

**Professor Seeram Ramakrishna, FEng, FBSE** is the Director of Center for Nanofibers & Nanotechnology at the National University of Singapore (NUS). He is a Highly Cited Researcher in Materials Science ([www.highlycited.com](http://www.highlycited.com)). He is among the World's Most Influential Scientific Minds (Thomson Reuters). He co-authored ~ 1,000 articles with ~60,000 citations and ~111 H-index.



His research outcomes have been translated into products. He is a Fellow of UK Royal Academy of Engineering (FEng); Biomaterials Science and Engineering (FBSE); American Association of the Advancement of Science (AAAS), and American Institute for Medical & Biological Engineering (AIMBE). He is a recipient of IFEES President award- Global Visionary; Chandra P Sharma Biomaterials Award; Nehru Fellowship; LKY Fellowship; NUS Outstanding Researcher Award; IES Outstanding Engineer Award; and ASEAN Outstanding Engineer Award. He received PhD from the University of Cambridge, UK, and The General Management Training from Harvard University, USA. He is a member of ISO/TC national committee on Medical Devices, Singapore. He chairs the Future of Manufacturing Technical Committee of Institution of Engineers Singapore. He is an Editor of Current Opinion in Biomedical Engineering (<http://www.journals.elsevier.com/current-opinion-in-biomedical-engineering/editorial-board>)

**Dr. Chandra Shekhar Sharma** is an assistant professor in the Department of chemical engineering at the Indian Institute of Technology, Hyderabad. Dr. Sharma has obtained his PhD from IIT Kanpur in the area of carbon based multiscale micro- and nano-structures. His research interests are Carbon based hierarchical materials, Nature inspired polymer functional surfaces, Electrospun nanofibers and Carbon-and Bio-MEMS.



He has received many awards, including the DST Inspire Faculty Award (2015), INAE Innovative Project Award (2011) and Gandhian Young Technological Innovation Award (2014 & 2015). Dr. Sharma has 25 peer-reviewed publications in reputed international journals, including *Carbon*, *Langmuir*, *ACS Applied Materials and Interfaces*, *Small* and *Electrochimica Acta*. He has four patent applications filed and two book chapters to his credit. Dr. Sharma has guided 2 Ph.D. and 7 M.Tech. students as of now.

**Dr. Mudrika Khandelwal** is an assistant professor in the Department of materials science and metallurgical engineering at IITH. She received her PhD degree in Materials science from Cambridge University in 2013. Her areas of research include biopolymer and composites inspired from nature. Currently her group is focused on developing conducting paper, and antifouling materials.



## About IIT Hyderabad

Inventions and innovations are key words on which the foundation of IITH is based. One of India's eight new IITs – IITH started functioning in August 2008. Currently it has 2000 students in total and offers undergraduate programs in four disciplines, M.Sc in Chemistry and Physics, M.Tech in six disciplines and PhD in 11 disciplines.

The first faculty at IITH joined in 2009 and as of today IITH has 165 faculty members. In a short span of three years, IITH has developed state-of-the-art infrastructure for advanced research and produced more than 600 publications in internationally reputed journals.

Research is a culture among the faculty and students of IITH. This is evident from the several research projects that are ongoing at IITH. On top of the gamut of sponsored projects from various funding agencies, IITH has active collaboration with industry as well.

IITH also has an innovative academic program where the students are offered fractional credits and the first semester undergraduates are allowed to do a project of their choice. Many more innovations in the academic front are in the offing. IITH always strives to offer an innovative environment where one is not afraid to experiment with high-risk ideas.

