

# RCOEM

Shri Ramdeobaba College of  
Engineering and Management, Nagpur



# STRATEGIC PLAN

(2022-23 To 2026-27)

SHRI RAMDEOBABA COLLEGE OF  
ENGINEERING AND MANAGEMENT, NAGPUR

# Shri Ramdeobaba College of Engineering & Management Nagpur



# MESSAGE FROM THE PRINCIPAL



**Dr. R. S. Pande**

RCOEM is governed effectively in tune with our vision and mission, providing quality education to develop world-class professionals. The cohesive team of faculty, students, and supporting staff with visionary Management strive hard to translate the vision into a reality. The Institute provides a stimulating

learning environment to achieve exemplary standards in Engineering and Management Education.

It is a significant moment for us, as we prepare the strategic plan to assess our strengths, weakness, opportunities, and challenges, review our performance to set the goals, and plan a roadmap to achieve the set goals through the ten identified pillars. The plan reflects the transformation over five years, and we will revisit the plan to evaluate our success in pursuit of excellence.

I look forward to working with all stakeholders to build RCOEM to meet the challenges and implement the strategic plan with effective planning of activities.



# OUR VISION

INSTITUTE PAR EXCELLENCE



# OUR VISION

Shri Ramdeobaba College of Engineering and Management envisages the institute par excellence, providing world-class technical and management education.

# OUR MISSION

To impart quality education in the field of Engineering and Management and to foster a mutually beneficial relationship with industries to create an intellectually stimulating environment for learning, research and for promoting professional and ethical values.

# OUR PRINCIPLES AND VALUES

RCOEM is committed to the following values:

- We are sensitive and empathetic towards the needs and concerns of our stakeholders.
- We exercise academic flexibility and freedom without compromising duties and responsibilities.
- We create every relationship on the foundation of integrity and trust.
- We practice transparency and ethical behaviour in every act we perform.

# OUR STRATEGIC PLAN

RCOEM has and shall always aspire to achieve excellence in education and research that serve society. Since, its inception, RCOEM has played a key role in creating highly skilled personnel that served the industry & society through their leadership, new knowledge creation, and entrepreneurial ingenuities.

We, at RCOEM, always believed that the great institute can only be built on three aspects of its foundation viz. its Values, its People, and its Governance. Based upon this foundation we would like to build our institution to achieve our three core goals: Excellence in Education, Excellence in Research, and Excellence in Service to Society.

Here, we envisage an actionable way to reach these core goals. And we call them Pillars. We have identified ten pillars that are rock steady on the solid foundation and providing the way and support to reach the required heights. Yes, through these pillars we desire to reach the higher order of conduct.



# OUR CORE GOALS

We, at RCOEM, believe that we must serve society through our education programs and research. Thus our primary role is to provide contemporary education and conduct meaningful research that contributes to industry and society. And hence our quest for excellence should encompass our three primary functions: imparting education, conducting research, and thereby offering services to society.

Yes, we at RCOEM, shall strive for excellence in all three core functions.

## 1. Excellence in Education

*“Equip students to transit successfully to the next stage of their lives as leaders, professionals, & responsible citizens.”*

Our prime objective is to prepare our students to transit successfully to the next stage of their lives as leaders, professionals, and responsible citizens. For this, we are committed to design and deliver our educational programs that disseminate the required knowledge and skillsets that shall transform our students into a workforce that possesses leadership, professionalism, and wisdom to serve the industry and society with humanity.

*We aspire to achieve:*

- **The reputation of our Institute:** The reputation of an institute may be gauged through rankings, ratings, and public opinion. We are proud holders of progressive rankings & ratings by various government and non-government agencies. Public opinion about us is highly positive. Still, we aspire to reach higher ranks so that our stakeholders take pride in us.
- **Quality Employment for our Students:** We see the quality of our students' employment as a graduate outcome for our students. Quality of employment is a blend of the reputation of employers as well as the nature of the profile that is being offered to our students. We are committed to enhancing our student's employability to surpass demanding industry standards.
- **Our Students as Entrepreneurs:** We also want our students to pursue entrepreneurship thus becoming employment generators. For this, we are committed to generating entrepreneurs by promoting entrepreneurship and start-ups.

