



Vidya Prasarak Mandal's

## Maharshi Parashuram College of Engineering

Hedvi Guhagar Road, At : Velneshwar, Taluka : Guhagar,

District : Ratnagiri, Maharashtra 415 729.

Tel. No. : 02359 - 205237 Fax No. : 02359 - 205238

E-mail : [mpcoe@vpmthane.org](mailto:mpcoe@vpmthane.org) URL : [www.vpmpcoe.org](http://www.vpmpcoe.org)

*Education*  
*on the lap of Nature ...*





The suggestive symbols of an illuminated lamp, open book, a pen, an inkpot and a flower in the emblem of VPM mentions in Sanskrit that :

**प्रज्वालितो ज्ञानमयः प्रदीपः**

***Prajwalito Jnanamayaha Pradipaha***

Translated into English it means that :

'The lamp of knowledge has lit'

## **Vidya Prasarak Mandal, Thane (VPM)**

### **TRUSTEES**

Dr. V. V. Bedekar

Shri. H. T. Thanawala

Shri. S. K. Joshi

Shri. S. V. Vengurlekar

### **MANAGING COMMITTEE**

Dr. V. V. Bedekar	Chairman
Shri. M. Y. Gokhale	Treasurer
Shri. Uttam Joshi	Secretary
Shri. J. N. Kayal	Joint Secretary
Shri. M. N. Patil	Member
Shri. S. V. Karandikar	Member
Shri. D. G. Joshi	Member
Dr. A. N. Bapat	Member
Smt. A. A. Bapat	Member
Shri. Aniruddha Joshi	Member
Dr. Mahesh Bedekar	Member

**First Year Engineering (Semester I & II), Revised course from  
Academic Year 2012-13, (Rev-2012),  
(Common for all branches)**

Sub Code	Subject Name	Teaching Scheme			Credits Assigned			
		Theory	Pract.	Tut.	Theory	TW/Pract.	Tut.	Total
FEC201	Applied Mathematics-II	04	-	01	04		01	05
FEC202	Applied Physics-II	03	01	-	03	0.5	-	3.5
FEC203	Applied Chemistry-II	03	01	-	03	0.5	-	3.5
FEC204	Engineering Drawing	03	04	-	03	02	-	05
FEC205	Structured Programming Approach	04	02	-	04	01	-	05
FEC206	Communication Skills	02	02	-	02	01	-	03
FEC201	Basic Workshop Practice-II	-	04	-	-	02	-	02
		19	14	01	19	07	01	27

**Scheme for Semester-II**

Sub Code	Subject Name	Examination Scheme								
		Theory Marks				Term Work	Pract.	Oral	Total	
		Internal Assessment		End sem.						
		Test 1	Test 2	Average of Test 1 and Test 2		exam				
FEC201	Applied Mathematics-II	20	20	20		80	25	-	-	125
FEC202	Applied Physics-II	15	15	15		60	25	-	-	100
FEC203	Applied Chemistry-II	15	15	15		60	25	-	-	100
FEC204	Engineering Drawing	15	15	15		60	25	50	-	150
FEC205	Structured Programming Approach	20	20	20		80	25	25	-	150
FEC206	Communication Skills	10	10	10		40	25	-	-	75
FEC201	Basic Workshop Practice-II	-	-	-		-	50	-	-	50
				95		380	200	75		750

**(As per Credit Based Semester and Grading System with effect from the academic year 2012 - 2013)**

# Vidya Prasarak Mandal, Thane

## Group of Institutions

- Dr. Bedekar Vidya Mandir ( Marathi Medium School)
- Sou. A. K. Joshi English Medium School
- B. N. Bandodkar College of Science
- K. G. Joshi College of Arts
- N. G. Bedekar College of Commerce
- VPM's TMC Law College
- Dr. V. N. Bedekar Institute of Management Studies
- VPM's Polytechnic
- VPM's Advanced Study Centre
- VPM's Polytechnic IT Centre
- VPM's Centre for Foreign Language Studies
- VPM's Department of Defence and Strategic Studies
- VPM's London Academy for Education and Research
- VPM's Academy of International Education and Research
- VPM's Maharshi Parashuram College of Engineering



## VISION

VPM ( Thane ) is Committed to run educational Institutions of excellence, driven by creativity and Innovation, through state-of-art infrastructure, With a view to provide quality, value based, education seeking holistic development of student's and teachers' personalities to enable Them to become socially responsible citizens.

