SHRI
DHARMASTHALA
MANJUNATHESHWARA
UNIVERSITY

Ordinance Governing
M. S. GENERAL SURGERY
Curriculum 2019-20

SHRI DHARMASTHALA MANJUNATHESHWARA UNIVERSITY

(A State Private University established under the Shri Dharmasthala Manjunatheshwara University
Act No 19 of 2018 of Government of Karnataka and Notification No. ED 261 URC 2018 dated 19th December 2018)

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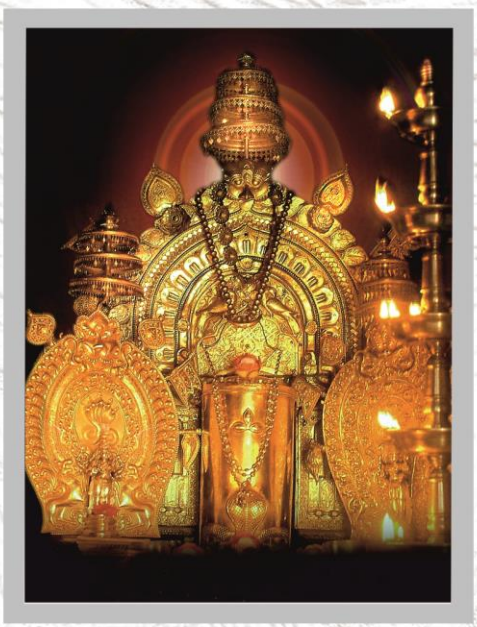
|| Om Shri Manjunathaya Namaha ||



Shree Kshethra Dharmasthala

Edition Year : 2019-20

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THE LOGO

Poojya Dr D. Veerendra Heggade, Hon'ble Chancellor of the University, while searching for an appropriate Logo for the University, saw a photograph picked from Temple Architecture showing Wings of a Bird, sculpted in Indian style and wanted it to be incorporated in the logo for the University, as the Wings symbolize 'Spreading of Knowledge beyond Boundaries'. Further it was felt that the Central theme of the logo should be 'Rudra' (The Linga) with three wings on each side. In this way, the logo of the University was conceptualized.

Hence:

1. The central part represents **Rudra** who Demolishes Darkness.
2. The Three **horizontal lines on The Linga** stand for Samyak Darshan (Right Belief), Samyak Gyan (Right Knowledge) and Samyak Charitra (Right Conduct).
3. The **Wings** symbolize spreading of Knowledge across the boundaries.
4. Base line **"Truth Liberates"** highlights the Purpose of Education: to liberate oneself unconditionally. It shows that it is not discipline, nor knowledge nor the efforts to freedom that liberate but Truth is what liberates you from all your conditioning and ignorance.

The overall significance of Shri Dharmasthala Manjunatheshwara University's Logo is:

Darkness of ignorance is destroyed by the flow of knowledge to bring Liberty to everyone, by realizing the truth. And, it should spread globally without the boundaries as hindrance.

SHRI
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MANJUNATHESHWARA
UNIVERSITY

TRUTH LIBERATES

VISION

Shri Dharmasthala Manjunatheshwara University will set the highest standards of teaching and learning by awakening the intelligence of the students and nurturing the creativity hidden in them by creating an environment where the ancient wisdom blends with modern science, to transform them into whole human beings to face the challenges.

MISSION

- To ensure that the journey of education is inspiring, pleasant and enjoyable.
- Attract the best of teachers and students.
- Achieve high principles of trust, love and spirituality in the students.
- Create a collaborative, diverse and exclusive community.
- Transform the student of today to be a leader of tomorrow and a better human being.
- Produce passionate teachers.
- Evolve innovative teaching techniques.
- Create a peaceful environment.
- Prepare the student to face the social challenges.
- Create a University of which the Nation is proud of.
- Be an effective partner in Nation Building.
- Create an Eco-friendly University.
- Create a University based on the principles of beauty, love and justice.

||Om Shanti! Om Shanti! Om Shanti||

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SDMU/Notif/28/2019

Date: 24 - 04 - 2019

NOTIFICATION

Regulations and Curricula of Medical Postgraduate Degree Courses in Clinical Subjects - 2019

