b], Lingesan Subramani[c], P.S. Kishore[d], P.L. Prasanna[a], D. Vinay Kumar[e]

[a] Department of Mechanical Engineering, Lakireddy Bali Reddy College of Engineering, Mylavaram, A.P, 521230, India
[b] Department of Automobile Engineering, Vel Tech Rangarajan Dr.Sagunthala R&D Institute of Science &Technology, Avadi, 600062, Chennai, India
[c] Department of Automobile Engineering, Madras Institute of Technology (MIT) Campus, Anna University, Chennai, 600044, India
[d] Department of Mechanical Engineering, Andhra University College of Engineering (A), Andhra University, Visakhapatnam, 530003, A.P, India
[e] Department of Mechanical Engineering, Vignan's Foundation for Science Technology and Research, Guntur, 522213, Andhra Pradesh, India

Heliyon 5 (2019) e01770

Contents lists available at ScienceDirect

Heliyon

journal homepage: www.heliyon.com

Influence of wear parameters on friction performance of A356 aluminum – graphite/ granite particles reinforced metal matrix hybrid composites

Tirlangi Satyanarayana[a], Putti Srinivasa Rao[a], M.Gopi Krishna[b,*]

[a] Dept. of Mechanical Engg, Andhra University, Visakhapatnam, India
[b] Dept. of Mechanical Engg, Acharya Nagarjuna University College of Engineering, Guntur, 522510, India

Measurement 158 (2020) 107712

Contents lists available at ScienceDirect

Measurement

journal homepage: www.elsevier.com/locate/measurement

Parametric analysis and optimization of hard turning at different levels of hardness using wiper ceramic insert

K Venkata Subbaiah[a], Ch Raju[b,*], Ch Suresh[c]

[a] Department of Mechanical Engineering, Andhra University, Visakhapatnam 530003, India
[b] Department of Mechanical Engineering, Govt. Polytechnic, Narsipatnam 531116, India
[c] Department of Mechanical Engineering, Avanthi Institute of Engineering & Technology, Makavarapalem, Visakhapatnam 531113, India

Fuel 276 (2020) 118076

Contents lists available at ScienceDirect

Fuel

journal homepage: www.elsevier.com/locate/fuel

Experimental study on engine parameters variation in CRDI engine fuelled with palm biodiesel

A. Naresh Kumar[a,b], P.S. Kishore[b,*], K. Brahma Raju[c], K. Nanthagopal[d], B. Ashok[d]

[a] Department of Mechanical Engineering, Lakireddy Bali Reddy College of Engineering, Mylavaram, A.P, India
[b] Department of Mechanical Engineering, Andhra University College of Engineering (A), Andhra University, Visakhapatnam 530 003, A.P, India
[c] Department of Mechanical Engineering, S.R.K.R Engineering College, ChinnaAmiram, Bhimavaram 534 204, A.P, India
[d] School of Mechanical Engineering, VIT University, Vellore, Tamilnadu, India

Results in Physics 10 (2018) 987–992

Contents lists available at ScienceDirect

Results in Physics

journal homepage: www.elsevier.com/locate/rinp

Harmonic frequency analysis of skewed functionally graded flat and spherical shallow shells

Chandra Mouli Badiganti[a,b,*], Ramji Koona[b,c]

[a] Department of Mechanical Engineering, RISE Krishna Sai Prakasam Group of Institutions, Ongole 523272, India
[b] Department of Mechanical Engineering, College of Engineering(A), Andhra University, Visakhaptnam 530003, India
[c] Dr. B. R. Ambedkar University, Srikakulam, India

Article

JOURNAL OF COMPOSITE MATERIALS

Journal of Composite Materials
0(0) 1–8

DOI: 10.1177/0021998319868517
journals.sagepub.com/home/jcm
SAGE

HAp/TiO_2 nanocomposites: Influence of TiO_2 on microstructure and mechanical properties

Ajay Kumar Vemulapalli[1], Rama Murty Raju Penmetsa[1], Ramanaiah Nallu[2] and Rajesh Siriyala[1]

Energy Conversion and Management 164 (2018) 655–666

Contents lists available at ScienceDirect

Energy Conversion and Management

journal homepage: www.elsevier.com/locate/enconman

An experimental study on the effect of nanoparticles with novel tamarind seed methyl ester for diesel engine applications

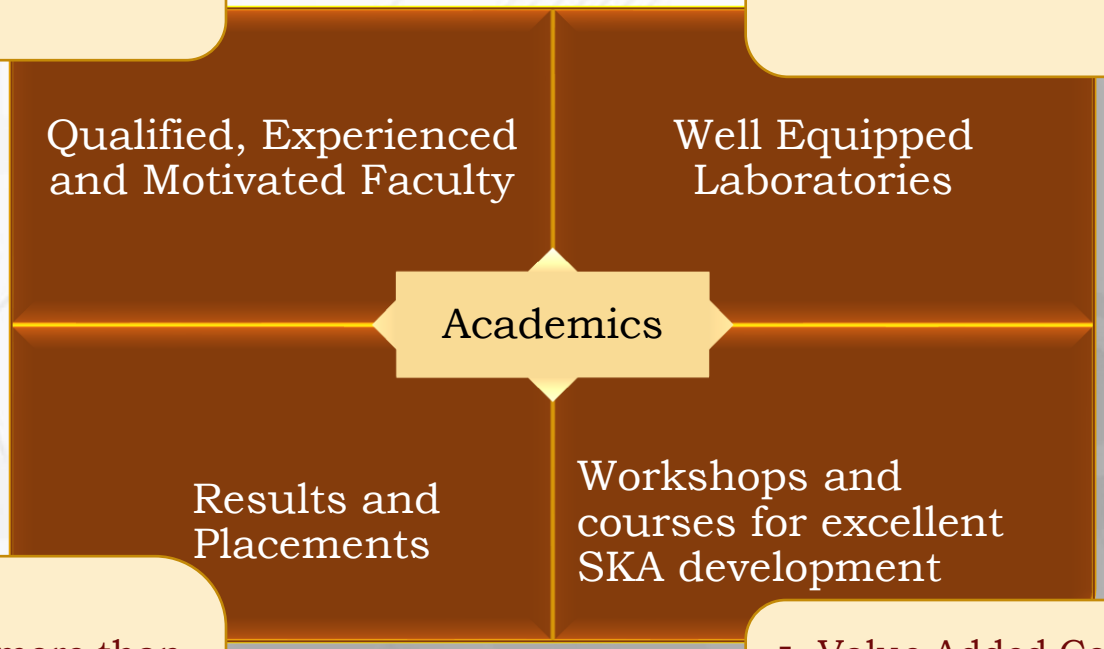
V. Dhana Raju[a], P.S. Kishore[a,*], K. Nanthagopal[b], B.Ashok[b]

[a] Department of Mechanical Engineering, Andhra University, Visakhapatnam 530003, Andhra Pradesh, India
[b] School of Mechanical Engineering, VIT University, Vellore 632014, India

Academics Highlights

- Faculty average age - **48** years
- Faculty avg. experience – **23** yrs
- Maximum experience : **33** yrs

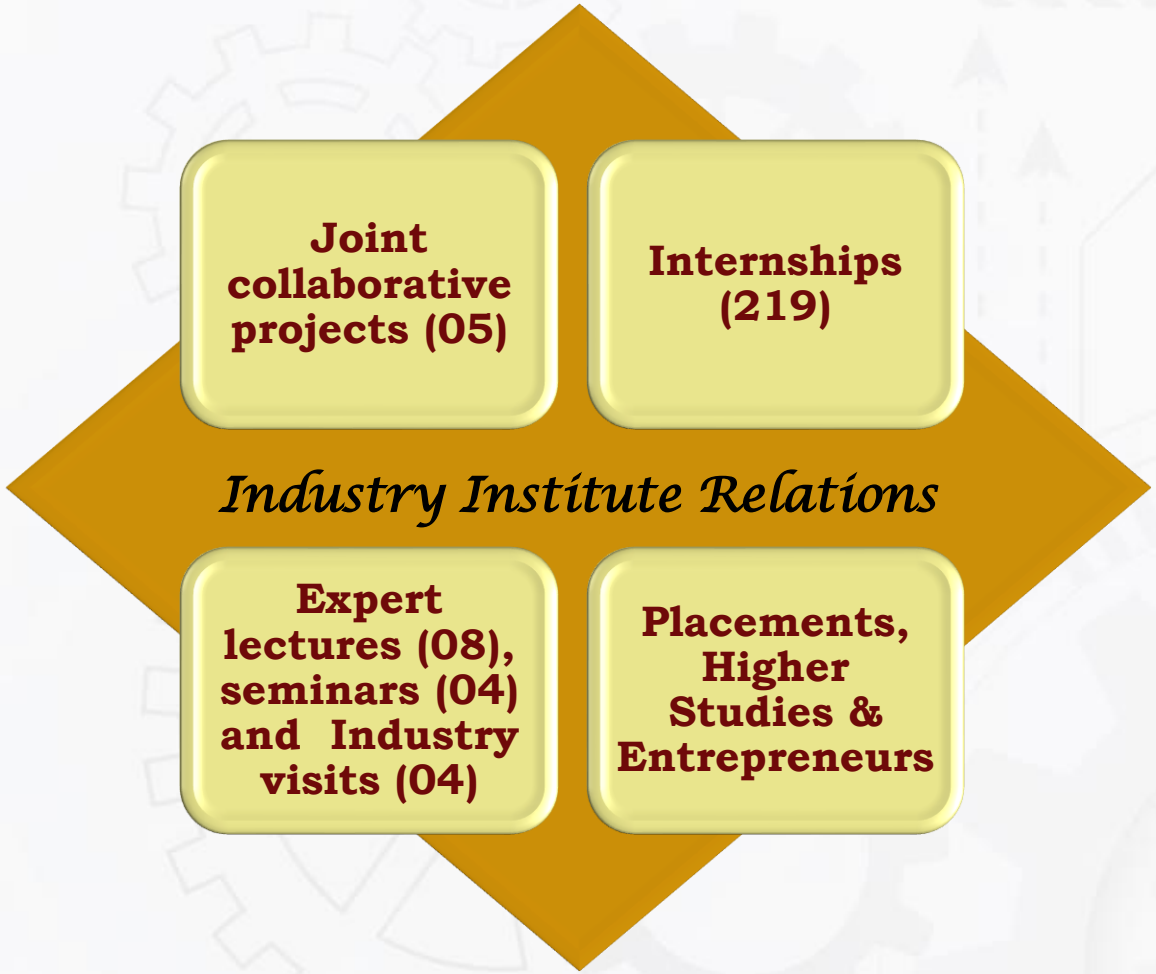
- Average number of labs per department: **18**
- Total cost of Equipment: Rs**. 33 Crores**



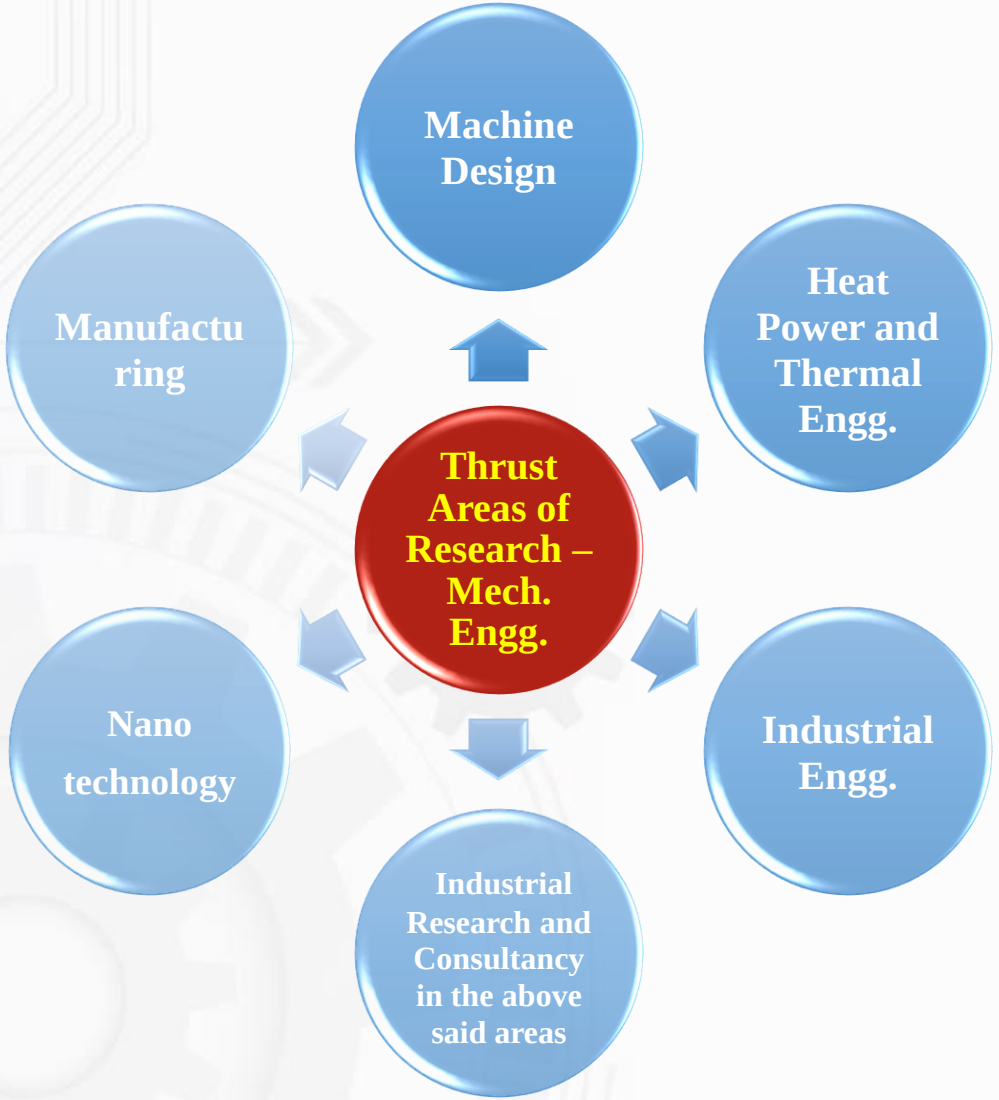
- Consistent results in Final year: more than **95%**
- Placements : more than **75%** of the eligible students

- Value Added Courses (89)
- Guest Lectures (08)
- Webinars (300)
- Certified Mini courses (02)

Initiatives of MED:
Partnerships – I-I-I



Thrust Areas of Research



Thrust Areas

Machine Design

- Optimization of Mechanical Systems
- Design & Analysis of Mechanical Systems
- Vehicle Dynamics & Tyre Mechanics
- Composites and Nanotechnology
- Vibrations & Condition Monitoring
- EMI and EMC & Stealth Technology

Industrial Engg.

- Supply chain management & Reliability Engg.
- Inventory Management & Optimization
- Sustainable operations & Quality Control

Heat Power Engineering

- Augmentation Heat Transfer
- Heat Pipes & Biodiesel Research
- Nano fluids Heat Transfer & Multiphase Heat Transfer

Manufacturing

- Additive Manufacturing
- Welding & Automation
- Metal Forming & Robotics
- MEMS & CAD/CAM

Major / Key Initiatives

Faculty Centric

- Financial Assistance for Paper presentations within India and Abroad
- Incentives for Paper Publication in cited and reputed Journals
- Incentives for Grants received
- Financial Assistance for attending Workshop/Seminars/Conferences
- Monetary incentives to functional heads
- Free Medical Facility & Insurance

Staff Centric

- Skill Enhancement Training
- Free Medical Facility & Insurance
- Encourage for Higher qualifications

Student Centric

- Add- on courses
- Minors & Majors & Honorary Degrees
- Free Medical facility & Insurance
- Remedial Classes

Faculty Centric Policies & Utilization

Faculty Centric Policies & Utilization

Encouragement

- Pursue Higher Studies (2),
- Corporate Training (3) & Research Work with on-duty leave (2)
- Writing Research Proposals
- Take up Consultancy with incentives (40-60%, 3+ Lakhs)

Financial Assistance

- Membership in Professional bodies (2)
- Publishing Papers
- Medical Bills Reimbursement
- Filing Patents (3)
- Attending/organizing workshops, FDPs, STTPs, Seminars and Conferences

Fee Concession

- Tuition fee and Transport fee for the children of our staff (25%)

Facilities

- Subsidized transport facility (100%)
- Gratuity (100%)
- Group Insurance (100%)
- PF
- Loans – Society (100%)
- Accidental Insurance
- Hostel stay
- ESI

Leave Provision

- Maternity leave (100%,)
- Paternity leave (100%)
- Study Leave (100%)
- CL, EL, PL (100%)
- Medical leave (100%)

Student Centric Policies & Utilization

01

Recognition

- Top Performers with Cash Awards
- Membership in Professional Societies

02

Financial Assistance

- Industrial trips (03)
- Sports & Cultural Activities (2)
- Merit Scholarships
- Publishing research papers
- Innovative Projects

03

Facilities

- R&D Centre – Research Culture (200 Lakhs)
- MoUs with R & D and Industries
- CoEs: Skill Lab&NT
- Grievance Cell
- NSS & NCC
- a-Hub

04

Digital Initiatives

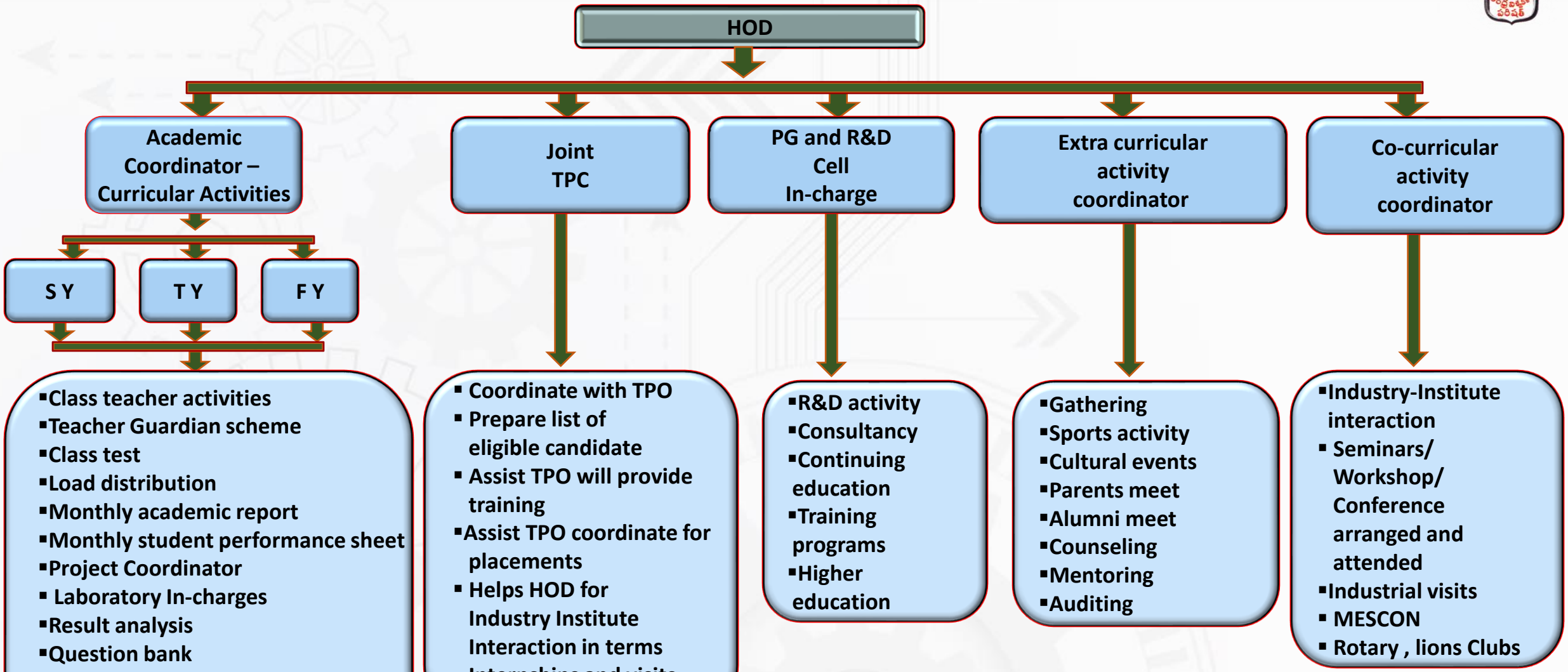
- Web based Students' Management System (ERP)
- Course Registration
- Attendance & Marks Entry
- OBE Analysis, Examination Automation Process
- Announcement of Results in time
- Progress Reports
- Feedback and Faculty Appraisal

05

Training & Counseling

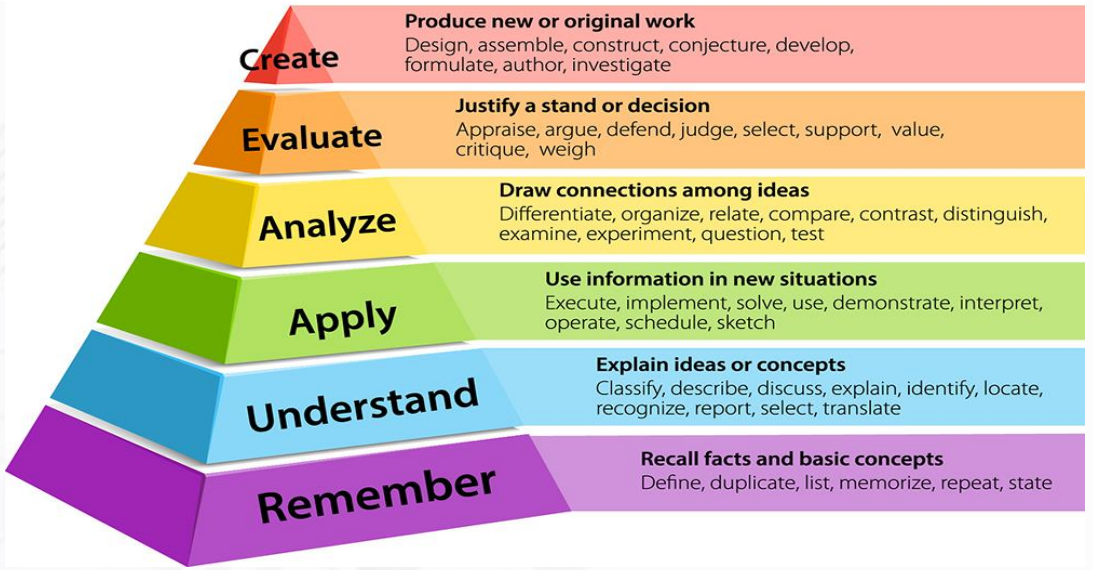
- Career Guidance (51)
- Training (234) & Placement (75 %) & HS (18 %)
- Self-Study Component
- NPTEL and MOOCs
- Internships (100%)
- Start-ups (2)

