# AICTE SPONSORED NATIONAL SEMINAR ON

Advances in Biomaterials for Medical Applications (ABMA-2014)
14 -15<sup>th</sup>, March 2014



Organized by
DEPARTMENT OF MECHANICAL ENGINEERING
R.V.R. & J.C.COLLEGE OF ENGINEERING
(Autonomous)

Chowdavaram :: GUNTUR - 522 019



### Coordinators

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### INTRODUCTION

Biomedical Engineering is a highly interdisciplinary and upcoming field of technology. Being an integrating medium for two dynamic professions, Medicine and Engineering, this discipline has the broad objective of assisting in the struggle against illness and disease by providing tools and techniques for research, diagnosis and treatment. The awareness in using biomaterials instead of traditional materials is growing, and as a result, an increased number of advancements in biomaterials are being made to meet the current and future needs in biology and medicine.

Orthopaedic biomaterials are enormously successful in restoring mobility and quality of life to millions of individuals each year. These products are generally used for either fracture fixation or joint replacement. Using nanotechnology, the total joint replacement surgeries are successful by improving the wear performance of the biomaterials. A new class of engineering and medical fluid called nano fluid is used for cancer treatment. Biosensors are implanted in the body which can control the blood pressure. Bio materials are also successfully implemented in Dental implants, cardiovascular surgeries and surgical instruments. So, the program is intended as a step forward in giving the future directions of using different materials and their developments with technical fundamentals and analysis.

### **OBJECTIVES**

- ➤ Mainly focused to encourage, promote and advance interdisciplinary co-operation amongst scientists, engineers and medical doctors.
- Provides the design and applications of modern materials along with manufacturing methods. The seminar also discusses the future challenges of Biomaterials for the benefit of humanity and healthy society.
- Vast information provided during the seminar will enable the participants to improve their knowhow in this upcoming area, but also to develop new skills, share expertise and consolidate knowledge.
- Proposed seminar is useful in deeper understanding of these fast growing fields in India.

### **SEMINAR CONTENTS**

The seminar focuses on

- Introduction to Biomaterials
- Synthesis and characterization of Biomaterials
- Processing methods of Biomaterials
- Composites, Nano Materials and their significance
- Computerized analysis of Dental implants and Orthopedic Biomaterials
- In- vitro and In- vivo analysis of materials
- Development ,regulation and ethics of medical products using Biomaterials
- Challenges and Future scope of Biomedical Engineering

## PROGRAMME DELIVERY

Renowned resource persons / Subject specialists from Academia, Institutions, Medical practitioners and R &D would be delivering lectures and sharing their experiences with the participants.

## **ELIGIBILITY**

The programme is open to teachers of AICTE approved Engineering/Polytechnic colleges working in in all disciplines, M.Tech students, medical doctors and Production Engineers from Industry. Participants are limited to 40.

### TRAVEL AND ACCOMMODATION

No TA/DA will be paid.Participants will be provided with free boarding and lodging at College hostels.

### ABOUT THE COLLEGE

R.V.R. & J.C.College of Engineering, (Autonomous), Guntur, established in 1985, is the 'Jewel in the Crown' of Nagarjuna Education Society, which took upon itself the responsibility of enriching the society through promotion of education, literature and culture. This Engineering College, since its inception, enjoyed the status of a proud possession of Guntur and truly contributed to the objective of offering quality education. The college registered a phenomenal growth and today it stands as a premier institution offering Engineering and Management education at UG and PG levels. Today, this most sought after college offers eight B.Tech, degree courses in Engineering, five M.Tech courses, MBA and MCA. The commitment, emotional attachment and professionalism

sustatined by the Management and Staff, since its inception, brought the following laurels.

- One of the few Engineering Colleges that was accredited four times 1998,2002,2007 and 2012.
- The college has been graded as the second best among the private Engineering Colleges by the APSCHE, Hyderabad
- Consistently figured among the top 100 Engineering collges in the country.
- Consistently awarded the best performing Engineering College in University Examinations for the last five years.
- Graded as AA+ by careers 360 magzine in May,2012.

## **ABOUT THE DEPARTMENT:**

The Department of Mechanical Engineering started B.Tech course in 1985 and M.Tech (CAD/CAM) in 2004. The B. Tech course had been accredited with "A" grade by NBA for 3/5 Years in 1998, 2002 respectively. It has been re-accredited for 3 years in 2007 and in 2012. The department was awarded Rs.83 lakhs worth projects by AICTE, UGC and so on. The department has well experienced faculty with right mix of specializations and highly skilled and motivated technicians to provide quality education to the students. A well established CAD/CAM laboratory posses 130 high end computer systems and all with advanced modeling and analysis softwares. Many of its students are placed in multinational companies like ISRO, HPCL, HAL, CUMMINS, ESSAR STEELS, INFOSYS, CTS, TCS, SATYAM VENTURES and INFOTECH etc., through campus selections.

# **Registration and Fee Particulars for Participants**

❖ Educational Institutions : Rs. 200/ ❖ R&D Organizations & Industries : Rs. 500/-

- P.G Students and Research scholars: Rs. 100/-The registration fee enables the participants to receive seminar kit, proceedings CD, lunch etc during seminar days.
- Registration forms are available on the website www.rvrjcce.ac.in.
- Filled in applications can also be mailed to vcd2k2@rediffmail.com

# Important Dates:

Last date for submission of Application :10-03-2014 Confirmation to participants: 11-03-2014

### **ORGANIZING COMMITTEE**

#### Chief Patron:

Dr. K. Basavapunnaiah, President, RVR&JCCE

#### Patrons:

Sri R.Gopala Krishna, Secretary & Correspondent, RVR & JCCE

Dr.M.GopalKrishna, Treasurer, RVR &JCCE Dr.A.Sudhakar, Principal, RVR &JCCE

#### Chairman:

Dr.K.Ravindra, Professor& Head, Department of Mechanical Engineering, Dean, Academics

### Coordinator:

Dr.V.Chittaranjan Das, Professor

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Chemical Engineering & Dean, Examinations
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### **REGISTRATION FORM**

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2. Designation:

3. Organization:

4. Mailing Address:

Mobile NO: Land Line No.

E.mail:

5. Whether accommodation is required: YES/NO

6. Demand Draft Details:

Number: Bank:

Amount: Date:

(Demand draft to be drawn infavour of Principal, R.V.R.& J.C.College of Engineering and payable at Andhra Bank, Chowdavaram, Guntur)

(Signature of Applicant)

I recommend his/her participation in the course

## Signature

(Head of the Institute/organization with seal)

Station :