Ref:
1. Minutes of the Board of Studies - Medical PG held on 16-03-2019 (SDMU/BOS-PG: 01/2019 dated 16-03-2019)
2. Minutes of the 1st Joint Faculty Meeting held on 19-03-2019 (*Letter No: SDMU/JF/M-01/85/2019; Dated: 19-03-2019*)
3. Minutes of the 1st Meeting of Academic Council held on 20-03-2019 (*Letter No: SDMU/AC/M-01/93/2019; Dated: 21-03-2019*)
4. Minutes of the 2nd Meeting of BoM held on 22-03-2019 (*Letter No: SDMU/BoM/M 02/94/2019; Dated:23-03-2019*)

Ordinance: In exercise of the powers conferred under Statutes 1.1 (Powers - Section xii), 1.2 (Powers and Functions - Section vii), 1.4 (Powers and Functions - Sections ix & x), 1.5b (Powers and Functions - Sections b & c) of Shri Dharmasthala Manjunatheshwara University, the BoM is pleased to approve and notify the Ordinance governing Regulations and Curricula of the following Medical Postgraduate Degree/ Diploma Courses in Clinical Subjects - 2019:

Sl No	Course	Sl No	Course
1	M.D. (General Medicine)	7	M. D. (Hospital Administration)
2	M. D. (Pediatrics)	8	M. S. (General Surgery)
3	M. D. (Dermatology)	9	M. S. (Ophthalmology)
4	M. D. (Psychiatry)	10	M. S. (Orthopedics)
5	M. D. (Anaesthesiology)	11	M. S. (Otorhinolaryngology)
6	M. D. (Radio-Diagnosis)	12	M. S. (Obstetrics & Gynecology)

Diploma

1	Diploma in Public Health		

The ordinance shall be effective for the students joining the courses during 2019-20 and onwards.

By Order

REGISTRAR

To:
1. The Principal, SDM College of Medical Sciences & Hospital.
2. Members of BoG, BoM & Academic Council, Shri Dharmasthala Manjunatheshwara University

Copy to:
1. The Vice-Chancellor, Shri Dharmasthala Manjunatheshwara University
2. The Controller of Examinations, Shri Dharmasthala Manjunatheshwara University

GUIDELINES FOR COMPETENCY BASED POSTGRADUATE TRAINING PROGRAMME FOR MS IN GENERAL SURGERY

Objectives of the training programme

Our purpose of PG education in General Surgery is to create globally competent and safe surgeons who will

1. Provide high quality health care to the community
2. Be a clinician par excellence
3. Be able to resuscitate trauma and critical cases
4. Be able to perform emergency surgery
5. Be competent enough to handle effectively medical / surgical problems
6. Be competent to provide professional services with empathy and humane approach.
7. Acquire the basic skills in teaching of medical / para-medical students
8. Be also expected to know the principles of research methodology and self-directed learning for continuous professional development

SUBJECT SPECIFIC LEARNING OBJECTIVES

Clinical Objectives

1. Diagnose and appropriately manage common surgical ailments in a given situation.
2. Provide adequate preoperative, post-operative and follow-up care of surgical patients.
3. Identify situations calling for urgent or early surgical intervention and refer at the optimum time to the appropriate centers.
4. Counsel and guide patients and relatives regarding need, implications and problems of surgery in the individual patient.
5. Provide and coordinate emergency resuscitative measures in acute surgical situations including trauma.
6. Organize and conduct relief measures in situations of mass disaster including triage.
7. Effectively participate in the National Health Programs especially in the Family Welfare Programs.
8. Discharge effectively medico-legal and ethical responsibilities and practice **one's** specialty ethically.
9. Must learn to minimize medical errors.
10. Must update knowledge in recent advances and newer techniques in the management of the patients.
11. Must learn to obtain informed consent prior to performance of operative procedure.
12. Perform surgical audit on a regular basis and maintain records (manual and/or electronic) for life.
13. Participate regularly in departmental academic activities by presenting Seminar, Case discussion, Journal Club and Topic discussion on weekly basis and maintain logbook.
14. Demonstrate sufficient understanding of basic sciences related to his specialty.
15. Plan and advice measures for the prevention and rehabilitation of patients belonging to his specialty.

Research:

The student should:

1. Know the basic concepts of research methodology plan a research project; know how to refer the published literature and how to consult the library.
2. Should have basic knowledge of statistical analyses.

