



## महाराष्ट्र शासन

शासकीय अभियांत्रिकी व संशोधन महाविद्यालय, अवसरी खुर्द,

तालुका: आंबेगाव, जिल्हा: पुणे-४१२ ४०५.

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दिनांक:

20 OCT 2022

प्रति.

मा.सहसंचालक

तंत्रशिक्षण विभागीय कार्यालय,

४१२, ई.बहिरट पाटील चौक, शिवाजीनगर,

पुणे - ४११ ०१६.

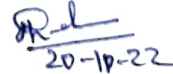
**विषय:** संस्थेचा विकास आराखडा (Institutional Development Plan) सादर करणेबाबत.

**संदर्भ:** आपल्या कार्यालयाचे पत्र.क्र.तंत्रिकापु/ विवि / संस्था विकास आराखडा/ २०२२/४३८९/  
दि. २१/०९/२०२२.

महोदय,

उपरोक्त विषयांस अनुसरून संस्थेचा विकास आराखडा (Institutional Development Plan) तयार करण्याबाबत संदर्भित पत्राद्वारे आपल्या कार्यालयाने सूचित केले होते त्या अनुषंगाने संस्थेचा विकास आराखडा तयार केलेला आहे. आपल्या माहितीसाठी व पुढील कार्यवहीसाठी सदर आराखडा या पत्रासोबत जोडून सादर करित आहे.

आपला विश्वासू,

  
20-10-22

(डॉ.दि.रा.पानगव्हाणे)

प्र.प्राचार्य

शासकीय अभियांत्रिकी व संशोधन महाविद्यालय,  
अवसरी खुर्द, ता. आंबेगाव, जिल्हा-पुणे.

सोबत: संस्थेचा विकास आराखडा (Institutional Development Plan)



Government of Maharashtra

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(Automobile Engineering and Mechanical Engineering Accredited by NBA)

## INSTITUTIONAL DEVELOPMENT PLAN



**(YEAR 2022-2032)**

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## 1. Introduction

In today's competitive technical education world government of Maharashtra has established this institute in rural area to cater the demand from Automobile and IT industrial hub nearby Pune in 2009. Institute is growing with 6 UG programs and planning to start PG programs and research centre in near future. In view of this, the proposed institute development plan will serve as blue print for the enhancement of quality of the institute and implementation of New Education Policy 2020.

|                                     |   |
|-------------------------------------|---|
| Name and Address of the Institute   | Government College of Engineering and Research,<br>Avasari (Khurd), Dist:Pune Pin-412405<br>Website: <a href="http://gcoeara.ac.in">http://gcoeara.ac.in</a><br>Email:- principal.gcoeara@demaharashtra.gov.in<br>Phone: 02133-230568 |
| Year of Establishment               | 2009  |
| Type of Institute                   | Fully Government  |
| AICTE Permanent ID                  | 1-10063464  |
| DTE Code                            | 6004  |
| University Code                     | cegp014980  |
| AISHE Code                          | C-55912   |
| Status of the Institution           | Affiliated to SavitribaiPhule Pune University, Pune   |
| Name of the Head of the Institution | Dr.Dilip R. Pangavhane  |
| Designation                         | I/c Principal and Professor in Automobile<br>Engineering  |

