

**REGULATIONS AND SYLLABUS  
FOR  
POST GRADUATE DIPLOMA IN LAPAROSCOPY ASSISTANT CARE  
MANAGEMENT**

*Offered by*  
**BHARATHIAR UNIVERSITY, COIMBATORE  
FROM 2009-2010**

*Under The*  
**CENTRE FOR COLLABORATION OF  
INDUSTRY AND INSTITUTIONS (CCII)  
COLLABORATIVE PROGRAMME**

## **POST GRADUATE DIPLOMA IN LAPAROSCOPIC ASSISTANT CARE MANAGEMENT**

### **Course Title and Summary**

The course shall be called as “POST GRADUATE DIPLOMA IN LAPAROSCOPIC ASSISTANT CARE MANAGEMENT”. It will be an intensive full time course, which will include mainly practical training in the operation theatres, recovery room and ICU, HDU apart from bedside classes and lectures.

At the end of the course the candidate will be fully trained in managing the preoperative lap surgical patients, know the OT set up for lap surgery cases, know to handle routine and special lap instruments, know to assist minor and major lap surgeries, know to handle post op lap surgical cases, etc. They will also get trained in ICU care of such patients.

The programme will be conducted in a hospital recognized by the Bharathiar University under the CCII collaborative programme. Candidates shall abide by the stipulated timings, discipline, rules and regulations of the hospital to which they will be assigned for the entire course.

### **REGULATIONS**

#### **1) Eligibility for admission:**

The candidates those who have passed 3 years Diploma in Nursing after +2 examination or B. Sc Nursing of recognized university or equivalent be eligible for admission to Post Graduate Diploma in Laparoscopic Assistant Care Management course.

#### **2) Course Duration:**

The duration shall be 12 months Full Time. The candidates admitted to this course would spend at least six hours a day and 30 hours per week in the Bharathiar University Recognized Hospitals.

#### **3) Course of study and scheme of Examinations**

The period of certified study for the POST GRADUATE DIPLOMA IN LAPAROSCOPIC ASSISTANT CARE MANAGEMENT shall be a full time course and its duration shall extend over a period of one academic year (non- semester). There shall be one examination at the end of the course, which will consist of theory, practical and oral components.

## SCHEME OF EXAMINATION

Paper No.	Subject	Credit Hours	Max Marks	
			Int	Ext
01	Applied Basic Sciences	6	60	90
02	Pathology and Microbiology	6	60	90
03	OT room setup and sterilization	6	60	90
04	Basic laparoscopic instruments and technique	6	60	90
05	Advance laparoscopic instruments and technique	6	60	90
06	Operation room technique - <b>Practical</b>	6	60	90
07	Laparoscopic surgery minor & major - <b>Practical</b>	6	60	90

#### 4) **Practical Training**

The candidate admitted to the course shall be put through a total of 900 hours of intensive practical and clinical training in the hospital OT and ICU/HDU, in order to gain a thorough understanding of the functioning of the various laparoscopic instruments and knowledge of various procedures being performed apart from knowing about the theatre setup and sterilization.

#### 5) **Requirement to appear for the examination**

A candidate should put in a minimum of 90% attendance to be eligible to appear for the examinations.

#### 6) **Medium of instruction:**

The medium of instruction throughout the course and the examinations shall be conducted in English only.

#### 7) **Passing Minimum**

To pass, a candidate shall secure a minimum of 50% percent marks individually in the practical and Theory Examinations. A candidate failing in any one component will have to reappear for that particular component in the semester examination.

#### 8) **Classification of successful candidates**

A candidate securing 75% and above, aggregate in the theory and practical examinations, in the first attempt, shall be deemed to have passed the examination with distinction.

A candidate securing 60% and above aggregate in the theory and practical examinations, in the first attempt, shall be deemed to have passed the examination with first class.

Other successful candidates shall be declared to have passed the examination in Second Class.

**9) Conferment of degree.**

A candidate, who has passed all the examinations as prescribed, shall be eligible to receive the degree of “Post Graduate Diploma in Laparoscopy Assistant Care Management” from the Bharathiar University.

**10) Ranking**

Candidates who have passed all the examinations in the very first attempt and securing the first position in aggregate marks for every 10 candidates appearing in the examinations ranking (with the maximum of 10 positions) will be awarded university ranks.

**11) Revision of regulations and syllabus.**

The syllabus and regulations of the course are subject to modification by the concerned board every year.

**12) Question paper pattern.**

Theory examination will be for 90 marks with the following components.

- Multiple choice / one word answers :  $15 \times 1 = 15$  marks (no choice)
- Short notes (100 words/ one paragraph) :  $5 \times 5 = 25$  marks (either/or type)
- Elaborate (300 words or 1½ paper) :  $5 \times 10 = 50$  marks (either/or type)

**Award of Internal Assessment Marks**

Internal assessment marks for theory will be awarded based on the Marks obtained in the three Internal Assessment Tests and based on the candidate’s regular performance in the practical area and one practical exam marks.