Teaching:

The student should learn the basic methodology of teaching and develop competence in teaching medical/paramedical students.

Professionalism:

1. The student will show integrity, accountability, respect, compassion and dedicated patient care. The student will demonstrate a commitment to excellence and continuous professional development.
2. The student should demonstrate a commitment to ethical principles relating to providing patient care, confidentiality of patient information and informed consent.
3. The student should show sensitivity and responsiveness to patients' culture, age, gender and disabilities.

SUBJECT SPECIFIC COMPETENCIES

By the end of the course, the student should have acquired knowledge (cognitive domain), professionalism (affective domain) and skills (psychomotor domain) as listed below:

A. Cognitive domain

1. Demonstrate knowledge of applied aspects of basic sciences like applied anatomy, physiology, biochemistry, pathology, microbiology and pharmacology.
2. Demonstrate knowledge of the bedside procedures and latest diagnostics and therapeutics available.
3. Describe etiology, pathophysiology, principles of diagnosis and management of common surgical problems including emergencies, in adults and children.

4. Demonstrate the theoretical knowledge of general principles of surgery.
5. Demonstrate the theoretical knowledge of systemic surgery including disaster management and recent advances.
6. Demonstrate the theoretical knowledge to choose, and interpret appropriate biochemical investigations, diagnostic and therapeutic imaging including Ultrasound, Mammogram, CT scan, MRI.
7. Demonstrate the knowledge of ethics, medico-legal aspects, communication skills and leadership skills. The PG student should be able to provide professional services with empathy and humane approach.
8. Should have knowledge of " Palliative Care"

B. <u>Affective domain</u>

1. Should be able to function as a part of a team, develop an attitude of cooperation with colleagues, and interact with the patient and the clinician or other colleagues to provide the best possible diagnosis or opinion.
2. Always adopt ethical principles and maintain proper etiquette in dealings with patients, relatives and other health personnel and to respect the rights of the patient including the right to information and second opinion.
3. Develop communication skills to frame documents including referral letters and opinions obtain a proper relevant history and professional opinion as well as to interact with patients, relatives, peer and paramedical staff, and for effective teaching.
4. Obtain informed consent for any examination/procedure and explain to the patient and attendants the disease and its prognosis with a humane approach.
5. Provide appropriate care that is ethical, compassionate, responsive and cost effective and conforming to with statutory body regulations.

C. <u>Psychomotor domain</u>

1. Perform a humane and thorough clinical examination including internal examinations and examinations of all organs/systems in adults and children.
2. Write a complete case record with all necessary details.
3. Arrive at a logical working diagnosis / differential diagnosis after clinical examination.

4. Order appropriate investigations keeping in mind their relevance (need based).
5. Choose, perform and interpret appropriate imaging in trauma - ultrasound FAST (Focused Abdominal Sonography in Trauma).
6. Perform minor operative procedures and common general surgical operations independently and the major procedures under guidance.
7. Provide basic and advanced life saving support services in emergency situations
8. Provide required immediate treatment and comprehensive treatment taking the help of specialist as required.
9. Perform minimally invasive surgery in appropriate clinical settings.
10. Must have undergone basic training in operative laparoscopy related to general and GI Surgery.
11. Undertake complete patient monitoring including the preoperative and post-operative care of the patient.
12. Write a proper discharge summary with all relevant information.
13. Follow up the patients after completion of treatment over a period of time.

Syllabus

Course Contents:

1. No limit can be fixed.
2. No fixed number of topics can be prescribed as course contents.
3. She/he is expected to know the subject in depth.
4. Emphasis should be on the diseases/health problems most prevalent in that area. Knowledge of basic sciences and recent advances as applicable to his/her specialty should get high priority.
5. Competence in surgical skills commensurate with the specialty (actual hands - on training) must be ensured.

