

# INFORMATION BROCHURE

## Admission to POST GRADUATE (PG) & DOCTORAL DEGREE PROGRAMMES (2010-2011)



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### **G.H. Raison College of Engineering**

CRPF Gate-3, Hingna Road, Digdoh Hills,  
Nagpur (M.S.)

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**RAISONI**  
GROUP OF INSTITUTIONS

■ NAGPUR ■ PUNE ■ JALGAON ■ RAIPUR ■ AKOLA ■ AMRAVATI ■ AHMEDNAGAR ■ LONDON



# Courses Offered

## DOCTORAL PROGRAMMES

Ph.D. Programmes are offered in

1. Department of Electrical Engineering
2. Department of Mechanical Engineering
3. Department of Electronics and Communications Engineering
4. Department of Computer Science and Engineering

## POSTGRADUATE PROGRAMMES

M.Tech. /M.E courses are offered in

1. Department of Electronics Engineering
  - M.Tech. (Electronics Engineering) (Intake -18)
  - M.Tech.(VLSI) (Intake -18)
2. Department of Mechanical Engineering
  - M.Tech. (Heat Power Engineering) (Intake -18)
  - M.Tech.(CAD/CAM) (Intake -18)
3. Department of Electrical Engineering
  - M.Tech. (Integrated Power System) (Intake -18)
4. Department of Computer Science & Engineering
  - M.Tech. (Computer Science & Engg) (Intake -18)
  - M.E.( Wireless Communication and Computing) (Intake -18)
  - M.E.( Embedded Systems & Computing) (Intake -18)
5. Department of Civil Engineering
  - M.Tech (Environmental Engineering) (Intake -18)

## Our Inspiration

The G H Raisoni College of Engineering was established in 1996 for providing leadership in education and research with a focus on science and technology. Over a period of about one decade, about 5,000 students have graduated from the institute with Bachelors, Masters degrees. Today, G H Raisoni College of Engineering is a leading institution globally for education in engineering and management.

The institute is committed to play a key role in creating an ambience for nurturing the engineers and leaders of tomorrow. In doing so, we hope to make significant contributions to the development of the country and improvement in the quality of life of its citizens. For this, we need to pursue a strategy that fosters creativity, supports interdisciplinary research and education. G H Raisoni College of Engineering is an essential component of this strategy.

I am proud to say that the institute is ideally placed to exploit the synergies with the industries located in the heart of India- Nagpur.



**Shri Sunil Raisoni**  
Chairman, RGI



**Mrs. Shobha Raisoni**  
M.D. RGI

G H Raisoni College of Engineering provides an excellent platform for engineering and management education. It builds on the harmony between engineering departments of the institute to promote innovation in engineering products, services and most importantly in thinking. The focus here is to hone the technical skills of the engineers and to transform them into renaissance leaders of tomorrow. The institute has achieved a distinguished status with its Master of Technology programme and its research programme leading to PhD. Through its strong linkages with the industry, the institute provides opportunities to work on need-of-the-day projects and interact with the industry leaders to understand the challenges as well as the expectations. The institute helps in providing a holistic engineering perspective to the students. The institute has ambitious plans to expand its academic and research activities which include building areas of specialization and centres of excellence.

Welcome to G.H. Raisoni College of Engineering.

## Our Dynamic Leadership



Dr. P. R. Bajaj  
**PRINCIPAL**  
**G.H. Raisoni College of Engg.**

G.H.Raisoni College of Engineering, Nagpur (GHRCE) is one of the premier institutions, unique like a prism reflecting the manifold shades of learning and co-curricular activities. The Institution is committed for providing qualitative technical higher education to the diverse student community.

GHRCE offers 09 Post graduate courses & 04 Doctoral courses in engineering disciplines and is an upcoming hub for Research & Development activities. Our most of the UG courses are accredited for 5 years by NBA and it is the first institute in the region to undergo PG accreditation.

The entire globe today is witnessing and experiencing the mind boggling Scientific and Technological developments. This is the age of Science and Technology. The term Technology stands for new techniques. Without the knowledge of Technology it is impossible to live in this modern age. The progress of any country is measured in term of Technology developed.

Our chief purpose as an educational institution is to offer superior academics. Our efforts are always towards providing stellar education with a global perspective by incorporating standard international teaching methodologies.

We provide an environment that fosters the development of each individual student and his or her core competencies. We aim to instill solid values in our students, empowering them to move forward confidently through every phase of growth.