## MISSION

To establish and develop institutions of excellence, in education, research, training and development in different disciplines of learning at primary, secondary and tertiary levels, with learner-centric pedagogically effective learning ambiance and state-of-the art technology that can encourage learning by spirit of inquiry, group work, discovery, imbibing moral and cultural values and institutional and individual leadership with social responsibility.

## GOALS

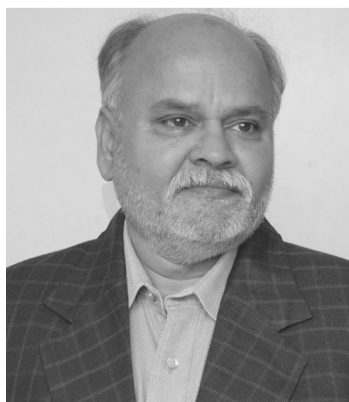
- ❖ To contribute to the development of teachers (facilitators) who can deliver state-of the-art knowledge to students and develop mindsets and abilities to convert knowledge into skilled action and contribute to social capital formation.
- ❖ To provide state-of the-art facilities to teachers and students with a view to develop holistic personalities driven by fundamental values of life-mutual respect, collegial attitude, creative and cognitive thinking, self directed learning, spirit of enquiry, environmental stewardship, transparency, diversity of ideas, academic freedom, respect for democratic values and dignity of individual.
- ❖ To develop industry academia partnership which can help to identify ways and means of establishing linkages to mutual advantage of education and industry through educational and training programs, case studies, consultancy services, students projects and summer and final placements et al.
- ❖ To develop linkages with various stakeholders of the Konkan region and Maharashtra State which can facilitate the making of MPCOE as a hub for various education and education related activities for empowering and enriching the fraternity of the Konkan region and society at large.
- ❖ To evolve MPCOE as a Centre for Student Advisory and Development services of the Konkan region which can.

Guide and mentor student pursuing higher education and encourage the student population in favour of higher, value added, educational products and services in Engineering, Management and other related disciplines.

Counsel students to make appropriate choices of career paths and courses based upon their competencies, demand for certain kinds of special skills and added qualification's.

To emerge as a full-fledged, duly accredited, centre for excellence which will be a highly interactive learning organisation interface industry, business and trade for imparting practical knowledge as all levels and contribute to the process of national and global development.

## CHAIRMAN'S MESSAGE



**Dr. Vijay V. Bedekar**

Chairman

Vidya Prasarak Mandal, Thane

Vidya Prasarak Mandal, Thane (VPM) is a pioneering educational trust, which enthusiastically and zealously caters to the basic and advanced needs of education of nearly 15,000 students through its Marathi and English Medium Schools, Arts, Commerce, Science and Law Colleges, Polytechnic, Institute of Management Studies and Advanced Study Centre all located in Thane city.

I am proud to say that VPM has taken a right step to fulfill the national dream of providing a high quality engineering education in rural environment of the Maharashtra State. It is said that “whoever can make two blades of grass grow where only one grew before will deserve better of mankind than any speculative philosopher or metaphysical system builder”.

The Velneshwar project, then (2008) a distant but desirable dream, has now fructified into a reality, with several blades of grass on the campus, in as much as the Maharshi Parshuram College of Engineering (MPCOE) has received permission from the AICTE to conduct the Bachelor's Degree of Engineering, of the University of Mumbai, in five branches viz. Mechanical, Electrical, Electronics & Telecommunication, Computer and Instrumentation Engineering with effect from the academic year 2012-13. Thus, VPM's expanse into the rural hinterland of Maharashtra through the launch of an Engineering college now and other centres of excellence in the future in different disciplines, and its extensions into the global network, will always underscore into its mooring in local soils and enrich Indian heritage, values, beliefs, practices and its immeasurable treasure of Indian wisdom. I take this opportunity to say that every dimension and all activities of VPM, shall endeavour, at all times, to align, forge and merge itself, with the ethos of the nation to sub-serve the cause of the onward march of human progress through its network of institutions and their diverse range of activities.

The MPCOE which is set in a sprawling campus of 37 acres of land houses educational buildings, students' hostel, staff quarters, canteen, auditorium, healthcare center, gymnasium, badminton court, bank with ATM center et al. The entire campus, as well as residential area, is connected through WiFi having 24 hours leased line Internet / intranet connectivity.

It therefore gives me a great pleasure to extend a very warm welcome to prospective students and teachers of this new institution. Your future livelihood and personal goals are greatly influenced by the choices you make today. We are committed to excellence in the field of education and our track record, of the last eight decades, bears testimony to the same. It is VPM's vision to make MPCOE a 'leading dynamic and responsive centre of excellence in technology, engineering and management in the world.' I recommend this vision as a credo and hope that this will be attained and always well sustained.

