# Executive Post Graduate Program in Medical Technology

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Hi, thanks for showing interest in our Post Graduate Program in Medical Technology. It was great talking to you. Here are the details regarding the course.

#### \*Duration of the course\*

Full Time: 12 Months

#### In this program, you will learn the below course

#### **Fundamentals Courses:**

- 1. Anatomy and Physiology
- 2. Medical Instrumentation and Biomedical Signals
- 3. Internet of things (IoT) in Healthcare
- 4. Product Design and Development
- 5. Medical Informatics
- 6. Manufacturing
- 7. Regulatory Processes For Medical Devices
- 8. Standards, Certifications and Accreditation

# After Completing the Fundamental courses, students have to choose any one of the following 3 tracks/specializations

### Specialization 1: Imaging & Radiology

- 1. Anatomy and Physiology
- 2. Medical Instrumentation and Biomedical Signals
- 3. Medical Informatics
- 4. Internet of Things (IoT) in Healthcare
- 5. Product Design and Development from A to Z
- 6. Regulatory processes for medical devices
- 7. Manufacturing
- 8. Core and Advanced Python Programming
- 9. Radiology
- 10. Imaging and Optics
- 11. Medical Image Processing
- 12. Advanced Medical Image Processing

# **Specialization 2: Electronics & Instrumentation**

- 1. Anatomy and Physiology
- 2. Medical Instrumentation and Biomedical Signals
- 3. Medical Informatics
- 4. Internet of Things (IoT) in Healthcare
- 5. Product Design and Development from A to Z
- 6. Regulatory processes for medical devices
- 7. Manufacturing
- 8. Embedded C Essentials
- 9. Medical Embedded Systems
- 10. Software Verification and Validation and System Testing for Hand Code

- 11. Advanced Instrumentation and Signal Processing
- 12. Electronics System Design

# **Specialization 3: Product Design and Development**

- 1. Anatomy and Physiology
- 2. Medical Instrumentation and Biomedical Signals
- 3. Medical Informatics
- 4. Internet of Things (IoT) in Healthcare
- 5. Product Design and Development from A to Z
- 6. Regulatory processes for medical devices
- 7. Manufacturing
- 8. CATIA for Mechanical Engineers
- 9. Design for Manufacturability
- 10. Biomaterials
- 11. Implants
- 12. In Vitro Diagnostics

#### \*Softwares\*

- 1. C Programming
- 2. Anaconda
- 3. SQLLite
- 4. STM32CubeIDE
- 5. C/C++
- 6. CAD (solidworks)
- 7. DICOM
- 8. PACS
- 9. Python
- 10. MATLAB
- 11. LDRA Tool Suite
- 12. CATIA V5
- 13. SolidWorks

# \*Projects in Imaging and Radiology\*

- Explain Two Surgical Procedures associated with the Gastrointestinal and Urinary Systems
- 2. Brief Two Surgical Procedures associated with the Cardiovascular and Nervous System
- 3. Multi-Parameter Patient Monitoring System
- 4. Robotic Surgery for Kidney Transplantation
- 5. Design and Develop an IT based Wireless Wearable Health Monitoring System
- 6. Design a Hospital Management System
- 7. Preparing a dummy design docket as required by schedule V of the MDR urs
- 8. Generation of Minimum 2 Concepts of Syringe Pump
- 9. Development of a Total Hip Replacement System including modularity and configurations
- 10. English Dictionary App
- 11. Library Book Management System
- 12. Al Based Solutions for Radiology
- 13. Understanding Medical Imaging
- 14. Design and development of a Digital and Hybrid medical ultrasound Imaging System
- 15. Development of an innovative microscopic imaging system
- 16. Basic Image Processing Operations
- 17. Practical Image Processing

# \*Projects in Electronics & Instrumentation\*

- Explain Two Surgical Procedures associated with the Gastrointestinal and Urinary Systems
- 2. Brief Two Surgical Procedures associated with the Cardiovascular and Nervous System
- 3. Multi-Parameter Patient Monitoring System
- 4. Robotic Surgery for Kidney Transplantation
- 5. Design and Develop an IT based Wireless Wearable Health Monitoring System
- 6. Design a Hospital Management System
- 7. Preparing a dummy design docket as required by schedule V of the MDR urs
- 8. Generation of Minimum 2 Concepts of Syringe Pump
- 9. Development of a Total Hip Replacement System including modularity and configurations
- 10. User Interfaces for Working with "Sets"
- 11. Finite State Machine for Aircraft Landing Gear System
- 12. Static Code Review Analysis
- 13. Dynamic Analysis White Box Testing

# \*Projects in Product Design & Development\*

- 1. Explain Two Surgical Procedures associated with the Gastrointestinal and Urinary Systems
- 2. Brief Two Surgical Procedures associated with the Cardiovascular and Nervous System
- 3. Multi-Parameter Patient Monitoring System
- 4. Robotic Surgery for Kidney Transplantation
- 5. Design and Develop an IT based Wireless Wearable Health Monitoring System
- 6. Design a Hospital Management System
- 7. Preparing a dummy design docket as required by schedule V of the MDR urs
- 8. Generation of Minimum 2 Concepts of Syringe Pump
- Development of a Total Hip Replacement System including modularity and configurations
- 10. Development and characterization of a novel biomaterial based cardiac stent for atherosclerosis treatment
- 11. Design a industrial product development project for bone cement preparation in the orthopedic applications

#### \*Demo videos\*

https://voutu.be/hl 3YEFS7aA

#### \*Description of course content\*

https://skill-lync.com/medical-technology-courses/executive-masters-medical-technology

# \*Success stories\*

Check out the Placements of our customers at <a href="Skill Lync Success Stories.pdf">Skill Lync Success Stories.pdf</a> and also hear what they say about our courses at <a href="http://bit.ly/skill-lync-google-reviews">http://bit.ly/skill-lync-google-reviews</a>. Visit the Project Portfolios of students placed in reputed companies after taking Skill-Lync courses-Sarthak's skill-lync Profile: Skill-Lync

<u>alagu's skill-lync Profile : Skill-Lync</u> Shubham's skill-lync Profile : Skill-Lync

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