For many years we have upheld a proud record of funding for research, and we have established a solid reputation for research achievements in many different fields and across many different disciplines. This reputation has attracted talented teachers and students to our Institute, further enhancing the quality of our research.

As a reputed academic institution, GHRCE especially values its intellectual and academic relationship with local as well as National & International community that forms its base and provides the foundation from which it will continue to look to the widest International horizons, enriching both itself and the society of which it is an inseparable part.

The history of the college tells about the various achievements of the students. So I hope you will also be acquiring the same and achieve success in every sphere of life and carry the legacy ahead. Our driving force is passion to excel to help our students to meet their goals. We will continue our efforts for excellence and pursuit for performance, tenacity, determination, persistence and endurance enabling each of us at GHRCE to accomplish our goals and objectives.

I welcome you and wish you the best for your future.

## **Our Mission**

Our efforts will be dedicated to impart Quality and value based education to raise satisfaction level of all stake- holders. Our strength will be directed to create competent engineers. Our endeavor will be to provide all possible support to promote research & development activities.

With this objective, in 1996-97 the institute was set up under the aegis of - Government of Maharashtra and The Directorate of Technical Education, Mumbai.

## **Our Vision**

To achieve excellent standards of Quality education by keeping pace with rapidly changing technologies. To create technical manpower of global standards with capabilities of accepting new challenges.

## **Preamble**

Centrally located... almost in the heart of India, Nagpur is well connected with other parts of the country by Air, Rail & Road.

Just 8 km away from the city, GHRCE campus is located on Hingna Road, Nagpur. Very close to the industrial area, the environment at the sprawling campus is conducive to academic pursuits like class-room studies and research.

The ergonomic design of various buildings helps to generate a feeling of spaciousness and tranquility, with ample scope for future development and expansion.

The institute has much needed student-friendly atmosphere and the courses have a distinct advantage of approach, designed to suit the needs of aspiring employees and the industry in the close vicinity.

Affiliated to Rashtrant Tukdoji Maharaj Nagpur University, we follow the syllabus specified by Board of Studies, Rashtrant Tukdoji Maharaj Nagpur University, Nagpur (formerly Nagpur University).

The Central Library, Central Computer Centre and MIR Research Labs of the institute are the backbone of the institution and are accessible to the students and staff of the institute.

The students get exposure to International Conferences, institute also provides sponsorships to conferences, for holding International workshops, arranging Industrial visits. Guest lecture of Eminent persons from Academics and Industries from all over India and abroad are arranged for the students.

## A. DOCTORAL PROGRAMMES ( Ph.D Programme)

The G H Raison College of Engineering offers Ph.D. programmes through its various Departments. The award of Ph.D. degree is in recognition of high academic achievements, independent research and application of knowledge to the solution of technical and scientific problems in Engineering and Technology. Creative and productive inquiry is the basic concept underlying the research work.

The Institute also encourages interdisciplinary areas through a system of co-supervision and provides excellent opportunities for such programmes.

The research work shall be an original work characterized either by the discovery of facts, or by a fresh approach towards the interpretation and application of facts. It shall demonstrate the candidate's capacity for critical examination and sound judgment and shall represent original contribution to the existing knowledge.

The degree of Doctor of Philosophy is granted for research work in areas recognized by the academic departments of the Institute. The degree of Doctor of Philosophy will be awarded in the discipline of the department in which the candidate is registered.

Departments have excellent R & D facilities and also tie up with national & International Labs & Center of Excellence.

Departments offering Ph.D Programme are

- (a) Department of Electrical Engineering
- (b) Department of Mechanical Engineering
- (c) Department of Electronics and Communications Engineering
- (d) Department of Computer Science and Engineering

## B. Postgraduate Programmes (M.Tech. / M.E.)

The sanctioned intake for each of the M.Tech. Programmes is 18. The category wise breakup of seats and distribution of seats shall be as follows:

a.	Open Category	-	10
b.	Reserve Category		
	S.C.	-	02
	S.T.	-	01
c.	Sponsored	-	05
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	<b>TOTAL</b>	<b>-</b>	<b>18</b>

## B.1 Full Time M.Tech. / M.E. Programmes

The full time postgraduate programmes of study in Engineering in different specializations leading to M.Tech. Degree. Details of these academic programmes along with the minimum educational qualifications, number of seats with details of Contact Person in the respective department is also given in the Table.

