H.V.P.Mandal's
College of Engineering & Technology, Amravati

INSTITUTIONAL DEVELOPMENT PLAN (IDP)

I. PREAMBLE

The Institutional Development Plan (IDP) serves as a strategic roadmap to transform the institution into a **center of quality technical and professional education, training, and research**, in alignment with the Vision and Mission of the institute and the broader framework of NEP 2020.

The plan emphasizes **balanced academic development, research promotion, industry linkage, and value-based education**, ensuring holistic growth of students and meaningful contribution to society.

II. VISION, MISSION AND OBJECTIVES

Vision

To make this institute a **center of quality technical and professional education, training, and promotion of research**.

Mission

- To offer a well-balanced program of learning in technical and professional education.
- To provide opportunities for overall personality development, discipline and values in students.
- To establish linkages with industries and other stake holders for the promotion of dissemination of knowledge of applied technology, placement of students and continuing education.

Objectives

- To qualify the students for university and other examinations for making them eligible for degrees conferred by university.
- To provide for research and for dissemination of knowledge through instructions, training and education.
- To take appropriate measures for promoting innovations in teaching-learning process and interdisciplinary studies and research .
- To establish linkages with industries for the promotion of dissemination of knowledge of applied technology and for placement of students .
- To pay attention to welfare of society in general. To pay attention to overall development, discipline and values in students

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III. CORE PRINCIPLES

- Quality Technical and Professional Education
- Student Development with Values and Discipline
- Research and Knowledge Dissemination
- Industry Relevance and Employability
- Innovation in Teaching-Learning
- Social Responsibility
- Inclusivity and Equal Opportunity
- Continuous Improvement and Accountability

IV. KEY OBJECTIVES (2025–2030)

Strengthen the institute as a **quality-focused technical education center**.

- Enhance **student success in final examinations and professional outcomes**.
- Promote **research culture and knowledge dissemination**.
- Improve **teaching-learning through innovation and interdisciplinary approaches**.
- Develop **strong industry linkages for training, internships, and placements**.
- Ensure **100% student participation in internships and experiential learning**
- Promote **entrepreneurship and start-up culture among students**

- Build a sustainable research and innovation ecosystem
- Strengthen industry partnerships and skill-based training

- Promote maximum number of **faculties for higher qualifications** viz. M.B.A, Ph.D. , Post Doc. qualifications
- Foster **personality development, discipline, and ethical values**.
- Contribute to **community development and societal welfare**.
- Improve **infrastructure and digital learning ecosystem**.

V. STRATEGIC FRAMEWORK

A. Strategic Goals

Achieve excellence in **technical and professional education delivery**.

- Build a strong **research and innovation ecosystem**.
- Develop **industry-ready graduates with ethical values and discipline**.
- Strengthen **industry-institute interaction and employability outcomes**.
- Promote **holistic student development and lifelong learning**.
- Ensure **institutional effectiveness and continuous quality improvement**.

B. Development Objectives

Design a **balanced and flexible curriculum** aligned with NEP 2020 and industry needs.

- Improve **student academic performance and examination results**.
- Increase **research activities, publications, and training programs**.
- Introduce **innovative teaching methods and interdisciplinary learning**.
- Strengthen **placement, internship, and industry training programs**.
- Implement **personality development and value education programs**.
- Expand **community engagement and extension activities**.
- Upgrade **laboratories, classrooms, and digital infrastructure**.

C. Operationalization Strategy

- Prepare **department-wise action plans** aligned with mission objectives.
- Define **measurable performance indicators** (results, placements, research output).
- Strengthen **IQAC for monitoring academic and quality initiatives**.
- Implement **ERP systems for academic and administrative efficiency**.

- Conduct **regular academic reviews and performance audits**.
- Engage **industry experts and stakeholders in curriculum and training**.

VI. IMPLEMENTATION ENABLERS

A. Governance Enablers (Governance & Quality)

- Participative and transparent governance.
- Strengthened IQAC for continuous quality improvement with data-driven system.
- Policy-driven academic and administrative processes.
- Performance monitoring aligned with institutional objectives.
- Phase-wise preparing proposals and submissions for **NBA, NAAC, and NIRF** for a quality transformation.

B. Academic Enablers (Academic Development)

- Balanced curriculum integrating **theory, practical, and applied learning**.
- Use of **innovative and ICT-based teaching methods**.
- Focus on **student performance in examinations and skill development**.
- Continuous curriculum improvement with industry input.