Introduction – Departmental Academic System



CURRICULAR ASPECTS: CURRICULUM DESIGN & DEVELOPMENT PROCESS

Bloom's Taxonomy



Approved by,

Academic Council & Executive Council

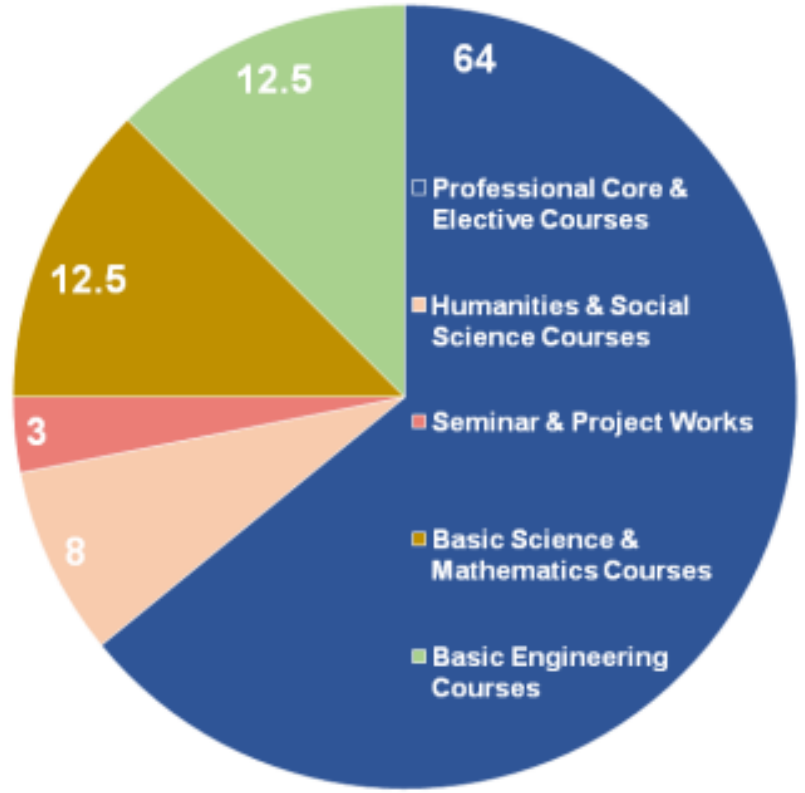
NEP-2020 in Curriculum

1. Multidisciplinary/interdisciplinary- Minor Degrees, Honors Degrees with Specialization
2. Academic bank of credits (ABC)
3. Skill development: Skill Labs, Dassault Laboratory, & CoEs
4. Appropriate integration of Indian Knowledge system (teaching in Indian Language, culture, using online courses)
5. Focus on Outcome based education (OBE)
6. Online education: Online Platforms, e-content, LMS, Outcome-based, etc.

1. Curricular Aspects

Curriculum Design

- **BOS of AU-MED** will prepare the Curriculum Schemes by referring to
  - AICTE/UGC/APSCHE/AU/CBCS/NEP Guidelines
  - Professional body Guidelines such as CMSI/SAE
  - Current requirements of the Industry
  - Stake Holders' Inputs
- **Revision of the Curriculum**
  - Industry/Market Requirements
  - Feedback from Stakeholders
  - Once in Six Months
  - Minor Changes In Curriculum
  - Introduction of New Electives
- **Academic Flexibility**
  - Choice Based Credit System
  - Credits
    - ✓ 2019-20 Batch - 160 (As per AICTE Guidelines)
    - ✓ 2021-22 Batch – 160
    - ✓ Courses offered with 1/2/3/4 credits
    - ✓ Additional credits can be earned from add-on courses
    - ✓ Provision for transfer of credits when the students migrate
  - Majors & Minors
  - Vertical mobility within the programmes



2022-23 Scheme | Course Components

- **NEP** Compliance
- Ability Enhancement Courses
- Engineering Science Courses
- Programming Language Courses
- Emerging Technology Courses
- Integrated Courses, Horizontal

Mobility

- **160** credits, Trans-, Inter-, Intra-, Cross- and Multidisciplinary

Courses with employability/Skill development/value added programmes offered in U.G/P.G

- Average percentage of courses having a focus on employability/entrepreneurship/skill development - 100%
- **Courses offered Core courses and Electives/MOOCs Courses**

Links to COs:

- B.Tech Mechanical(2015-16)
- B.Tech Mechanical(2019-20)
- B.Tech Mechanical(2020-21)
- B.Tech Mechanical(2021-22)

Links to COs:

- M.Tech. (MACHINE DESIGN)(2015-16)
- M.Tech. (MACHINE DESIGN)(2019-20)
- M.Tech. (HEAT TRANSFER in ENERGY SYSTEMS)(2015-16)
- M.Tech. (HEAT POWER ENGINEERING)(2019-20)
- M.Tech. (INDUSTRIAL ENGINEERING)(2015-16)
- M.Tech. (INDUSTRIAL ENGINEERING)(2019-20)
- M.Tech. (NANOTECHNOLOGY)(2015-16)

Criterion 1 CURRICULAR ASPECTS (CONTD.,)

- **CBCS/AICTE/APSCHE/OBE/NEP - 2020 Scheme:**

Programme Code	Programme name	Year of Introduction	Status of implementation of CBCS/Elective course system (Yes/No)	Year of revision (if any)
3-1-20	B. Tech. Mechanical	2015-16	YES	2019-20
				2020-21
				2021-22
3-2-33	M.Tech. - Machine Design	2015-16	YES	2019-20
3-2-36	M.Tech. - Heat Power Engineering	2015-16	YES	2019-20
3-2-34	M.Tech. - Industrial Engineering	2015-16	YES	2019-20
3-2-38	M.Tech. - Nanotechnology	2015-16	YES	--

1. Curricular Aspects

Curriculum Enrichment

Value Addition Courses

Industrial Requirements/Market demands, Guest speakers, Technological Upgradation, Skill Enhancement courses

Project Works – Mini/Main

Laboratory/Research based learning

Internships / Field Works

hands-on experience, field trips

Student forum-based activities

Group Discussions, Case Studies, extra-curricular activities, interests outside the classroom and problem-solving exercises

Students Undertaking

445	219	112	63
• Project Works	• Internships	• Mini-Projects	• Field Works

Learning is more meaningful and enjoyable when content and process are learned in the context of real and present problems.

CURRICULAR ASPECTS (CONTD.,)

○ Student Project works

Programme name	2017-18	2018-19	2019-20	2020-21	2021-22
B.Tech. (Mechanical Engineering)	22	16	16	17	16
M.Tech. (Machine Design)	13	15	12	13	17
M.Tech. (Heat Power Engineering)	13	15	13	12	12
M.Tech. (Industrial Engineering)	21	10	11	16	18
M.Tech. (Nanotechnology)	11	06	10	12	10
Ph.D.	15	23	16	23	21

1. Curricular Aspects

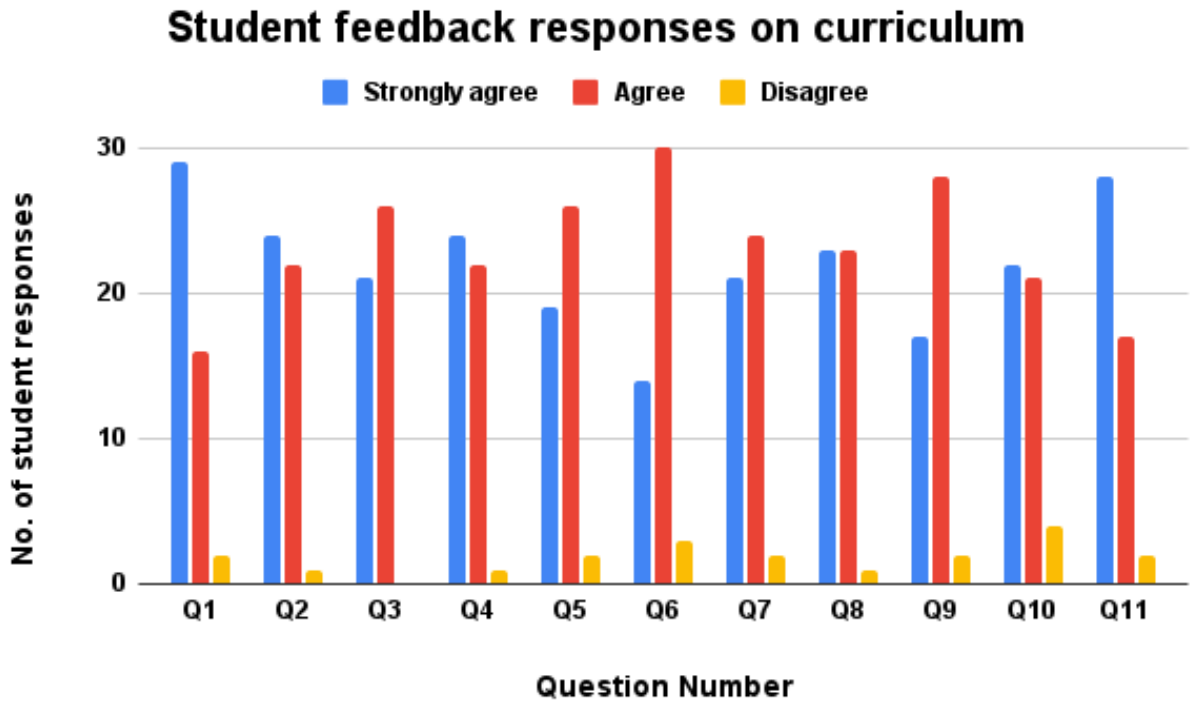
Feedback

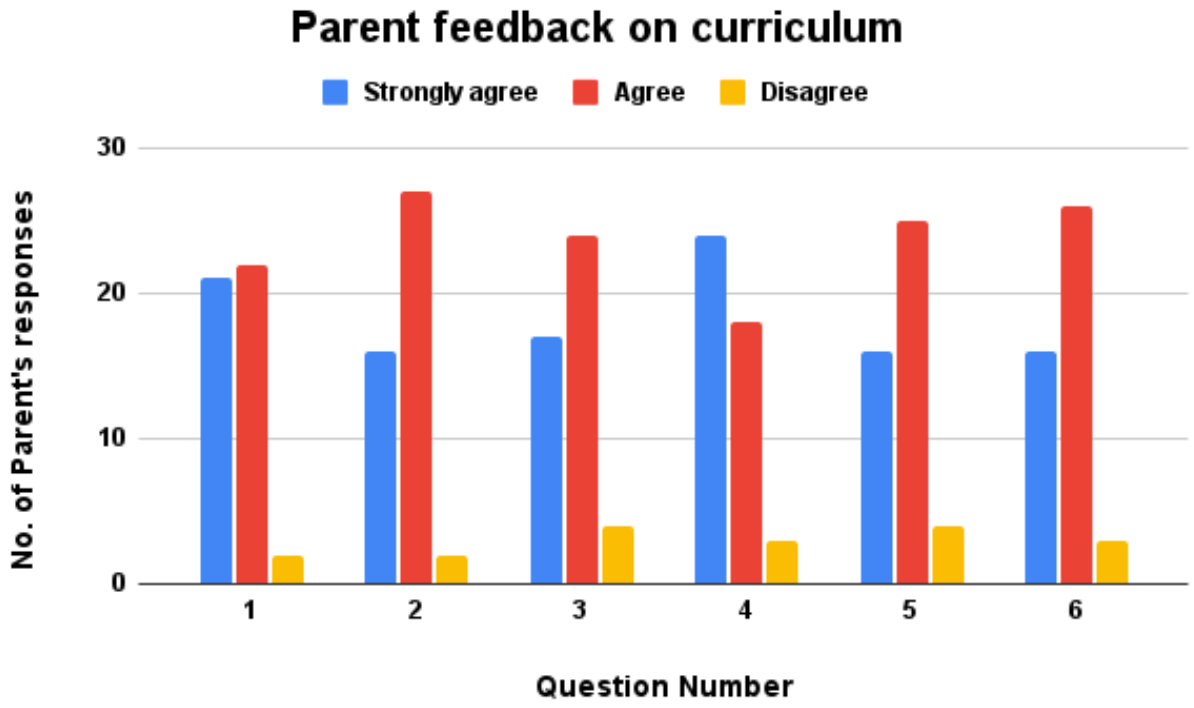
Feedback system is in place and has an **active process** of

- Collecting feedback from all stakeholders
- Analyzing it
- Identifying and drawing significant indicators to enhance the learning effectiveness.

Criterion 1 Feedback for curriculum collected and analysed report

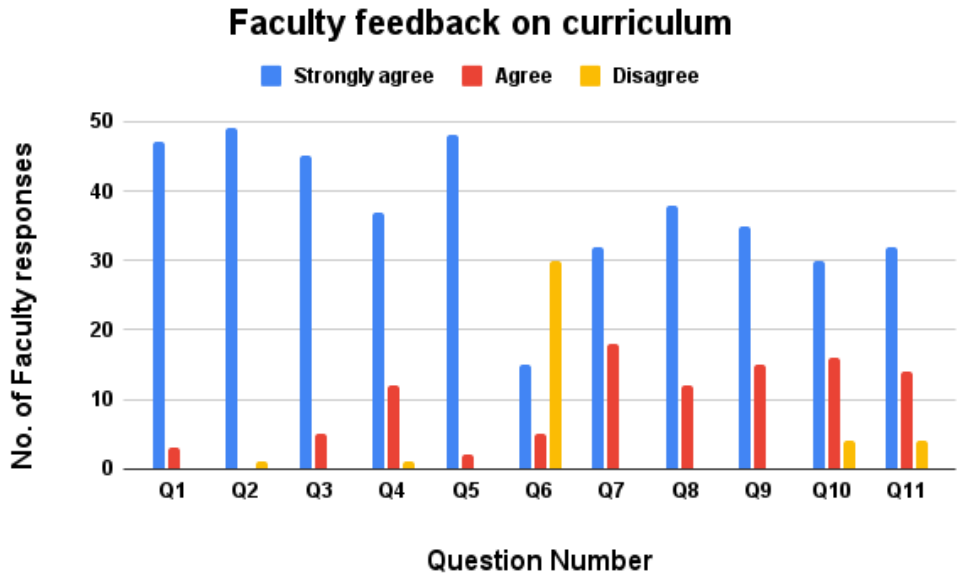
- Students feedback for curriculum - 205
- Parents feedback for curriculum - 190
- Faculty feedback for curriculum - 200
- Alumni Feedback for curriculum - 95

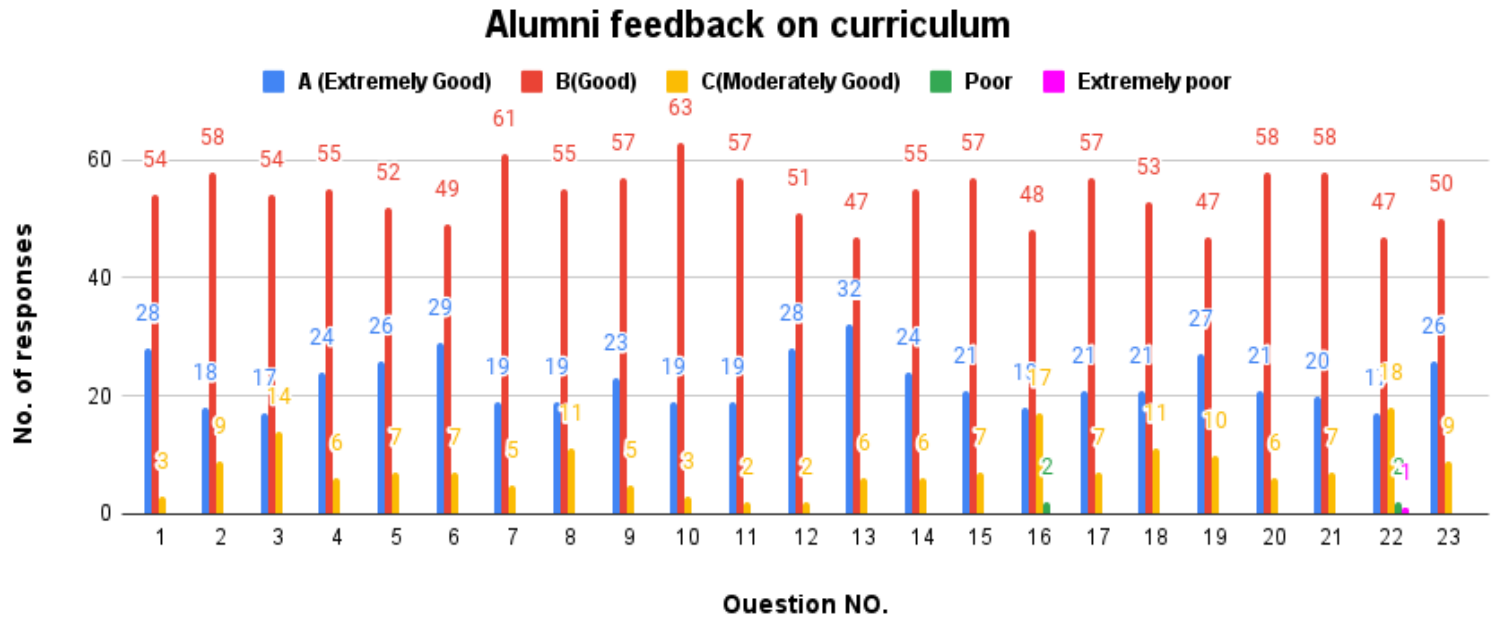




Criterion 1

Feedback for curriculum collected and analysed report (Contd.,)





Criterion 2 DEMAND RATIO

Academic Year	2017-18	2018-19	2019-20	2020-21	2021-22	Average
B.Tech Mechanical Engineering						
Seats Available	31	31	81	67	58	53
Applications Received	145428	132281	133003	133072	133072	135371
Demand Ratio	4691	4267	1643	1823	2294	2990
M.Tech. – Machine Design						
Seats Available	18	15	15	18	17	17
Applications Received	26677	23831	20986	20165	20165	22365
Demand Ratio	1482	1589	1399	1120	1186	1355
M.Tech – Industrial Engineering						
Seats Available	14	14	15	17	13	15
Applications Received	26677	23831	20986	20165	20165	22365
Demand Ratio	1906	1702	1399	1186	1551	1549
M.Tech – Heat Power Energy Systems						
Seats Available	16	15	15	15	16	15
Applications Received	26677	23831	20986	20165	20165	22365
Demand Ratio	1667	1589	1399	1344	1260	1452
M.Tech – Nanotechnology						
Seats Available	11	06	10	12	10	9.8
Applications Received	26677	23831	20986	20165	20165	22365
Demand Ratio	1667	1589	1399	1344	1260	1452

Criterion 2 Seats filled against Reserved categories

Academic Year	2017-18	2018-19	2019-20	2020-21	2021-22	Average
B.Tech Mechanical Engineering						
SC	5	5	10	10	5	7
ST	2	2	4	4	1	3
OBC	8	8	16	16	38	17
M.Tech. – Machine Design						
SC	2	1	3	2	2	2
ST	0	0	0	1	1	1
OBC	6	6	6	6	10	7
M.Tech – Industrial Engineering						
SC	3	2	3	1	3	2
ST	1	1	1	0	0	1
OBC	6	6	3	6	7	6
M.Tech – Heat Power Energy Systems						
SC	1	1	2	2	2	2
ST	0	0	0	0	0	0
OBC	6	6	6	6	11	7
M.Tech – Nanotechnology						
SC	4	1	1	4	3	3.4
ST	1	0	0	1	0	0.2
OBC	2	3	4	5	5	3.8

Criterion 2 Student Diversity

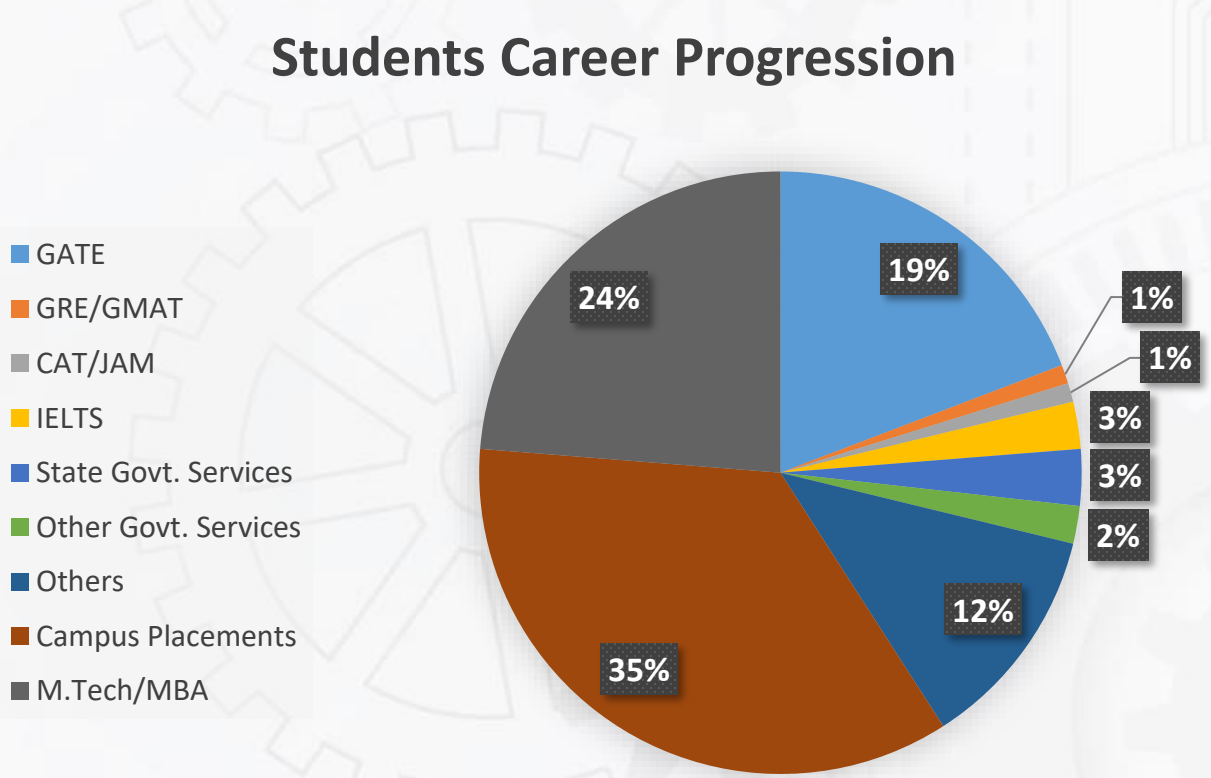
Academic Year	2017-18	2018-19	2019-20	2020-21	2021-22	Average
B.Tech Mechanical Engineering						
Male	22	21	47	50	41	36
Female	9	10	24	23	17	17
Total	31	31	71	73	58	53
M.Tech. – Machine Design						
Male	16	11	13	16	13	14
Female	2	4	2	2	4	3
Total	18	15	15	18	17	17
M.Tech – Industrial Engineering						
Male	12	8	10	17	10	11
Female	4	6	5	0	3	4
Total	14	14	15	17	13	15
M.Tech – Heat Power Energy Systems						
Male	10	12	15	13	13	13
Female	6	3	0	2	3	3
Total	16	15	15	15	16	15
M.Tech – Nanotechnology						
Male	7	3	5	5	7	5.4
Female	4	3	4	7	3	4.2
Total	11	6	9	12	10	9.6