**PAPER 1**  
**APPLIED BASIC SCIENCES**

**Aim:** At the end of the course, the candidate should have a thorough knowledge of the structural and functional aspects of the human gastrointestinal and reproductive systems.

**Unit: 1**

Applied GIT anatomy I: Anatomy of the esophagus, stomach, duodenum, small bowel.

**Unit: 2**

Applied GIT anatomy II: Anatomy of abdomen, omentum, colon, rectum and anal canal.

**Unit: 3**

Applied anatomy of pelvis: Anatomy of pelvis, uterus, ovaries, bladder, vagina and pelvic floor

**Unit: 4**

Applied GIT Physiology I: Mechanism of stomach and intestinal secretion. Function of stomach, duodenum and gallbladder.

**Unit: 5**

Applied GIT physiology II: function of liver, spleen, colon and rectum. Physiology of defecation.

**REFERENCE BOOKS:**

1. Williams PL, Warwick R, Dyson M, Bannister LH (eds) Gray's Anatomy. 36th edition. Churchill Living stone, New York, 1980.
2. Human anatomy Regional and applied Volume – 1 - B.D Chaurasia's, 3rd CBS Publishers and distributions New Delhi, 1995.
3. Text book of Medical Physiology - Arthur C. Guyton, John E. Hall, 9th edition W.B.
4. Saunders Company U.S.A 1996.
5. Essentials of Medical physiology - Anil Baran singha mahapatra, 1st edition current Books international Mumbai. 1998.
6. Clinical Anatomy for Medical students - Richard s. Snell, 5th edition Little, Brown and
7. company. U.S.A 1992.

## **PAPER 2**

### **PATHOLOGY AND MICROBIOLOGY**

**Aim:** At the end of the course, the student should know about the pathogenesis and detailed pathology of the various diseases affecting the gastro intestinal systems. The students should also know about the various types of organisms affecting the gastrointestinal tract and in the OT set up.

#### **Unit: 1**

General lectures on micro-organisms- Classification/ shapes/

#### **Unit: 2**

Sterilisation and asepsis.

#### **Unit: 3**

Infection- source of infection, , spread of infection, various pathogenic bacteria, viruses and diseases caused by them (gastritis, enteritis, enterocolitis, colitis, etc)

#### **Unit: 4**

Pathology – General- Cell injury and adaptation, inflammation and repair, fluid and hemodynamic derangement in vomiting and diarrhoea.

#### **Unit: 5**

Pathology of the gastrointestinal tract and genital system. IBS, IBD, Koch's abdomen.

#### **REFERENCE BOOKS:**

1. Fletcher: Diagnostic Histopathology of Tumours – Christopher DM Fletcher 2007 (3<sup>rd</sup> edition)
2. Lakhani: Basic Pathology: An Introduction to the Mechanisms of Disease – Sunil R
3. Lakhani, Susan A Dilly, Caroline J Finalyson and Ahmet Dogen 2003 (3<sup>rd</sup> ed),
4. Appleton & Lange's Review of Microbiology & Immunology – Dr William W Yotis,
5. Tadayo Hashimoto, Harnold J. Blumenthal – 1997.
6. 4. Medical Microbiology – Michael A. P Faller, Patrick R.Murray, Ken S. Rosenthal – 2005.

**PAPER 3**  
**OPERATION ROOM SETUP AND MANAGEMENT**

**OVERALL OBJECTIVE:** At the end of the course the students will be able to acquire knowledge on the basic concepts of operation room technique and develop desirable skill and attitude in providing basic care to the patient before, during and immediately after surgery.

**SPECIFIC OBJECTIVES:**

The students will be able to

1. Classify the surgeries
2. Prepare the operation theatre for surgery
3. Identify the instruments used for various surgeries
4. Assist the anesthesiologist
5. Follow standard precaution and waste management protocols in OR
6. Monitor the patient in recovery room
7. Maintain clean or sterile environment in OR

**Unit: 1**

Introduction to Operation Theatre Management: Organisation of Hospital - Organisation of operating rooms - Single and Multiple theatre units - Elective and emergency surgeries, Ambulatory surgery.

**Unit: 2**

Principles of Surgical Asepsis and Hygienic Operating Room: Carbolization and fumigation - Scrubbing, gowning, gloving - Preparation of sterile field. Preparation of skin for patient - Preparation of tables, equipments, instruments for surgery - Care of operating room – before, during & after surgery – Maintenance of Septic Theatre Special Precaution in handlings patients with sepsis, blood borne infection – Hep.B, HCV, HIV etc - Cleaning and disinfection of the articles and OR (with special reference to HIV, HBV & HCV Terminal disinfection of theatre).