C. Student Admissions

- Building partnerships with industries and offering internship-linked programs further enhances appeal, while active engagement through campus visits, webinars, and counseling improves conversion from applicants to enrolled students and in turn improved GER.
- Continuous monitoring of key indicators such as application numbers, branch-wise demand, admission quality, and first-year retention ensures data-driven improvements and long-term sustainability.

D. Student Development.

- Strong academic foundations, practical skills, and overall student growth through a structured and continuous support system.
- A robust mentoring system where faculty regularly guide students on academics, career planning, and personal development, ensuring early identification of challenges and timely intervention.
- The integration of internships and industry exposure as a mandatory component, enabling students to gain hands-on experience, understand real-world applications, and improve employability through collaborations with industries and organizations.
- Additionally, a system of continuous evaluation—including quizzes, assignments, projects, lab performance, and internal assessments—should replace sole reliance on final exams, promoting consistent learning and skill development.
- Embedding personality development and human values holistic development of students

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E. Research & Knowledge Dissemination (Research & Innovation)

- Promote **faculty and student research initiatives**.
- Organize **seminars, workshops, and training programs**.
- Encourage **publication and knowledge sharing**.
- Support **interdisciplinary and applied research**.

F . Autonomy & Institutional Growth

- Effectively leverage academic autonomy to keep pace with rapidly evolving technologies while exercising the associated responsibilities with accountability and transparency.
- With the freedom to design and implement its own academic framework, the institution will emphasize on outcome-based education, continuous internal evaluation, and project-based learning methodologies.
- The institution upholds its responsibilities through structured governance, including active Boards of Studies, Academic Council oversight, and regular academic and administrative audits. Involvement of Industry experts in curriculum design, ensuring alignment with current technological trends.

- This balanced approach of freedom with responsibility to be used in significant institutional growth, which will be reflected in improved student performance, higher placement rates, increased research output, and strengthened industry collaborations.

G. Industry & Stakeholder Linkages (Industry Linkages)

- MoUs with industries for **training, internships, and placements**.
- Industry participation in curriculum design and delivery.
- Technical workshops in association with industries
- Guest lectures, industrial visits, and collaborative projects.
- Continuing education programs for stakeholders.

H. Physical Infrastructure (Infrastructure)

- Well-equipped laboratories and classrooms.
- Facilities for research and practical training.
- Library with updated academic resources.
- Student support and activity spaces.

I. Digital Enablers (Digital Transformation)

- ICT-enabled teaching-learning environment.
- LMS and online learning integration.
- Digital evaluation and academic tracking systems.
- Access to online courses and knowledge platforms.

J. Human Resource Enablers (Human Resources)

- Faculty development programs for teaching and research enhancement.
- Mentoring system for **student academic and personal development**.
- Training programs for administrative staff.
- Promotion of **discipline, ethics, and institutional values**.

K. Community Engagement

- Integration of social responsibilities into academics and activities through cleanliness drives, blood donation camps, and environmental initiatives.
- Participation of students in programs that build civic sense, ethical values, and community awareness.
- Adoption of nearby villages and implementing projects like water conservation, renewable energy, and digital literacy.
- Collaboration with organizations local NGOs to organize and supports health camps, education initiatives, and social outreach.
- Regular awareness programs on hygiene, gender equality, sustainability, and social issues.
- These initiatives contribute to holistic student development while creating measurable social impact.

L . Financial Enablers (Financial Sustainability)

- Resource mobilization through **industry collaboration and consultancy**.
- Alumni support and institutional development funds.
- Funding for **research and training programs**.
- Revenue through **continuing education and certification programs**.

VII. MONITORING & PERFORMANCE INDICATORS

Examination pass percentage

- Placement rate and internship participation
- Number of industry collaborations
- Research publications and training programs conducted
- Student participation in personality development programs
- Community engagement activities
- Teaching innovation practices adopted
- Student discipline and progression indicators

HVPM' College of Engineering & Technology, Amravati

Institutional Development Plan – TIME-BOUND ACTION PLAN

Strategic Area	Action Plan	A.Y. 2025–26	A.Y. 2026–27	A.Y. 2027–28	A.Y. 2028–29	A.Y. 2029–30	A.Y. 2030–31 / 31–32	Expected Outcome
Governance & Quality (IQAC)	Strengthening IQAC	Strengthen IQAC activities, Documentation & AQAR systems	Academic audits. Proposal for closure of courses of minimal response	Submission of Accreditation (NBA) proposals for CSE	Benchmarking with top institutions Grade enhancement, Gap analysis, Best practice adoption, Submission of Accreditation (NBA) proposals for IT	Submission of NAAC proposal Submission of Accreditation (NBA) proposals for ENTC	Grade enhancement in NIRF-ranking	Continuous quality improvement