### 1.1 About the Institute

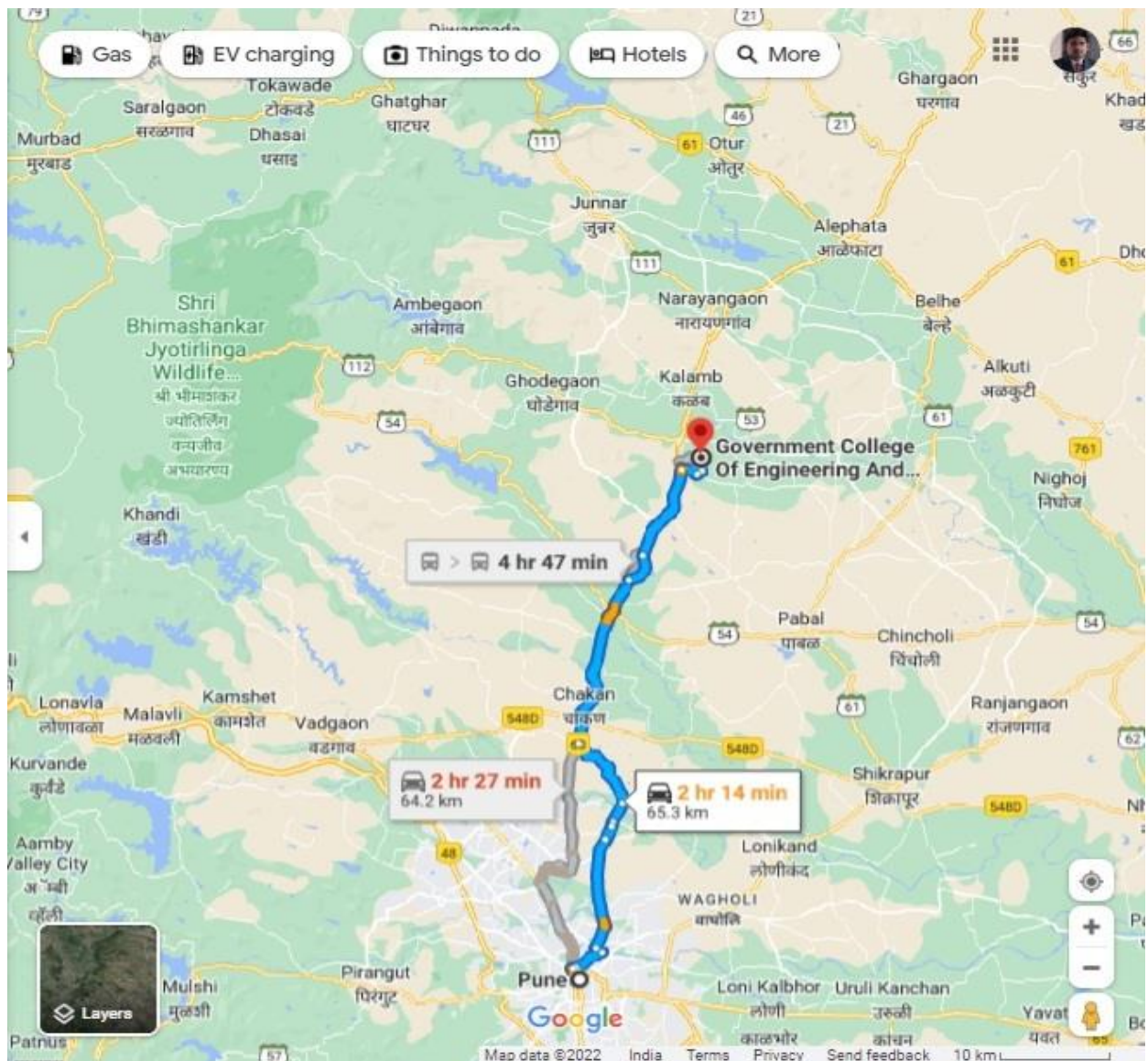
The institute is located in the midst of Sahyadri Valley's pollution free environment and conducive ambience. It is about 65 km North of Pune, on Pune-Nashik National Highway (NH-60) in the vicinity of holy "Shrine Bhimashankar" and "ShivneriFort", the birth place of the Great Maratha warrior Chhatrapati Shivaji Maharaj. Campus is spread over 50.48 acres of land with lush green surrounding having academic built up area of 52407 Sq.mtr. and residential built up area of 30663 Sq.mtr.

The blend of rural and urban meritorious students from all over Maharashtra seeks admission in the institute through MHT-CET plus supernumerary admissions under TFWS, EWS, PMSSS, JK, and GoI quota. Recently our two programs Automobile Engineering and Mechanical Engineering are NBA accredited for the AY 2022-25. Institute is fortunate to have young, dynamic, aspiring faculty with 50% Ph.D. out of available faculty.

With continuous efforts by institute and participation by the students, they have bagged awards in prestigious national / international competitions like ABU Robocon-2022 with Asia Pacific 5<sup>th</sup> rank, Technoxian world robotics championship with 4<sup>th</sup> rank, Virtual BAJA with AIR 7<sup>th</sup>, ETWDC with AIR 3<sup>rd</sup>.