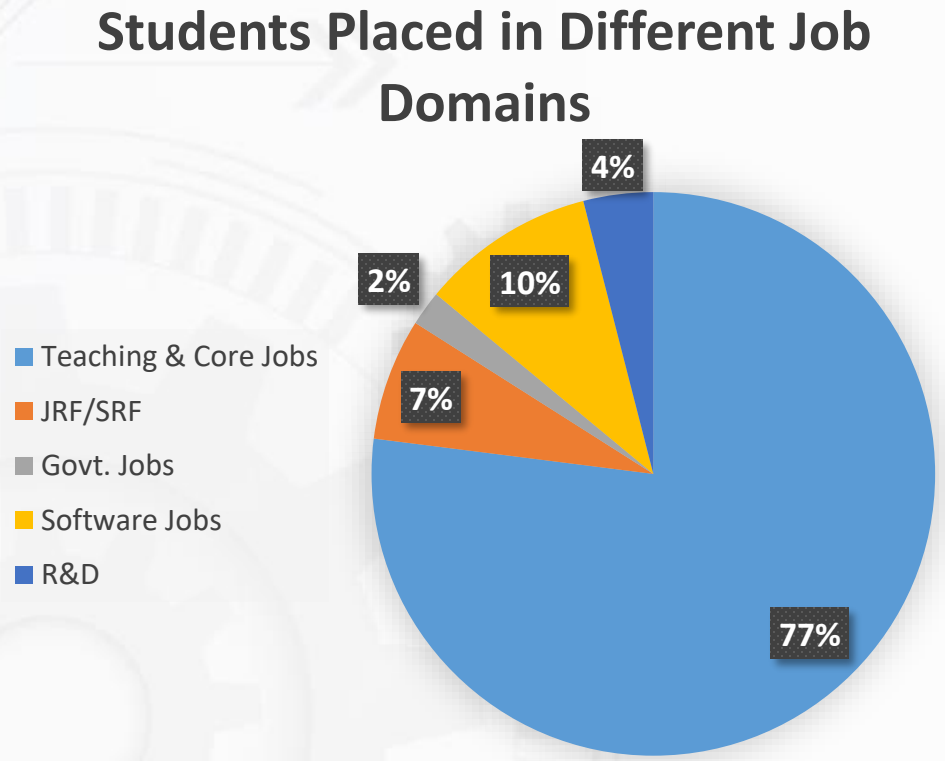
Criterion 2 Student Diversity

STUDENT STRENGTH

B.Tech.	M.Tech. (IE, MD, HPES, NT)	Ph.D.
257	213	60

STUDENTS DIVERSITY





Criterion 2 Student - Faculty Ratio

	No. of Students					
Course Name	2017-18	2018-19	2019-20	2020-21	2021-22	Average
B.Tech Mechanical Engineering (4 Yrs)	124	124	174	210	237	173.8
M.Tech. – Machine Design (2 Yrs)	36	33	30	33	35	33.5
M.Tech – Industrial Engineering (2 Yrs)	28	28	19	32	30	27.4
M.Tech – Heat Power Energy Systems (2 Yrs)	36	33	33	33	35	34
M.Tech – Nanotechnology (2 Yrs)	17	15	21	22	28	20.6
Total No. of Students	241	233	277	330	365	289.3
No. of Teachers	18	18	18	16	18	17.6
Student – Teachers Ratio	13.39	12.94	15.39	20.63	20.28	16.43

Criterion 2 Student's categorisations

For Advanced Learners

Student Centric Methods	Programmes
Research projects	DST FIST Lab, MODROB Lab,
Student managed events	MESCON
Stress and psychological counseling	Live interaction with experts and
On-line learning support	NPTEL/SWAYAM and other MOOC courses
Personality development program	Communication Skills Lab
Placement support	Placement training
Career Guidance & Higher studies	CSIR, NET, GATE, CAT, GMAT, GRE, IELTS, TOEFL, etc
Participation in Conferences, Seminars, Symposiums	a -HUB interactions, Microsoft, UPSKILLING, Start-up Saturdays, GITA talks
Monetary benefit Student Achievements	Awards & Merit Scholarships

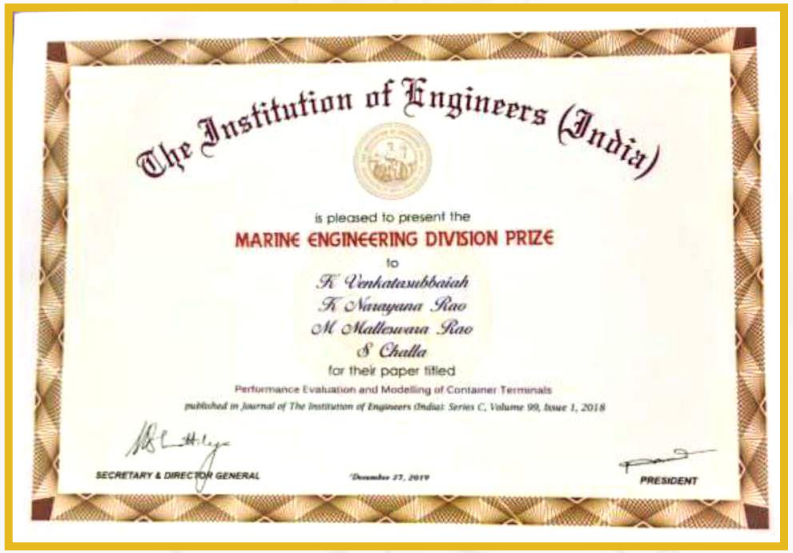
For Slow Learners

Student Centric Methods	Programmes
Experiential learning	Field survey, Laboratory experience with live example
Participative learning	Periodic Online interactive programs with experts
Remedial classes	Giving assignments, virtual learning
Teachers use ICT enabled tools	Online resources for effective teaching and learning process.

Criterion 2 Student to Mentor Ratio

	No. of Students					
Course Name	2017-18	2018-19	2019-20	2020-21	2021-22	Average
B.Tech Mechanical Engineering (4 Yrs)	124	124	174	210	237	173.8
M.Tech. – Machine Design (2 Yrs)	36	33	30	33	35	33.5
M.Tech – Industrial Engineering (2 Yrs)	28	28	19	32	30	27.4
M.Tech – Heat Power Energy Systems (2 Yrs)	36	33	33	33	35	34
M.Tech – Nanotechnology (2 Yrs)	17	15	21	22	28	20.6
Total No. of Students	241	233	277	330	365	289.3
No. of Mentors	18	18	18	16	18	17.6
Student – Mentors Ratio	13.39	12.94	15.39	20.63	20.28	16.43

Criterion 2 AWARDS / RECOGNITIONS / FELLOWSHIP



- **Prof. K. Venkata Subbaiah, 2017, Best Paper, Marine Engineering Division The Institution of Engineers (India), Kolkata**

- **Sr. Prof. K. Venkata Subbaiah 2019, Best Paper, Marine Engineering Division, The Institution of Engineers (India), Kolkata**

- **Prof. K. Ramji, 2019, Outstanding Mentor Award, ANU, Guntur**

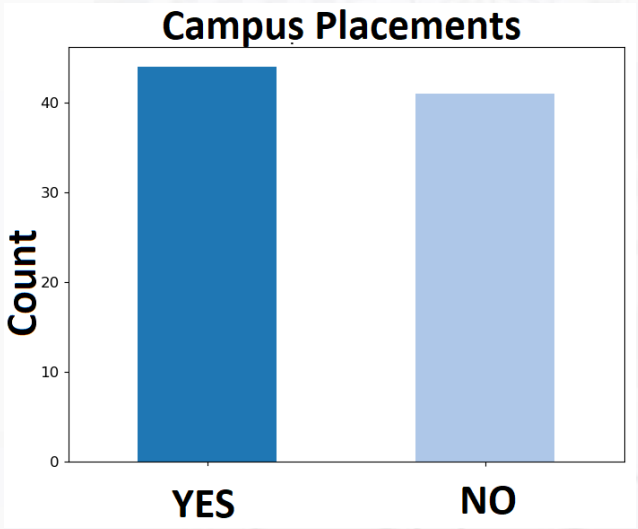
- **Prof. K. Ramji, 2020, Lifetime Achievement award 2020 Elsevier**

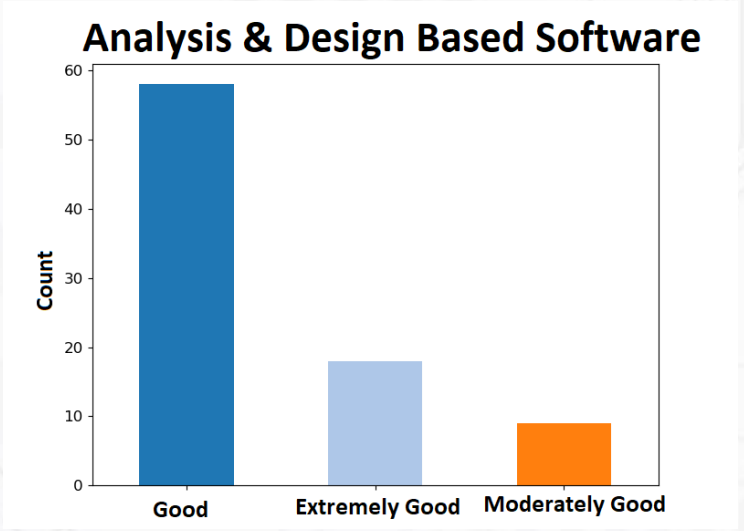
Criterion 2 Evaluation Process and Reforms

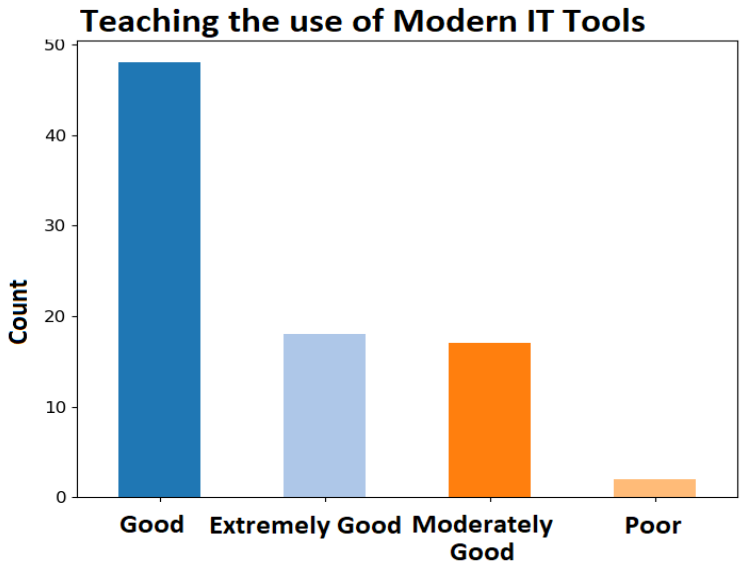
B.Tech Mechanical Engineering					
	2017-18	2018-19	2019-20	2020-21	2021-22
Last date of the semester-end/ year- end examination	07/04/2018	30/04/2019	24/07/2020	30/06/2021	17/07/2022
Date of declaration of results of semester-end/ year- end examination	27/04/2018	24/10/2019	03/08/2020	21/07/2021	02/08/2022
M.Tech (Machine Design, Industrial Engineering, Heat Power Energy Systems, Nanotechnology)					
Last date of the semester-end/ year- end examination	10/06/2018	06/10/2019	29/10/2020	28/11/2021	30/10/2022
Date of declaration of results of semester-end/ year- end examination	10/07/2018	24/10/2019	12/11/2020	20/12/2021	17/11/2022

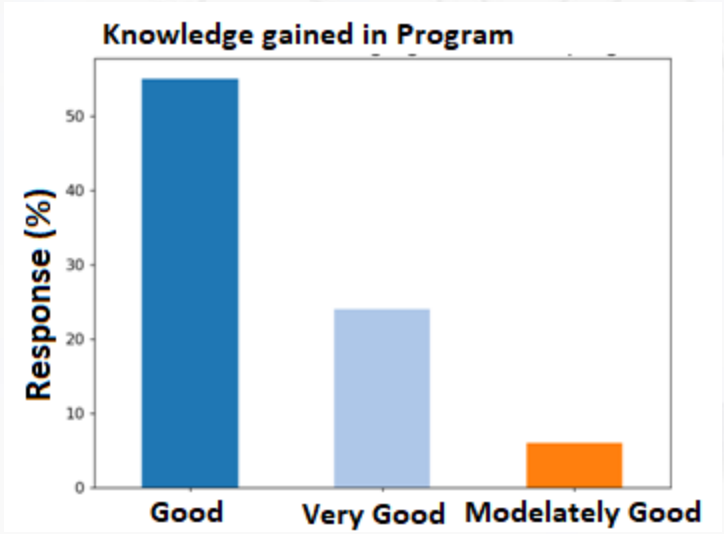
B.Tech Mechanical Engineering					
	2017-18	2018-19	2019-20	2020-21	2021-22
Number of students appeared in the final year examination	36	39	30	32	32
Number of students passed in final year examination	29	36	23	25	25