The future is always given shape by the faith we have in ourselves in what we do, believe and practice. In fact as a renowned American social philosopher – Lewis Mumford – observes: “Faith in the creative process, in the dynamics of emergence, in the values and

purposes that transcend past achievements and past forms, is the precondition of all further growth.”

I would therefore urge all stakeholders, existing and potential, to take a look around our campus and see the world class facilities that have been provided to students and teachers in pursuing and contributing to the cause of Engineering education. Education at MPCOE is committed to attain, maintain and continuously improve the quality of faculty, programs and the youth graduating from the portals of this alma mater. We are firmly focused on realising our vision and dreams and achieving our goals and make MPCOE a national, nay international, centre of excellence and a choicest destination for engineering education in the country. I am looking forward to meet the young entrants into MPCOE and offering them the best of the facilities, environment and resources so that they will be the pioneers and great achievers in their respective endeavors and bring pride and glory not only to their alma mater but also to society at large.

The teachers / students are the backbone of any educational institution including MPCOE. I am sure that the teaching fraternity and students of MPCOE will rise to the occasion and shoulder the responsibility cast on them with ease and enable the realisation of dreams of a great future for all stakeholders of MPCOE. For VPM (Thane) the past was great no doubt, the future will be glorious still and MPCOE, alongwith its other sister institutions in Thane, would have played their respective roles. I commend the above thoughts to one and all and solicit their co-operation in the humble mission that VPM (Thane) has ventured.

**Dr. Vijay V. Bedekar**

Chairman

Vidya Prasarak Mandal, Thane

## BRIEF RESUME OF DR. VIJAY VASUDEO BEDEKAR

- NAME : **DR. VIJAY VASUDEO BEDEKAR**
- DATE OF BIRTH : 9<sup>TH</sup> October 1947
- BIRTH PLACE : MUMBAI (BOMBAY)
- ADDRESS : "Shivshakti", Dr. Bedekar Hospital,  
M. Karve Road, Naupada, Thane 400601. (M.S.)
- TEL. NO. : 022 25421438
- QUALIFICATION  
& OCCUPATION : **M.B.B.S. (1972), D.G.O. (1977)**  
**Practicing as Gynecologist and General Physician for the  
last 39 years at Thane.**
- ACTIVITIES : Special liking for Oriental Studies, History, Indian  
Culture and Traditions, Sociology, Art, Science,  
Voracious Reader & undertaking extensive study travels.
- Connected with a number of Institutions and Organizations  
in various capacities, some of them being :
- Founder President: Institute for Oriental Study, Thane  
**Chairman, Vidya Prasarak Mandal, Thane**  
Founder President: The Museum Trust of West Coast of India, Thane  
Founder President: Satya Shodha Sanstha, Thane  
Life Member: Asiatic Society Mumbai  
Life Member: Numismatic and Epigraphic Society of India  
Life Member: Bharat Itihas Sanshodhak Mandal, Pune  
Member: International Association of Sanskrit Studies  
Member: Governing Council, Bhandarkar Oriental  
Research Institute, Pune  
Friend: (Life) British Library, London, UK  
Friend: British Museum, London, UK  
Friend: V & A Museum, London, UK  
Friend: Bodleian Library, Oxford, UK  
**Member: Royal Asiatic Society, London**  
**Friend : The Ashmolean Museum, Oxford, UK**  
**Fellow : The Linnean Society of London**
- Talks on All India Radio on various subjects such as  
Oriental Studies, Ancient- Medicinal Sciences, Ayurveda etc.  
Participation in International Conference and Seminars on  
Medicine, Sanskrit, History etc. some of them being:  
San Francisco, America, 1982: International Conference on Gynecology  
Philadelphia, America, 1984: 6<sup>th</sup> World Sanskrit Conference  
Singapore, 1986: World Conference on Fertility and Sterility  
Singapore, 1986: Asian History Congress  
Republic of China, 1986: First Non-political and Non Govt. aided  
study tour

Lahore, Pakistan, 1987: World Conference on Perinatology  
Holland, 1987: 7<sup>th</sup> World Sanskrit Conference at Leiden  
Vienna, Austria, 1990: 8<sup>th</sup> World Sanskrit Conference  
East Europe, 1990: Study tour of Rumania, Hungary, Yugoslavia,  
East Germany, Czechoslovakia and other East European  
countries after the debacle of communism  
Melbourne, Australia, 1994: 9<sup>th</sup> World Sanskrit Conference  
Delhi, India, 1994: 3<sup>rd</sup> World Archeological Congress  
Torino, Italy, 2000: 11<sup>th</sup> World Sanskrit Conference  
Helsinki, Finland, 2003: 12<sup>th</sup> World Sanskrit Conference  
Edinburgh, UK, 2006: 13<sup>th</sup> World Sanskrit Conference