Department	Name of the course	Eligibility	Contact Persons
Computer Science & Engineering	M.Tech (Computer Science & Engineering )	B.E. or Equivalent in CT/CS/CE/EDT/Electronics/EXTC/Electrical/E & P/PE/IT/MCA of any recognized Indian University.	Dr.R.V.Dharaskar Mobile :9422130930 Prof.U.N. Shrivankar Mobile : 9422803996
	M.E. (Wireless Communication & Computing)		Dr.A.R.Mahajan Mobile :9881712976 Prof. S.T.Bodkhe Mobile : 9422449737
	M.E. (Embedded system & Computing)		Dr.N.G.Bawane Mobile :9822236057 Prof. A.V.Talhan Mobile:9890699097
Electronics Engineering	M.Tech (Electronics Engg.)	B.E. or Equivalent in CS/EDT/Electronics/IE/E & T/IT of any recognized Indian University.	Dr.S.B.Pokle Mobile :9423638816 Prof P.V.Puranik Mobile:9881154387
	M.Tech(VLSI)	B.E. or Equivalent in EDT / Electronics / EXTC / Inst.	Prof.D.V.Padole Mobile:9881711791 Prof.P.H.Rangari Mobile :9665610280
Electrical Engineering	M.Tech (Integrated Power System )	B.E. or equivalent in Power Electronics / E & P / Electrical of any recognized Indian University.	Dr.S.G.Tarnekar Mobile :9370315225 Prof.J.G.Choudhari Mobile : 9011000784
Mechanical Engineering	M.Tech (Heat Power Engineering)	B.E. or equivalent in Mechanical / Automobile / Power Engineering of any recognized Indian University.	Dr.V.M.Kriplani Mobile :9373750759 Prof.N.R.Pathare Mobile :9011084355
	M.Tech (CAD / CAM)	B.E. or Equivalent in Mechanical / Production / Industrial Engg. / Automobile	Dr.S.B.Jaju Mobile :9822561608 Prof.N.K.Mandavgade Mobile :9011084402
Civil Engineering	M.Tech (Environmental Engineering)	B.E. or equivalent in Civil Engineering / Environmental Engineering / Structural Engineering	Dr.N.M.Kanhe Mobile:9860218704 Prof.R.M.Dhoble Mobile :9881713142



## **B.2 Admission Procedure**

### **B.2.1 M.E. / M.Tech Programmes**

#### **B.2.1.1 ADMISSION OF CANDIDATES UNDER GATE/NON-GATE CATEGORY**

##### **B.2.1.1.1 Eligibility**

Candidates fulfilling eligibility requirements as mentioned above will be considered for admission to the respective programme under GATE/Non GATE category as per details given in Table-1. However the candidates who apply for admission under quota of sponsored seats shall not be considered for admission under this category.

##### **B.2.1.1.2 Admission Procedure**

- i) Admissions will be done according to merit list prepared on the basis of valid GATE score in the respective programmes indicated under the column of Eligibility criterion in Table-1. GATE score in one branch will not be valid for admission in another branch.
- ii) If enough GATE qualified candidates (candidates with valid GATE score) are not available, the vacant seats will be offered to the Non GATE (candidates without GATE score) as per merit, based on total marks secured out of 100 in the entrance Test and interview as indicated below.

<b>Entrance Test</b>	<b>Maximum 70 marks</b>
<b>Interview /Viva voce</b>	<b>Maximum 30 marks</b>
<b>Total</b>	<b>100 marks</b>

Candidates securing less than 40 marks out of 100 indicated above shall not be eligible for admission.

- iii) If the performance of the candidates are comparable, then the preference shall be given for admission to the candidates who are GATE qualified and those who are serving in Engineering Colleges, Polytechnic and industry, in that order.
- iv) No reservation is provided in sponsored category. However, preference will be given to the candidates of reserved in the case of equal merit.

### **B.2.1.1.3 Entrance Test / Interview**

A written entrance test shall be conducted by the institute for all Non-GATE candidates to fill up the vacant seats, if any, after admitting all GATE qualified candidates. The list of such candidates shall be displayed by the respective departments. The syllabus / topic for the entrance test for various programmes are prescribed in Appendix –I.