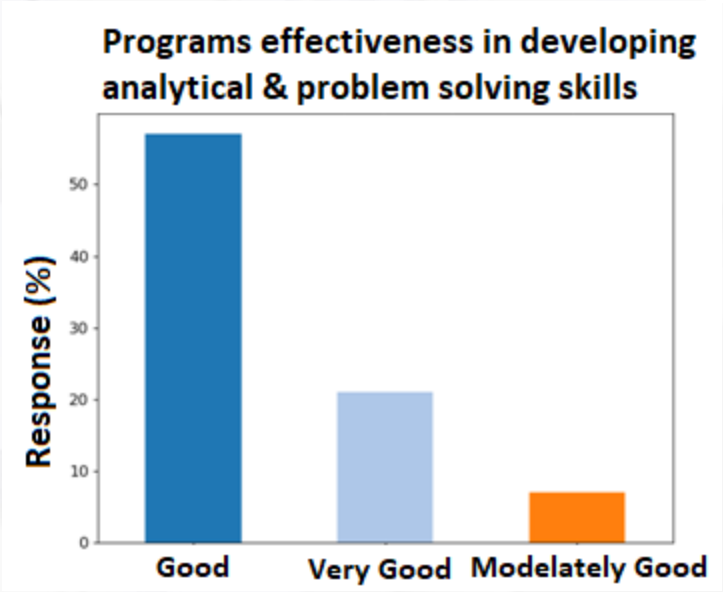
Criterion 2 Student Exit Survey

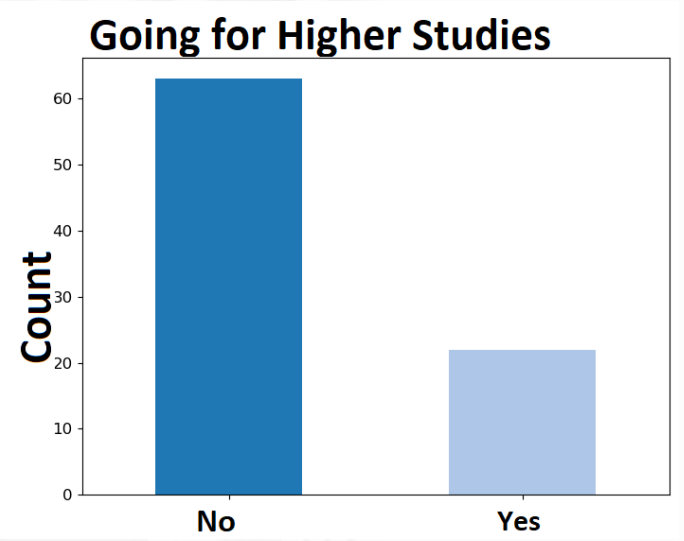




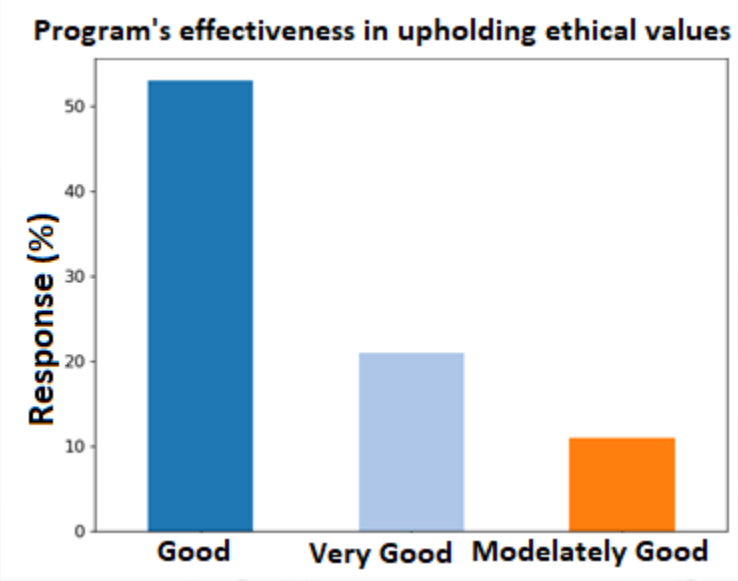


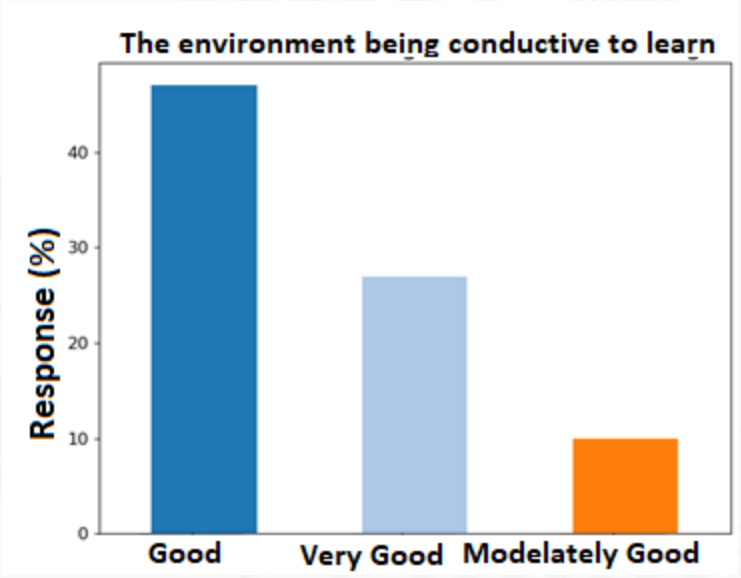


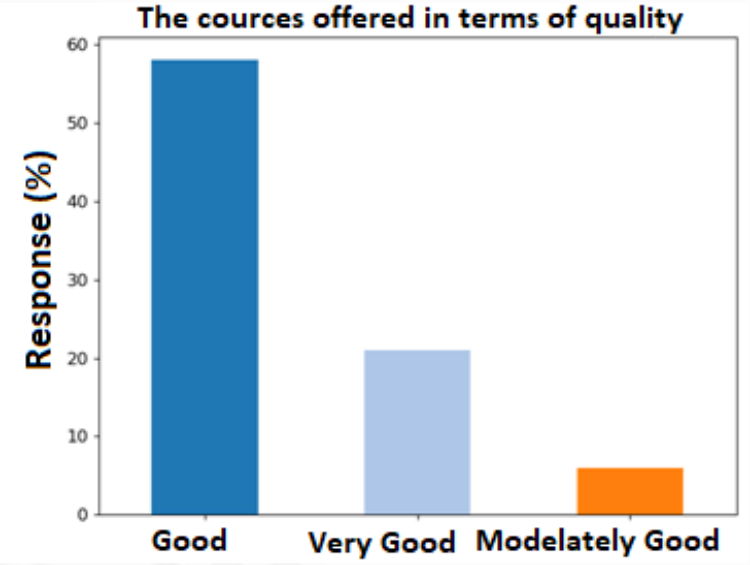


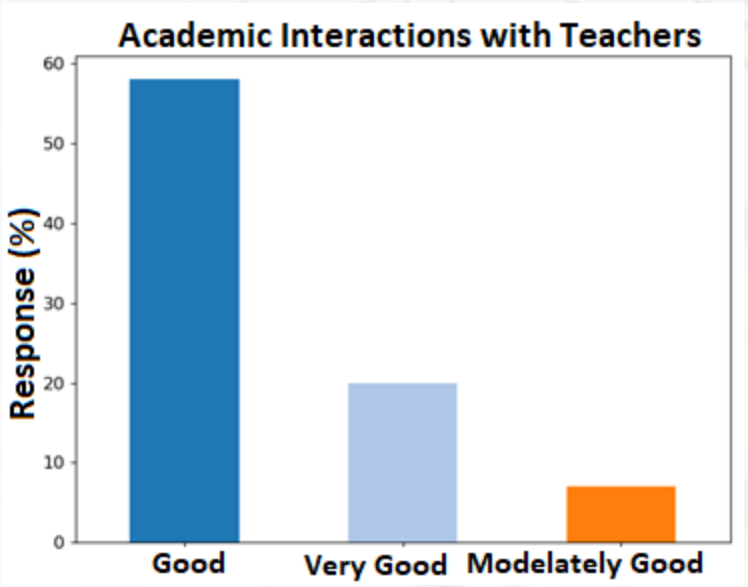


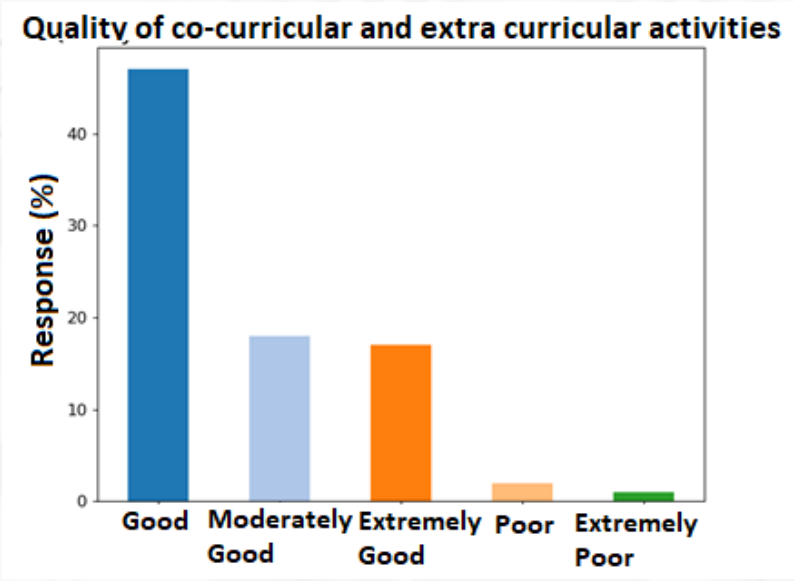
Criterion 2 Student Exit Survey

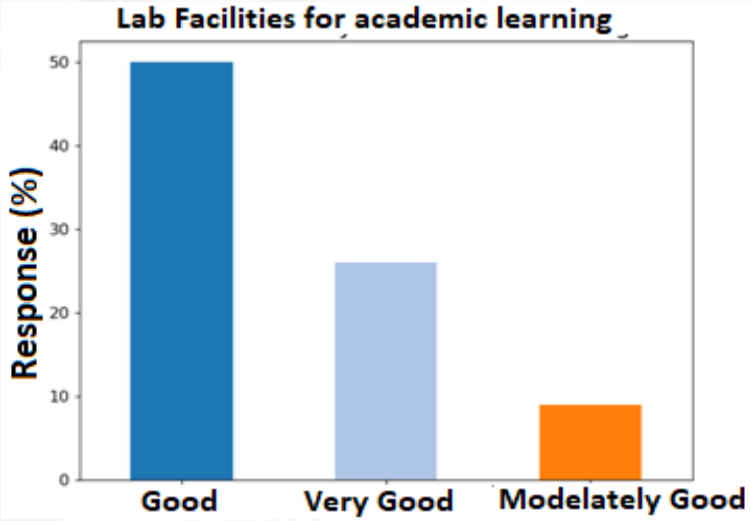




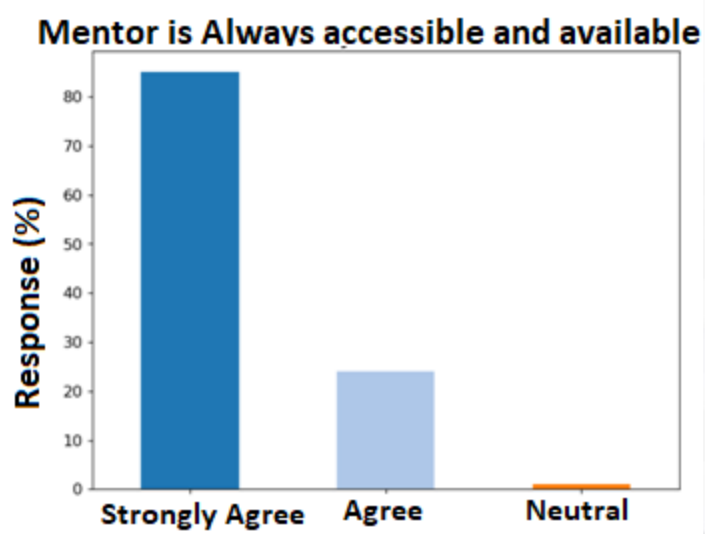


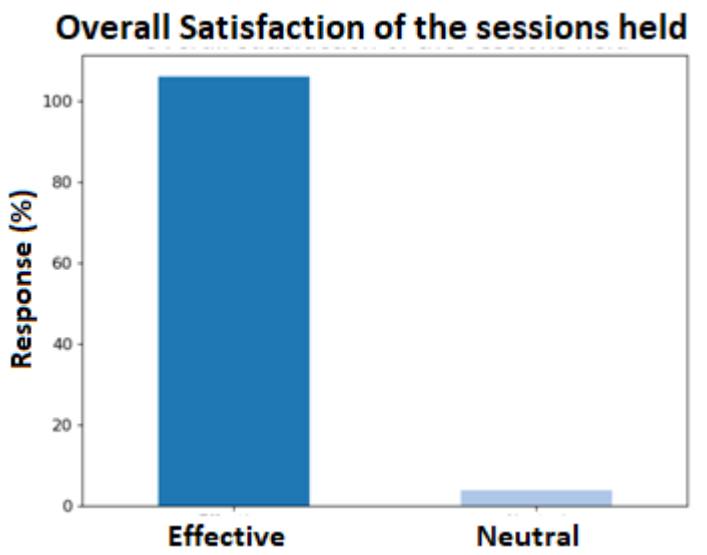


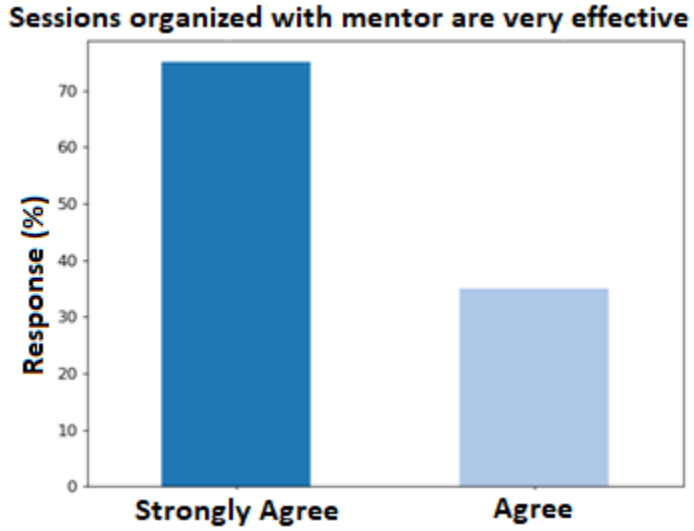


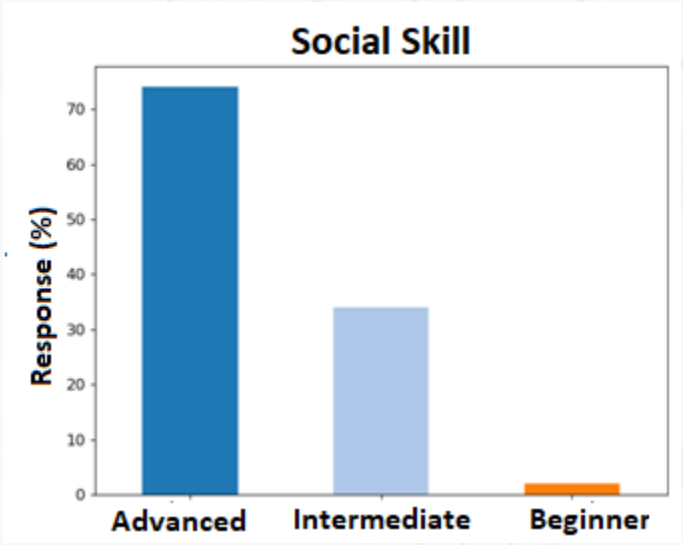


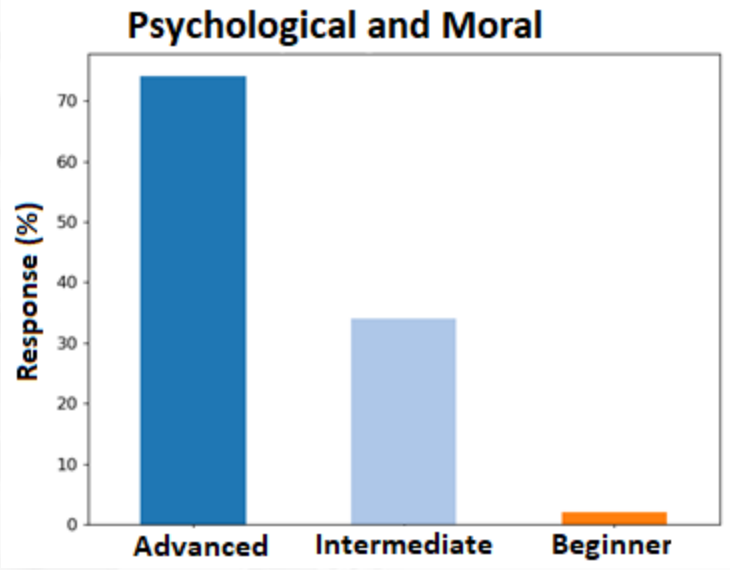
Criterion 2 Mentee Satisfaction Survey











QUALITY ASSURANCE INITIATIVES

Quality Assurance & Best Practices

Impact of Quality Assurance Initiatives

Programme Outcomes – (POs)

1. Engineering Knowledge – Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.
2. Problem Analysis-Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.
3. Design/Development of solutions – Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations
4. Conduct investigations of complex problems – Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.
5. Modern tool usage – Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modelling to complex engineering activities with an understanding of the limitations.
6. The engineer and society – Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice

Programme Outcomes (POs)

7. • Environment and Sustainability – Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development

8. • Ethics – Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.

9. • Individual and teamwork – Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings

10. • Communication – Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.

11. • Project management and finance – Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments

12. • Life-long learning – Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.

Programme Specific Outcomes (PSOs) – UG B.Tech. Programme

Programme Specific Outcomes are to educate the students thorough in the year are committed to: Mechanical Engineering Programme

Keywords

PSO1:
Apply knowledge of basic engineering, mechanical engineering, mathematics, physical sciences and engineering management to develop simple to complex mechanical engineering systems.

Solutions for Complex Problems

PSO2:
Identify, investigate, model and analyze engineering challenges and problems in the diverse fields of mechanical engineering e.g., thermo-fluid, manufacturing, design, industrial management and in interdisciplinary fields including research, with career options in the fields as stated.

Solving Problems in Mechanical Engineering

PSO3:
Smoothly dovetail into the real world of Mechanical Engineering as a finished product.

Product Development

PSO4:
An ability to develop and implement new ideas on product design with the help of modern computer aided tools (CAD, CAM) and programming language (PYTHON) for ensuring best manufacturing practices.

Skilling towards Software Tools

POs

Program outcome	Technical
PO1	Engineering Knowledge
PO2	Problem Analysis
PO3	Design/Development of Solutions
PO4	Conduct investigations of complex problems
PO5	Modern Tool usage
PO6	The Engineer and society

Program outcome	Society Concern
PO7	Environmental Science
PO8	Professional Ethics and Universal Human Values, Gender sensitisation
PO9	NCC and NSS program
P10	Soft skills, Anti-ragging program
P11	Internships, Project work and Student Clubs
P12	Green Chemistry (Sustainability)

Curricular Aspect – Outcome Based Education

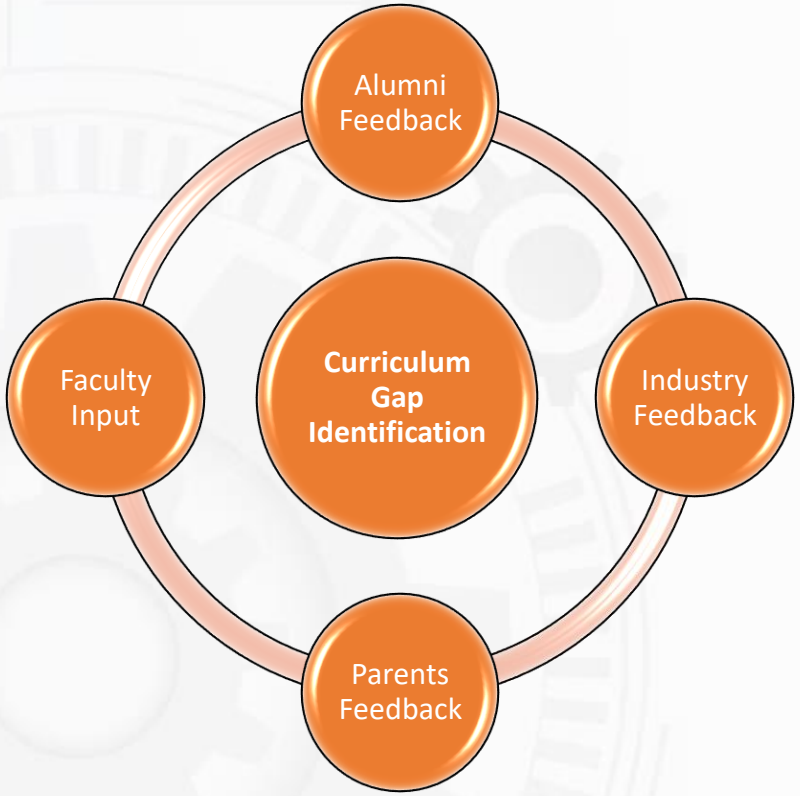
Identification of extent of compliance

POs mapping with curriculum

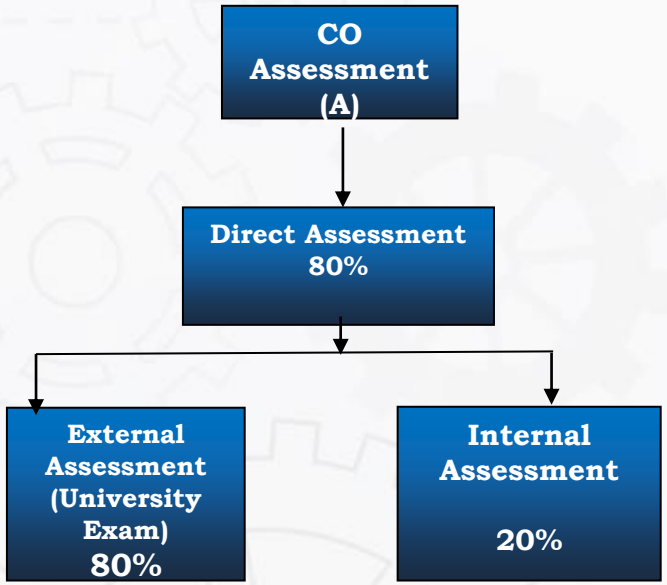
Mapping of all the COs with POs

Determining the extent of correlations between CO-PO

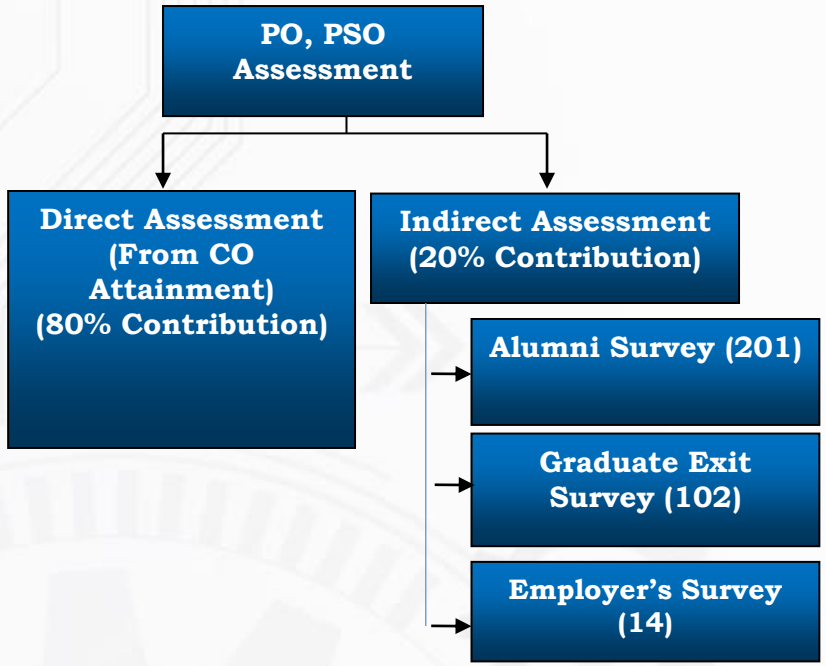
Process used to identify extent of compliance of the University Curriculum for attaining the POs and PSOs



CO, PO & PSOs Assessment Process and Tools



CO Assessment Process

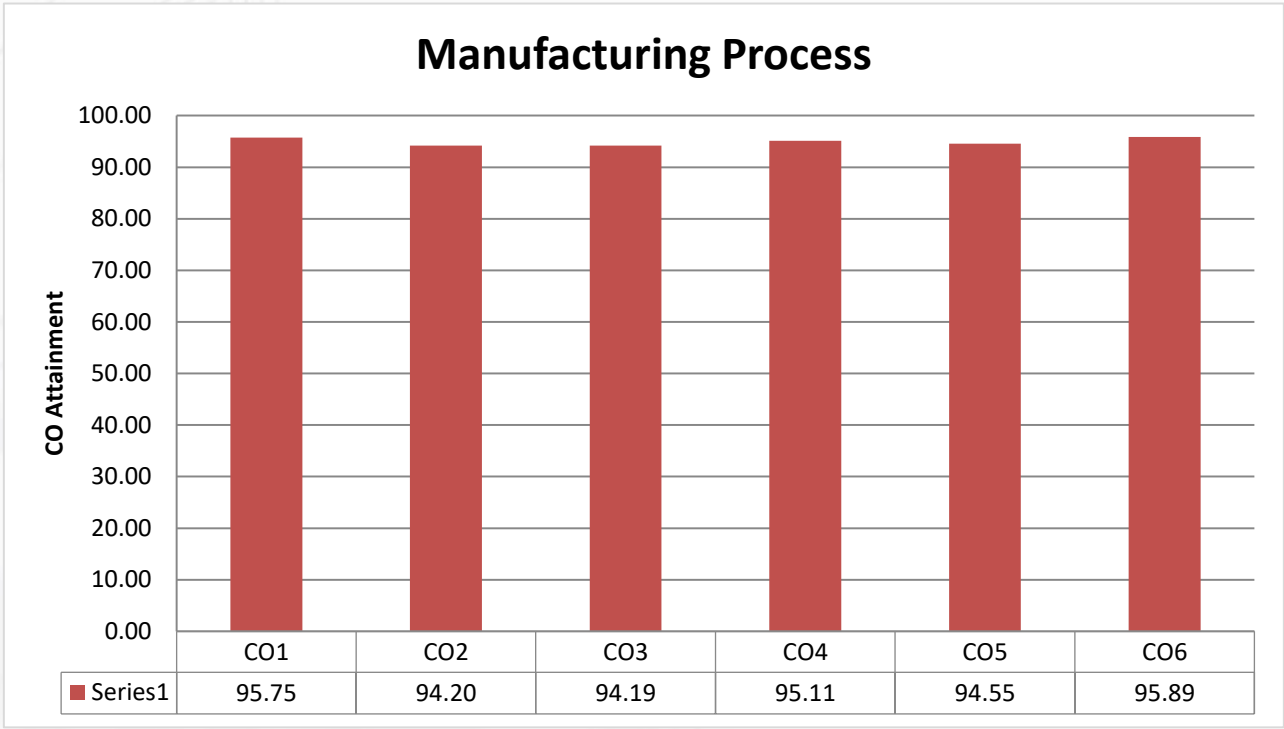


PO& PSO Assessment Process

Attainment Levels	% of Attainment
1	>=60% to =70%
2	>70% to =80%
3	>80%

CO mapping for course: Manufacturing Process

Final CO Calculation			
Course Outcomes	Overall CO Attainment without Indirect Assessment	Overall CO Attainment with Indirect Assessment	Level Attained 1/2/3
CO1	98.59	95.75	3
CO2	97.18	94.20	3
CO3	98.59	94.19	3
CO4	98.59	95.11	3
CO5	98.59	94.55	3
CO6	98.59	95.89	3
	Final CO attainment of Course Name		3