**Athens, Greece, 2009 : IAIE Annual Conference**

**Budapest, Hungary, 2009 : 23<sup>rd</sup> International Congress of History of  
Science & Technology.**

**Kyoto, Japan. 2009 : 14<sup>th</sup> World Conference**

**Bucharest, Romania–September 2011 : 5th International Vedic  
Conference**

**New Delhi 2012 : 14<sup>th</sup> World Sanskrit Conference**

Editor of 'Itihas Patrika', a Research Journal and profound writer of  
articles and letters

Published books on variety of subjects like Education, Caste System,  
Blind Faith and subjects of social importance

Research Papers: Indian Contribution to World Civilization

Science, Technology and Human Development

Sthapatya in Ancient India

British Policies and India culture

Law and Justice in Ancient India

Sports and Past times in Ancient India

Agriculture in Ancient India

Science and Technology in Ancient India

Marine Archaeology

Indo-Native American cultural Similarities

Education in Ancient India

**History of Migration of Panchatantra and what it can teach us\_?**

**India's Scientific Contribution to Europe and other World  
Civilizations Prior to Industrial Revolution**

## PRINCIPAL MESSAGE



**Dr Avinash Madhukar Chincholkar**  
PhD (CAD-CAM, IIT-Madras), MBA (HRM)

Dear Students,

Greetings from Dr Chincholkar!!!

At the outset I thank you for choosing VPM's Maharshi Parashuram College of Engineering (VPM's MPCOE), Velneshwar, for pursuing your Engineering dream.

On behalf of the Management of VPM, and the faculty and staff of the college, I welcome you on-board this educational ship. VPM's MPCOE is strategically perched on an elevated land off the Hedvi-Guhagar road (also named Coastal Highway), is only 5 km from the famous tourist destination of Velneshwar temple and adjoining beach, and faces the vast expanse of splashing blue water of the Arabian Sea. The college is surrounded by green and beautiful landscape that will make your stay pleasant and comfortable. The fully residential campus, and quiet and serene ambience are meant to provide you with a perfect environment that is conducive to learning your chosen Engineering course.

On the academic front, we have provided the best quality class rooms, laboratories, and library facilities. We have taken utmost care while recruiting the faculty and staff. The campus boasts of the other amenities essential for a residential township such as well-furnished hostel, sports ground, gymkhana, guest-house for parents and visitors, large auditoriums, bank, canteen, shops, first-aid, and an open theatre.

While disciplined and time-bound life-style will be emphasized in the campus, we have provided 24-hour internet access for enjoyable learning experience. During the course of your four-year degree programme, it will be our sincere endeavour to ensure that your overall personality undergoes positive transformation through special guest lectures on varied subjects by eminent personalities, visits to industries in the vicinity, movie screening, and regular interaction with the Principal and faculty of the college.

Please ask your parents, relatives and friends to visit our college campus at their convenience, or visit our website [www.vpmmcoe.org](http://www.vpmmcoe.org) for more information.

I wish you comfortable, enjoyable and fruitful learning years in MPCOE, Velneshwar, and a bright and successful future.

**Dr Avinash Madhukar Chincholkar**

Principal

VPM's Maharshi Parashuram College of Engineering

## BRIEF RESUME OF DR. AVINASH MADHUKAR CHINCHOLKAR

Dr Avinash Madhukar Chincholkar, born in Nagpur on 19 April '61, obtained his -

- ✍ B.E. (Mechanical Engg) from Govt. Engg. College, Jabalpur (M.P.) in 1983,
- ✍ M.Tech. (Production Engg.) from VRCE, Nagpur (now NIT, Maharashtra) in 1989,
- ✍ Ph.D. in CAD/CAM from IIT, Madras, in 1995.

Besides, he holds -

- ✍ M.A. (Public Administration) Degree from Nagpur University, and
- ✍ Diploma in Management &
- ✍ MBA in Human Resource Management from IGNOU, New Delhi.

Dr Chincholkar has good number of International & National Journal and Conference publications to his credit.

He has successfully guided 4 Ph.D. candidates and 8 M.Tech. candidates so far.

He has organized one International conference, one National conference, and a five-day workshop on “Creativity for Robust Product Design”, and has participated in more than 30 conferences and workshops during the last 29 years of service in Engineering colleges.