**Unit: 3**

Operating Room Instruments and Maintenance: Basic instruments, sutures, needles, dressing - Operating room lighting – Specific instruments used in General Surgery, Gynaec, GI surgeries. Routine and special laparoscopic instruments

**Unit: 4**

Assisting with Anaesthesia: Preparation of patient including transfer & positioning of the patient - Brief orientation to different types of anesthesia. Assisting the anesthesiologist for induction of anaesthesia.

**Unit: 5**

Maintaining Patient Safety and Comfort in OR: Maintaining patient safety & comfort in OR, Prevention of physical, electrical, chemical injuries/hazards to patient - Maintenance of interpersonal relationship, Orientation to legal & ethical issues involved in operation room technique

**REFERENCE BOOKS:**

1. Introduction to Operating room Technique - Kandaswami
2. Theatre Technique - Dixon Eileen
3. Fundamentals of Operation Theatre Service - T.K.Datta



**PAPER 4**  
**BASIC LAPAROSCOPIC SURGERY CARE**

**Aim:**At the end of the course students will acquire enough knowledge about the basic laparoscopic instruments and will be able to do table layout for minor laparoscopic surgeries and will be experienced in assisting all minor laparoscopic surgeries.

**Unit: 1**

Equipments- insuffalator, insuffalating tube, light source, camera , trolley, light cable, suction apparatus, diathermy- their function and trouble shooting

**Unit: 2**

Basic laparoscopic instruments: identifying and knowing the importance of all basic lap instruments.veerus needle- assembling and disassembling all the instruments.

**Unit: 3**

Assisting all basic lap surgeries- appendectomy, cholecystectomy, diagnostic laparoscopy, etc. expertising in making modified orders knot.

**Unit: 4**

Cleaning and washing all the lap instruments. Sterilisation using steroid and ETO. labeling and packing the lap instruments.

**REFERENCE BOOKS:**

1. SAGES manual perioperative care in minimally invasive surgery. Richard I. Whelan, James w. fleshman, Dennis L. fowler. Springer edition
2. Text book and atlas in laparoscopic surgery. Dr. C. Palanivelu, JAA PEE.
3. text book in laparoscopic surgery. Zucker.

**PAPER 5**  
**ADVANCE LAPAROSCOPIC SURGERY CARE**

**Aim:** At the end of the course students will acquire enough knowledge about the advance laparoscopic instruments and will be able to do table layout for major laparoscopic surgeries and will be experienced in assisting all major laparoscopic surgeries.

**Unit: 1**

Equipments- special instruments- harmonic scalpel, bipolar diathermy machines, gyrus, ligasure and, APC. Handling, fixing and trouble shooting of all those equipments.

**Unit: 2**

Advance laparoscopic instruments: identifying and knowing the importance of all advance lap instruments. Assembling and disassembling all the instruments.

**Unit: 3**

Assisting all advance lap surgeries- appendicular perforation, acute cholecystitis and difficult cholecystectomy, CBD exploration, fundoplication, TEP, TAPP and IPOM

**Unit: 4**

Assisting major GI cancer surgeries – lap gastrectomy, thoraco lap esophagectomy, transhiatal esophagectomy, AR, APR and hepatectomy.

**Unit: 5**

Assisting all gynecological surgeries including cancer surgeries and hysteroscopic procedures. Will get trained in assisting TLH, LAVH, ovarian cystectomy, tubal recanalisation and PFR.

**REFERENCE BOOKS:**

1. SAGES manual perioperative care in minimally invasive surgery. Richard I. Whelan, James w. fleshman, Dennis L. fowler. Springer edition
2. Text book and atlas in laparoscopic surgery. Dr. C. Palanivelu, JAA PEE.
3. text book in laparoscopic surgery. Zucker.

**PAPER 6**  
**PRACTICAL: OPERATION ROOM TECHNIQUES**

**Clinical Postings in**

- Recovery room
- Operation theatre

**Procedure to be completed**

- Fumigation
- Cleaning & disinfection of articles.
  - Packing articles for sterilization
  - Sterilization of equipments
- Setting up of table for various lap surgeries
- Assisting the surgeon
- Scrubbing, gloving & gowning
- Laying tables
- Positioning
- Assisting with anaesthesiologist
- Observation & monitoring the patient in recovery room
- Terminal disinfection

**PAPER 7**  
**PRACTICAL: LAPAROSCOPIC SURGERY MINOR AND MAJOR**

**Clinical Postings in:**

- Recovery room
- Operation theatre

**Procedure to be completed**

- assisting the surgeon for minor lap GI surgeries
- assisting and observing major lap GI surgeries
- assisting and observing gynec surgeries
- assisting and observing GI oncosurgeries

At the end of the course student will be able to understand the basic concepts of all the laparoscopic surgeries and the instruments and will be able to assist all major and minor laparoscopic surgeries.

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