**The date and time of the entrance test and schedule for interview will be uploaded on website.**

## **B.2.1.2 ADMISSION OF CANDIDATES UNDER SPONSORED CATEGORY**

### **B.2.1.2.1 Eligibility**

- i) Candidate who posses Bachelors degree in the respective or allied branch of engineering / technology, as specified in Table – I will be eligible for admission to respective programmes and as per RTM Nagpur University and DTE , Mumbai
- ii) The condition of minimum percentage of marks may be waived for those candidates who are teachers either in Engineering Colleges or Polytechnics and joined before 20.09.1989, provided they are eligible for admission in the course as per R.T.M. Nagpur University Rules.
- iii) The candidates must have minimum of 2 years of fulltime work experience in a registered firm/ company / industry / educational and /or research institute / any Government Departments or Government – Autonomous Organization in the relevant field in which admission is being sought.
- iv) A letter from the employer must be furnished stating that the candidate is being sponsored to seek admission to the postgraduate degree programme. The employer should also indicate that the candidate will not be withdrawn midway till the completion of the course. The candidates will be fully under the administrative control of the institute for the period of the course. Proforma of sponsorship certificate is given in Application form.

- v) Only those candidates who at the time of admission are employed in an organization referred to in above clause on (iii) and (iv) will be eligible for claiming seats against sponsored category.

#### **B.2.1.2.1 Entrance Test/ Interview**

A written entrance test shall be conducted by the institute for all the sponsored candidates along with Non GATE candidates. The list of such candidates shall be displayed by the respective departments.

The syllabus/topic for the entrance test for various programmes are prescribed in Appendix –I. The date and time of the entrance test/interview will be updated on the website.

### **B.3 Admission to ME (By Research) Programme**

The objective of this program is to provide an opportunity to people working in Industries and R&D organizations, to update their knowledge and qualification. Programs leading to ME (By Research) are offered in various departments listed below.

- (a) Department of Electrical Engineering
- (b) Department of Mechanical Engineering
- (c) Department of Electronics Engineering
- (d) Department of Computer Science and Engineering

#### **B.3.1 Eligibility**

The ME (By Research) program is open to candidates sponsored from industries or R&D organizations. The candidates must have at least five years of industrial experience.

The prescribed minimum qualification for admission into M.E. (By Research) program is B.E./B.Tech or equivalent degree. The admission to ME.(By Research) program shall be open to candidates who passed the prescribed minimum qualifying examination in First Class not less than 60% marks in the aggregate (55% marks in the case of SC/ST candidates).

### B.3.2 Selection

Eligible candidates possessing the minimum educational qualifications, will be called for an interview and/or test, by the selection committees of the respective departments.

### B.3.3 Program Structure

The M.E. (By Research) program consists of course work and thesis work.

The minimum period of study and research required at the institute from the date of registration for M.E. (By Research) program to the date of submission of the thesis, shall be 24 months.

The maximum period of the M.E. (By Research) program shall be four years.

The minimum residential requirement is 6 months, during which time; the candidate is required to complete the course work.

## C. FEES

Candidates desirous of seeking admission to any of the PG programme must deposit demand draft of required amount (refer table below) drawn in favour of the Principal, G. H. Rasoni College of Engineering Nagpur, payable at Nagpur or cash payment at the College Bank Counter.

### C.1 Statement of fees for Post Graduate Programmes:

Sr. No.	Name of Department	Course	Fees per Year (Rs.)
1	Electrical Engineering	M. Tech (Integrated Power System)	40,000.00
2	Computer Science & Engineering	M. Tech. (Computer Science & Engineering )	80,000.00
		M.E. (Wireless Communication & Computing )	80,000.00
		M. E. (Embedded System & Computing )	80,000.00
3	Electronics Engineering	M. Tech (Electronics Engg. )	60,000.00
		M. Tech (VLSI)	40,000.00
4	Mechanical Engineering	M.Tech. (Heat Power Engineering )	40,000.00
		M. Tech (CAD/CAM)	40,000.00
5	Civil Engineering	M.Tech ( Environmental Engineering	40,000.00

## **D. Financial Assistance**

### **D.1 Stipend for Postgraduate programmes(Under Earn and Learn Scheme)**

Assistantship will be awarded to GATE qualified candidates as per norms of the Government Agency for the duration of the M. Tech. programme.

Institutional Assistantship of Rs. 8000 pm will be awarded to two students of M.Tech./M.E per department under earn and learn scheme. The students will be selected on merit basis by considering the score in written test and interview. Those who are not in receipt of salary from any source will only be considered for assistantship. A student receiving assistantship will be required to work in the concerned department.

The continuance of the assistantship shall depend upon the satisfactory progress report of work, attendance, conduct of the recipient as communicated by the Head of the Department concerned and academic performance in the End Term Examination.

### **D.2 Financial Assistance for Doctoral programmes**

Financial assistance can be considered for full time scholars on the basis of merit.