PO mapping for Manufacturing Process

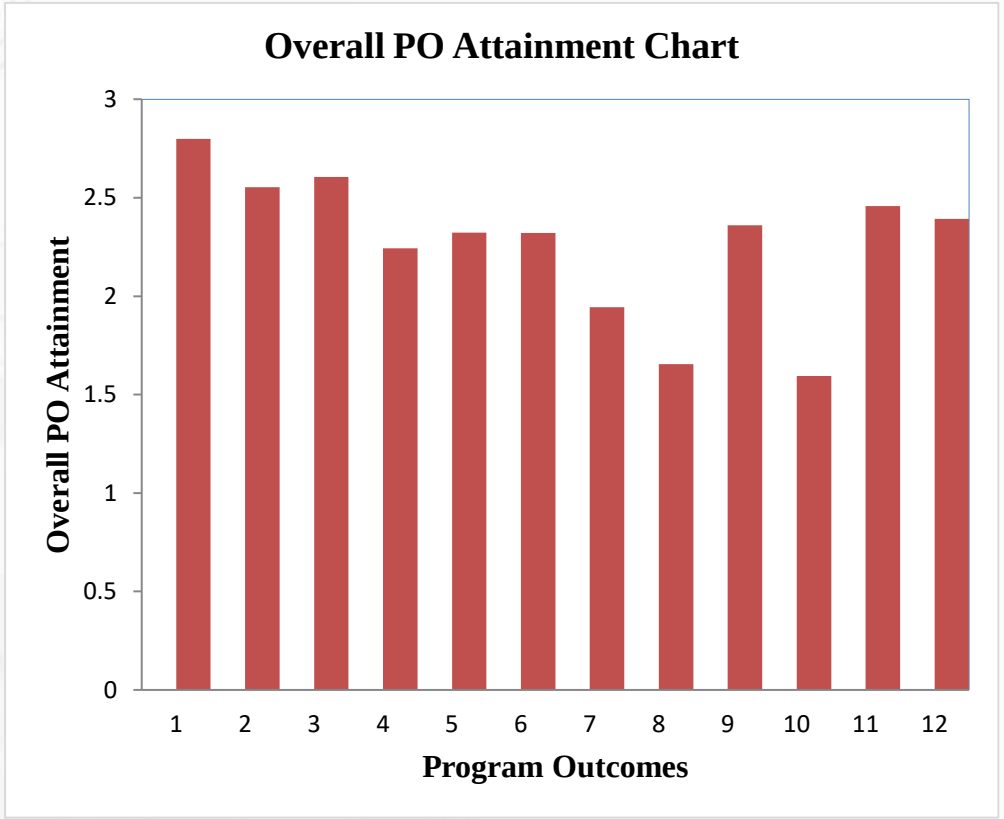
			PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO 12
MANUFACTURING PROCESS	MEC2106	CO1	3		3		3	2					2	2
		CO2	3		2	2	2		2					2
		CO3	3		3	3	2		1				1	2
		CO4	3	2	2								1	2
		CO5	3	3	2	3			2				1	2
		CO6	3	3	2	2			2		1			2
		Avg	3	2.6666667	2.333333333	2.5	2.333333333	2	1.75		1		1.25	2

Indirect Assessment (2019 Batch)

S. No.	POs/PSOs	Student survey	Alumni Survey	Faculty survey	Parent survey	Indirect attainment	Indirect Attainment Level (20%)
1	Engineering Knowledge	3	3	3	2	3	0.6
2	Problem Analysis	2	3	3	2	2.5	0.5
3	Design/Development of Solutions	2	3	3	2	2.5	0.5
4	Conduct investigations of complex problems	2	3	3	2	2.5	0.5
5	Modern tool usage	2	3	3	2	2.5	0.5
6	The engineer and society	2	3	2	2	2.25	0.45
7	Environment and sustainability	2	3	3	3	2.5	0.5
8	Ethics	2	3	3	3	2.5	0.5
9	Individual and team work	2	3	3	3	2.5	0.5
10	Communication	2	3	3	3	2.5	0.5
11	Project management and finance	3	3	3	3	3	0.6
12	Life-long learning	3	3	3	3	3	0.6

Overall PO attainment (2019 batch)

S. No.	PO's	Direct Attainment	Indirect Attainment	Direct Attainment (80%)	Indirect Attainment (20%)	Overall PO attainment
1	PO1	2.75	3.00	2.20	0.6	2.80
2	PO2	2.57	2.50	2.05	0.5	2.55
3	PO3	2.63	2.50	2.11	0.5	2.61
4	PO4	2.18	2.50	1.74	0.5	2.24
5	PO5	2.28	2.50	1.82	0.5	2.32
6	PO6	2.34	2.25	1.87	0.45	2.32
7	PO7	1.80	2.50	1.44	0.5	1.94
8	PO8	1.44	2.50	1.15	0.5	1.65
9	PO9	2.33	2.50	1.86	0.5	2.36
10	PO10	1.37	2.50	1.09	0.5	1.59
11	PO11	2.32	3.00	1.86	0.6	2.46
12	PO12	2.24	3.00	1.79	0.6	2.39



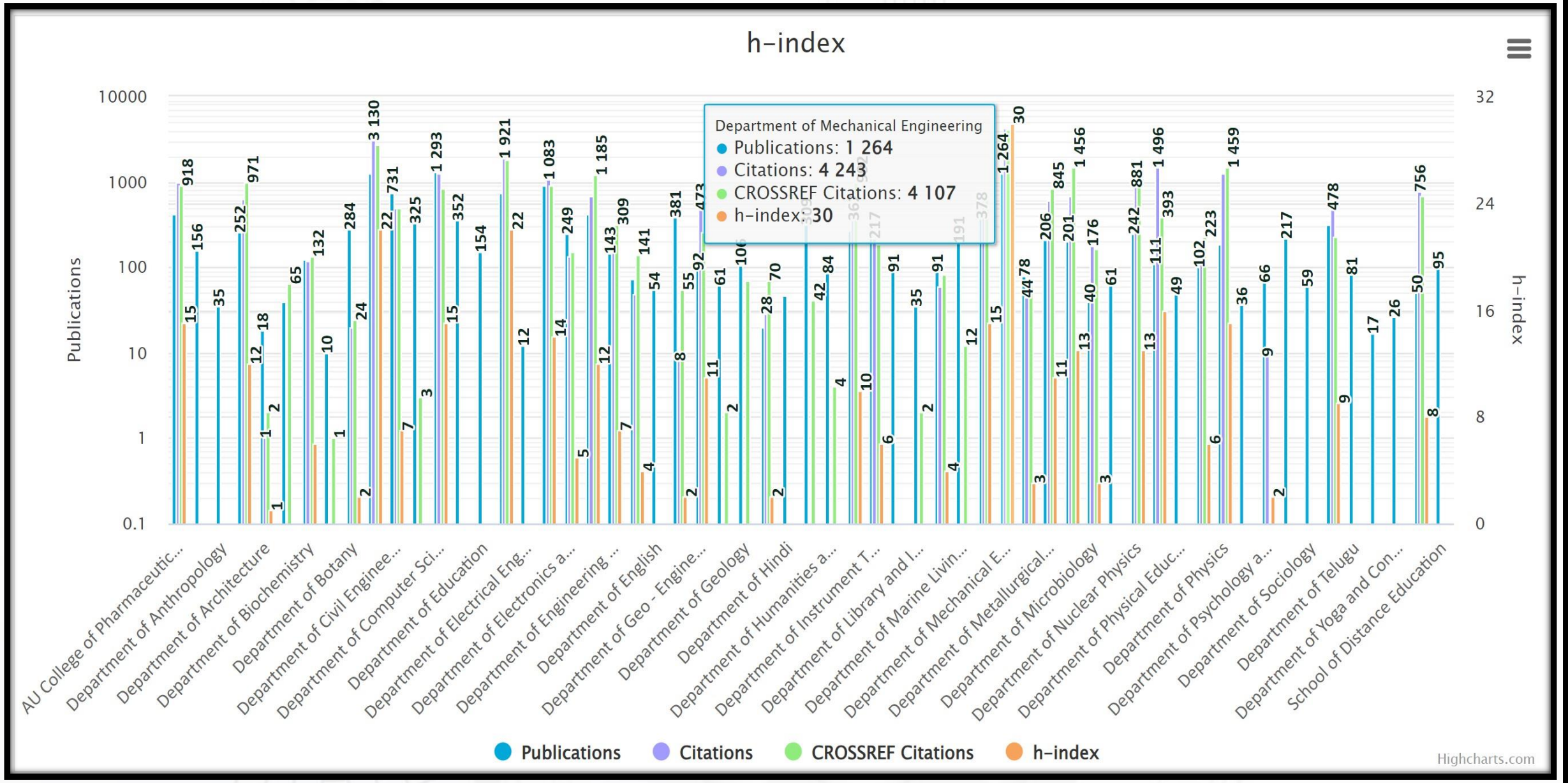
Criterion 3 Financial support by various agencies for advanced studies/research year-wise during the last five years

1	Prof. K T Balaram Padal	International conference on Science and Engineering Materials ICSEM held at UP.	2017-18	TEQIP - 3, MHRD
2	Prof. K Venkata subbaiah	Indian engineering congress conference	2017-18	TEQIP - 3, MHRD
3	Dr. R. Madhusudhan	One week training programme on CNC training on Milling and turning TEQIP sponsored residential training programme. Held at Chennai	2017-18	TEQIP - 3, MHRD
4	Dr. K. T Balaram Padal	One week training programme on CNC training on Milling and turning TEQIP sponsored residential training programme. Held at Chennai	2017-18	TEQIP - 3, MHRD
5	Dr. K. T Balaram Padal & Dr. R. Madhusudhan	One week training programme on CNC training on Milling and turning TEQIP sponsored residential training programme. Held at Chennai	2017-18	TEQIP - 3, MHRD
6	Prof. K T Balaram Padal	International conference on "Nano Materials, Synthesis, Characterization and Applications (ICN-2018)" held atMahatma Gandhi University, Kottayam, Kerala	2017-18	TEQIP - 3, MHRD
7	Prof.K.Venkatasubbaiah	Andhra Pradesh Science Congress(APSC-2018) Held at Yogi Vemana University Kadapa	2018-19	TEQIP - 3, MHRD
8	Prof.K.Venkatasubbaiah	33rd Indian Engineering Congress (IEC- 2018) Held at Udaipur	2018-19	TEQIP - 3, MHRD
9	Dr.K.T.Balaram Padal	One Week Short Term Training Course on "Characterization of Materials for Renewable and Sustainable Energy" Held at IIT Indore.	2018-19	TEQIP - 3, MHRD
10	Dr. K.T. Balaram Padal	Twinning Activates Mentee Institute GB Pant Institutes of Engineering and Technology, held at Pauri Garhwal Uttarkhand.	2019-20	TEQIP - 3, MHRD
11	Prof. L.S.V.Prasad	Six days short term course on " Recent Developments in Surface Coating and Composite Materials" held at NIT, Jamshedpur.	2019-20	TEQIP - 3, MHRD
12	Dr.K. N. S. Suman	Six days short term course on " Recent Developments in Surface Coating and Composite Materials" held at NIT, Jamshedpur.	2019-20	TEQIP - 3, MHRD
13	Prof. R. Madhusudan	Six days short term course on " Recent Developments in Surface Coating and Composite Materials" held at NIT, Jamshedpur.	2019-20	TEQIP - 3, MHRD
14	Dr. K. T. Balaram Padal	Orientation Programme IISc held at Bangalore.	2019-20	TEQIP - 3, MHRD
15	Prof. N. Ramanaiah	Extramural Research award	2020-21	BRNS, BARC

Research, Innovations and Extensions

RESEARCH PROJECTES COMPLETED/ONGOING DURING LAST FIVE YEARS

Name of the Scheme/Project/ Endowments/ Chairs	Name of the Principal Investigator/ Co Investigator (if applicable)	Name of the Funding agency	Type (Government/ Non-Government)	Year of Award	Funds provided (In Lakhs)	Duration of the project
Challenges of Nano-Technology for 21st century generation - Indian perspectives in global scenario	Prof. K. Ramji	Center of Excellence (COE) – TEQIP PHASE – II, Sub component 1.2.1-MHRD	Government	2016	₹ 700	2016-23
UGC-SAP	Prof. K. Venkata Subbaiah	UGC-SAP	Government	2016	₹ 129.6	2017-22
DST-FIST	HOD, Dept. of Mech. Engg.	DST-FIST	Government	2012	₹ 86	2013-18
Research Project	Prof. N. Ramanaiah	DAE-BRNS	Government	2020	₹ 29.208	2021-24
AICTE MODROB Project	Dr. M. V. J. Raju	AICTE	Government	2020	₹ 9	2021-23


h-index
Department of Mechanical Engineering
Publications: 1 264
Citations: 4 243
CROSSREF Citations: 4 107
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Department of Anthropology
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Department of Botany
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Department of Computer Sci...
Department of Education
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Department of Electronics a...
Department of Engineering ...
Department of English
Department of Geo - Engine...
Department of Geology
Department of Hindi
Department of Humanities a...
Department of Instrument T...
Department of Library and I...
Department of Marine Livin...
Department of Mechanical E...
Department of Metallurgical...
Department of Microbiology
Department of Nuclear Physics
Department of Physical Educ...
Department of Physics
Department of Psychology a...
Department of Sociology
Department of Telugu
Department of Yoga and Con...
School of Distance Education
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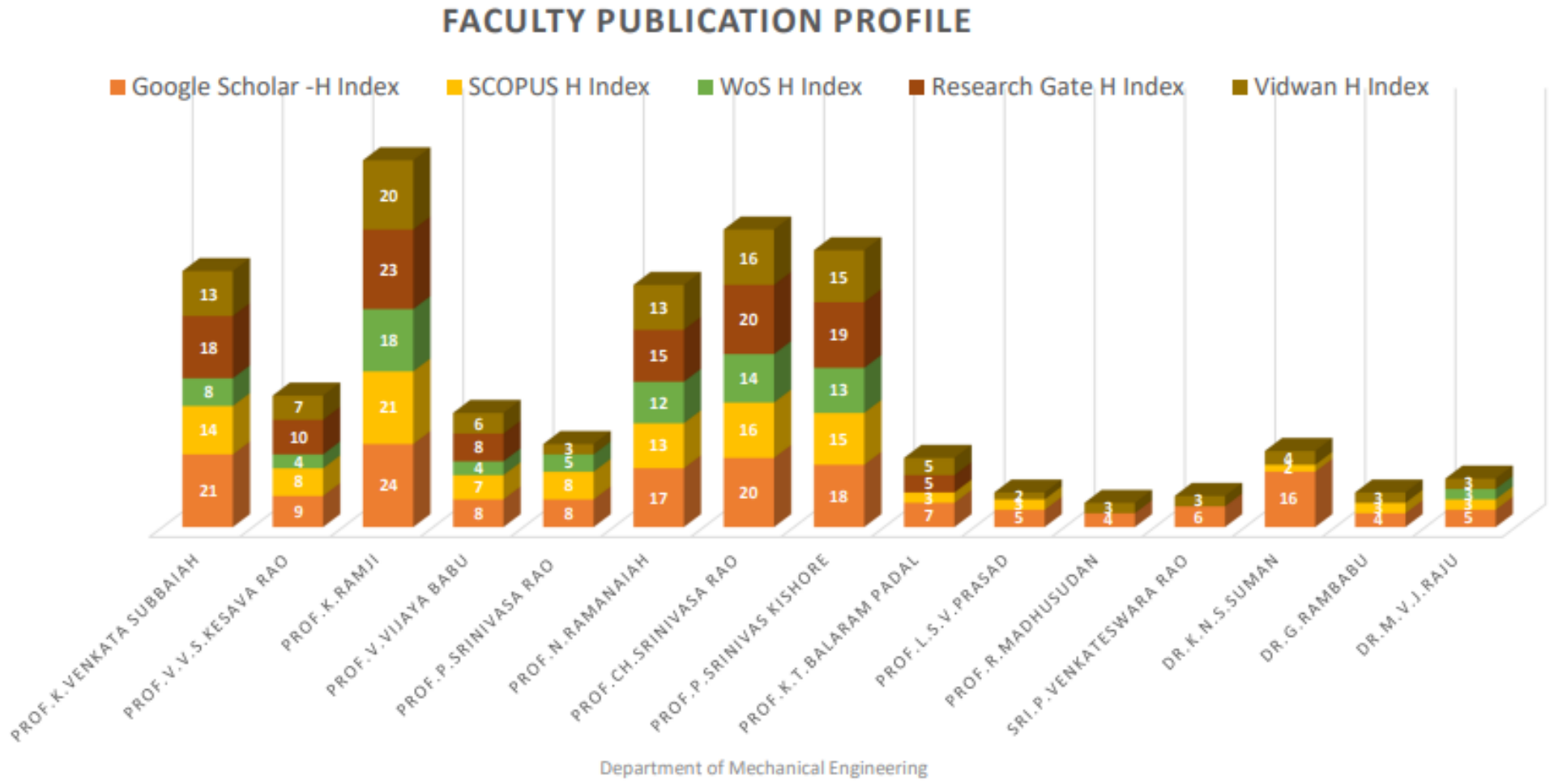
Highcharts.com

Research, innovations and Extensions

Faculty Research Status



Research, Innovations and Extensions

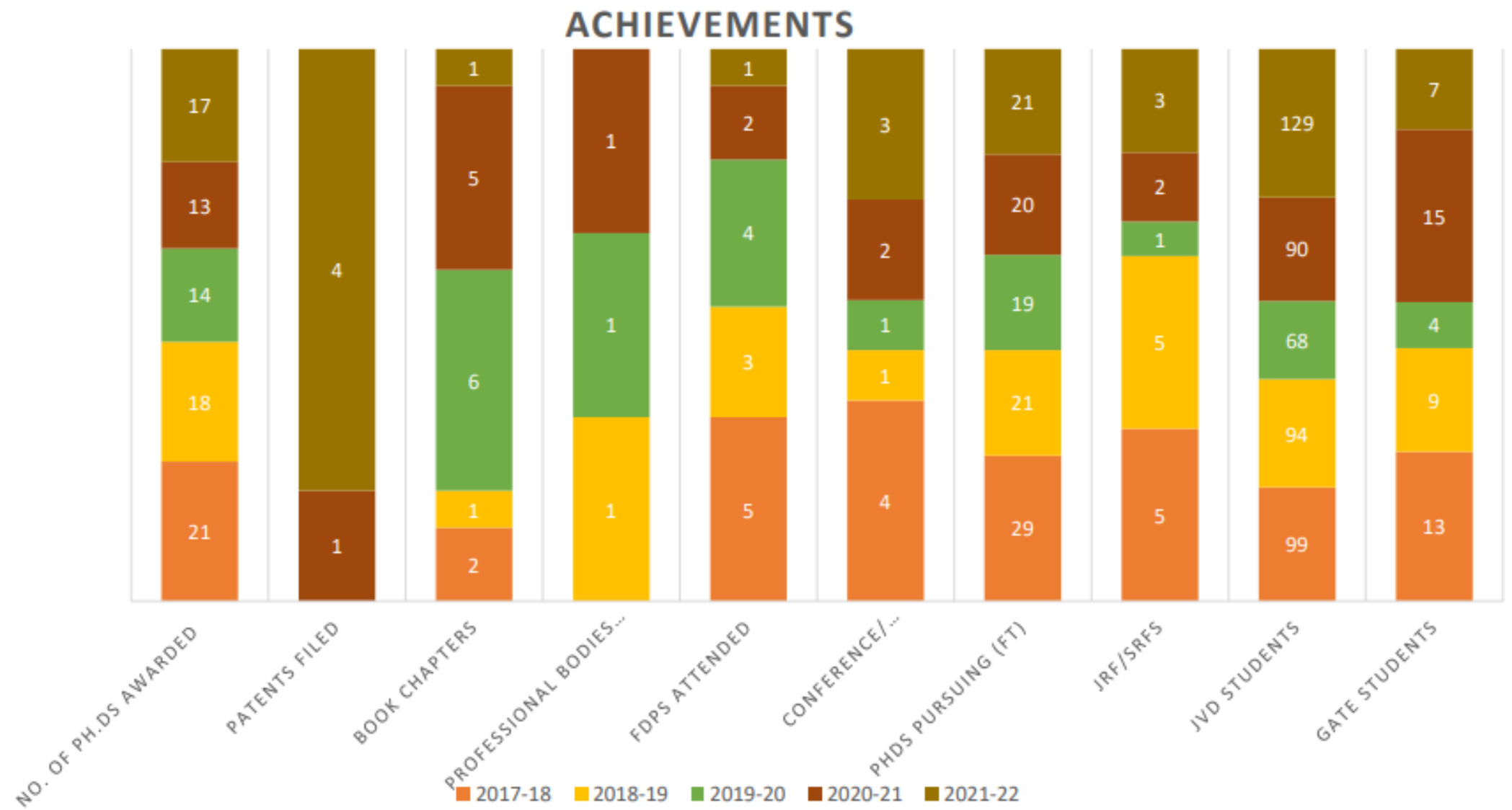
RESEARCH PUBLICATIONS DURING LAST FIVE YEARS

S.No.	Academic Year	SCI	SCOPUS	UGC	Total
1	2017-18	4	45	15	64
2	2018-19	7	70	8	85
3	2019-20	7	60	11	78
4	2020-21	11	33	9	53
5	2021-22	7	45	6	58

Awards from professional societies/bodies

Name of the awards/Research/ innovation by exams/students/ scholars/student (Best poster/PPT/Member-awards)	Name of the Awardee	Name of the Awarding Agency with contact details	Year of Award	Category- institution/teacher/ research scholar/student
Certificate of Appreciation	Prof. K. Ramji	Social Entrepreneurship, Swachatha and Rural Engagement Cell	2020	Teacher
Lifetime Achievement award 2020	Prof. K. Ramji	Elsevier	2020	Teacher
Best Paper, Marine Engineering Division	Sr. Prof. K. Venkata Subbaiah	The Institution of Engineers (India), Kolkata	2017	Teacher

Research, innovations and Extensions



Research, Innovations and Extensions

Patents published

S.No.	Name of the Patentor	Patent Number	Title of the patent	Year of Award / published of patent
1	Ms.M.Amareswari Reddy, Prof K.Venkata Subbaiah, Dr.Challa Suresh	202241004951 A	A learning system for manufacturing process optimization using restricted Boltzmann machines and multi-objective evolutionary model	2022
2	Vidya Sagar Battula, Dr.K.Venkata Subbaiah	202241043767 A	Preparation of E-Glass fibre reinforced Epoxy based Hybrid Composites filled with RHA/WDA/RHAWDA for water tank and roof sheet Manufacturing	2022
3	K T Balaram Padal and M Srinivasa Rao	202241046330	A novel reinforced AA2195 based metal matrix composite for space applications	2022
4	M Srinivasa Rao and K T Balaram Padal	202241047825	A High strength hot rolled and heat treated Aluminium AA2195 alloy-based Metal matrix composite and manufacturing process	2022
5	Ms.M.Amareswari Reddy, Prof K.Venkata Subbaiah, Dr.Challa Suresh	202241049355 A	A Novel Model for Prediction of Patient Specific Dental Implantation Design Parameters	2022
6	Avinash Gandi, Praveen Kalla, Prof. Koona Ramji and Prof. P Ravindranadh	Filed: 22/04/2021	A Modular Underwater Vehicle System for Maintenance, Surveillance and Reconnaissance Operations	2021
7	M. Anil Prakash, Avinash Gandi, Prof. Koona Ramji, Prof. K.V.L.Raju and Praveen Kalla	30-04-2021	System and Method for Planning a Planar or Spatial Path for an Autonomous Vehicle	2021

Research, Innovations and Extensions

Book chapters published

S. No.	Name of the teacher	Title of the book/chapters published	Year of publication	Name of the publisher
1	Dr. K N S Suman	Biocomposite and Synthetic Composites for Automotive Applications	2021	Woodhead Publishing Series in Composites Science and Engineering
2	Dr. Ch. Srinivasa Rao	Light Weight Materials: Processing and Characterization	2022	Wiley Online Library
3	Prof. K Ramji	Intelligent Computing in Control and Communication	2021	Springer
4	Prof. K.T. Balaram Padal	Advances in Materials and Mechanical Engineering	2021	Springer
5	Prof. Ch. Srinivas Rao	Modern Manufacturing Processes	2020	Elsevier
6	Prof. Ch Srinivasa Rao	Advances in Applied Mechanical Engineering.	2020	Springer
7	Prof. K Ramji	Recent Trends in Mechanical Engineering	2020	Springer
8	Prof. Ch. Srinivasa Rao	Advances in Simulation, Product Design and Development	2019	Springer
9	Prof. Ch.Srinivasa Rao	Numerical Heat Transfer and Fluid Flow	2019	Springer
10	Prof. Ch Srinivasa Rao	Advances in Intelligent Systems and Computing	2019	Springer
11	Prof. N. Ramanaiah	Advanced Manufacturing and Materials Science	2018	Springer International Publishing
12	Prof. Ch. Srinivasa Rao	Mechanical Engineering For Sustainable Development State-of-the-Art Research	2018	Apple Academic Press
13	Prof.K. Ramji	Faecal Sludge and Septage management	2018	Administrative Staff College of India (ASCI)
14	Prof.K. Ramji	Smart Computing and Informatics	2017	Springer
15	Prof.K. Ramji	2017 IEEE International Conference on Consumer Electronics-Asia (ICCE-Asia)	2017	IEEE

INDUSTRY-INSTITUTE-INTERACTION (I-I-I) & COLLABORATIONS

S.No.	Name of activity	2017-18	2018-19	2019-20	2020-21	2021-22	Total
1	No. of MoUs signed with Industries (enclose List of industries)	02 MHRD, DRDO	02 MHRD, DRDO	02 MHRD, DRDO	02 MHRD, DRDO	02 MHRD, DRDO	02
2	Expert Lectures organized	03	02	04	06 (Online)	06	21
3	Campus Placements	91	81	62	113	53	400
4	No. of Industries Involved in Curriculum development	04	03	03	03	05	18

- Visakhapatnam Steel Plant & Essar Steel
- Hindustan Shipyard Ltd. & Visakhapatnam Port Trust
- Naval Science & Tech. Laboratory – DRDO
- Coromandel Fertilizers Ltd. & Hindustan Petroleum Corp.
- ISRO, DRDO, NTPC etc.