Formerly, he was the **Principal** of Sandip Foundation's Sandip Institute of Engineering and Management, Nashik, during July '10 to June '12.

Areas of research interest of Dr Chincholkar include modeling, simulation, and performance evaluation of automated manufacturing systems, cellular manufacturing systems, abrasive waterjet machining, and composite materials.

Dr Chincholkar is a Fellow of Institution of Engineers (India), and a Life Member of Indian Society for Technical Education (ISTE). He is a Lead Auditor for ISO 9000:2008, and has been Management Representative for ISO 9001:2000 for almost 8 years, and for ISO 14001:2004 for 2 years at Manipal University (Karnataka).

Dr Chincholkar led a team of students to Warsaw, Poland, to take part in IAESTE's (International Association for the Exchange of Students for Technical Experience) annual conference in January 2009.

His hobbies include singing, and listening to songs of different languages, reading detective novels, watching detective serials, studying and analysing animal and human behaviour, understanding and analysing interpersonal human relations, and going on long drive.

He was an active and keen sportsman during his school and college days and played table tennis, badminton, cricket, hockey, chess, and carrom. Dr Chincholkar believes in positive and constructive thinking, team work, and destiny.

Dr Chincholkar is married to Geeta Chincholkar and has a son Aditya who is pursuing B.E. (Mechanical).

## DIRECTOR'S MESSAGE



**Dr. Kamalakar Dinkar Desai**  
B.E.(Elect.), M.E.(Spe-Comp. Science), Ph.D.(Tech.)

I extend a warm welcome to you all to witness our fulfillment of vision to start a world-class engineering college ,VPM's Maharshi Parshuram College Of Engineering (MPCOE), new educational township at Velneshwar, in clean, green and pollution free, environment of the Konkan.

Maharshi Parshuram College Of Engineering at Velneshwar is 20 km from Guhagar and 55 km from Chiplun (Mumbai-Goa highway ). Velneshwar with its picturesque beach has been declared as B class tourist center by Govt. of Maharashtra.

Engineering education has played an important role in development of technology to make life simpler and easy to live. VPM MPCOE , is a step ahead towards training engineers affiliated to Mumbai University offering five Degree Engineering Courses viz:

- Mechanical Engineering
- Electrical Engineering
- Electronics and Telecommunication Engineering
- Computer Engineering
- Instrumentation Engineering

It will also have Badminton Court and an Amphitheater of 1000 capacity, Gymnasium, Clubhouse, Guesthouse, Canteen and Medical Centre .The qualified faculty and staff pledge their best efforts to achieve educational goals .

The vision of EX- President DR. ABDUL KALAM , stating the power of computer in education has been integrated in imparting training utilizing e-learning concept all throughout the training .The use of scientific softwares such as Scilab, Maxima, BRL (A), X CIRCUIT Ki CAD are introduced at appropriate levels in training.

The students , educators and staff are connected together by AICTE provided software Live @Edu. This provides students to communicate with staff and real time document sharing and management. Students are trained with Microsoft tools as they are likely to encounter in future workforce. Care has been taken to see that every student's personality is developed which will contribute to build strong India.

I invite you all to visit our MPCOE green technology campus, encouraging us to build prospective careers in techno growth of India.

**Dr. K. D. Desai**  
Director  
VPM's Maharshi Parashuram College of Engineering

## **BRIEF INTRODUCTION OF DR. KAMALAKAR DINKAR DESAI**

DR. K.D. DESAI was Director (Tech.) at M/S Livingstones Group at SEEPZ Mumbai (1997 to 2009) before joining NMIMS- University (2009-2011 ). He has 38 years of experience in the field of general Management & Administration as well as Technology Training, Research. He was department head at Shree Bhagubhai Mafatalal Polytechnic for 10 years.

As Director (Technology) at Livingstones Group, SEEPZ he has contributed immensely in developing Innovation in Precious Metal Casting technology reducing production cost by 20 %. He was invited to USA at Santa Fe Symposium (Manufacturing Technology ) in May 2005 and by Platinum Guild International, USA in 2004 to deliver his talk on Process innovation .

He served with distinction in various fields of e-Learning , Manufacturing Technology , Laser-Technolog and Agriculture Industries by conducting seminars, conferences and workshops .. He was awarded British Council Visitor ship Scholarship to visit Technology Institute in England in year 1989. He has credit to visit USA , GERMANY , ITALY ,SWITZELAND , JAPAN ,CHINA and HONG KONG for Technology interaction and Transfer . He was invited at the United Arab Emirate University (UAE ) during his Ph. D. (TECH ) studies (1990 TO 1997 )

His Human Relationship rapport in industry and institutions has lead to success in implementing mission of the organization . His interaction in India and abroad and has been responsible for the up-liftment of industries wherever he has worked. He is also a board member IIGJ, Mumbai, M Recognized member of IOD and Managing Committee Member of Vishal Mumbai Shikshan Prasarak Mandal , Mumbai.