- **Our Students pursuing further Studies:** We intend to have a portion of our passed-out students going for further studies in premier Universities/Institutes.
- **Our Alumni contributing to society and nation-building:** We intend to serve society by making our students the torch bearers of industry and societal development. We want to see our alumni emerged as leaders in various fields (of business, education, research, sports, community service, etc.) and are instrumental in contributing to society in multiple ways. We take pride in associating with our alumni who have proved themselves in various fields by winning awards/accolades of repute.
- **Positive Program Outcomes:** As an Institute we shoulder the responsibility to shape the present and future of students. We ensure the quality of education by attaining benchmarks termed as 'Program Outcomes'. Apart from this, the outcomes of student satisfaction & engagement surveys, alumni satisfaction surveys, and employers' feedbacks are used to make continuous improvements in our curriculum design and delivery.

## 2. Excellence in Research & Innovation

*"Produce and disseminate research that benefits society and the industry and has a positive impact on global as well as local challenges."*

The pursuit of new knowledge is a human trait that is primarily responsible for scientific discoveries. The technologists use this scientific knowledge to create technologies that are helping humans in multifarious ways. We aim to contribute to this pursuit by new knowledge creation and technology development through research and innovation. For this, we are committed to creating an ecosystem for achieving excellence in research and innovation.

Our goal is to produce and disseminate research that benefits society and the industry globally as well as locally. Our key role would be generating and circulating knowledge and serving the needs of society through quality research.

*We aspire to achieve:*

- **New Knowledge Creation:** We seek to own a rich stock of research articles published in high-ranked journals & publications. Our IPRs should be useful in providing low-cost implementable solutions.
- **Research Influence:** We want to disseminate our research outcomes in such a way that it is being used and referred by many others. Obtaining higher citations for each published research work indicates its value and usefulness.



- **Research Impact:** Impactful academic research has the potential to improve the world we live in. Society can reap the benefits of successful research studies only if the results are converted into marketable and consumable products. The impact of our research would be ascertained from the patents that are transferred into products/services that are being consumed by industry and society.
- **Research Productivity:** Our focus is to involve all the available talent pool of students, faculty, staff, scholars in research. The aim is to improve the research productivity.
- **Knowledge Transfer:** Whatever the knowledge that has been gained or generated, it is important for us to transfer that knowledge to the needy for maximizing its benefits. Such knowledge transfer may be achieved by offering training and consultancy to corporates. So, our focus is to increase training and consultancy offered to corporate houses thus enabling them to solve their problems.

### 3. Excellence in Service to Society

*“Serve society through imparting quality education and impactful research.”*

We believe in serving society in varied ways. And our way of serving society is by performing our primary task of imparting quality education and conducting research that benefits society. It's now time for us to take a bigger role in the community's well-being and upliftment. For this, we are committed to aligning our programs, pedagogies, and research & innovation to take care of societal challenges and problems. Our efforts shall be focused on providing the much-needed support expected by society from us. It may be skill development or livelihood creation or solving a problem through the application of complex technology or just simply sensitizing about the social issues. We are going to do this all in the best possible manner.

# FOUNDATION NEEDED TO REALISE CORE GOALS

## 1. Our People: Faculty & Staff

*“Our faculty and staff: Foundation of RCOEM”*

The contribution of faculty and staff to the development and progress of an institute is undeniable and irrefutable. We, at RCOEM, believe that if we wish to build a world-class institute, we need to have an adequate number of high-quality people.

*We aspire to achieve:*

- **Maintaining adequate faculty and staff:** Adequate faculty-student ratio and staff-student ratio are the determinants of an institution's attitude towards educational excellence. We maintain an adequate number of faculty and staff as it determines our accountability towards students and their career goals.
- **High quality of faculty & staff:** We are committed to nurturing our faculty and staff so that they contribute successfully to achieving our goals and objectives. For this, we shall provide the necessary motivation, mentoring, capacity building, and rewards on a continuous basis.
- **Diversity of faculty:** The diversity amongst staff and faculty creates healthy teaching and learning environment. We shall maintain equal gender diversity and shall strive fair level of diversity from and across the geographies.
- **Satisfied and committed faculty & staff:** Great student experience can only be delivered through satisfied and committed faculty and staff. We plan and execute our policies that meet employee expectations.