Duration of the assistantship will normally be up to 4 years, but can be extended for another one year under special circumstances on case-to-case basis. A student receiving assistantship will be required to devote at least sixteen hours per week towards the departmental or Institute work assigned to him/her. If assistantship from the Institute is not available; students can be admitted on self-finance basis.

Those receiving fellowships from sponsored projects or from any other funding agencies such as the Council of Scientific & Industrial Research (CSIR), Department of Atomic Energy (DAE), University Grants Commission, etc. will not be eligible for the Institute assistantship.

## **E. CONDUCT AND DISCIPLINE**

Students while studying in the college, if found indulging in anti-national activities contrary to the provisions of acts laws enforced by Government, any activity contrary to rules of discipline will be liable to be expelled from the college without any notice by the Principal of the college.

If any of the statement made in application form or any information supplied in connection with his/her admission is later on, at any time, found to be

false or incorrect, his/her admission will be cancelled, fees forfeited and he/she may be expelled from the college by the Principal and prosecuted, if deemed necessary.

All candidates for admission to post graduate courses in engineering are required to give the following undertaking.

- a. I have read all the Rules of Admission for the current year and after understanding these rules, I have filled-in this form of application for admission for the current year.
- b. The information given by me in my application is true to the best of my knowledge and belief.
- c. I have not been debarred from appearing at any examination held by any government constituted or statutory examination authority in India.
- d. I fully understand that the offer of a course or branch of engineering will be made to me depending on inter-se merit and availability of seats at the time of verification of my application when I will report to the admission authority according to the schedule of admission.
- e. I understand that no other document, other than those attached to the application form before the last date of admission will be entertained for the purpose of claims,/concessions etc. in connection with my admission.
- f. I hereby agree to confirm to any rules, acts and laws enforced by Government and I hereby undertake that so long as I am a student of the college, I will do nothing either inside or outside the college which may result in disciplinary action against me under the rules, acts and laws.
- g. I fully understand that the Principal of the college where I would be admitted, will have right to expel/rusticate me from the college for any infringement of the Rules of conduct and discipline prescribed by the college/university (if any) and the undertaking given above.

## **F. Rules for PG Courses during academic session**

- a. Full yearly fees should be paid at the time of admission.
- b. The students should have minimum aggregate 75% attendance during academic session.
- c. The students should deliver all 8 progress seminars during project spade work.

## **G. SUBMISSION OF APPLICATION FORM**

The application form for admission, duly completed in every respect, must be submitted to the Principal, G.H. Rasoni College of Engineering Nagpur on or before Sunday, 10<sup>th</sup> June 2010 on or before 5.00 p.m. for all M.Tech./M.E. Programmes. Application received after the above due date will not be considered.

### **Please also note that:**

1. No separate interview call will be sent to candidates. They should attend the written test and interview as per the schedule uploaded on website.

2. Attested photocopies of the following certificates (as applicable) should be attached with the application form. The candidates must produce the original certificates at the time of admission along with the requisite fees.
  - a) GATE score card (For admission on GATE Merit)
  - b) Qualifying Examination (s) Certificate (s)
  - c) Mark List of Qualifying Examination
  - d) Transfer Certificate
  - e) Sponsorship Certificate (For Sponsored Category )
  - f) Experience Certificate
  - g) Caste and Validity Certificate, as applicable for reserved Category
  - h) Migration Certificate (If applicable)
  - i) Nationality Certificate
  
3. Incomplete application and applications without attested copies of the documents as required will not be considered for admission process.

## H. CANCELLATION OF ADMISSION AND REFUND OF FEES

The candidate who has been provisionally admitted may cancel admission by submitting an application in duplicate and may request for refund of fees. The refund of fees as applicable shall be made in due course. It is made clear that such application for cancellation will be considered if and only if the admission is taken provisionally by paying the prescribed fees and by submitting original documents. Refund of fees shall be made after deduction of cancellation charges as shown below-

No.	Period of Cancellation of Admission	Amount of Cancellation Charges
1.	Up to 15 days from the date of admission	50% of the Fees
2.	After 16 <sup>th</sup> day from the date of admission	Nil

## I. FACULTY PROFILE

The college has technically rich faculty with Doctorate qualifications. It comprises highly qualified, well-trained staff possessing sound teaching, research as well as industrial experience with excellence in their fields. The faculties keep themselves abreast of the technological developments in the concerned fields through active participation in various activities like seminars, conferences, training programs and guest lecture etc. Eminent guest faculties from industries / IITs/ Foreign Universities and institutions are regularly invited to make the students aware of the latest research and development in the field.