## ABOUT VIDYA PRASARAK MANDAL THANE, (VPM)

Vidya Prasarak Mandal's, Thane is a 75 years old Charitable Educational Trust committed to quality education. It runs Marathi and English Medium Schools, Arts, Commerce, Science, and Law Colleges, Management Institute, Polytechnic, IT Centre, Advanced Study Centre and a Foreign Language Centre (French / Japanese / German / Chinese).

- ❖ More than **17000 students** get quality education from **KG** to **PG** through the schools and colleges run by VPM, Thane.
- ❖ VPM's English Medium School has almost **100% result** of SSC Board from several years.
- ❖ VPM's Arts, Commerce and Science Colleges are **NAAC accredited "A+" Grade** and B. N. Bandodkar College of Science received **Best College Award** in 2009-10 from the Mumbai University.
- ❖ VPM's Polytechnic, Thane, is privileged to be the first accredited, unaided Polytechnic which has been adjudged as the winner of **ISTE-Narsee Monjee Award for Polytechnic having Best Overall Performance in Maharashtra State for the year 2009.**
- ❖ VPM, has two separate educational campuses in Thane, one for Schools and other for Colleges with modern educational infrastructure like **Fibre Optic Backbone, Auditorium with video conferencing technology, Leasedline connectivity, Digitisation of libraries and whole campus with WiFi facility** etc.
- ❖ VPM has been given permission by the All India Council for Technical Education (AICTE) to start **VPM's Maharshi Parshuram College of Engineering (MPCOE)** at Velneshwar, Tal-Guhagar, Dist.-Ratnagiri from the academic year 2012-13.
- ❖ AICTE has approved Five Engineering Degree Courses affiliated to University of Mumbai viz. **Mechanical, Electrical, Electronics and Telecommunication, Computer and Instrumentation Engineering** of 60 intake capacity each will be conducted from this academic year 2012-13.

## SALIENT FEATURES

- 1 A huge 35 Acres Engineering College campus in Velneshwar Tal-Guhagar, Dist –Ratnagiri.
- 2 Affiliated Mumbai University following Degree Engineering Courses
  - ☞ Mechanical Engineering
  - ☞ Electrical Engineering
  - ☞ Electronic and Telecommunication Engineering
  - ☞ Computer Engineering
  - ☞ Instrumentation Engineering
- 3 Engineering College is situated on proposed coastal highway and two k.m. away from Velneshwar Beach. Beautiful College campus viewing sea face.
- 4 Campus is 50 K.M. away from Chiplun railway station on konkan railway.
- 5 35 Acres township college campus is proposed to contains 6 academic buildings consists of Step Auditorium for every building, 10 hostel buildings, 10 Teachers buildings, Gymkhana building, utility building and guest house.
- 6 Qualify Teaching staff
- 7 24 hours Electronic Security system, Bank Debit card cum I-Card facility, ATM Centre in the college Campus.
- 8 7 am to 11 pm library facility in the campus with National and International data bases
- 9 International Standard Hostels, two students in each room comprising attached toilet with 24 X 7 hours Internet facility.
- 10 Best Quality Canteen and Mess in the campus.
- 11 Spacious Class rooms / Laboratory having facility of projectors, smart boards
- 12 Guest House for Public/ Parents.
- 13 First Aid/Medicine.facility
- 14 Bank facility/ stationery shop/Laundry and basic need facility
- 15 Open Theatre in the college campus.
- 16 Care has been taken to see that every students complete personality is developed which will contribute to built strong India.

## FACILITIES

### LIBRARY

- Well equipped library
- Over 2500 books
- 150 Students seating capacity
- OPAC – Online Public Access Catalog
- Digital Repository
- Online Database
- Multimedia Center
- Wifi / Internet enabled

### HOSTEL

- 2 students per room
- Attached Toilet / Bathroom
- Each student will have Student Desk and Wardrobe
- All room equipped with Internet access / Wifi
- Each room with independent balcony
- Hostel cluster of 5 building
- Hostel mess facility (breakfast/lunch / dinner)
- Lounge area with TV & Reading material

### CANTEEN

- Capacity of 150 Students
- Nourishing food – all type

### LABS

- Physics Labs – 2
- Chemical Labs – 2
- Basic Electrical Lab
- Basic Electronics
- Computer Centre - 75 Computers with WiFi and Internet
- Drawing Hall
- Language Lab – Language learning software with Audio Visual facilities

### INTERNET

- 4 MBPS Lease Line Connectivity
- Entire campus Wifi enabled
- All Academic and Residential facility have Internet Capability

### MEDICAL FACILITIES

- First Aid nursing station is provided with Doctor Available on call

### BANK

- Bank Branch / Extension Counter – Under Process

### POST OFFICE

- Post Office is proposed, meanwhile courier facility will be made available.