### *Our Success Indicators:*

- Faculty-student ratio
- Staff – student ratio
- % of highly cited researchers
- % faculty & staff winning awards/accolades/fields medals of repute
- Publications per faculty
- Citations per faculty
- Patents per faculty
- Revenue per faculty
- Gender diversity ratios
- Geographic diversity ratios
- Positive employee satisfaction survey

## 2. Strategic Planning, Finance & Governance

*“Our governance: Cornerstone of our foundation”*

We are onto the process of building a great institution and the cornerstone of this institution would be the transparent and ethical governance practiced by our management. The process would be aided by a well-crafted strategic plan that would work as our roadmap. This strategic plan will not only help us in developing the right policies but also in making the right choices.

*We aspire to achieve:*

- **Strategic Planning and its Execution:** Our desire for higher levels of growth makes it important for us to have a well-crafted strategic plan along with its right execution at all levels. We have already adopted the systematic approach of implementing this plan and its evaluation at the institute level, department level, and operational level. Every department will align its Mission and Program Educational Objectives with the institute's Mission.
- **Growing Revenues:** The strategies are bound to fail if not supported with proper budgets and resources. And hence the need for an adequate revenue stream cannot be underestimated. For a non-profit institute like ours, the major source of income is tuition fees. We need to think beyond this.
  - We will focus on the increase in the inflow of grants from government and non-government organizations.
  - We will enhance our revenue generation through the delivery of training and consultancies.
  - The commercialization of IPRs will be another major focus of revenue in the coming years.
  - Philanthropy & endowments from alumni and other stakeholders may also be an important source of revenue for us.
- **Governance that is true to the expectations of the Stakeholders:** We shall continue with our transparent and ethical governance practices. Our values and principles shall remain our guiding source for governance practices.

*Our Success Indicators:*

- Reports of accreditation/ranking/benchmarking studies/internal performance reviews
- % growth in fees and non-fees revenue
- Increase in the number of revenue streams
- % increase in grants
- % increase in income through consultancy and commercialization
- % increase in endowments

### 3. Values & Principles

*“Our Values & Principles: Soul of our RCOEM”*

RCOEM is known for its robust base of values and principles. Since its inception, we have been following transparency and ethics in all that we do. We strongly believe that values such as integrity and trust make our foundation stronger to build a legacy for generations.

*We aspire to achieve:*

- We are sensitive and empathetic towards the needs and concerns of our stakeholders
- We exercise academic flexibility and freedom without compromising duties and responsibilities
- We create every relationship on the foundation of integrity and trust
- We practice transparency and ethical behavior in every act we perform





# PILLARS TO ACHIEVE CORE GOALS

## 1st Pillar: Teaching & Learning

*“To deliver education that is challenging, enabling, research-led and transformative”*

Our educational programs are designed keeping in mind the regional, national, and international requirements. The program curriculum should make every student curious to explore more and thus making them life-long learners. Every curriculum shall have depth and breadth of the subject domain and will include a research component. Apart from this, the curriculum and its delivery should enable students toward creativity and innovation. Along with this, a special emphasis would be on inculcating entrepreneurial traits among students.

*Our Objectives:*

- Encourage and enhance our support for continuous innovation in
  - o teaching-learning process
  - o pedagogy and assessment
- Create a mechanism that continuously
  - o identifies the graduate quality & outcomes
  - o upgrades curriculum as per the needs
- Design educational programs offering
  - o new fields of study & subject combinations
  - o greater choice of electives, and
  - o multiple entries & exits
- Design & deliver a curriculum that
  - o stimulates problem-solving by thinking logically, critically, and creatively
  - o offers enough opportunity for research-led learning, project-based/ experiential learning
  - o inspires leadership, professional ethics, and sensitivity towards societal problems & issues
- Enhance the attractiveness, sustainability, and flexibility of our PG/PhD programs
- Developing PG students' advanced research and intellectual skills and preparing them to contribute significantly at a higher level than a graduate