Location Map: -<https://g.page/GCOEARA?share>



*Program wise accreditation status of the institute.*

| Sr. No. | Program                | Year of Establishment | Sanctioned Intake | NBA Status   |
|---------|------------------------|-----------------------|-------------------|--|
| 1       | Automobile Engineering | 2009                  | 60                | Accredited for three years from academic year 2022-23 to 2024-25 i.e. up to 30/06/2025 |
| 2       | Mechanical Engineering | 2009                  | 60                | Accredited for three years from academic year 2022-23 to 2024-25 i.e. up to 30/06/2025 |

| Sr. No. | Program                                      | Year of Establishment | Sanctioned Intake | NBA Status              |
|---------|--|-----------------------|-------------------|-------------------------|
| 1       | Computer Engineering                         | 2009                  | 60                | Not Eligible - High SFR |
| 2       | Instrumentation & Control Engineering        | 2010                  | 60                | Not Eligible - High SFR |
| 3       | Electronics & Tele-Communication Engineering | 2009                  | 60                | Not Eligible - High SFR |
| 4       | Civil Engineering                            | 2010                  | 60                | Not Eligible - High SFR |

## 1.2 Institute Vision Mission and Core Values

To achieve the technological excellence we dream the **Vision**,

*“Educational institution for Empowerment through technological excellence towards sustainable development”*

Through the **Mission**:

- *Value based and demand driven education using best practices*
- *Promotion of research, innovation and entrepreneurship*
- *Commitment to sustainable solutions in service of society*
- *Capability to face local and global challenges*

We imbibe **Core Values**

- *Integrity*
- *Excellence*
- *Transparency*
- *Inclusivity*
- *Lifelong learning*

### 1.3 SWOC Analysis

After the Journey of last 12 years (“एकतप”), rigorous SWOC analysis has been done with the participation of all stakeholders.

#### Strengths

---

- Fully Government institute
  - Excellent civil infrastructure with ample land and built up area
  - Meritorious student’s admissions from all over Maharashtra
  - Well qualified (Almost 50% Doctorate) young and experienced faculty and staff
  - Lowest fee structure in Maharashtra state
  - In the vicinity of industrial (Automobile, IT) area
  - Well defined teaching learning process (OBE based)
  - Availability of all Government welfare schemes
  - Support for Co-curricular and extra- curricular activities
  - Environment friendly campus with express feeder electric supply and
  - Sewage Treatment Plant (3 lakh litres per day)
- 

#### Weaknesses

---

- Shortage faculty positions (35 % Vacant of sanctioned)
  - Moderate campus placement (About 45%)
  - Cumbersome and delayed government procedures
  - Inadequate laboratory equipment’s and furniture
  - Poor campus wide networking and non-availability of MIS
  - Lack of High end computing facility, licensed software’s, smart classroom etc.
  - Lack of good public transportation facility
  - No cafeteria, reprographic, CCTV, Sports Facility, Sports Ground
- 

#### Opportunities

---

- Strengthen industry institute interaction
  - Collaborations with National / International Educational Institutions
  - Research Laboratories Establishments
  - Institute level examinations / tutorials / seminars / quizzes etc.
  - Increase access to library and laboratories
  - Better internet & Wi-Fi facility
  - Extra coaching for competitive examinations / management skills / communication skills
-



## Challenges

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- Procedural delay in equipment purchase, upkeep and maintenance
  - Faculty and staff transfers
  - Competition from other developed institutes
  - Procedural delay in implementation of CAS
  - Ever changing demands of industries
  - Fluctuating job opportunities
-

## 2 Academic Development Plan

### 2.1 Teaching Learning Process

The institute follows Outcome Based Education (OBE) based education pattern as per AICTE guidelines. The Course Outcomes (COs) are identified for every course and are mapped with Program Outcomes (POs). We are practicing conventional and ICT based teaching methodology. In addition to this, innovative practices such as flipped classroom, ice breakers, group activity, and project based learning etc. are included in the curriculum in each program by the University. However, to incorporate these innovative practices institute needs more funding/ facilities to enhance the quality of the teaching learning process. In addition, university has already introduced the new pattern of 'Honor and Minor Courses'. Institutional autonomy gives more freedom for effective implementation for the teaching learning process. Hence, institute is planning to go for autonomy in near future.