## **Dr. Mohan Umakant Deshpande**

**Ph.D (Electrical Engg.)**

**Principal Consultant**, Rasoni Group of Institutions, NAGPUR 440001

**Doctor of Philosophy (Ph.D)**, 1974 from Nagpur University.

**Area of Specialization**      Power system protection & control



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## **Dr. Preeti. R. Bajaj**

**Ph.D(Electronics Engg.), M.B.A**

**Principal and Professor in Electronics Engg. Deptt.**

G H Rasoni College of Engineering, NAGPUR 440001

**Area of Specialization:** Intelligent Transportation System with soft computing, Hybrid Intelligent systems design

**Academic Experience:** 19 years

**Industrial Experiences:** **Consultant, National Highways Authority of India**

**Research Experience**

- Total Publications in International Conferences and Journals:65
- UG Projects Guided: 35
- PG Projects guided : 7
- Ph.D. Students enrolled: 8
- Presented papers in International Conferences at UK, JAPAN, SG, USA, and HK

### **International recognition**

Member of International Technical Committee/ Member Program Committee for more than 50 Conferences

### **As Reviewer in the Journals**

- Reviewer of International journals IJPRAI- International journal of pattern recognition and Artificial Intelligence
- Reviewer of International journals IDT- Intelligent decision technologies
- Reviewer of International journals JAIS





- Reviewer of International journals IJSSST
- Regular Reviewer for IEEE transaction on Systems, Man and Cybernetics, Part A
- Reviewer for **Scientific Journals International**

#### **Guest Editor**

- International Journal of Intelligent Decision Technologies, Australia
- International Journal of Information Assurance and Security, Korea
- International journal of simulation, Systems, Science & technology , UK

#### **International Responsibilities Handled**

- India Coordinator – MIR Labs, A global consortium of academicians & researchers
- General Chairs –For ICETET series of International Conferences
- Organized Session on HISA09 Cambridge UK

#### **Prashant Bharat Nagarnaik**

#### **Professor and Head of Civil Engineering Department**

#### **Ph. D. (Environmental Engg.)**

**Area of Research :** Quality Cost, TQM, Automation, Industrial Engineering

#### **Number of Publications :42**

#### **Research & Development:**

- 1) Approved Guide For Ph.D In Civil Engg. at Amravati university and Nagpur university.
- 2) Associate Editor For The Journal Of Pradushan Nirmlan
- 3) Reviewer For International Journals Of Environmental Pollution
- 4) Reviewer for the conferences and journals of WESAS working group on energy , Environment, ecosystems and sustainable development
- 5)Co-chaired the National Conferences On Advances In Road Transportation at Rourkela



**Dr Sanjay B. Pokle**

**Professor and Head ECE Dept.**

**Ph. D. (Electronics)**

**Area of Specialization** Design of MIMO-OFDM Based Wireless Communication System.

**Number of Publications:13**

**Details of participation in National & International Events as**

**Session Chair :**

- (1) Reviewed technical papers on wireless communication for IFToMM International Conference organized on 11-14 July at PCEA, Nagpur.
- (2) Chairperson for national level competition Jigyasa-2008 at P.C.E. Nagpur on 29 Feb. 2008.
- (3) Chairperson for national level competition Jigyasa-2009 at P.C.E. Nagpur on 30 Jan. 2009.



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**Name :** Narendra G. Bawane

**Designation :** Designated Professor

**Qualification :** Ph. D.

Areas of interest are:

- Artificial Neural Network (ANN)
- Embedded system
- Biomedical engineering
- Fuzzy logic system
- Wavelet analysis
- Emotion in speech and facial recognition



**Number of Publications : 25**

## Details of participation in National & International Events as

### 1. Program Committee Member

- Member, International Editor Board, Gconference
- Journal of Circuit, system and Computers
- Academi Publisher, Netherland
- Edas Conference System
- ISTED Multi-conference
- CSSim2009 (Brno International Conference on Computational Intelligence, Modelling and Simulation 2009).
- Journal of Science & Technology

### 2. Session Chair- ICETET 08 international Conference , National conference on National Conference On "Emerging Trends in Communication .