Strategic Area	Action Plan	A.Y. 2025–26	A.Y. 2026–27	A.Y. 2027–28	A.Y. 2028–29	A.Y. 2029–30	A.Y. 2030–31 / 31–32	Expected Outcome
Academic Development	Curriculum improvement	Review and modernization of curriculum as per NEP guidelines, Plan industry alignment	Add-on courses at least one per year from each dept. (30 to 45 hours of short duration courses), Implementation of NEP based curriculum for 1st year	Implementation of NEP based curriculum for 2nd year	Implementation of NEP based curriculum for 3rd year, Interdisciplinary courses	Implementation of NEP based curriculum for Final year, Skill-based modules At least one by each dept.	Flexible curriculum (closely tied to interdisciplinary learning.)	Improved academic quality
	Teaching-learning innovation	ICT tools adoption	OBE implementation, online courses viz. NPTEL, SWAYAM , MOOC courses etc. with enrollment of at least 20% from each dept. with gradual increase in succeeding A.Ys	Blended/flipped learning Along with traditional face to face class room teaching, online courses viz. NPTEL, SWAYAM , MOOC courses etc.	Mini-Projects	Industry based Project/ Project addressing local and Social problems – one from each dept. LMS implementation	Advanced pedagogy	Enhanced learning outcomes

Strategic Area	Action Plan	A.Y. 2025–26	A.Y. 2026–27	A.Y. 2027–28	A.Y. 2028–29	A.Y. 2029–30	A.Y. 2030–31 / 31–32	Expected Outcome
Student Admissions	Increase intake & enrollment	Increase admission Intake	Improve GER	Program expansion viz. AI & DS, AIML	Diversification & School Connect Program	Demand-based programs to be designed under T & P cell viz. CTA	Sustainable admissions growth	Higher enrollment
Student Development	Personality & values	Soft skills & value-based programs in curriculum	Mentorship system to strengthen	Value-added courses at least one per year from each dept.	Leadership/Entrepreneurship programs at least one per year from each dept.	Tailored Career guidance Under T & P cell	Holistic development	Industry-ready graduates
	Academic performance	Remedial classes & result improvement	Internship, startup activities for students Enrollment of at least 20% from each dept. and growing gradually in succeeding years	Tracking system to identify Slow and Fast Learners and implement remedial process	Mentoring	Continuous evaluation	High pass %	Better results

Strategic Area	Action Plan	A.Y. 2025–26	A.Y. 2026–27	A.Y. 2027–28	A.Y. 2028–29	A.Y. 2029–30	A.Y. 2030–31 / 31–32	Expected Outcome
Research & Innovation	Research promotion	Encourage publications in peer-reviewed journals, Patents Research awareness under IIC ,	Enrollment for higher education by faculties, FDPs each per dept. and kept continuing in succeeding years , Research training	Publication under UG Projects, Seed funding, Research center at Institute level	Publications growth	Patent filing at least one per year per department	Upgradation of Research centers	Strong research ecosystem
	Knowledge dissemination	Seminars/workshops at least one per sem. from each dept.	Conferences at least one per year from an Institute	Industry lectures two per department per year	Promotion of Interdisciplinary research	MoU with NIT's	Recognized output	Academic visibility
Autonomy & Institutional Growth	Autonomous status	Apply for autonomous status	Compliance & reforms	Curriculum autonomy	Academic flexibility	Full autonomy benefits	Model autonomous institution	Academic excellence

Strategic Area	Action Plan	A.Y. 2025–26	A.Y. 2026–27	A.Y. 2027–28	A.Y. 2028–29	A.Y. 2029–30	A.Y. 2030–31 / 31–32	Expected Outcome
Industry Linkages	Collaboration	Identify industry partners for inernships	MoUs At least one from each deptartment	Internships – 40% Students of final year per department	Enrollment for Live Projects, Internships – 60% Students of final year per department	Internships – 100% Students of final year per department	Long-term partnerships	Employability growth
	Training & placement	Skill training modules	Certification programs, Strong placement system , training and promotions for UPSC, Govt. sector exams. Target Placement – 20% of Eligible candidates Soft skill & Aptitude Training to 50% Students of 3rd year	Target Placement – 30% of Eligible candidates Soft skill & Aptitude Training to 60% Students of 3rd year	Target Placement – 40% of Eligible candidates Soft skill & Aptitude Training to 70% Students of 3rd year	Industry integration Of each dept. Target Placement – 50% of Eligible candidates Soft skill & Aptitude Training to 80% Students of 3rd year	Better Placement In tier-I Multinational companies Target Placement – 60% of Eligible candidates Soft skill & Aptitude Training to 90% Students of 3rd year	Higher placements