### 2.2 Curriculum Development, Implementation and Up-gradation

The curriculum development process is carried out systematically by the Savitribai Phule University, Pune. The present curriculum is 2019 pattern. After every 4 years the syllabi is revised and implemented by the University. Our faculty members take active part in the syllabus revision activity. Hence, the institute is planning for conducting various workshops, seminars, and symposium and meetings with stakeholders in particularly industry personal at least once in year. To identify and bridge the curriculum gap as per industry demand and recent trends in the engineering field, faculty needs to visit institute of repute in order to study their curriculum model periodically.

| Sr.No. | Particulars                             | Approx. Cost. Rs.<br>in lakhs | Remarks   |
|--------|---|-------------------------------|-----------|
| 1.     | Workshops/Seminars /Symposium/ Meetings | 5                             | Per Annum |
| 2.     | Visit to institute of repute            | 3                             | Per Annum |

### 2.3 Academic Quality Assessment Methodologies

In order to assure the academic quality, institute conducts 'Internal Academic Audit' every year as per university norms. Academic quality measurement is mainly focused on following parameters;

- Teaching Learning Processes
- Curricular Aspects
- Students Performance
- General Academic Activities
- Academic Facilities / Resources
- Faculty Performance
- In-Semester Exam (30 Marks)
- End-Semester Exam (70 Marks)
- Practical / Oral / Term Work Exam
- Quizzes
- Projects / Seminars
- Stakeholders Feedback

The institute is planning to implement above academic quality assessment through external audits / expert visits / sessions.

| Sr.No. | Particulars                                  | Approx. Cost. Rs. in lakhs | Remarks   |
|--------|--|----------------------------|-----------|
| 1.     | External Academic Audit for all program      | 1                          | Per Annum |
| 2.     | Expert sessions / visits as an when required | 1                          | Per Annum |

## 2.4 Modernization of library

All the books accession activity is performed through library automation software. The total number of titles and volumes available are 2387 and 22,434 respectively, along with 8898 e-Books, e-journals from DelNet and J-Gate database. Addition of books and journals as per the new syllabus and demand from the students and faculty is need to be fulfilled along with required furniture. In view of this, in today's modern engineering education more and more learning resources are exponentially growing in the digital multimedia form. So, institute plans to deploy full-fledged digital library concepts in near future.

| Sr. No. | Particulars  | Approx. Cost. Rs. in lakhs | Remarks     |
|---------|--|----------------------------|-------------|
| 1.      | Books, E-books, E-journals and magazines, plagiarism software, Digital Library platform. | 50                         | Per Annum   |
| 2.      | Library furniture with well furnishing (at least 100 seating capacity)                   | 50                         | One Time    |
| 3.      | Computers & all required peripheral devices. (100 Nos)                                   | 50                         | Every 05 yr |

## 2.5. Accreditation

NBA Accreditation process of two departments i.e. Automobile Engineering and Mechanical Engineering have been successfully carried out the AY 2022-23 and awarded accreditation for THREE years (valid till 30 June 2025). However, the remaining FOUR departments are in the verge of fulfilling the eligibility criteria by expecting sufficient faculty members. Hence, FOUR programs are preparing for accreditation in near future and at the same time institute is also planning to apply for NAAC.

| Sr.No. | Particulars  | Approx. Cost. Rs. in lakhs | Remarks         |
|--------|--|----------------------------|-----------------|
| 1      | NBA Institute Application Fees                             | 1                          | One Time        |
| 2      | First NBA Accreditation application fees for 4 program.    | 8                          | (for 4 Program) |
| 3      | Second cycle NBA -Visit for 2 Program. related expenditure | 4                          | (for 2 Program) |
| 4      | NBA Visit related expenditure.                             | 6                          | One time        |

**2. The total budget under Academic Development plan is Rs.79 Lakhs per annum and Rs. 100 Lakhs one time.**

## 3 Student Development Plan

### 3.1 Classroom and Laboratory Teaching methodology

Teachers are using traditional chalk, blackboard teaching method and supported LCD projectors. Institute is planning to have paradigm shift in the teaching modern tools by utilizing smart class rooms. Recording studio is to be developed for the creation of e-content.

| Sr.No. | Particulars                       | Approx. Cost. Rs.<br>in lakhs | Remarks  |
|--------|-----------------------------------|-------------------------------|----------|
| 1.     | Smart/Digital Classroom (8 setup) | 50                            | One time |
| 2.     | Recording Studio Setup –(1 setup) | 20                            | One time |

### 3.2 Student Welfare

Being a Government institute, various scholarship and fee concession schemes are provided. Hostel facility is provided with minimum charges as per Government norms. AICTE Pragati scheme for girls, SAKSHAM for physically challenged students, PMSSS for J&K students is implemented. Along with Government Scholarship there are private industry / organizations who give scholarships to students such as Tata Samarth, Siemens, Ujjawal Deep, DayanadScholarship.