# TECHNICAL COMPETITION



# SPORTS MUSIC DEBATE DRAMA VOLUNTEERING LEADERSHIP

*Our Success Indicators:*

- Benchmarking with premier Universities/Institutes
- Percentage compliance to the curriculum expectations from statutory bodies/rating/ranking/accreditation bodies

**2nd Pillar: Student Experience & Engagement**

*“To deliver a wider student experience that is cherished by them for life”*

The student-life experience that is cherished lifelong can only happen if the students get ample opportunities to build and showcase their talent in the wide range of curricular and co-curricular activities. The quality of co-learners and engagement also enhance this experience to the next level.

*Our Objectives:*

- Aim for higher and higher ranks of entering students
- Provide students with an enhanced range of curricular and co-curricular experiences, giving them broader opportunities to develop their skills and competencies for professional and personal life
- Ensure that students participate and outshine in
  - o Technical competitions/Hackathons
  - o Sports, music, debate, drama
  - o Volunteering and leadership
- Learn and adopt best practices in Student Experience around the world
- Develop world-class student services and facilities
- Ensure student administrative and support services are sufficiently resourced and appropriately developed to meet the needs of the students

*Our Success Indicators:*

- % increment in the ranks of entering students on a YoY basis
- % of students participate & outshine in professional and technical events
- % of students participate & outshine in sports, music, debate, etc
- % of students participate & outshine in volunteering and leadership
- Benchmarking of best practices with premier universities/institutes
- Benchmarking of student services and facilities
- Positive outcomes of student satisfaction and engagement surveys (academic & non-academic)







### 3rd Pillar: Research Ecosystem & Culture

*“To create a rewarding research environment and an exceptional research-led learning experience”*

One of our core goals is to achieve excellence in research and innovation. Our research and innovation should address the problems of industry and society. It should impact the lives of people by solving their problems. The industry should benefit economically from our research lead innovative solutions. To strengthen our research-innovation ecosystem, we are committed to investing in research infrastructure and creating research ethos amongst our faculty, staff, and students.

#### *Our Objectives:*

- Establish critical mass in emerging research areas by nurturing in-house talent and also by attracting talent from outside
- Maximize the quantity and quality of research outcomes
- Collaborate with private and public sector organizations for training, research, and funding opportunities
- Continue to invest in research infrastructure to support thrust areas
- Receive more research funding to support research infrastructure development and experimentation
- Further boost doctoral research for higher enrolments, faster completion, and better outcomes
- Develop strong industry engagement with local industries/SMEs by providing them R&D support
- Develop efficient research performance measurement and monitoring system
- Identify and promote best practices for improving research
- Create provision for Post-Doctoral research

#### *Our Success Indicators:*

- % increase in the number of publications in top-10 percentile journals
- % increase in the citations of publications
- % increase in the number of books and book chapters with high-impact publishers
- % increase in the number of postgraduates with publications
- % of publications jointly authored with researchers from industries and institutes

- % increment in research infrastructure and promotion expenses
- % increase in research and development grants
- % of enrollment in PhD programs
- % completion of doctorates
- % of publications by PhD scholars
- % of IPR generated by PhD scholars
- % increase in the number of international fellowships offered
- % increase in the number of international fellowships availed by our faculty
- % increase in consultancy and sponsored research
- Number of collaborative research projects with SMEs/Industries/Institutes
- Reports of accreditation/ranking/benchmarking studies/research performance review

## 4th Pillar: Innovation & Entrepreneurship Enablers

*“To develop an ecosystem that will encourage, inspire and nurture faculty and students to create technologies & its commercialization and start-ups”*

We will continue to encourage and nurture our faculty and students to be creative and innovative. And for this, we will keep providing impetus and resources for innovations leading to creative products, technology development, process improvements, etc. Further, we want our students to take these innovations to next level by creating new ventures around these innovations. For this, we are committed to providing incubation support through our state-of-the-art incubation center.

