

Finishing School Program (Online Internship)-2020

Name of Department	Department of Biotechnology
Module Name	Medical Device Innovation
Module Coordinators	1) Prof. Vishal Kumar Ranjan 2) Dr. Sunita Sharma 3) Prof. Shikha Jha 4) Dr. Radhika R
Module Objective	The Internship will help in understanding the importance of the 460 billion \$ market of medical device globally. The objective of this online internship is to give the basic idea about designing and development of Medical device.
Module Content	Definition and classification of medical devices, Case studies from successful medical device startups. Medical device: needs finding and need statement development; Stake holder analysis, Preliminary market analysis and disease state understanding; Needs filtering, Need validation through market analysis and disease state analysis. Intellectual property fundamentals and patenting procedures, Regulatory fundamentals. Concept generation, concept selection and concept development, Design control and documentation, Prototyping, Business plan development.
Module Methodology	The workshop will start with various aspects of Medical device development phase such as finding need for device, Needs filtering, Need validation, , concept selection and concept development, documentation, Business plan development and final Prototyping designing.
Module Outcome/ Impact	<ul style="list-style-type: none">• Able to design and develop a new medical device.• Able to patent a new medical device.• Able to incubate a biomedical start-up company.
Duration	5 Weeks (30 days)

MADHAV INSTITUTE OF TECHNOLOGY AND SCIENCE, GWALIOR
(A Govt. Aided UGC Autonomous & NAAC Accredited Institute Affiliated to RGPV, Bhopal)

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Day Wise Schedule				
	Date	Day	Module Contents to be covered/Interactive Session/Assignment/Quiz/Exercises/Daily practice sheets (DPP)/Tutorial/Project etc. (10:00 AM onward, 3-4 Hrs/ Day)	Faculty
Week 1	19/05/2020	Tue	Definition and classification of medical devices	Dr. Sunita Sharma
	20/05/2020	Wed	Introduction to new medical device development	Dr. Sunita Sharma
	21/05/2020	Thu	Case studies from successful medical device startups.	Dr. Sunita Sharma
	22/05/2020	Fri	Strategic focus	Dr. Sunita Sharma
Week 2	26/05/2020	Tue	Medical device: needs finding and need statement development;	Prof. Vishal Kumar Ranjan
	27/05/2020	Wed	Stake holder analysis, Preliminary market analysis and disease state understanding;	Prof. Vishal Kumar Ranjan
	28/05/2020	Thu	Needs filtering	Prof. Vishal Kumar Ranjan
	29/05/2020	Fri	Need validation through market analysis and disease state analysis	Prof. Vishal Kumar Ranjan
Week 3	02/06/2020	Tue	IP fundamentals. patenting procedures	Prof. Shikha Jha
	03/06/2020	Wed	Regulatory fundamentals.	Prof. Shikha Jha
	04/06/2020	Thu	Regulatory strategy for new product,	Prof. Shikha Jha
	05/06/2020	Fri	Provisional patent filing	Prof. Shikha Jha
Week 4	09/06/2020	Tue	Concept generation	Dr. Radhika R
	10/06/2020	Wed	Concept selection	Dr. Radhika R
	11/06/2020		Concept Development	Dr. Radhika R
Week 5	16/06/2020	Tue	R&D strategy. Medical device reliability and quality assurance	Prof. Vishal Kumar Ranjan
	17/06/2020	Wed	Design control and documentation	Prof. Vishal Kumar Ranjan
	18/06/2020	Thu	Prototyping, Business plan development	Prof. Vishal Kumar Ranjan
	19/06/2020	Fri	Concluding Remarks by all Faculties	All faculty

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Module Coordinators Email Id and Mobile Number	1) Prof. Vishal Kumar Ranjan; 7010934981; vishalbiotechnology2007@gmail.com 2) Dr. Sunita Sharma; 98263555314; sunitasharma75@mitsgwalior.in 3) Prof. Shikha Jha ; 9933924395; shikhajha17@gmail.com 4) Dr. Radhika R ; 9085979189; vinoth.radhika07@gmail.com
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Eligibility and Important Instructions :-

1. The Online Finishing School Program (Online training/Internship) is designed only for Pre-final & Final Year students of Electrical Engineering Department.
2. The students may apply online.
3. The Online Finishing School Program/ Summer Internship Program is free for the participants of Pre-final & Final year students of MITS, Gwalior.
4. The participants outside the Institute may also join the Program on payment basis.
5. This online module will be conducted under the Finishing School Program which will be considered equivalent to Online Internship of Pre-final year students who could not get any Internship during this situation.
6. Duration of this program will be of four weeks which is equivalent to summer Internship period as per AICTE and our Institute policy. Daily no. of hours of online training may be flexible.
7. Certificates will be issued to candidates who have attendance 75% or more and also score more than 60% in the test.