### 3.3 Student Extra-Curricular

Now a day's more need of social concern and institute mission also aims towards achieving sustainability through its goals. Institute has NSS unit of 50 Students sanctioned by SPPU. Through this NSS unit various activities planned and conducted throughout the year. Student Cultural Club is active and takes part in various programs at institute and university level. But, it is observed that, more number of students is willing to join noble social work. Hence, there is need of enhancement in the NSS and similar activity. In addition to this, recreational center will definitely add value to the social work.

| Sr.No. | Particulars   | Approx. Cost. Rs.<br>in lakhs | Remarks   |
|--------|---|-------------------------------|-----------|
| 1.     | NSS Camp once in a year and other related activities (100 students) | 2                             | Per Annum |
| 2.     | Recreational center   | 10                            | One time  |

### 3.4 Student Association / Chapters

Each department has their own student association, and different technical and non-technical activities are conducted at department level / institute level through these chapters. ISTE and SAE student chapter are active and works at institute level.

Institute is planning to establish at least one professional body chapter per department such as ISTE, IETE, IEEE, ISA, ACM, CSI and IE.

| Sr.No. | Particulars | Approx. Cost. Rs. | Remarks |
|--------|-------------|-------------------|---------|
|--------|-------------|-------------------|---------|

|    |   |          |           |
|----|---|----------|-----------|
|    |   | in lakhs |           |
| 1. | ISTE, IETE, IEEE, ISA, ACM, CSI and IE. | 5        | Per Annum |

***3. The budget required for Student Development plan is Rs. 7 Lakhs per annum and Rs. 80 Lakhs one time.***

#### 4 Faculty Development Plan

Existing faculty in the institute is 56 out of 83 sanctioned posts with 27 vacant posts. As per university curriculum by considering electives, minor and honors courses the actual work load is quite higher. Hence the actual faculty required is more than the sanctioned posts. Considering above fact the additional 54 and 27 vacant post i.e. total 81 more faculty is required as shown below:

|                  | Sanctioned Posts |      |      | Filled Posts |       |      | Vacant Posts |       |      | Additional Required as per Load |       |      |
|------------------|------------------|------|------|--------------|-------|------|--------------|-------|------|---------------------------------|-------|------|
| Principal        | 1                | -    | -    | 0            | -     | -    | 1            | -     | -    | -                               | -     | -    |
| Branches         | P                | As.P | A.P. | P            | As.P. | A.P. | P            | As.P. | A.P. | P                               | As.P. | A.P. |
| Automobile       | 1                | 3    | 7    | 1            | 1     | 8    | 0            | 2     | 1#   | 1                               | 1     | 6    |
| Mechanical       | 2                | 3    | 7    | 0            | 3     | 7    | 2            | 0     | 0    | 0                               | 1     | 6    |
| Electro & Tc     | 2                | 3    | 7    | 1            | 0     | 5    | 1            | 3     | 2    | 0                               | 2     | 5    |
| Computer         | 1                | 3    | 7    | 1            | 1     | 6    | 0            | 2     | 1    | 1                               | 2     | 6    |
| Civil & App.     | 1                | 3    | 8    | 0            | 2     | 3    | 1            | 1     | 5    | 1                               | 2     | 6    |
| Instru & Control | 1                | 3    | 7    | 1            | 1     | 7    | 0            | 2     | 0    | 1                               | 3     | 6    |
| App.Sci. & Other | -                | -    | 11   | -            | -     | 8    | -            | -     | 3    | 0                               | 0     | 4    |
| T&P Officer      | -                | 1    | -    | -            | 0     | -    | -            | 1     | -    | -                               | -     | -    |
| Librarian        | -                | -    | 1    | -            | -     | 0    | -            | -     | 1    | -                               | -     | -    |
| TOTAL            | 9                | 19   | 55   | 4            | 8     | 44   | 5            | 11    | 11   | 4                               | 11    | 39   |
| Grand Total      | 83               |      |      | 56           |       |      | 27           |       |      | 54                              |       |      |

# Excess Post

#### Current Faculty Position

Out of 56 faculty 22 faculty are PhD, one has submitted PhD thesis, and 11 are Pursuing PhD which includes 3 faculty on AICTE-QIP deputation.