Research, Innovations and Extensions

JRF/SRFs

S.No.	Name of JRF/SRFs	Agency	Fellowship Amount per month (In INR)	Duration
1	Ch. Suresh	UGC-SAP	31,000	2014-19
2	V. Suresh Babu	UGC-RGNF	31,000	2014-19
3	N. Mary Jasmin	UGC-RGNF	31,000	2014-19
4	Balaji Naik	UGC-RGNF	31,000	2014-19
5	M. Srinivas Rao	UGC-RGNF	31,000	2014-19
6	K.S.D. Sudheer	UGC-RGNF	31,000	2018-23
7	Ch. Rohinikumar	DAE-BRNS	31,000	2021-24
8	G. Siva Kumar	NFPWD	31,000	2020-24
9	K. Samadhanam Raju	APSEEDCO	30,000	2021-23

Criterion 4 Infrastructure and teaching resources

S. No.	Room number or Name of classrooms/Seminar Hall with LCD / WIFI / LAN facilities with Room Numbers	Type of ICT facility
1	Main Block Room No. 214 – E Class Room	AC, LCD, Digital Interactive Smart Board, Wi-Fi
2	Main Block Room No. 117 – E & Smart Class Room	AC, LCD, Digital Interactive Smart Board, Wi-Fi
3	PG Building E & Smart Class room (First Floor)	AC, LCD, Digital Interactive Smart Board, Wi-Fi
4	PG Building Room No. FF 1	LCD, White Screen, Wi-Fi
5	PG Building Room No. FF 2	LCD, Wi-Fi
6	PG Building Seminar Hall – E Class Room	AC, LCD, Digital Interactive Smart Board, Wi-Fi
7	Main Block Room No. 119	Digital Interactive Smart Board, Wi-Fi
8	PG Building CAD lab	LCD, White Screen, Wi-Fi
9	PG Building Room No. GF 1	Wi-Fi
10	PG Building Room No. GF 2	Wi-Fi
11	PG Building Room No. FF 3	Wi-Fi
12	Main Block Room No. 116	Wi-Fi
13	Main Block Room No. 114	Wi-Fi
13	Main Block Room No. 212	Wi-Fi
14	Main Block Room No. 213	Wi-Fi

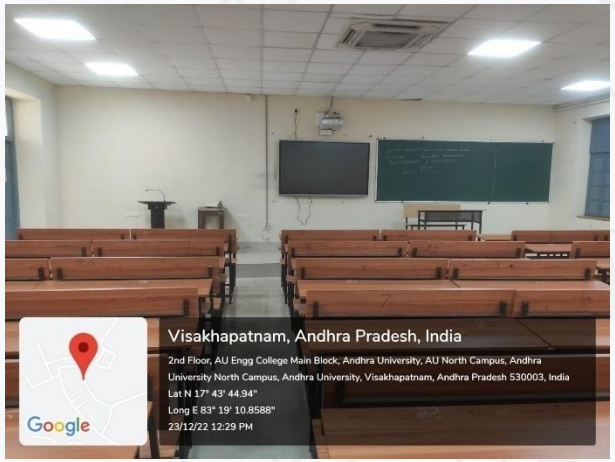
Criterion 4 Infrastructure and teaching resources

- **e-Class rooms / smart class rooms**

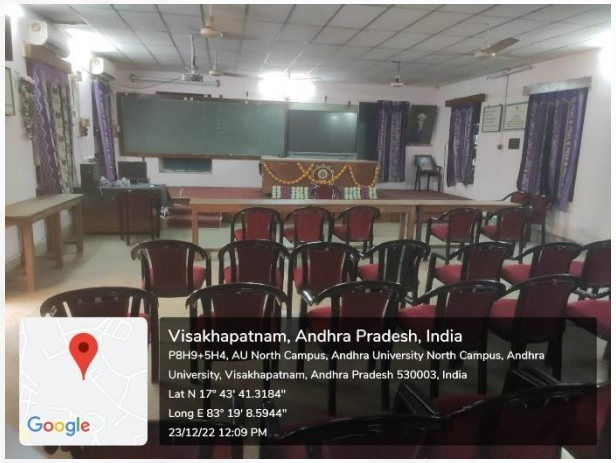
PG Block – Seminar hall (Alumni Funded)

PG Block – Seminar hall (Alumni Funded)

Main Block Room No. 117 (Alumni – GMR Funded)



Main Block Room No. 214



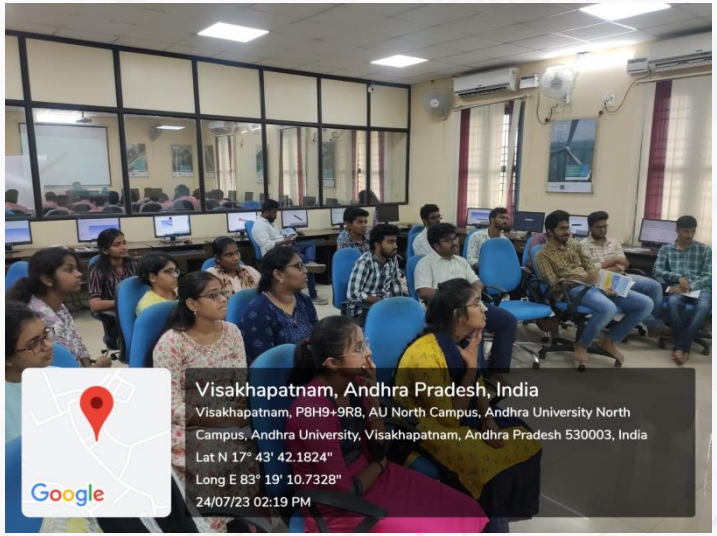
PG Building E-Class room (First Floor)

*** The Department is totally technology enabled. There is 24*7 internet and Wi-Fi connection available for the staff and students. There are Eight LCD projectors (including 1 portable), 5 Digital interactive smart Boards, two laptops, audio-visual equipment to have online class as well as offline classes.**

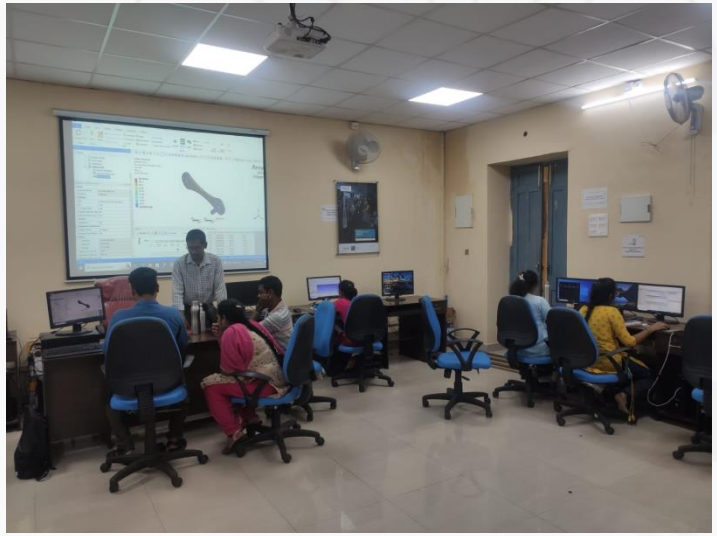
Criterion 4

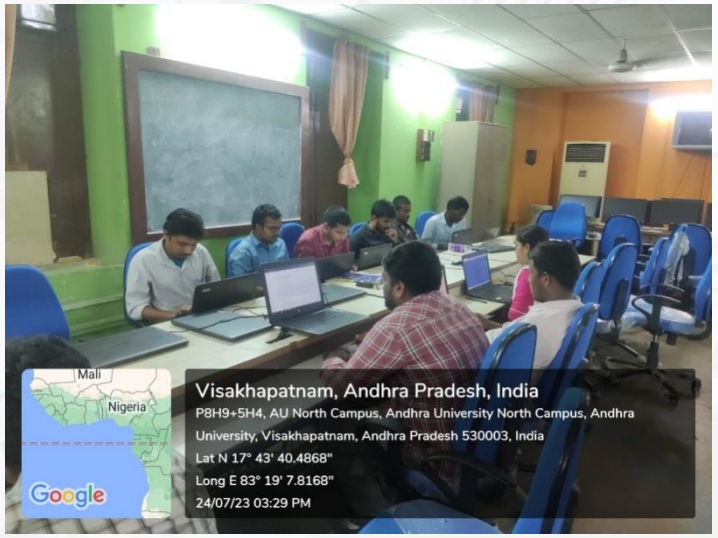
Student Computer Ratio

No of computers Available in the department 100+15+36 = 151 (APSSDC), Student – computer ratio batch wise: 3:1



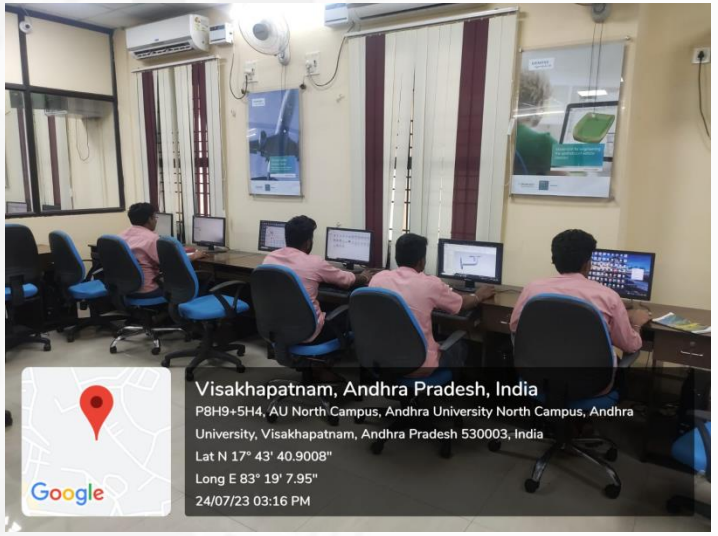
Product Design and Validation Lab





PG Building CAD lab

Advanced Manufacturing Lab

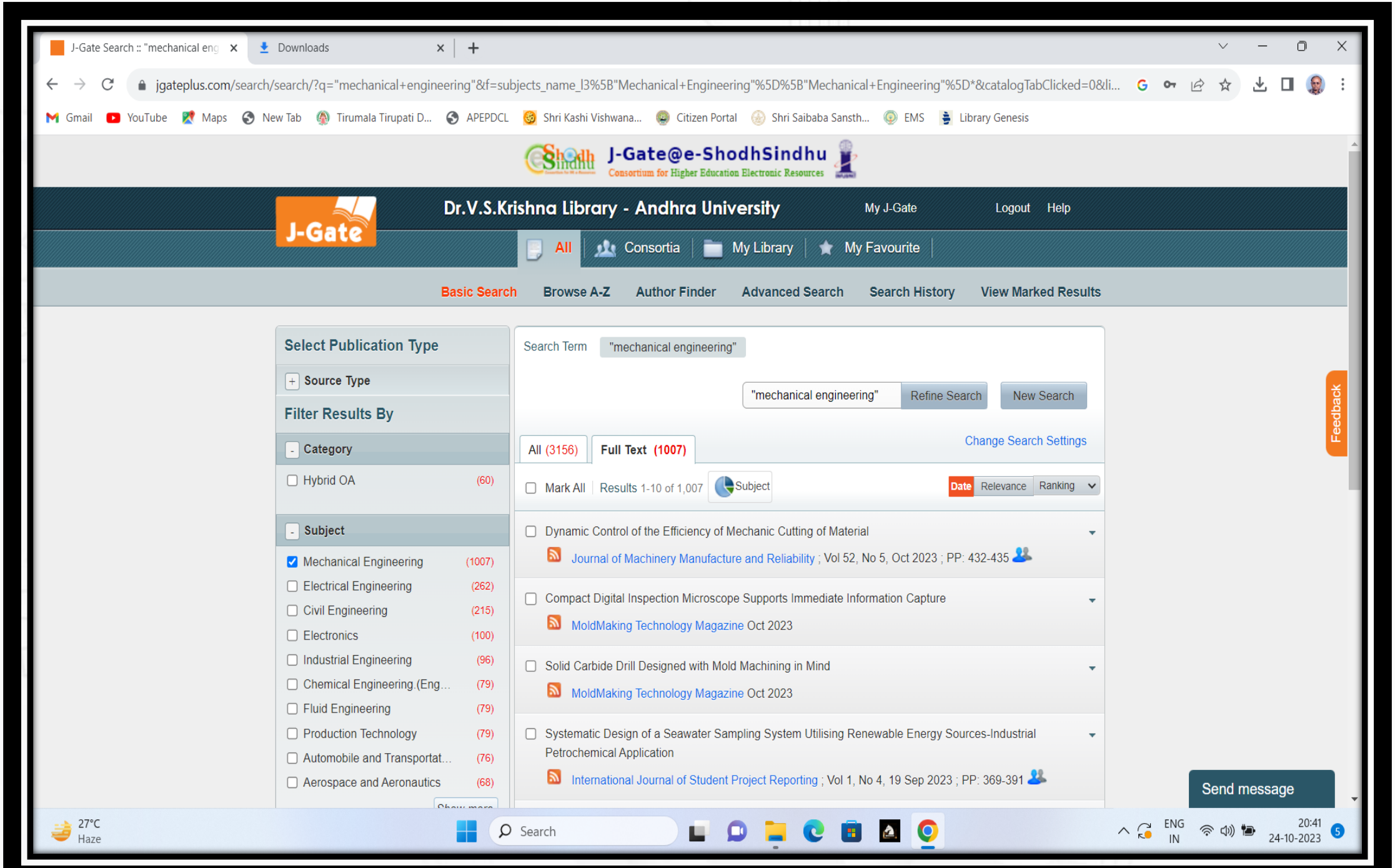


Department library/e -resources/Wi-Fi/internet facilities/Bandwidth/link to library e-resources

- College is having 1GBPS leased line.
- Library Automation – Soul WEBOPAC - http://192.168.100.172/webopac/
- IEEE and DELNET, Central Funding (E-SHODHSINDHU, SHODHGANGA), J-GATE, INFILIBNET etc.
  - https://www.andhrauniversity.edu.in/library
  - E-Journals – IEEE, ASME, etc.
  - Apex Journals
  - DELNET - http://delnet.in/
  - J-Gate - http://jgateplus.com/
  - INFLIBNET - http://inflibnet.ac.in/
  - Total e-journals from all the above sources – 2226 - https://www.andhrauniversity.edu.in/library/forms1.html
  - Digitization of Ph.D. Theses – 252 out of 274 - https://shodhganga.inflibnet.ac.in/
  - Total e-books from all the above sources – 1544627 - https://www.andhrauniversity.edu.in/library/tables1.html

e-Journals Access for Mechanical Engineering

S.No	Name of the e-resource	Link of the e-resource	No. of e-journals	Access
1	IEEE xplore	https://ieeexplore.ieee.org/Xplore/home.jsp	408	Institution Access
2	American Chemical Society (Material Science)	https://pubs.acs.org/	58	
3	American Institute of Physics	https://pubs.aip.org/aip	34	
4	American Physical Society	https://journals.aps.org/browse.html	14	
5	J Gate plus (JCCC)	https://jgateplus.com/search/	449	
6	JSTOR	https://www.jstor.org/subject/engineering	11	
7	Taylor & Francis	https://www.tandfonline.com/engineering-technology	429	
8	American Society of civil Engineers (ASCE)	https://ascelibrary.org/journals	14	
9	Springer open	https://www.springeropen.com/journals#Engineering	16	Open Access
10	Hindawi	https://www.hindawi.com/journals/	15	
11	Scopus Open Access	https://www.scopus.com/sources.uri	771	
12	Cambridge University press	https://www.cambridge.org/core/browse-subjects/engineering	7	
		Total	**2226**	


J-Gate Search :: "mechanical eng
Downloads
jgateplus.com/search/search/?q="mechanical+engineering"&f=subjects_name_l3%5B"Mechanical+Engineering"%5D%5B"Mechanical+Engineering"%5D*&catalogTabClicked=0&li...
Gmail
YouTube
Maps
New Tab
Tirumala Tirupati D...
APEPDCL
Shri Kashi Vishwana...
Citizen Portal
Shri Saibaba Sansth...
EMS
Library Genesis
J-Gate@e-ShodhSindhu
Consortium for Higher Education Electronic Resources
J-Gate
Dr.V.S.Krishna Library - Andhra University
My J-Gate
Logout
Help
All
Consortia
My Library
My Favourite
Basic Search
Browse A-Z
Author Finder
Advanced Search
Search History
View Marked Results
Select Publication Type
Source Type
Filter Results By
Category
Hybrid OA (60)
Subject
Mechanical Engineering (1007)
Electrical Engineering (262)
Civil Engineering (215)
Electronics (100)
Industrial Engineering (96)
Chemical Engineering.(Eng... (79)
Fluid Engineering (79)
Production Technology (79)
Automobile and Transportat... (76)
Aerospace and Aeronautics (68)
Search Term
"mechanical engineering"
"mechanical engineering"
Refine Search
New Search
Change Search Settings
All (3156)
Full Text (1007)
Mark All
Results 1-10 of 1,007
Subject
Date
Relevance
Ranking
Dynamic Control of the Efficiency of Mechanic Cutting of Material
Journal of Machinery Manufacture and Reliability ; Vol 52, No 5, Oct 2023 ; PP: 432-435
Compact Digital Inspection Microscope Supports Immediate Information Capture
MoldMaking Technology Magazine Oct 2023
Solid Carbide Drill Designed with Mold Machining in Mind
MoldMaking Technology Magazine Oct 2023
Systematic Design of a Seawater Sampling System Utilising Renewable Energy Sources-Industrial Petrochemical Application
International Journal of Student Project Reporting ; Vol 1, No 4, 19 Sep 2023 ; PP: 369-391
Feedback
Send message
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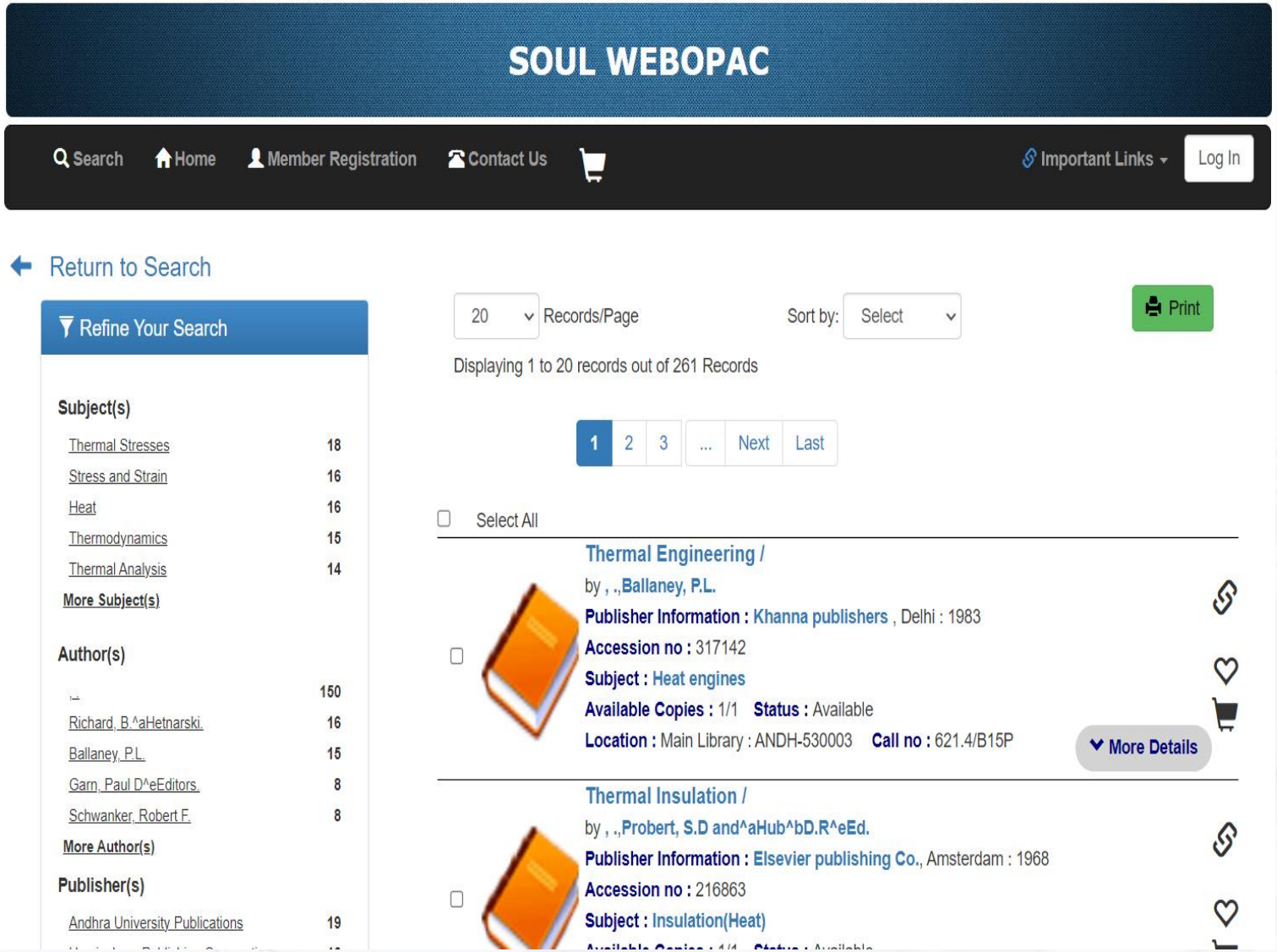
20:41
24-10-2023

e-books Access for Mechanical Engineering

S.No	Name of the e-resource	Link of the e-resource	No. of e-books	Access
1	Wiley	https://ebooks.wileyindia.com/home	1543	Institution Access
2	ASAP Global	https://www.asapglobe.com/SearchUniversity.aspx	447	
3	IEEE Xplore	https://ieeexplore.ieee.org/Xplore/home.jsp	516	
4	Openly Available Sources Integrated Search (OASIS)	https://oasis.geneseo.edu/	191	
5	Internet Archive	https://archive.org/	404540	Open Access
6	Bookboon	http://bookboon.com/	1630	
7	Directory of Open Access books	http://www.doabooks.org/	204	
8	PDF Drive	https://www.pdfdrive.net	122878	
9	Library Genesis	http://libgen.rs/	39594	
10	National Digital Library of India	https://ndl.iitkgp.ac.in/	973135	
11	e PG Pathshala	https://epgp.inflibnet.ac.in//	465	
		Total	**1544627**	