Strategic Area	Action Plan	A.Y. 2025–26	A.Y. 2026–27	A.Y. 2027–28	A.Y. 2028–29	A.Y. 2029–30	A.Y. 2030–31 / 31–32	Expected Outcome
Infrastructure	Physical development	Lab upgrades ICT tools : Smart Board each one for every dept.	Smart classrooms, Proposal for industry sponsored labs, Lift installation	Establishment of Student activity center, Equipment modernization	Separate Bldg. for MB and compliance of basic infrastructural amenities	Construction of Library bldg.., Advanced labs	Centers of excellence	Improved facilities
	Library	• Membership of E-journals, books and Digital resources, • Partial Automation (Bar-coding) , • LMS-(SOUL) • Library orientation programs • Organized Seminar, Conferences, Workshop	**Library institutional Repository :- Technical Requirements Software platform**: Common options include DSpace, EPrints, or Fedora Common **Hardware infrastructure**: Reliable servers, storage systems, and backup facilities **Internet connectivity**: Stable and secure network access **Professional training** for librarians and library staff **Training** users (students, faculty) on how to use and contribute	Research & Academic Support •Reference management training (Mendeley, Zotero) •Workshops for Research Methodology •Maintain institutional repository (papers, theses	**Fully digital** Mobile app or web portal for: • Book search • Renewal • Notifications • Smart reading zones (silent, collaborative, group study)	**Complete Automation(Smart Library Integration)** • RFID-based book tracking Self-check-in/check-out system	Innovation & Excellence Hub	Academic support

Strategic Area	Action Plan	A.Y. 2025–26	A.Y. 2026–27	A.Y. 2027–28	A.Y. 2028–29	A.Y. 2029–30	A.Y. 2030–31 / 31–32	Expected Outcome
Digital Transformation	ERP & ICT	Basic ERP setup	LMS integration	Digital records	Online exams	Analytics	Smart campus	Efficient governance
Human Resources	Faculty development/Staff Development program	FDP on Training & Research orientation	Recruitment, Promotions under CAS and Regularization of faculties	Research incentives for publication	Strengthening of Appraisal systems	FDP on Advanced training	FDP on Leadership roles	Skilled faculty
Community Engagement	Social responsibility	Awareness & outreach programs	Rural engagement	Social projects	NGO collaboration	Sustainability	Model engagement	Social impact
Financial Sustainability	Resource mobilization	Identify funding sources	Testing/Consultancy activities and at least one activity from each department.	Alumni Association	Grants(AICTE/DST/CSR) at least one from each dept.	PPP model	Self-sustained system	Financial stability

Data-driven Quality systems:

A data-driven system in education refers to using data (from students, teachers, assessments, and institutions) to guide decisions, improve learning outcomes, and optimize educational processes rather than relying only on intuition or tradition.

Data to be collected such as:

- Student performance (tests, assignments, attendance)
- learning behaviors (engagement, time spent, participation)
- Teacher effectiveness
- Curriculum outcomes

Decision-making

Used to insights:

a)Personalize instruction
b)Adjust curriculum
c) Provide targeted interventions

Benchmarking with top institutions in a data-driven education system means comparing your college against high-performing institutions to identify gaps, adopt best practices, and improve outcomes.

Add on Courses:

Viz. : Artificial Intelligence & Machine Learning , Data Science & Analytics, Cyber security & Ethical Hacking, Robotics & Automation, Electric Vehicles (EV) & Renewable Energy, Internet of Things (IoT),Soft Skills + Industry Readiness Programs, Mobile servicing etc of 30 to 45 hours

NEP based CBCS strengthening :

- Expand Meaningful Electives
- Integrate Add-on & Skill Courses
- Flexible Credit Transfer
- Continuous & Data-Driven Evaluation
- Academic Flexibility
- Strong Academic Advising
- Industry Collaboration

  Etc.

Interdisciplinary courses are programs that combine knowledge, methods, and perspectives from multiple fields to address complex real-world problems—rather than staying within a single subject.