*Our Objectives:*

- Develop an innovative and entrepreneurial mindset through series of activities
- Augment infrastructure & facilities to promote innovation & entrepreneurship
- Generate revenue from commercialization of IP and innovations
- Fortify existing incubator to develop a strong start-up ecosystem of the region.
- Establish more new ventures with the support of the institute/govt. & non-govt. agencies
- Mobilize funds/investments to support start-ups incubated through angel investors & venture capitalists
- Collaboration for & co-creation of innovation & entrepreneurship initiatives

*Our Success Indicators:*

- % increase in the number of co-curricular events related to innovation and entrepreneurship (I&E) promoted/organized
- % increase in the number of co-curricular events related to I&E participated by students and faculty
- % of academic programs/course/certificate course/MDPs/FDPs related to I&E and IPR offered
- % increase in the number of ideas or innovative projects implemented in the industry and community
- % increase in the number of ideas or innovative projects/TRLs/Social Innovations implemented with financial support from the institute/others
- % increase in the number of awards won by the student and faculty innovations at State/National/International Level in I&E related events
- % increase in the number of patents filed/published/granted by faculty/students/incubates
- Number/value of IPs commercialized/ technologies transferred
- % increase in the number of startups with CIN/with GST number started by students/ faculties/ staff/ alumni and facilitated by the institute
- % increase in the number of startups with CIN / with GST number started by the external beneficiaries
- % increase in the number of startups with an annual turnover of Rs. 50 Lakhs or 10 employees
- Total amount raised by incubates/strat-ups from Angel/VC Fund/High Net-worth Individual (HNI)
- Number of active collaborations with Industry Associations /Knowledge Agencies/Entrepreneurs/other Incubation units either to provide or receive incubation support









## 5th Pillar: Faculty Development & Mentoring

*“To create expert, passionate and satisfied academic and support staff”*

The success of RCOEM depends on the commitment and competence of our faculty and staff. For this, we are committed to invest and support faculty & staff development and mentoring continuously. We shall create policies and practices that shall provide opportunities for career progression leading to higher productivity and satisfaction.

*Our Objectives:*

- Recruit faculty and staff members of the highest quality
- Provide mentoring & support to faculty members for their scholastic and professional development
- Provide opportunities and support for skilling & qualification enhancement
- Provide performance-based opportunities for career progression to promote job satisfaction and productivity
- Create communities of practice within which colleagues can develop their professional expertise, and research
- Inculcate a culture and practice of continuous improvement

*Our Success Indicators:*

- % of faculty participating in faculty development/training activities/STTPs
- % of faculty provided with mentoring & support
- % of faculty is PhD
- % of faculty appended their qualification(Diplomas/Degrees)
- % of faculty actively involved in communities of practice

## 6th Pillar: Internationalization & Collaboration

*“To build active international collaborations”*

Internationalization refers to interactions between cultures of distant geographies through teaching, research, and community service. It expands the horizon and opens up a world of new educational opportunities as well. Here, the objective is to build active international collaborations for mutual benefits and cross-cultural sensitivity.



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*Our Objectives:*

- Build sustainable, mutually beneficial relationships with key international universities
- Provide support and enhance international mobility of students, faculty, staff to and from RCOEM through faculty & students exchange programs
- Offer joint degree programs and international curricula in our programs
- Build and sustain international partnership in research and development
- Develop cultural ties with our partner universities
- Increase the proportion of non-Indian students admitted to RCOEM
- Employ/engage academic staff from premier institutes/universities of the world
- Identify best practices in every aspect of functioning and implement them gradually

*Our Success Indicators:*

- No. of Active international collaborations
- The success of Faculty-Students Exchange Programs
  - % of RCOEM students joining foreign Universities
  - % of RCOEM faculty associating with foreign Universities
  - No. of international students coming to RCOEM
  - No. of international faculty associating with RCOEM
- % compliance to international curricula in our programs
- No. of active projects in collaboration with international partners
- % faculty/staff associated actively with internationally collaborated projects
- % of international students enrolled in RCOEM

**7th Pillar: Digital Transformation & Data Management**

*“To fortify digital infra for efficient administration and decision making”*

We shall bring digital transformation by using digital technologies that will simplify our academic and administrative work bringing more productivity and efficiency. This will be supplemented by effective data management practices so that we store, process, and analyze the data that will help us in faster and better decision making.