Soul WEBOPAC – Andhra University



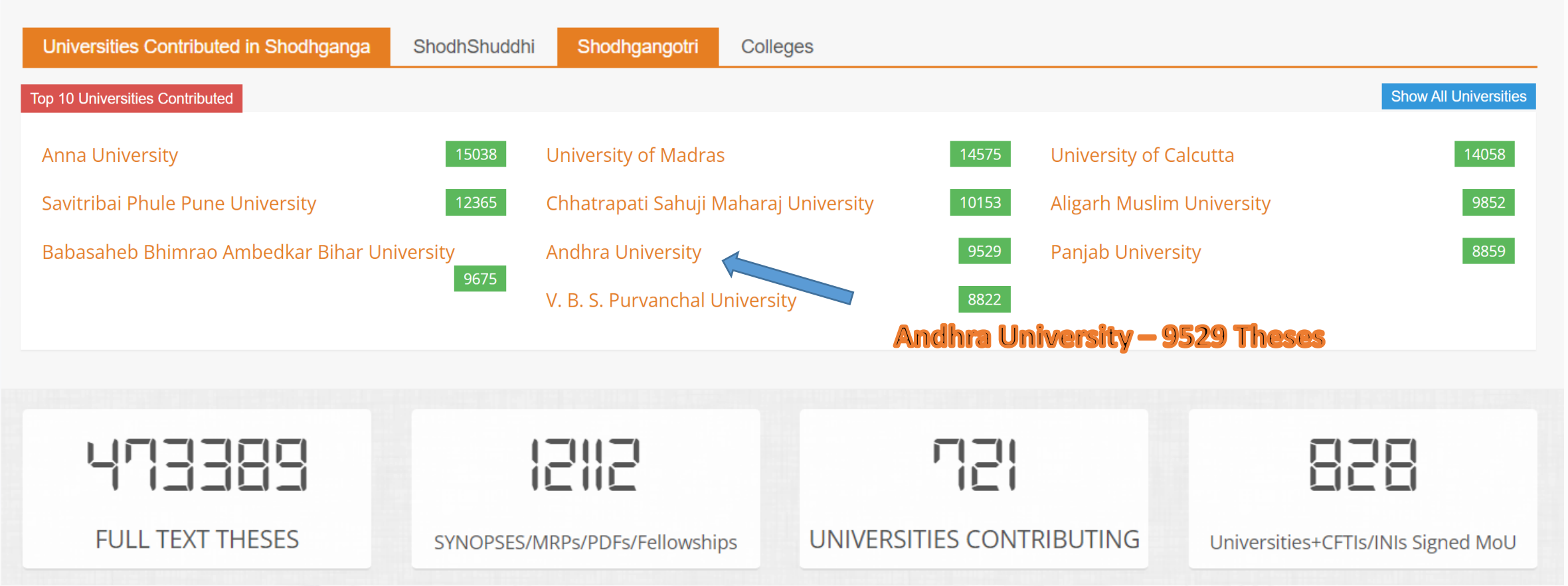
URL to access remotely
http://192.168.100.172/webopac/

- Web-based Online Public Access Catalog (OPAC) system
- To provide the users with access to the collection of books and other materials.
- To facilitate easy and efficient searching of library resources.
- To find information about the availability and location of specific items within the library's collection.
- To search for materials by various criteria such as title, author, subject, or keyword.

Infrastructures and teaching resource

Link to library e resources (Contin..)

- SHODHGANGA - https://shodhganga.inflibnet.ac.in/
- Andhra University in Top 10 Indian Universities in Shodhganga.

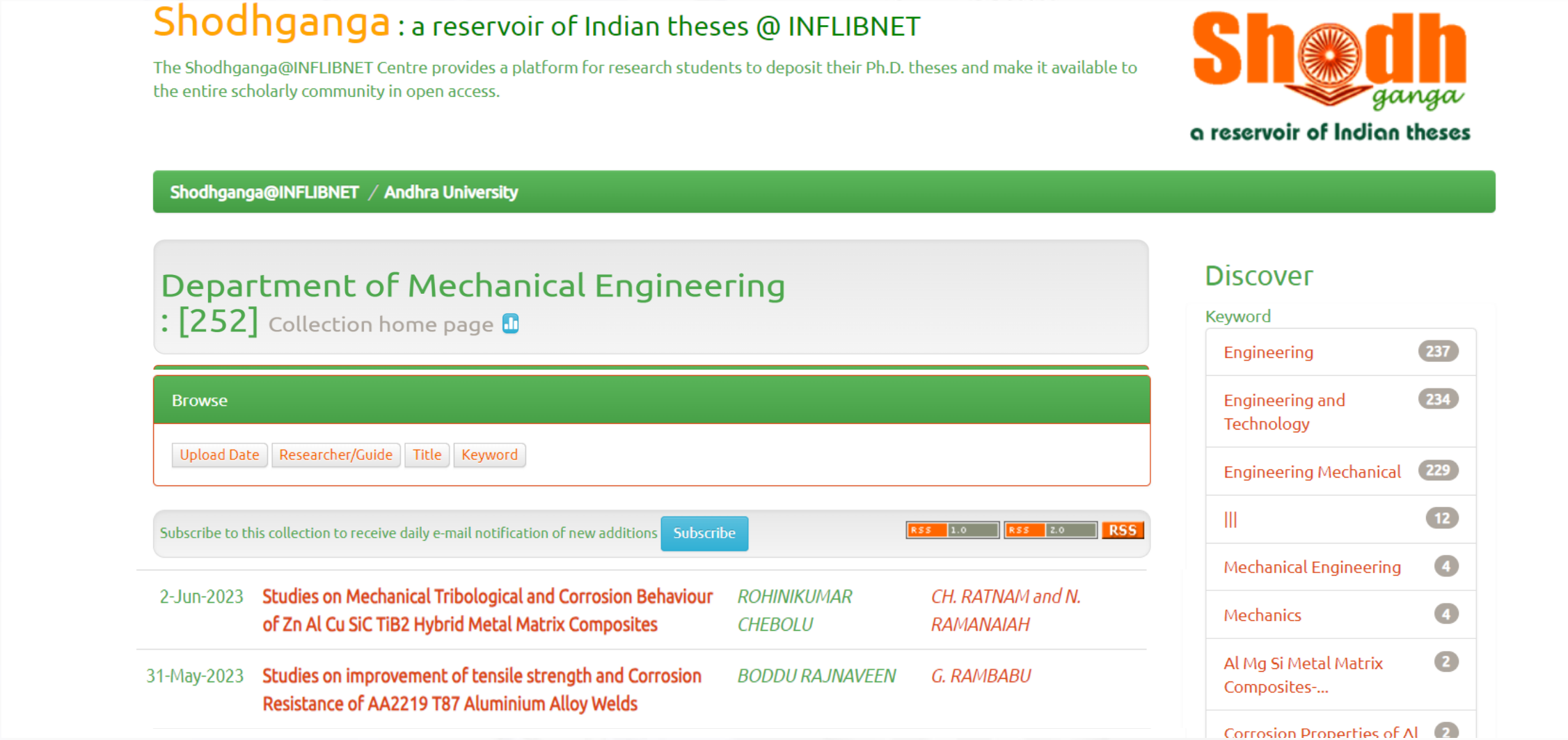


Criteria 4

Infrastructures and teaching resource

○ Link to library e resources (Contin..)

- SHODHGANGA – Mechanical Engineering – 252 Theses



Criterion 5 Students Support and Progression

Scholarships

S. No	Academic Year	Number of Students benefited	Amount (Lakhs)
1	2017-18	99	12.8
2	2018-19	94	13.7
3	2019-20	68	7.4
4	2020-21	90	5.4
5	2021-22	129	21.57

Competitive Exams

S. No	Academic Year	Number of Students Qualified
1	2017-18	32
2	2018-19	13
3	2019-20	12
4	2020-21	26
5	2021-22	07

Ragging Free Campus

Skill Development Programmes

Product Design and Validation Lab

1. Essential for NX Designers, 2. Synchronous Modelling, 3. Drafting, 4. Sheet Metal, 5.Free Form Modelling

CNC Programming Lab

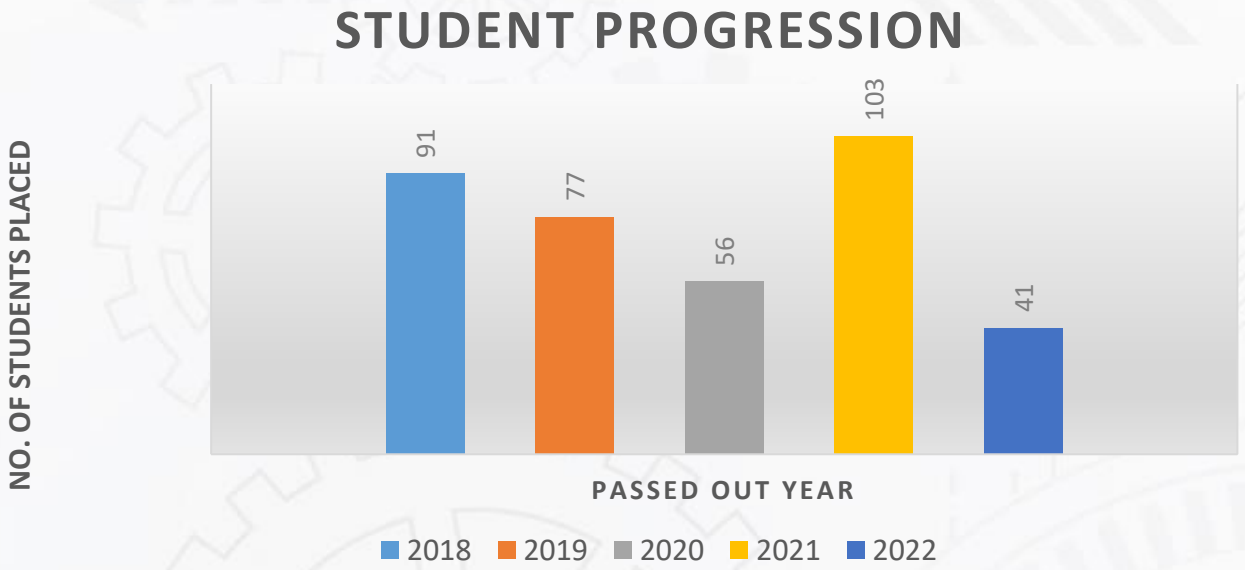
1. Turning NC Programming, 2. Milling NC Programming, 3. Turning Operation and Machining, 4. Milling Operation and Machining

Test and Optimization Lab

1. Vibration Measurement and Analysis,
2. Experimental Vibration Testing,
3. Experimental Acoustic Testing

English Communication Skills

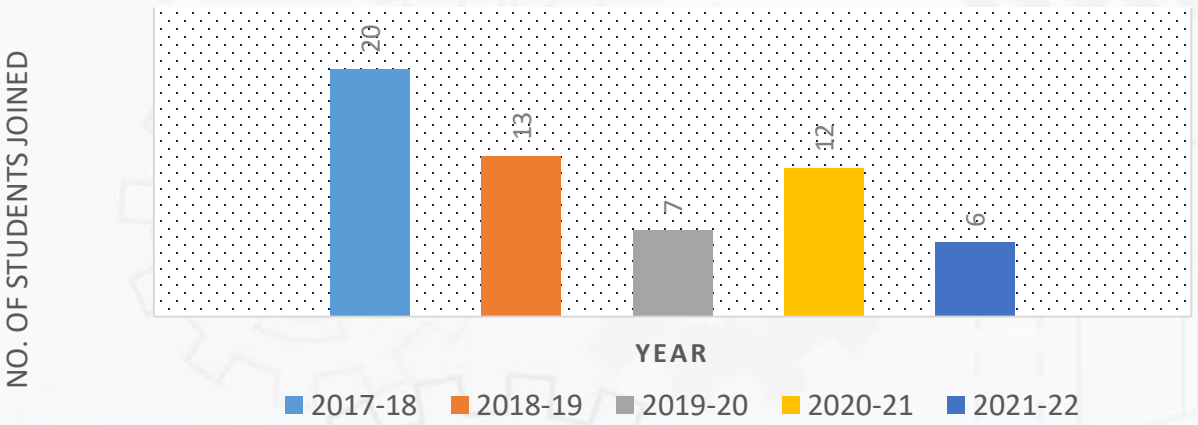
Criterion 5 Students Support and Progression



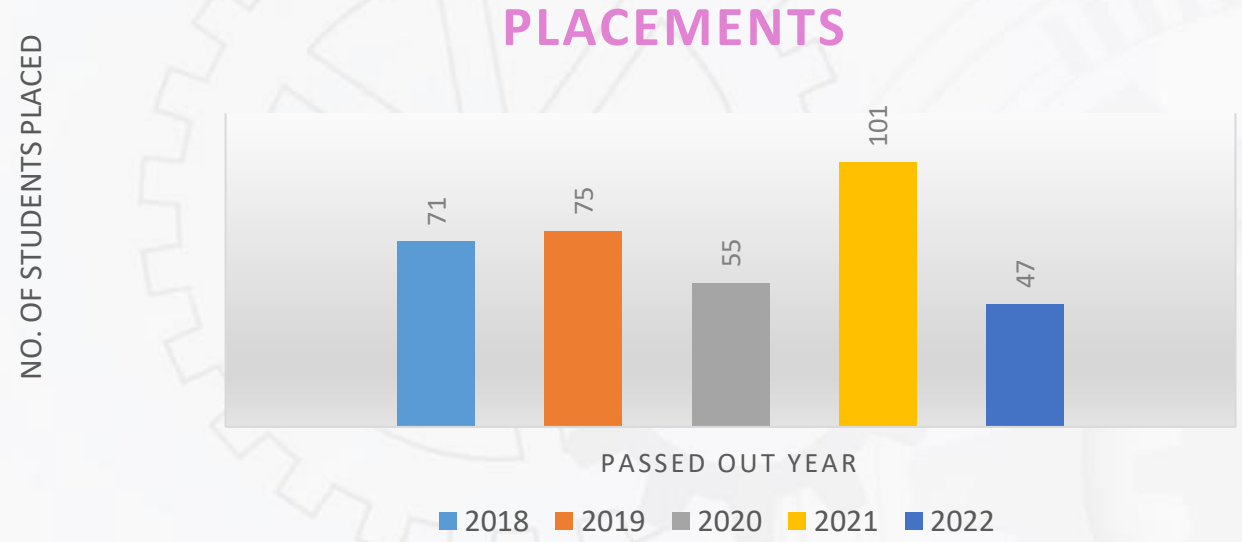
Year	2017-18	2018-19	2019-20	2020-21	2021-22	AVG.
Students Progressed	91	81	62	113	53	80
Total Students	91	81	126	135	114	129
% of Progressed	100	100	49.2	83.7	46.4	75.8

Students Support and Progression

HIGHER STUDIES



PLACEMENTS



Sports Activities

Students participated in Inter-University and National wise sports events

ANDHRA UNIVERSITY
(Andhra University Sports Board)
Department of Physical Education & Sports Sciences
VISAKHAPATNAM - 530 003, A.P.
INTER - COLLEGIATE GAMES AND SPORTS 2022- 2023
Participation / Certificate of Merit
This is to certify that A. Surya sai teja S/o Gangadhara Ramarao
representing AU College of Eng(A), VSP
was member of the Athletics Pole Vault (M) team, participated and won
First / ~~Second~~ / ~~Third~~ place in the INTER - COLLEGIATE GAMES AND SPORTS
Competitions held at Andhra University during November 2022
Organising Secretary
Director of Physical Education & Secretary, Andhra University Sports Board.

ANDHRA UNIVERSITY
(Andhra University Sports Board)
Department of Physical Education & Sports Sciences
VISAKAPATNAM - 530 003, A.P.
NATIONAL UNIVERSITY GAMES
(INTER-UNIVERSITY)
2022- 2023
Certificate of Participation
This is to certify that Ayk Surya sai teja S/o AG Ramarao
represented Andhra University Athletics Men team that participated
in the ~~South~~ Zone / Southwest Zone / ~~All~~ India Inter - University Tournament / Championship
held at TNPES University, Chennai during 09.01.23 to 12.01.23
Director of Physical Education
Andhra University
Vice - Chancellor
Andhra University

Criterion 5

Students Support and Progression

Independence Day

Republic Day

Blood Donation

International Yoga Day

Tri Color Flag Day

Students Council & Activities

Swatch Bharath

NSS Day

Tug of War

Salute to our Pulwama Martyrs

Mechanisms to Curb Human Trafficking

Students Support and Progression

Prominent Alumni

- Vice Admiral Kalidoss Srinivas AVSM, NM, VSM (retd.)

- Dr. G.M Rao, Chairman, GMR Group.

- Dr. A. Seshadri Sekhar, Director, IIT Palakkad.

- Prof. Beela Satyanaraya, Former Vice Chancellor, Andhra University.
- Dr. Singeresu.Rao, Professor, University of Miami.

- Dr. D. R. Prasada Raju, Advisor, DST, New Delhi.

- Sri A. Radha Krishna Reddy, IAS, Additional Secretary, A. P. Govt.
- Sri B. Raja Sekhar, IAS, Secretary, Andhra Pradesh.

- Sri K. Vijaya Kumar, IAS, Secretary, Andhra Pradesh.
- Sri A. Giridhar, IAS, Secretary, Andhra Pradesh.

- Sri N. Sambasiva Rao, IPS, Former DGP, Govt. of AP.

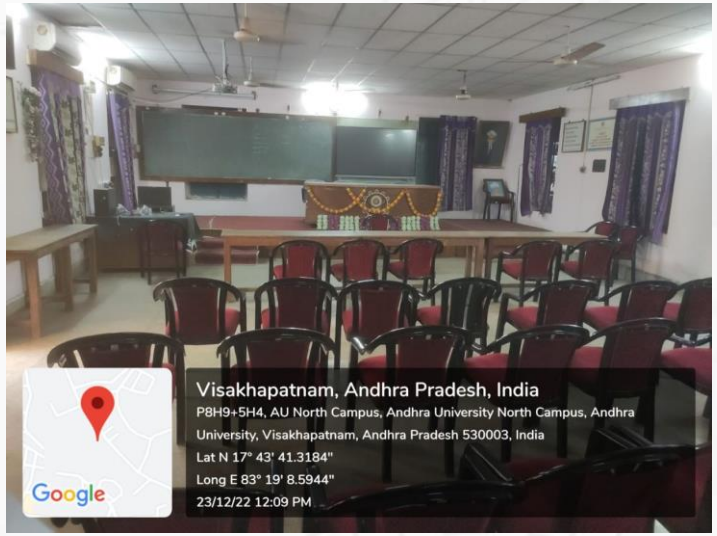
- Sri B. Bharat Reddy, IPS, DCP , Delhi Police, ND.
- Sri Hiralal Jutshi, HPCL, Mumbai.

- Sri V. R. Rao, General Manager, B.H.P.V Ltd, Visakhapatnam.