- AI + Other Fields
- Data Science + Domain Knowledge
- Mechatronics
- Robotics & Automation
- Environmental Engineering + Technology
- Bioengineering / Biomedical Engineering
- Cybersecurity + Law / Policy
- FinTech (Finance + Technology) Etc.

Skill-based modules

- Programming & Software Skills
- Data & Analytics Skills
- Core Engineering Practical Skills
- Emerging Technology Skills
- Communication & Professional Skills
- Entrepreneurship & Innovation

A **flexible curriculum** means you're not locked into a rigid set of subjects—you can mix disciplines, choose electives, and shape your learning based on your interests and career goals. It's closely tied to interdisciplinary learning.

Here's what it usually includes:

- Key Features of a Flexible Curriculum
- Choice-based subjects (electives): Pick courses outside your core field
- Credit system: Learn at your own pace, sometimes even across semesters
- Multiple entry/exit options: Certificates, diplomas, or full degrees
- Skill-based + academic mix: Combine theory with practical skills
- Interdisciplinary freedom: Example—mix economics + data science + psychology

In India (NEP 2020 model)
Under the National Education Policy 2020, many colleges now offer:
Major + Minor combinations
Academic Bank of Credits (ABC)
Multidisciplinary universities
Platforms like SWAYAM also let you take flexible online courses alongside your degree.

Career guidance" works best when it's tailored—otherwise it turns into generic advice that doesn't really help.

Step 1: Know your base

Ask yourself three things:
What subjects do you not hate? (more honest than "passion")
Are you more into people, data, or creativity?
Do you prefer stable jobs or risk (business/freelance)?

Step 2: Pick a direction (not a job yet)

Here are solid career directions in India today:

- **Tech-oriented**

Data Science, AI, Cybersecurity
Software/Web Development

Good if you like logic + problem-solving.

- **Business & Finance**

Accounting, CA, Investment Banking
Business Analytics, Marketing

Good if you like numbers + decision-making.

- **Creative & Digital**

Graphic Design, UI/UX
Content Creation, Video Editing
Tools: Figma, Adobe Photoshop

- **Psychology & People-focused**

HR, Counseling
Organizational Psychology

Blended learning is an educational approach that combines traditional face-to-face classroom teaching with online learning, giving students more flexibility and control over how they learn.

Holistic development means growing in all areas of life—not just academics or career, but also your mindset, health, skills, and values. It's about becoming a well-rounded person who can handle real-world challenges, not just exams.

What holistic development includes : Intellectual growth, Physical well-being, Mental & emotional health , Social & communication skills, Skill development, Values & personality.

LMS (Learning Management System) implementation is the process of selecting, setting up, and integrating a digital platform to manage teaching, learning, assessments, and student data in an institution. :

Popular LMS platforms include Moodle, Canvas, and Google Classroom.

Advanced pedagogy refers to modern, research-based teaching approaches that go beyond traditional lectures to make learning more interactive, personalized, and skill-focused.

Outreach & branding in education is about how an institution communicates its value, builds reputation, and connects with students, parents, industry, and the wider community. Done well, it directly influences admissions, partnerships, and long-term credibility.

Diversification means expanding what an institution offers, who it serves, and how it delivers value—so it isn't dependent on a single program, revenue source, or student segment.

1. Academic diversification : Offer programs across multiple disciplines and emerging fields:
2. Program formats : Move beyond full-time degrees:
   Short-term certifications
   Online and blended courses
   Executive education
   Skill-based programs
3. Revenue diversification
4. Student diversification
5. Partnerships and collaborations

ERP (Enterprise Resource Planning) is a centralized software system that integrates all administrative and academic processes in one place.

ICT (Information and Communication Technology) refers to all digital technologies used for teaching, learning, and communication.

The PPP model (Public–Private Partnership) in education is collaboration where the government and private sector share responsibilities, risks, and resources to deliver better educational services.

Innovation Corner / Startup Zone: Coding resources, hackathon materials
Industry reports and patents database
Collaborate with industries and alumni
Host: Technical reading clubs
Research symposiums

Research & Academic Support : Reference management training (Mendeley, Zotero)
Research paper writing workshops
Maintain institutional repository (papers, theses)
Add IEEE project archive for students
Start library orientation programs for all branches

Smart Library Integration: Introduce:
RFID-based book tracking (if budget allows)
Self-check-in/check-out system
Mobile app or web portal for:
Book search
Renewal
Notifications
AI-based recommendation system (optional)
Smart reading zones (silent, collaborative, group study)

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