SPONSORSHIP CERTIFICATE

It is certified that Dr./Mr./Mrs.

_____

is a faculty of our Institute and is being sponsored hereby for attending the QIP Short term course on "**Biomedical Optics and Instrumentation**" to be conducted at IIT Madras from **3rd–7th December, 2018**.

Signature of Sponsoring Authority

(With date and seal)

Date:

Place:

*This application can be printed on an A4 sheet

Duly filled application forms should be sent to:

Prof. N. Sujatha
Department of Applied Mechanics
Indian Institute of Technology Madras
Chennai – 600 036
Tel. : 044-22574067
E-mail: nsujatha@iitm.ac.in

ELIGIBILITY

Faculty of Biomedical engineering, Physics, Electrical engineering, Electronics and Communications engineering, Mechanical engineering, Computer Science and engineering and Bio-Technology from AICTE approved colleges are eligible to apply.

REGISTRATION FEE

There is **no course fee** for the participants from AICTE approved engineering colleges.

TRAVEL

The train fare (ONLY two way 3-Tier AC train fare by the shortest route from your institute to Chennai and back) will be provided to the selected participants as per AICTE guidelines.

BOARDING AND LODGING

Boarding and lodging facilities will be provided for the selected candidates in Taramani Guest House at IIT Madras.

IMPORTANT DATES

Last date for applications: 20th October 2018
Intimation of selection: 27th October 2018 (By email)
Confirmation of participation: 03rd November 2018 (By email)

AICTE QIP SHORT TERM TRAINING PROGRAMME

On

Biomedical Optics and Instrumentation

DECEMBER 3-7, 2018

Coordinator
Prof. N. Sujatha

Organized by
Department of Applied Mechanics
Indian Institute of Technology, Madras

BACKGROUND

Biomedical optics is a multidisciplinary field dealing with all aspects of interactions between light and biological material resulting in the development of optical technology and applications in Biomedical research and medicine. Emerging photonics technologies augment tissue diagnosis/therapy/ surgery in different *in-vivo* and *ex-vivo* conditions. These technologies also lead to the development of non-invasive tools for routine monitoring of the tissue health and recording the effectiveness of various treatment procedures. A good understanding of Biophotonics principles is indispensable for a dedicated team of professionals dealing with the design and development of such instruments.

COURSE OBJECTIVES

Courses dealing with applications of photonic principles in the biomedical domain are recently gaining wider popularity in the biomedical engineering curriculum. Proper training in the area would be desirable for the faculty members in order to efficiently implement the course and to guide related student projects. With this aim, this short-term course is designed to provide insight into the fundamental concepts of Biophotonics and its applications in biomedical research and medicine. Various diagnostic and therapeutic based optical devices will be discussed and the instrumentation aspects will be demonstrated through lab/hospital visits.

COURSE OVERVIEW

Introduction to Biophotonics, Basics of Optical instrumentation for biomedical applications, Concept of Optical biopsy as a new frontier in diagnostic medicine - Lab/hospital visit and demonstrations, Optical coherence tomography, Laser speckle interferometry for tissue imaging - Lab visit and demonstrations, Bio-medical applications of digital photo-elastic analysis, Optical instrumentation and applications in ophthalmology, Optical microscopy, Optics and assessment of vascular dynamics, Emerging technologies in biomedical optical imaging, Optics for therapeutic applications, Computational aspects of diffuse optical imaging, Optics and biosensors.

ABOUT THE DEPARTMENT

The Department of Applied Mechanics has been in existence since 1959 and has grown into a full-fledged interdisciplinary graduate research department over the years. The Department focuses on academic activities in three broad areas viz., Biomedical Engineering, Fluid Mechanics and Solid Mechanics. The Department has played a major role in contributing to the academic community and society. The faculty has won international recognition for their industrial research and sponsored projects. Some of the facilities available in various laboratories of this Department are unique in the country. Coupled with its multi-disciplinary background, the Department has highly diverse and experienced faculty. It has an excellent student-teacher ratio, providing opportunities for academically intense learning.

Equipped with state of the art facilities in a serene campus, the department offers an enriching academic environment. For more details, you may please visit **https://apm.iitm.ac.in/**

AICTE QIP
SHORT TERM TRAINING PROGRAMME
ON

Biomedical Optics and Instrumentation
(December 3-8, 2018)

APPLICATION

Name:

Designation:

Department:

Organization:

Qualification:

Experience (in years):

Mailing Address:

Phone:

E-mail:

Date:

Signature of the Applicant