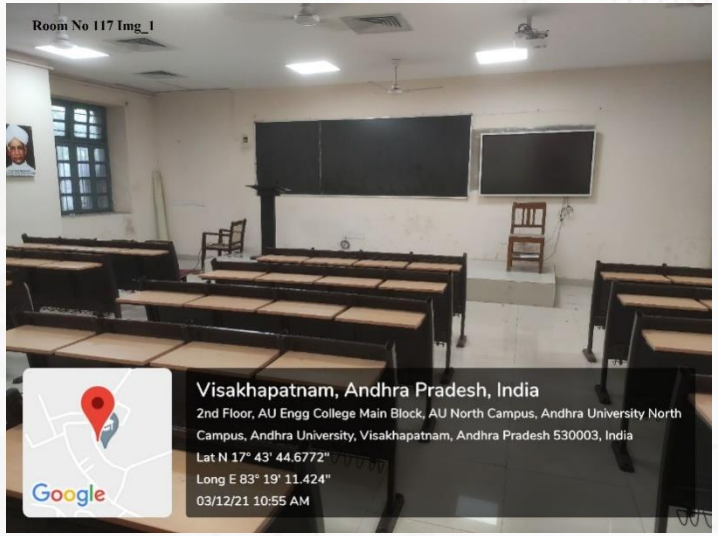
- Sri U. Niranjan, IRS, Commissioner for Revenue, Visakhapatnam.

Students Support and Progression

Alumni Contributions



Mechanical Department
Seminar Hall Renovation
Sponsor: 1975-80 Batch Alumni
1.5 Lakhs



Smart Class Room
Sponsor: Dr. K. Kumar Raja
6 Lakhs

GMR Golden Jubilee Alumni Hall
Sponsor: Dr. G. M. Rao
5 Lakhs

Other Contributions by Alumni

MESCON	**: 3 Lakhs**
Renovation of Washrooms	**: 1 Lakh**
Black Boards	**: 5 Lakhs**
Scholarships/Award	**: 1.5 Lakhs**
Textbooks & Lathe Machines	

Talk by Dr. Kameswara Rao, BHEL

Talk on Industry 4.0

Talk by Mr. Umesh, CEO, Lansum Group

Guest Lectures
by Prominent Industry Experts

Talk by Dr. Ramaraju, PoP, AU

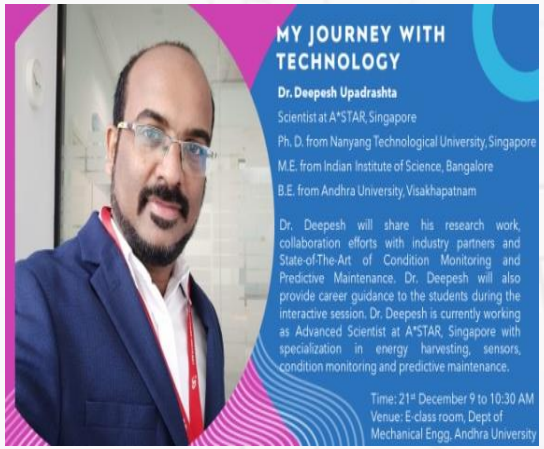
Talk on CFD

Talk by Ravi Eswarapu, CEO, a-Hub

Workshops/ Lectures by Alumni

Sri B Bharat Reddy IPS
Deputy Commissioner of Police
Delhi Police

Workshop on Career Counseling Orientation for Civil Services



Dr. Deepesh Upadrashta
Scientist at A*STAR, Singapore,
2019 - present

Workshop on Career Counseling Orientation for R&D Career

Dr. Ganesh Tamadapu
Assistant Professor
Dept. Applied Mechanics,
IIT Madras.

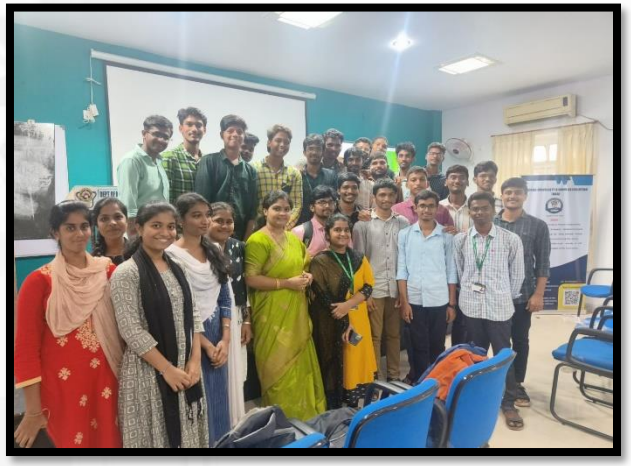
Lecture on Trends and Technologies of Biomechanics

Career Guidance, Personality Development, 21st Century Skills Training, Extra Curricular, Co-curricular, Experiential Learning, Participative Learning & Self-Learning activities

MESCON

Career Development

Personality Development



Governance, Leadership/Management

Conferences /workshop attended

Year	Name of the teacher	Name of conference/ workshop attended	Financial support provided (In INR)
2017-18	Prof. K T Balaram Padal	International conference on Science and Engineering Materials ICSEM held at Sharda University, Greater Noida, UP.	₹ 38,256
2017-18	Prof.K.Venkatasubbaiah	Marine Engineering Division Prize for the paper in Indian Engineering Congress (IEC-2017) held at chennai.	₹ 10,688
2017-18	Prof. K T Balaram Padal	International conference on "Nano Materials, Synthesis, Characterization and Applications (ICN-2018)" held atMahatma Gandhi University, Kottayam, Kerala	₹ 48,282
2018-19	Prof.K.Venkatasubbaiah	Presented a paper in 33rd Indian Engineering Congress (IEC 2018) Held at Udaipur	₹ 23,353

Governance, Leadership/Management (contd.,)

Professional development / Administrative training Programmes

Year	Name of the teacher	Name of the programme
2017-18	Dr. M V J Raju	Workshop for faculty mentors on induction program for new students conducted by NPIU, MHRD, held at New Delhi.
2019-20	Dr. M V J Raju	Two day National Conference on "Innovative mechanisms & standards for Assuring Quality in HEIs (IAQHEI'2020)", organized by IQAC&ASC, KLU, Vijayawada,6th – 7th March 2020. (Funded by A.U).
2020-21	Dr. M V J Raju	One Week online Capacity Building Workshop on "Outcome Based Education (OBE) and NBA Accreditation Process", Bharati Vidyapeeth's Institute of Computer Applications and Management (BVICAM), New Delhi, 27th July – 31st July, 2020, (One Week). (Funded by TEQIP – III)
2020-21	Dr G Rambabu	One Week online Capacity Building Workshop on "Outcome Based Education (OBE) and NBA Accreditation Process", Bharati Vidyapeeth's Institute of Computer Applications and Management (BVICAM), New Delhi, 27th July – 31st July, 2020, (One Week). (Funded by TEQIP – III)

Governance, Leadership/Management (contd.,)

FDPs attended

S. No.	Name of the teacher	Title of the program
1	Prof. R Madhusudhan	One week training programme on CNC training on Milling and turning TEQIP sponsored residential training programme. Held at Chennai
2	Dr K T Balram Padal	One week training programme on CNC training on Milling and turning TEQIP sponsored residential training programme. Held at Chennai
3	Dr M V J Raju	UGC sponsored Short term course on Computer Applications, UGC- HRDC, A.U., Visakhapatnam
4	Dr G Rambabu	UGC sponsored Short term course on Computer Applications, UGC- HRDC, A.U., Visakhapatnam
5	Dr G Rambabu	Three Week Inter Disciplinary Refresher course in Disaster Environmental sciences (UGC-HRD centre, AU Visakhapatnam)
6	Dr.K.T.Balaram Padal	One Week Short Term Training Course on “Characterization of Materials for Renewable and Sustainable Energy" Held at IIT Indore.
7	Dr M V J Raju	Inter Disciplinary Refresher Corse in Environmental Sciences, (UGC sponsored Refresher Course), UGC- HRDC, A.U., VISAKHAPATNAM
8	Prof.V.Vijaya Babu	Short term course on "Vibration monitoring technique for machinery fault diagnosis" held at IIT Indore
9	Prof. L. S. V Prasad	Six days short term course on " Recent Developments in Surface Coating and Composite Materials"(RDSCC-2019) held at NIT, Jamshadpur.
10	Dr. K N S Suman	Six days short term course on " Recent Developments in Surface Coating and Composite Materials"(RDSCC-2019) held at NIT, Jamshadpur.
11	Dr K T Balram Padal	Orientation Programme, IISc Bangalore
12	Dr K T Balram Padal	Training on AICTE Examination reforms organized by BVB College of Engineering Technology, KLE Technological University in collaboration with NPIU held at Hubballi.
13	Dr M V J Raju	One week capacity building workshop on "Outcome Based Education (OBE) and Accreditation Process" which was conducted by Bharati Vidyapeeth's Institute of Computer Applications and Management (BVICAM), New Delhi
14	Dr M V J Raju	Faculty Development Program On “3D Printing and Additive Manufacturing for Industrial and Bio Medical Application” Sponsored by AICTE under ATAL Program, Satyabhama University
15	Dr M V J Raju	APSCHE is organising a 5- day Faculty Development Programme on E-content Development in association with Indian Institute of Information Technology, Design and Manufacturing, Kurnool and Virtual Learning Academy

Criterion 7

Best Practices of the Department
(aligned with the University's Interest)

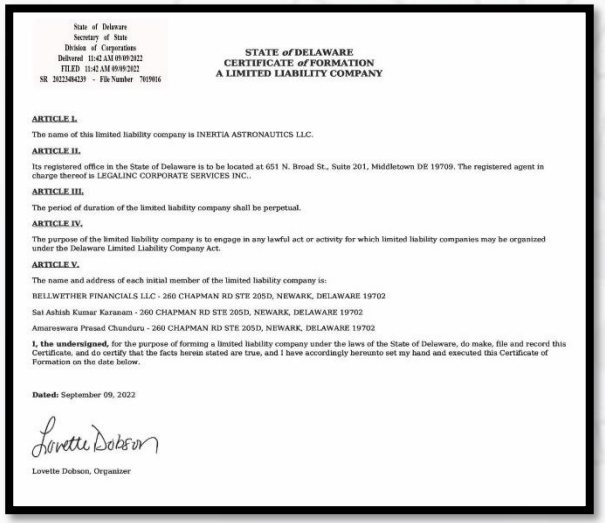
Incubations/ Start-Ups

1. KKB TECH SOLUTIONS PVT LTD

   (A research Based Company)

2. Inertia Astronautics LLC - American Space Company

3. Inertia Astronautics PVT LTD.- India's First Space Mining Company (Space Robotics)Inertia Astronautics is a Space Robotics Company - Specialised in Space Mining on Lunar South Pole



State of Delaware
Secretary of State
Division of Corporations
Delivered 11:42 AM 09/09/2022
FILED 11:42 AM 09/09/2022
SR 20223484239 - File Number 7019016

STATE of DELAWARE
CERTIFICATE of FORMATION
A LIMITED LIABILITY COMPANY

ARTICLE I.
The name of this limited liability company is INERTIA ASTRONAUTICS LLC.

ARTICLE II.
Its registered office in the State of Delaware is to be located at 651 N. Broad St., Suite 201, Middletown DE 19709. The registered agent in charge thereof is LEGALINC CORPORATE SERVICES INC..

ARTICLE III.
The period of duration of the limited liability company shall be perpetual.

ARTICLE IV.
The purpose of the limited liability company is to engage in any lawful act or activity for which limited liability companies may be organized under the Delaware Limited Liability Company Act.

ARTICLE V.
The name and address of each initial member of the limited liability company is:

BELLWETHER FINANCIALS LLC - 260 CHAPMAN RD STE 205D, NEWARK, DELAWARE 19702

Sai Ashish Kumar Karanam - 260 CHAPMAN RD STE 205D, NEWARK, DELAWARE 19702

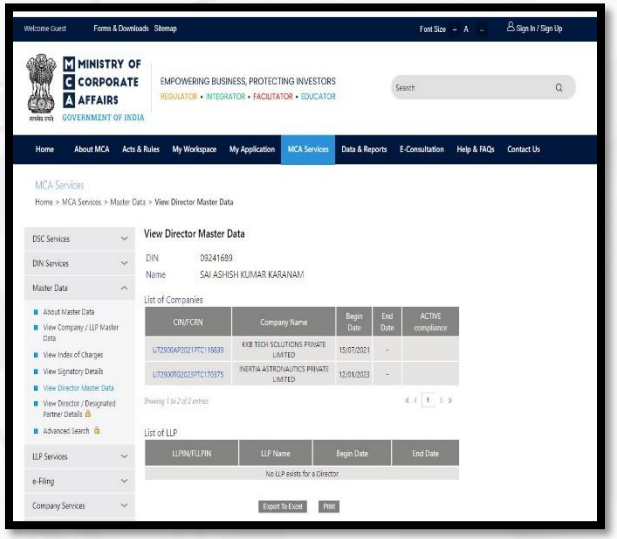
Amaresware Prasad Chunduru - 260 CHAPMAN RD STE 205D, NEWARK, DELAWARE 19702

I, the undersigned, for the purpose of forming a limited liability company under the laws of the State of Delaware, do make, file and record this Certificate, and do certify that the facts herein stated are true, and I have accordingly hereunto set my hand and executed this Certificate of Formation on the date below.

Dated: September 09, 2022

Lovette Dobson

Lovette Dobson, Organizer



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GOVERNMENT OF INDIA

EMPOWERING BUSINESS, PROTECTING INVESTORS
REGULATOR • INTEGRATOR • FACILITATOR • EDUCATOR

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- View Index of Charges
- View Signatory Details
- View Director Master Data
- View Director / Designated Partner Details
- Advanced Search

LLP Services
e-Filing
Company Services

View Director Master Data

DIN 09241689
Name SAI ASHISH KUMAR KARANAM

List of Companies

CIN/FCRN	Company Name	Begin Date	End Date	ACTIVE compliance
U72900AP2021PTC116838	KKB TECH SOLUTIONS PRIVATE LIMITED	15/07/2021	-	
U72900RS2023PTC170975	INERTIA ASTRONAUTICS PRIVATE LIMITED	12/01/2023	-	

List of LLP

LLPIN/FLLPIN	LLP Name	Begin Date	End Date
No LLP exists for a Director			

Export To Excel | Print

Criterion 7

Best Practices(contd.,)

Yoga

Hackathons

Best Practices(contd.,)

❖ **Social Empowerment through UG & PG Students and Ph.D. Research Scholars' Projects by using Advanced Research Labs, CoEs and Skill Labs**

- To promote academic-industry interaction and foster collaboration.
- To expose students to state-of-the-art technologies.
- To encourage students to become Entrepreneurs.
- To encourage students to take up Research and Development as career options.
- To promote Societal Empowerment and responsibility through social service.
- NCC camps, Blood donation camps.

Visit to IoT Lab at NASSCOM Centre

Visit to NASSCOM Centre

Visit to a-hub

Visit to ICDT

Visit to Digifac

Best Practices (contd.)

❖ Enhancement for acquiring 21st Century skills for UG and PG Students

- Prepare the students to face the Group Discussion (GD) and Personal Interview (PI) and Personality Development effectively.
- Improve logical thinking to solve various quantitative and reasoning problems.
- Enhance the Programming Skills (C, Python, MATLAB, etc.) to hit the placements from various software companies.
- Impart knowledge of Resume Writing and self-marketing. Adopt Student approach oriented training.
- Increase employability skills among the students in order to increase the placement rate. The placement record of AUCE-Department of Mechanical Engineering displays the no. of students placed in companies as well as competitive exams as follows.

S. No	Academic Year	No. of UG Students Placed	No. of PG Students Placed
1	2017-18	22	11
2	2018-19	20	11
3	2019-20	19	14
4	2020-21	28	13
5	2021-22	24	12

S. No	Academic Year	Number of UG Students Qualified in Competitive exams	Number of PG Students Qualified in Competitive exams
1	2017-18	32	5
2	2018-19	13	6
3	2019-20	12	6
4	2020-21	26	7
5	2021-22	17	5

Best Practices(contd.,)

- These programs also create an opportunity for the students to lay a path for they also help the students to clear the entrance exams like GRE, TOEFL, IELTS, and CAT, etc.
- The students are exposed to skill improvement programs in B.Tech programme in collaboration with Skill Labs and DASSAULT SYSTEMS like Simulation Lab, Computation Lab, Python Programming, etc.
- AUCE has a unique pool of laboratories such as SIEMENS, DASSAULT, Automobile Lab, CNC Machine, Solid Edge Modeling, Computer Based Training (CBC), AutoCAD, etc.

Sl. No	Academic Year	No. of Students who went for Higher Education
1	2017-2018	20
2	2018-2019	13
3	2019-2020	7
4	2020-2021	12
5	2021-2022	6

Skill Lab

Siemens Lab

Best Practices(contd.,)

- The Department has been supporting the students by giving appreciation letters for the toppers of 1st, 2nd, and 3rd year students of B.Tech. Mechanical, Subject wise toppers for some subjects, GATE toppers in the department, progressively performing students (Academically), and economically backward students.
- The financial support is provided by the faculty of the Mechanical Engineering department, alumni association, and charitable trusts.
- From the alumnus (Industry, R&D), the Department conducts guest lectures continuously for the betterment and motivation of the students.
- The students are encouraged to do summer and winter internships at reputed institutions/ industries outside and Industry visits.

Visit to Diesel Loco Shed

Visit to Refratechnik

Abhijeet Ferro Tech. Ltd.

UniParts India Ltd.

Vizag Profiles Pvt. Ltd.

HSL

Criterion 7

❖ Alternate sources of energy and energy conservation measures

- **A total of 190 Solar energy panels were installed on the roof of the PG building with a capacity of power 330 KWH.**
- **Solid waste management – GVMC recyclers (at hostel premises)**
- **Liquid waste management - pits**
- **Some rain water harvesting pits are provided in front of the PG building**

Solar Energy Panels

Solar Panels along with ACDB inverter

Dust Bin

Dustbin

Rain Water Pit

Rainwater harvesting pits

Ramp

Ramp for wheelchair

Progressive Plan

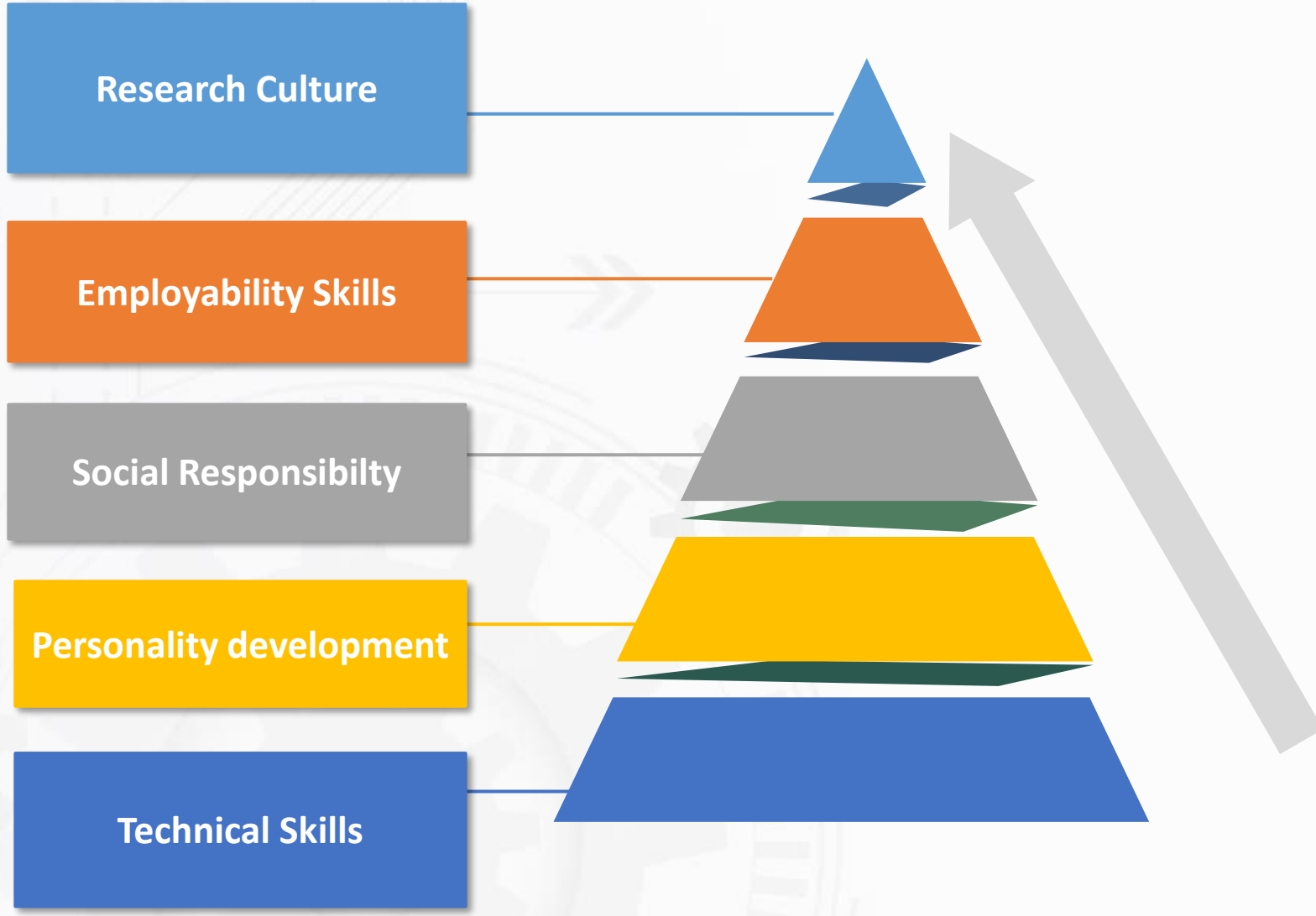
More Research Proposals, Peer Review Publications (SCI, Q1,etc), Books Publications & Patent Commercialization, Multi-, Inter-Trans Disciplenary Research & Field Projects

More encouragement towards Innovation, invention, incubation, Startups, Alumni Interactions, Internships etc.

Encourage to Do Ph.Ds. & Projects relating to industry and Society Concern problems

HR Trainings, Advanced 21st century Skill Development Programmes, Student Exchange Programmes

Innovative skills, Minor, Major & Honorary Degrees, Networking and Collaborations, Produce Entrepreneurs and Professionals for the Global Market



THANK YOU