*Our Objectives:*

- Create a 'Digital First' policy in all the processes and governance
- Develop a separate plan for digital transformation
- Create a digital learning environment that provides rich engagement and flexibility for the delivery of academic programs.
- Develop a robust administrative process that includes acquiring, validating, storing, protecting, and processing required data to ensure the accessibility, reliability, and timeliness of the data for its users
- Adopting data science techniques to extract meaningful information and to predict future patterns for taking the right decisions

*Our Success Indicators:*

- % Compliance with the plan

## 8th Pillar: Alumni Engagement & Philanthropy

*"To engage alumni for the development of the institute"*

Society, in general, evaluates the performance of an institute based on its alumni. In its opinion, the larger the base of successful alumni better is the institute. We, at RCOEM, are fortunate to have a large base of successful alumni who are eager and motivated to help their alma mater in the best possible manner. Our proud alumni are already engaged with the institute by providing their support in academic and governance activities. We need to take this engagement to a next level where they support us in achieving our goals through their networking, philanthropy, and advisory services.

*Our Objectives:*

- Create and nurture an approachable alumni base
- Enhance active engagement with the alumni
- Build a lifelong learning mechanism for our alumni that will be supported by a strong virtual learning environment.
- Seek mentoring, endowment, and philanthropic support from our alumni for our students

*Our Success Indicators:*

- % of alumni with whom the institute can approach with ease
- % of alumni who actively engaged with the institute (for governance,



curriculum design & delivery, research, innovations, startups, mentoring, placements, etc.)

- Amount of philanthropic support per alumnus
- % alumni providing active mentorship to our students
- Outcomes of alumni satisfaction surveys

## 9th Pillar: Societal Responsibility & Community Engagement

*“To share the responsibility of societal development and fruitful community engagement”*

We at RCOEM, feel that we need to share the responsibility of societal development. For this, we need to have a proactive community engagement that will help us in understanding the challenges and pain points at the grass-root level. We are committed to solving societal problems by providing training, skilling, and research/technology intervention. Simultaneously, we shall accelerate our efforts to reduce consumption and waste in the resources we use thereby strengthening our sustainable development practices.

*Our Objectives:*

- Practice community engagement that suffices our core goals and values
- Bring societal development by providing training, skilling, and problem-solving through research/technology intervention
- Practice sustainable development
- Reduce consumption and waste: water, electricity, paper, e-waste, etc.
- Practice green audit, energy audit, water audit, etc.

*Our Success Indicators:*

- Number of community engagement activities conducted
- Number of citizens impacted by training, skilling, problem-solving through research/technology intervention
- Measurable impact achieved in terms of lives benefited, livelihood generated, monetary benefits to society and individuals
- Sustainable development practices implemented
- % reduction in consumption of water, electricity, paper, solid waste, e-waste
- Unqualified-opinion-clean audit reports of green audit, energy audit





## 10th Pillar: Infrastructure & its Maintenance

*“To build infrastructure that shall aid us achieving our goals”*

One of the key attributes of any great institute is the well-equipped infrastructure that aids quality teaching-learning and research. We are committed to building the state of the art labs; well-equipped centers of research, innovation & incubation; modern teachinglearning aids; advanced computing facilities; in fact, every other facility that shall help us in achieving our objectives and goals. We shall make sure every facility is safe and maintained properly.

*Our Objectives:*

- Build state of the art infrastructure that is safe and efficient
- Proactive need assessment, planning, and efficient execution
- Upgrade and maintain the infrastructure periodically

*Our Success Indicators:*

- % compliance to infrastructure norms led by statutory/accreditation/ranking bodies
- % utilization of funds allocated
- Unqualified-opinion-clean Safety audits
- Benchmarking of best practices with premier universities/institutes



# Conclusion

The higher education system in India is likely to undergo a rapid transformation in the coming days in view of NEP2020 to keep pace with the requirements of a prosperous national economy along with a comprehensive technological foundation. RCOEM would strive to adapt systems and practices to implement all the recommended measures in a highly competitive environment to develop world class professionals .



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