<http://www.iith.ac.in/>

For details please contact:  
Dr .Chandra Shekhar Sharma

Coordinator - GIAN Course on Biomaterials engineering and digital manufacturing



भारतीय प्रौद्योगिकी संस्थान हैदराबाद  
Indian Institute of Technology Hyderabad

INDIAN INSTITUTE OF TECHNOLOGY HYDERABAD  
Kandi(V), Sangareddy (M), Medak District - 502285,  
Hyderabad, Telangana Phone: +91-040-23016112 Email:  
[cssharma@iith.ac.in](mailto:cssharma@iith.ac.in)

## GLOBAL INITIATIVE ON ACADEMIC NETWORK (GIAN)

10 Days Course on

## Biomaterials Engineering and Digital Manufacturing

12-21 December 2016

Venue



भारतीय प्रौद्योगिकी संस्थान हैदराबाद  
Indian Institute of Technology Hyderabad

INDIAN INSTITUTE OF TECHNOLOGY HYDERABAD  
<http://www.gian.iitkgp.ac.in/>

## Overview

Innovations in biomaterials engineering enable the success of medical devices, nanomedicine and regenerative medicine there by enhancing the outcomes of healthcare. This course is designed to provide an in-depth foundation in principles of biomaterials science and engineering. Students will be introduced to the practical aspects, particularly materials selection, design, fabrication methods, antimicrobial surface coatings, biocompatibility assessment, international standards, and national regulations. Students also will be introduced to the emerging technologies such as digital manufacturing/additive manufacturing/3D Printing, Electrospinning, Electrospraying.

## Course Objectives

The primary objectives of the course are as follows:

1. To enable students to develop a strong base in biomaterials engineering
2. To introduce various stages involved in medical devices development
3. Understanding of related regulations, standards and ethical issues
4. Selection of biomaterials for specific applications
5. Advanced topics such as nanomedicine, tissue engineering/regenerative medicine, lab on chips, diagnostics, imaging, ex-vivo tissue models
6. Digital manufacturing for innovations in healthcare

## Who can attend:

- Students at all levels (BTech/MSc/MTech/PhD) or Faculty from academic institutions and technical institutions.
- Professionals, Executives, engineers and researchers from medical, pharmaceutical background
- Business school graduates with entrepreneurial interests in biomaterials

The maximum number of participants for the course shall be limited to 30.

## Evaluation and Grading

- This course is evaluated for 2 credits
- Evaluation of the course is done by term project, reading assignments, home works and quizzes.
- Each participant will be awarded a letter grade based on his/her performance during the course.
- In addition, participation certificate will be issued to all the participants

## Registration details

Registration fee\*\*:

For participants from academic institutions: Rs. 10,000

For participants from industry: Rs. 15,000

For students\* : Rs. 2,000

Foreign Delegates: USD 500

(\*ID proof to be submitted)

\*\* Registration Fee includes access to attend all the lectures/tutorials. An additional fee of Rs. 2500 has to be paid for providing Mineral Water bottle/Lunch/ 2 Coffee/Tea with snacks on all 10 days.

There will be limited accommodation for student participants in IITH Hostel on payment basis. Please write to course coordinator in this regard at the time of submission of registration form.

Payments should be made in the form of a DD in favour of Registrar, IIT Hyderabad, Payable to SBI, IIT Kandi Branch, IFS Code: SBIN0014182.

The DD, a copy of ID proof issued by the organisation mentioned in the registration form, together with registration form should be sent to:

Dr. Chandra Shekhar Sharma  
Coordinator- GIAN on Biomaterial Engineering and Digital Manufacturing

INDIAN INSTITUTE OF TECHNOLOGY HYDERABAD  
Kandi(V), Sangareddy (M), Medak District - 502285,  
Hyderabad, Telangana Phone: +91-040-23016112 Email:  
cssharma@iith.ac.in

**Last date for receiving applications : 15 Nov 16**  
**Intimation to participants : 30 Nov 16**  
**Course Dates : 12-21 Dec16**

**Important dates**

## Registration form

# Biomaterials Engineering and Digital Manufacturing

Title: Mr./Ms./Mrs./Dr.

Name: \_\_\_\_\_

Date of birth: \_\_\_\_\_

Designation: \_\_\_\_\_

Organization\*: \_\_\_\_\_

Mailing address: \_\_\_\_\_

Phone: \_\_\_\_\_

Email: \_\_\_\_\_

Registration Fee Enclosed (select one):

Rs. 2000/ Rs. 10000/ Rs. 15000/ USD 500

Draft details: \_\_\_\_\_

Accommodation needed on payment basis

(for student participants only) : Yes/No

\* Proof to be submitted