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**Dr. Satish R. Vaishnav**

**Professor and Head of Electrical Engineering**

**Qualification : Ph.D (Electrical)**

**Area of Research :** PID Control ,

Soft Computing Application to PID Control

- Approved supervisor for Doctoral work in Electrical Engg at R.T.M.Nagpur University



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**Name : Dr. V.M.Kriplani**

**Professor and Head of Mechanical Department**

**Highest Qualifications : Ph.D. (Heat transfer)**

**Recognised research guide for M.E. and Ph.D. programs under R.T.M.Nagpur University,Nagpur**

**Number of Publications: 09**

**Areas of Interest:** Heat transfer-Natural and Forced Convection , IC Engines, Refrigeration and Air Conditioning, Cryogenics



**Name** : Dr. K.Vihari

**Professor of Mechanical Department**

**Highest Qualifications** : Ph.D.

**Publications: 11**



- Invited as Chairman of a Session in Fourth International Conference on Production Engineering held in Tokyo (Japan) in August 1980

**Santosh Balkrishna Jaju**

**Professor in Mechanical Engineering Department**

**Qualification : Ph.D (Prod. Engg.)**

**Area of Research : Quality Cost, TQM, Automation, Industrial Engineering**

**Number of Publications:31**

**Responsibilities handled:**

- Organizing secretary of **All India Seminar on Quality Edge 2008** organised by Institution of Engineers, Nagpur
- Regular Technical Session Co Chair in **International Conference on Emerging Trends in Engineering & Technology (ICETET 2008)** held during July 2008.
- National Organising Committee member of **All India seminar on Mapping Excellence Towards Global Competitiveness (MAP EXCEL 2008)** to be held during 16-17 Oct 2008, hosted by Institution of Engineers, Mumbai.



**Dr. S. G. Tarnekar**

**Professor of Electrical Engineering,**

**Academic Qualifications : Ph.D. (Electrical Power System Protection )**

**Area of Research :** Electrical Power System

**Award / Honour** : Best Engineering College Teacher Award ( Maharashtra), by the Indian Society for Technical Education, in 1997.



**Dr. N. M. Kanhe**

**Professor in Civil Engg.**

**Qualification : Ph. D. (Environmental Engg.)**

**Area of Research : Water Treatment, Industrial wastewater Treatment**

**Number of Publications**

**Journal ( National & International ) : International : 03, National : 01**

**Conferences ( National & International ) : International : 03, National : 08**



**Dr R V Dharaskar**

**Professor**

**Ph.D.** (Computer Science & Engineering, Faculty of Engineering & Technology

**Ph.D.** guide for RTM Nagpur University and SGB Amravati University for Computer Engineering ( Faculty of Engineering & Technology) and Computer Science (Faculty of Science).



**Dr. A.R.Mahajan**

**Professor in Computer Science Engg.**

**Qualification : Ph. D**

**Area of Research : Artificial Intelligence/Evolutionary Algo.**

**Number of Publications:60**



# Laboratories :

<b>Electronics Engineering</b>	
<p>VLSI / VHDL          Optical Communication          Embedded Systems          Communication Electronics          Digital Image Processing          Advanced Microprocessors          Electronic Devices &amp; Circuits          Project lab</p>	<p>Digital signal processing          . Television Engineering          . UHF &amp; Microwave          . Communication Electronics          Telematics          Electronics Workshop          . Digital Circuits          . Linear Electronic Circuits          . R &amp; D Center</p>
<b>Mechanical Engineering</b>	<b>Computer Science &amp; Engineering and Information Technology</b>
<p>Energy Conversion          Fluid Power          Refrigeration and Air conditioning          CAD/ CAM          Heat Transfer          Theory of Machines          Mechanical Measurements          Engg. Metallurgy          Engg Metrology          Automation in Production.          Machine Shop</p>	<p>Wireless &amp; Embedded lab.          Networking lab.          Software Engg. Lab.          Advanced computing lab.          Computer Application lab.          Project lab.          R &amp; D Centre          Multimedia Lab</p>
<b>Electrical Engineering</b>	<b>Civil / Environmental Engineering</b>
<p>Electrical Engineering.          Control System.          Electrical workshop.          Electrical Machines.          Electrical Measurements.          Switch gear and protection.          High Voltage Engg.          FACTS.          Electrical Drives.</p>	<p>Water wastewater treatment          Air Pollution Lab          Solid Waste Analysis          Environmental Chemistry          Environmental Microbiology          Fluid Mechanics          Computer lab          Concrete Technology</p>

## **GHR LABS and Research Centre**

GHR Labs and Research Centre, Nagpur, India aims to promote research in various trends of engineering, science and management and the innovations in established and newer technologies. Through which the need of requirement the Masters and Doctoral degree candidates along with post doctoral and interdisciplinary research in engineering, technology and science can be fulfilled with a flavor of research experience. It also aims to undertake, promote, study of global developments and evaluate new instruments, services, facilities and disseminate their applications to provide offer fellowship, scholarship, prizes, certificates, diplomas, awards honour in various disciplines of education in India and abroad.