### GYMKHANA / CLUB

- Indoor Badminton Court
- All sports and recreation facilities

### UTILITIES

- Shopping Center & Basic facilities such as Laundry / Washing will be made available

## SEXUAL HARASSMENT SUPREME COURT GUIDELINES

The GUIDELINES and NORMS prescribed herein are as under:

HAVING REGARD to the definition of “human rights” in Section 2 (d) of the Protection of Human Rights Act, 1993.

TAKING NOTE of the fact that the present civil and penal laws in India do not *adequately* provide for specific protection of women from sexual harassment in workplaces and that enactment of such legislation will take considerable time.

It is necessary and expedient for employers in workplaces as well as other responsible persons or institutions to observe certain guidelines to ensure the prevention of sexual harassment of women:-

**1. *Duty of the employer or other responsible person in workplaces and other institutions:***

It shall be the duty of the employer or other responsible person in workplaces or other institutions to prevent or deter the commission of acts of sexual harassment and to provide the procedures for the resolution, settlement or prosecution of acts of sexual harassment by taking all steps required.

**2. *Definition:***

For this purpose, sexual harassment includes such unwelcome sexually determined behavior (whether directly or by implication) as:

- (a) physical contact and advances;
- (b) a demand or request for sexual favours;
- (c) sexually-coloured remarks;
- (d) showing pornography;
- (e) any other unwelcome physical, verbal or non-verbal conduct of sexual nature.

Where any of these acts is committed in circumstances whereunder the victim of such conduct has a reasonable apprehension that in relation to the victim’s employment or work whether she is drawing salary, or honorarium or voluntary, whether in government, public or private enterprise such conduct can be humiliating for instance when the woman has reasonable grounds to believe that her objection would disadvantage her in connection with her employment or work including recruiting or promotion or when it creates a hostile work environment. Adverse consequences might be visited if the victim does not consent to the conduct in question or raises any objection thereto.

**3. *Preventive steps:***

All employers or person in charge of workplace whether in the public or private sector should take appropriate steps to prevent sexual harassment. Without prejudice to the generality of this obligation they should take the following steps:

**Vishaka v. State of Rajasthan (Verma, C.J.)**

- (a) Express prohibition of sexual harassment as defined above at the workplace should be notified, published and circulated in appropriate ways.
- (b) The rules/regulations of government and public sector bodies relating to conduct and discipline should include rules/regulations prohibiting sexual harassment and provide for appropriate penalties in such rules against the offender.

- (c) As regards private employers steps should be taken to include the aforesaid prohibitions in the standing orders under the Industrial Employment (Standing Orders) Act, 1946.
- (d) Appropriate work conditions should be provided in respect of work, leisure health and hygiene to further ensure that there is no hostile environment towards woman employee should have reasonable grounds to believe that she is disadvantaged in connection with her employment.

**4. Criminal proceedings:**

Where such conduct amounts to a specific offence under the Indian Penal Code or under any other law, the employer shall initiate appropriate action in accordance with law by making a complaint with the appropriate authority.

In particular, it should ensure that victims, or witnesses are not victimized or discriminated against while dealing with complaints of sexual harassment. The victims of sexual harassment should have the option to seek transfer of the perpetrator or their own transfer.

**5. Disciplinary action:**

Where such conduct amounts to misconduct in employment as defined by the relevant service rules, appropriate disciplinary action should be initiated by the employer in accordance with those rules.

**6. Complaint mechanism:**

Whether or such conduct constitutes an offence under law or a breach of the service rules, an appropriate complaint mechanism should be created in the employer's organization for redress of the complaint made by the victim. Such complaint mechanism should ensure time-bound treatment of complaints.

**7. Complaints Committee:**

The complaint, mechanism referred to in (6) above, should be adequate to provide, where necessary, a Complaints Committee a special counsellor or other support service; including the maintenance of confidentiality.