**\*Required faculty as per university curriculum load and better student teacher ratio (15:1) Physical director required.**

#### Current Staff Position

| Post          | Sanctioned Posts | Available Posts | Vacant Posts | Additional Required |
|---------------|------------------|-----------------|--------------|---------------------|
| Registrar     | 1                | 0               | 1            | 0                   |
| Class 3 Staff | 73               | 51              | 22           | 29                  |
| Class 4 Staff | 44               | 13              | 31           | 25                  |



#### 4.1 Faculty Knowledge Up-gradation

Institute organizes FDP/STTP sponsored by DTE and ISTE. Teachers attend these FDP/STTP as per their specialization and interest. Institute also sponsors teachers for attending FDP/STTP organized by other reputed institutes for knowledge up-gradation. Some faculty works as resource persons in FDP/STTP organized by other reputed institutes. Teachers get benefited of QIP program of AICTE for up-gradation of qualification. Our faculty and staff members are deputed to undergo training at YASHADA and Maharashtra State Faculty Development Academy (MSFDA) at Pune.

Institute is planning to depute teachers for their knowledge up-gradation in industry and research organizations such as ARAI, NCL, CIRT, VigyanAashramPabal, TCS, Amazon, Infosys, L& T InfoTech, TATA Motors, Mahindra and Mahindra, Forbes Marshall, Bharat Forge and many MNCs for substantial duration.

| Sr.No. | Particulars  | Approx. Cost. Rs.in lakhs | Remarks   |
|--------|--|---------------------------|-----------|
| 1.     | FDP/Workshop to organize 1 per program per year.                   | 12                        | Per Annum |
| 2      | Faculty participation in FDP/Workshop/Training as per requirement. | 2                         | Per Annum |

#### 4.2 Faculty Welfare

All state government welfare schemes are applicable to faculty and staff members of the institute.

As per AICTE 7<sup>th</sup> pay commission GR, New entrants as well as existing faculty members of degree level institutions should be provided with a desktop computer / laptop / office furniture and a printer with internet connectivity in their office so as to make a faculty member computer savvy and to enable them to have access to the latest technology. All teachers may be given a grant up to Rs.75, 000/- per year on a reimbursement basis, which may be permitted to be accumulated up to 3 years towards acquiring the membership of Professional Societies and for participating in national / international conferences/workshops etc. As per 6<sup>th</sup> Pay commission grant of 2 lakh for purchase of books, computer, etc. was recommended for all teachers.

In the teaching learning process, the faculty plays an important key role for the shaping of students' career. So, it is a deadly need to empower the teachers by providing all types of modern teaching aids. The institute thinks in convergence with the AICTE recommendations.

#### 4.3 Faculty Happiness Index

It is observed and convinced that, the last pandemic situation taught us about the importance of everyone's health and happy minds helps to improve the efficiency and the quality of work. There is a need of motivational, stress management, yoga, vipassana, exploring nature India etc.

| Sr.No. | Particulars  | Approx. Cost. Rs.<br>in lakhs | Remarks  |
|--------|--|-------------------------------|----------|
| 1.     | Motivational, stress management, yoga,vipassana, exploring nature India etc. Visits and tours once in a every two years. | 10                            | One time |

***4. The budget required for Faculty Development plan is Rs. 14 Lakhs per annum and Rs. 10 Lakhs one time.***

## 5 Industry Institute Interaction Development Plan

### 5.1 Memorandum of Understanding

Currently institute have 10+MoUs with different industries and organizations. Institute is planning to sign more than one MoU with industry related with each department. Through MoUs institute is conducting different activities such as use of industry resources (experts, research laboratories), to arrange visits, internship trainings, assistance for placement, sponsored projects. By increasing the interaction with industry through MoUs the gap between Industry Academia will be reduced.

| Sr.No. | Particulars   | Approx. Cost.<br>Rs. in lakhs | Remarks   |
|--------|---|-------------------------------|-----------|
| 1.     | Expenditure towards arrangement of visits, internship trainings, assistance for placement, sponsored projects | 3                             | Per Annum |

### 5.2 Industrial Training for the Faculty

In order to get hands on experience to the faculty, institute is planning to depute faculty members in the industry during vacations. This will help to improve practical skills of the teacher for effective teaching learning.

### 5.3 Faculty Exchange Program

The institute is planning to share faculty resources with industry and other Government institutes and research laboratories.

### 5.4 Sabbatical Training of Faculty

Institute is planning to depute few faculty members on sabbatical training for the purpose of professional and academic growth, learning and development of new skills, writing books, monographs etc. It helps to grow with the industry hand in hand.

### 5.5 Sponsored Research Laboratory

Institute is planning to establish industry sponsored at least one research laboratory in each department through active MoU implementation. Presently Automobile Engineering department have one industry sponsored laboratory sponsored by Terminal Technology and sponsored laboratory by Forbes Marshal in Instrumentation and Control department is in process.