### **Our Objectives**

GHR Labs and Research Centre, Nagpur, India aims to promote research in various trends of engineering, science and management and the innovations in established and newer technologies. Through which the need of requirement the Masters and Doctoral degree candidates along with post doctoral and interdisciplinary research in engineering, technology and science can be fulfilled with a flavor of research experience. It also aims to undertake, promote, study of global developments and evaluate new instruments, services, facilities and disseminate their applications to provide offer fellowship, scholarship, prizes, certificates, diplomas, awards honour in various disciplines of education in India and abroad.

### **Vision**

To provide a platform for potential researchers to acquire requisite state of art skills for becoming leading exponents in the field of Engineering and Technology and thus contribute substantially towards the development and progress of the scientific world. The endeavor will be to promote research work to the highest level possible so that the institution becomes one of the foremost learning centers wherein students from across the globe seek admissions. The institute will create an outstanding climate of support for researchers enabling stellar research advances and is committed to the highest standards of research and training for advance learning and knowledge.

### **Mission**

The Institute commits to provide all necessary facilities in terms of technology, manpower, infrastructure, information and literature to researches to fulfill the goals and aspirations of the individual and the scientific community at large. It will partner with other research communities to create a culture of high achievements and also enhance the researchers abilities to obtain and manage grants. The aim is to strategically invest in promising research and researchers by being responsive, productive and innovative. This will enhance the ability to perform research in a global community thus improving research productivity. The aim is to strengthen the country technically so that it becomes a global technical power in the coming years.

## Advisory Board

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### **Research Areas:**

GHR Labs and Research Center extends the extensive research infrastructure and facilities in the areas of

- ✚ Engineering, Technology,
- ✚ Science,
- ✚ Management Market research,
- ✚ Environmental studies,
- ✚ Pharmacy,
- ✚ Nano-Technology,
- ✚ Interdisciplinary sciences and technologies.

## APPENDIX – I: SYLLABUS / TOPICS FOR WRITTEN TEST

1. **M. Tech (Integrated Power System):** - Electrical Machines, Networks, Measurements, Power Electronics, Control System Engineering, Electrical Power System Analysis & related topics.
2. **M. Tech (Electronics )** Electronics Devices & circuits, Electromagnetic field, Power Electronics, Communication Electronics, Field radiating systems, Microprocessors & Microcontroller, Digital circuits, Ultra High Frequency & related topics Digital Communications Digital Signal Processing
3. **M. Tech (VLSI) :-** Electronics Devices & circuits, Electromagnetic field, Power Electronics, Communication Electronics, Field radiating systems, Microprocessors & Microcontroller, Digital circuits, Digital Electronics, Ultra High Frequency & related topics, Digital Signal Processing.
4. **M. Tech. (Heat Power Engineering ) :** - I & II law of Thermodynamics, SFEE, Entropy , Air Standard Cycles, Steam, Rankine Cycle, Conduction, Convection, Radiation, Heat Exchanger, Compressors, Boiler, Steam Turbine, IC Engine, Psychometric Properties of air, Refrigeration Cycles & related topics.
5. **M. Tech (CAD/ CAM) :** - CAD/CAM, Machine Design, Theory of machines , computer applications, Automation in Production, Manufacturing Processes Production Engineering, Robotics & related topics.
6. **M. Tech. (Computer Sci. & Engineering ) :** -Theory of Computation , c/c++, data Structures, Operating Systems, Computer Networks and Internet, DBMS, Discrete Mathematics, Systems Programming , object oriented Programming, Computer Architecture & Organization & related topics, Digital Signal Processing
7. **M. E. (Wireless Communication & Computing ) :-** C, C++, Data Structures, Operating Systems, Computer Networks, DBMS, Discrete Mathematics, Object oriented Programming, Computer Architecture,

- Microprocessors, Microcontrollers, Digital Communication, Wireless Communication, DSP & related topics.
8. **M. E. (Embedded System & Computing )** : C, C++, Data Structures, Operating Systems, Computer Networks, DBMS, Discrete Mathematics, Object oriented Programming, Computer Architecture, Microprocessors, Microcontrollers, Digital Communication, Wireless Communication, DSP & related topics.
  9. **M.Tech. (Environmental Engineering)** : - Water Treatment, Sewage / Wastewater Treatment, Air Pollution, Solid Waste Management, Water Distribution System