Title: DIGITAL PATHOLOGY

Course Code: VMCPA-01

Duration: 30 Hrs

Department: PATHOLOGY

Coordinator: Dr Sheeladevi C S

Who Can Enroll: Undergraduate and post graduate students

Course overview

JSS Medical college , JSSAHER, has developed this hybrid mode learning programme to increase knowledge and improve competence in whole slide imaging and digital pathology.

Digital pathology is one of the major transformations that has occurred in the field of pathology in past decade. It includes acquiring, managing, consulting and interpretation of pathology information (both slides and data) in a digital environment. It is presently being used in a few centres in India and worldwide with a wide array of advantages in the fields of medical education, patient care as well as research. The purpose of this course is to teach students the fundamentals of digital imaging and instructing them on the utilization of digital pathology as a tool for advancing pathology practice.

Learning modules of the course.

The course consists of six learning units with the end goal of the student being awarded a certificate of completion to recognise this achievement. The teaching sessions will be taken by experienced teachers in this field. The course units are detailed below.

Unit I: Introduction-Digital Pathology- Past to present.

By the end of unit I, students should be able to describe the history, evolution, and current scenario of digital pathology.

Unit II: Basics of Digital pathology-Technical details

By the end of Unit II, students should be able to list the hardware and software used in digital pathology.

Unit III: Applications of digital pathology

By the end of Unit III, students should be able to discuss the various applications of digital pathology with respect to

1. Primary diagnosis, remote consultation and second opinions

2. Medical Education, Pathology reviews and tumor boards

3. Biobanking

4. Research and evolution of artificial intelligence

Unit IV: Current technology and challenges

By the end of Unit IV, the students should be able to explain whole slide imaging and digital pathology analysis.

Unit V: Case based applications of digital pathology.

By the end of Unit V, students should be able to explain the utility of digital pathology with respect to:

1. Diagnosis and staging of disease
2. Teaching tool
3. Quality control and assurance

Unit VI: -New Frontiers in digital pathology

By the end of Unit VI, students should be able to describe the new frontiers in digital pathology.

Content/syllabus-format with teaching schedule

Unit	Content	Objectives	Time allotted	Mode of learning
Unit I	**Introduction-Digital Pathology- Past to present**	History, evolution, and current scenario	2hrs	Online
	Guest lecture on digital pathology		1 hr	
Unit II	**Basics of Digital pathology**	Hardware and software	3 hrs	online
Unit III	**Applications of digital pathology**	Primary diagnosis, remote consultation and second opinions Medical Education, Pathology reviews and tumor boards Biobanking Research and evolution of artificial intelligence	10hrs	Online /offline
	Quiz		1 hr	Online
	Pecha kucha		2 hrs	Online
Unit IV	**Current technology and challenges**	Whole slide imaging and digital pathology analysis	2 hrs	Online

Unit V	**Case based application of digital pathology**	Diagnosis and staging of disease Teaching tool Quality control and assurance	3 hrs	Online / offline
	Practical session		2hrs	Offline
	Case based discussion		2hrs	Online
Unit VI	**New Frontiers in digital pathology**	Three dimensional whole slide imaging, spectral imaging, DIY (Do it yourself) digital pathology	2 hrs	Online

Expected Outcome:

By the end of the course, students should know:

1. What is digital pathology.
2. Digital tools used in teaching learning in pathology
3. The various applications and uses of digital pathology

Assessment method: Multiple choice questions,

Case based image analysis.

Certificate of completion:

To get the completion certificate you need to complete the course with minimum 80% attendance and pass the exam at the end of the course.

Certificate will be uploaded to your registered e-mail address.

Registration: Free registration. For registration click the link https://forms.gle/MjLFMtoUa3bMWx1B8