**5. The budget required for Industry Institute Interaction Development plan is Rs. 3 Lakhs per annum**

## 6 Research Development Plan

### 6.1 PG courses and Research Center

As two programs (Automobile Engineering and Mechanical Engineering) have got accreditation from NBA, institute is planning to start PG courses in respective departments. After starting PG programs, the Institute will become eligible to apply SPPU for recognized research center in respective department.

| 1 <sup>st</sup> Phase  | Faculty Required<br>for PG Courses |      |      |
|------------------------|------------------------------------|------|------|
| Branches               | P                                  | As.P | A.P. |
| Automobile Engineering | 1                                  | 1    | 1    |
| Mechanical Engineering | 1                                  | 1    | 1    |

| 2 <sup>nd</sup> Phase                               | Faculty Required<br>for PG Courses |              |                |
|---|------------------------------------|--------------|----------------|
| Branches  | Prof                               | Asso<br>Prof | Asst.<br>Prof. |
| Electronics and<br>Telecommunication<br>Engineering | 1                                  | 1            | 1              |
| Computer Engineering                                | 1                                  | 1            | 1              |
| Civil Engineering                                   | 1                                  | 1            | 1              |
| Instrumentation and Control<br>Engineering          | 1                                  | 1            | 1              |

### 6.2 Innovation, IPR, Start-ups, Incubation

Institute has initiated activities related to Innovation and IPR. Institute is planning to establish separate cells for Start-ups and Incubation.

| Sr.No. | Particulars                            | Approx. Cost.<br>Rs.<br>in lakhs | Remarks   |
|--------|--|----------------------------------|-----------|
| 1.     | Innovation, IPR Registration fees etc. | 5                                | Per Annum |
| 2.     | Start-ups, Incubation                  | 100                              | One Time  |

### 6.3 Publications

Faculties and students are publishing the research work in SCOPUS indexed / UGC approved / Other Index Journals and Conferences. More publications are expected after starting PG courses and after establishment of research centers. Institute encourages faculty to publish books, monographs, book chapters, articles, etc.

| Sr.No. | Particulars                                    | Approx. Cost. Rs.<br>in lakhs | Remarks   |
|--------|--|-------------------------------|-----------|
| 1.     | Publication registration fee and travel grant. | 5                             | Per Annum |

#### **6.4 Testing and Consultancy**

Institute is providing testing and consultancy by effective utilization of available resources. Institute is planning to increase the Testing and Consultancy through each department. Institute is planning to procure equipment required for Testing and Consultancy purpose.

***6. The budget required for Research Development is Rs. 10 Lakhs per annum and Rs. 100 Lakhs one time.***

## 7. Infrastructure and Facility Development Plan

### 7.1 Digital Campus Development

Currently campus wide wired internet facility is available. Wi-Fi facility is available in two departments and planning to make it campus wide. CCTV available at selected places but planning to extend same campus wide. It is necessary to procure latest configuration Computers and peripherals, LCD projector and equipment's for smart class rooms. Available furniture is insufficient, hence need to purchase additional.

| Sr.No. | Particulars   | Approx. Cost.<br>Rs. in lakhs | Remarks  |
|--------|---|-------------------------------|----------|
| 1.     | College campus wide networking and CCTV surveillance system | 100                           | One Time |
| 2.     | LCD Projector, Laptops -60 nos                              | 60                            | One Time |
| 3.     | College MIS   | 100                           | One Time |

### 7.2 Modernization of Existing Laboratories and Establishment of New Laboratories

Modernization of laboratories and removal of obsolesce is needed on priority basis. Also most of the equipment's need periodic maintenance. Most of the laboratories need to be upgraded in accordance with the 2019 revised university syllabus. Following new laboratories are needed to be developed:

| Programs                         | Existing<br>No of<br>Labs | New Lab Name to be established   | Approx.<br>cost in<br>Lakhs for<br>new labs | Approx<br>cost in<br>Lakhs for<br>existing<br>labs |
|----------------------------------|---------------------------|--|---|--|
| Automobile                       | 8                         | Vehicle Testing Lab, Vehicle Research Lab  | 200   | 268  |
| Mechanical                       | 8                         | Noise Vibration and Harshness Lab, Electrical Vehicle Research Lab, Project Lab    | 180   | 165  |
| Civil                            | 5                         | Project Lab, Engineering Geology Lab, Fluid Mechanics, Survey Lab, Environment Lab | 100   | 120  |
| E&TC                             | 8                         | Image and Video Processing Lab, Advance Communication                              | 160   | 100  |
| Computer                         | 4                         | AIML Lab, Block Chain Lab and Project Lab  | 100   | 100  |
| Instrumentation                  | 4                         | Robotics & Automation, Embedded System, Control system, IoT Lab                    | 160   | 125  |
| First Year and Institution Level | 3                         | Project Based Learning, Central Computing Lab                                      | 100   | 22   |