The Complaints Committee should be headed by a woman; and not less than half of its members should be women. Further, to prevent the possibility of any undue pressure or influence from senior levels, such

**SUPREME COURT CASES (1997) 6 SCC**

Complaints Committee should involve a third party, either NGO or other body who is familiar with the issue of sexual harassment. The Complaints Committee must make an annual report to the Government Department concerned of the complaints and action taken by them.

The employers and person-in-charge will also report on the compliance with the aforesaid guidelines including on the reports of the Complaints Committee to the Government Department.

**8. Worker's initiative:**

Employees should be allowed to raise issues of sexual harassment at worker's meeting and in other appropriate forum and it should be affirmatively discussed in employee meetings.

9. **Awareness:**

Awareness of the rights of female employees in this regard should be created in particular by prominently notifying the guidelines (and appropriate legislation when the enacted on the subject) in a suitable manner.

10. **Third-party harassment:**

Where sexual harassment occurs as a result of an act or omission by any third party or outsider, the employer and person-in-charge will take all steps necessary and reasonable to assist the affected person in terms of support and preventive action.

11. The Central/State Governments are requested to consider adopting suitable measures including legislation to ensure that the guidelines laid down by this order are also observed by this order are also observed by the employers in private sector.

12. These guidelines will not prejudice any rights available under the Protection of Human Rights Act, 1993.

**Action against ragging: Maharashtra Prohibition of Ragging Act 1999 which is in effect from 15<sup>th</sup> May, 1999 has the following provisions for Action against Ragging.**

- a) Ragging within or outside of any educational institution is prohibited,
- b) Whosoever directly or indirectly commits, participates in, abets, or propagates ragging within or outside any educational institution shall, on conviction, be punished with imprisonment for a term up to 2 years and / or penalty, which may extend to ten thousand rupees.
- c) Any student convicted of an offence of ragging shall be dismissed from the educational institution and such student shall not be admitted in any other educational institution for a period of five years from the date of order of such dismissal.
- d) Whenever any student or, as the case may be, the parent or guardian or a teacher of an educational institution complains, in writing, of ragging to the head of the educational institution, the head of educational institution shall, without prejudice to the foregoing provisions, within seven days of the receipt of the complaint, enquire into the matter mentioned in the complaint and if, prime facie, it is found true, suspend the student who is accused of the offence, and shall, immediately forward the complaint to the police station having jurisdiction over the area in which the educational institution is situated, for further action. Where, on enquiry by the head of the educational institution, it is found that there is no substance, prime facie in the complaint received, he/she shall intimate the fact, in writing, to the complainant. The decision of the head of the education institution shall be final.
- e) If the Head of the educational institution fails or neglects to act in the manner specified in section “d” above when a complaint of ragging is made, such person shall be deemed to have abetted the offence and shall, on conviction, be punished as provided for in section “b” above.



# UNIVERSITY OF MUMBAI

## Bachelor of Engineering

**First Year Engineering (Semester I & II), Revised course from  
Academic Year 2012-13, (Rev-2012)  
(Common for all branches Engineering)**

Sub Code	Subject Name	Teaching Scheme			Credits Assigned			
		Theory	Pract.	Tut.	Theory	TW/Pract.	Tut.	Total
FEC101	Applied Mathematics-I	04	-	01	04		01	05
FEC102	Applied Physics-I	03	01	-	03	0.5	-	3.5
FEC103	Applied Chemistry-I	03	01	-	03	0.5	-	3.5
FEC104	Engineering Mechanics	05	02	-	05	01	-	06
FEC105	Basic Electrical & Electronics Engineering	04	02	-	04	01	-	05
FEC106	Environmental Studies	02	-	-	02	-	-	02
FEC101	Basic Workshop Practice-I	-	04	-	-	02	-	02
		21	10	01	21	05	01	27

### Scheme for FE-Semester-I

Sub Code	Subject Name	Examination Scheme							
		Theory Marks				Term Work	Pract.	Oral	Total
		Internal Assessment			End sem. exam				
		Test 1	Test 2	Average of Test 1 and Test 2					
FEC101	Applied Mathematics-I	20	20	20	80	25	-	-	125
FEC102	Applied Physics-I	15	15	15	60	25	-	-	100
FEC103	Applied Chemistry-I	15	15	15	60	25	-	-	100
FEC104	Engineering Mechanics	20	20	20	80	25	-	25	150
FEC105	Basic Electrical & Electronics Engineering	20	20	20	80	25	-	25	150
FEC106	Environmental Studies	15	15	15	60	-	-	-	75
FEC101	Basic Workshop Practice-I	-	-	-	-	50	-	-	50
				105	420	175		50	750