### 7.3 Extension of Hostels

Currently institute is having boys hostel with capacity of 360 and girls hostel with capacity of 230 which is insufficient. The institute is located in remote place so, more meritorious students may take admissions in the institution if there is provision for good transportation and hostel facility. Hence, institute is planning to expand the capacity of both the hostels on priority basis.

| Sr.No. | Particulars   | Approx. Cost. Rs.<br>in lakhs | Remarks  |
|--------|---|-------------------------------|----------|
| 1.     | New Boys Hostel of capacity 900 including mess and laundry rooms  | 15646                         | One Time |
| 2.     | New Girls Hostel of capacity 310 including mess and laundry rooms | 5390                          | One Time |

### 7.4 Student centric infrastructure

Institute is planning to develop well-furnished Cafeteria, Student Multipurpose Activity Centre, Gymkhana Centre, Students Technical and Cultural Clubs, Reprographic facility centre and Covered Parking.

| Sr.No. | Particulars  | Approx. Cost. Rs.<br>in lakhs | Remarks  |
|--------|--|-------------------------------|----------|
| 1.     | Cafeteria (With 100 Seating Capacity)  | 35                            | One Time |
| 2.     | Student Multipurpose Activity Centre / Gymkhana Centre (With 100 Seating Capacity) | 35                            | One Time |
| 3.     | Furniture for Students Technical and Cultural Clubs                                | 20                            | One Time |
| 4.     | Reprographic facility centre (20Sq.mtr)  | 7                             | One Time |
| 5.     | Covered Parking for Four Wheeler   | 10                            | One Time |
| 6.     | Covered Parking for Two Wheeler  | 20                            | One Time |

### 7.5 Landscaping and Green Campus

Institute has developed Rainwater management System, Waste Water Management System and Sewage Disposal System. Institute has planted more than sufficient number of plants in campus and nearby campus. There is scope for landscape to improve the aesthetics of campus. Institute is Plastic free. Sanction of solar roof-top system through MEDA is in process.

| <b>Sr. No.</b> | <b>Description</b> | <b>Budget in Rs.<br/>Lakhs</b> | <b>Remarks</b> |
|----------------|--------------------|--------------------------------|----------------|
| 1.             | Landscaping        | 50                             | One time       |
| 2.             | Green Campus       | 10                             | One time       |
| 3.             | Yearly Maintenance | 5                              | Per Annum      |

#### **7.6 Other Institutional Estimation and Planning**

| <b>Sr. No.</b> | <b>Description</b>                           | <b>Budget in Rs.<br/>Lakhs</b> | <b>Remarks</b> |
|----------------|--|--------------------------------|----------------|
| 1.             | Automobile Garage                            | 116                            | One time       |
| 2.             | Heavy Structure laboratory                   | 250                            | One time       |
| 3.             | Purchase of Bus and Office Vehicle           | 75                             | One time       |
| 4.             | Yearly Maintenance of Bus and Office Vehicle | 1                              | Per Annum      |

***7. The budget required for Infrastructure and Facility Development plan is Rs. 6 Lakh per annum and Rs. 23824 lacks one time.***

## 8. Institute Development Plan Summary

| Sr. No.      | Expenditure                                | Amount in Rs.<br>Lakhs Per<br>Annum | Amount in<br>Rs. Lakhs.<br>One Time |
|--------------|--|-------------------------------------|-------------------------------------|
| 1            | Introduction                               | -                                   | -                                   |
| 2            | Academic Development                       | 79                                  | 100                                 |
| 3            | Student Development                        | 7                                   | 80                                  |
| 4            | Faculty Development                        | 14                                  | 10                                  |
| 5            | Industry Institute Interaction Development | 3                                   | 0                                   |
| 6            | Research Development                       | 10                                  | 100                                 |
| 7            | Infrastructure and Facility Development    | 6                                   | 23824                               |
| <b>TOTAL</b> |  | <b>119</b>                          | <b>24114</b>                        |



*Dr. D. R. Pangavhane*

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