A. General topics

Basic sciences including recent advances as applicable to Surgery

a) Applied surgical and operative Anatomy
b) Applied Physiology
c) Biochemistry

d) Microbiology
e) Pathology
f) Pharmacology

B. <u>Self-directed learning</u>

a) History of medicine with special reference to ancient Indian texts
b) Health economics - basic terms, health insurance
c) Medical sociology, doctor-patient relationship, impact of the ailment on the family members of the afflicted , organizational behavior, conflict resolution
d) Computers - record keeping, computer aided learning, virtual reality, robotics
e) Hazards in hospital and protection:
f) AIDS, hepatitis B, tuberculosis, radiation, psychological
g) Environment protection - bio-medical waste management
h) Surgical audit, evidence based surgical practice, quality assurance
i) Concept of essential drugs and rational use of drugs
j) Procurement of stores and material & personal management
k) Research methodology - library consultation, formulating research, selection of topic, writing thesis protocol, preparation of consent form from patients
l) Bio-medical statistics, clinical trials
m) Medical ethics
n) Consumer protection
o) O.T. design, technologies, equipment
p) Brain death
q) Organ transplantation: Basic principles including cadaver donation, related Human Organ Transplant Acts, ethical and medico legal aspects
r) Telemedicine, teleproctoring and e-learning

C. <u>As part of seminars and symposium</u>

1. Metabolic response to Surgery and trauma
2. Shock ,SIRS and MODS
3. Wound healing including recent advances. Wounds of scalp and its management

4. Blood and blood components, transfusion indication, contraindication, mismatch and prevention and management of complications of massive blood transfusion
5. Surgical infection :
   - Antibiotic therapy rationale including antibiotic prophylaxis, misuse, abuse.
   - Newer antibiotics. Problem of resistance.
   - Hospital acquired nosocomial infection causes and prevention including MRSA.
   - Asepsis, antisepsis, sterilization, HIV, AIDS and Hepatitis B & C.
   - Universal precautions when dealing with patients suffering from these diseases.
   - Common aerobic and anaerobic organisms and newer organisms causing infection including Helicobacter Pylori Tetanus, gas gangrene treatment & prevention.
   - Chronic specific infections TB, Filariasis.
   - Boils, cellulites, abscess, narcotizing fasciitis and synergistic infection
6. Principles of Laparoscopic and Robotic surgery
7. Basic radiology for surgeons
8. Gastrointestinal endoscopy
9. Critical care in surgical practice
10. Fluid and electrolyte balance including acid – base disturbance.
11. interpretation of blood gas analysis data and management
12. Nutrition
13. Communication skills
14. Documentation (MANDATORY)
    - Case sheet writing
    - Operative surgery notes
    - Discharge summary
15. Common preoperative preparation (detailed preoperative workup, risk assessment according to the disease and general condition of the patient as per ASA grade) and detailed postoperative complications following major and minor surgical procedures.
16. Surgical aspects of diabetes mellitus particularly management of diabetic foot and gangrene, preoperative control of diabetes, consequences of hypo- and hyper- glycaemia in a postoperative setting.

17. Sinus and fistulae, pressure sores.
18. Surgical knots, sutures, drains, bandages and splints.
19. Consequences and management of bites and stings including snake, dog, human bites.

Systemic Surgery

The student must acquire knowledge in the following important topics are but teaching should not be limited to these topics. A standard text-book may be followed, which will also identify the level of learning expected of the trainees.

Trauma

Response to trauma Disaster management, mass casualties, Triage. Mechanisms and management of missile, blast and gunshot injuries. Rhabdomyolysis and prevention of renal failure

Initial management of life threatening trauma

Head injuries

Spine Injuries

Chest injuries

Abdominal trauma

- Liver
- Spleen
- Pancreaticodudenal trauma
- Upper urinary tract
- Lower urinary tract

General management of long bone fractures

Skin

- Common skin and subcutaneous condition
- Burns: causes, prevention and management
- Reconstructive surgery

Artery, Veins and Lymphatic

- Limb ischemia
    - Acute
    - Chronic
- Vascular injuries: basic principles and management
- Investigations in case of arterial obstruction
- Amputations
- Venous disorders: Varicose veins
- Diagnosis, principles of therapy, prevention of DVT: basic principles and management Pulmonary embolism: prevention/recognition and treatment
- Lymphatic: Diagnosis and principles of management of lymphangitis and lymphedema
- Surgical management of Filariasis
- Cervical lymphadenitis nonspecific and tuberculosis, metastatic lymph nodes and lymphomas.

Head, Neck and oral cavity

Oral cavity

- Cleft lip and palate
- Leukoplakia, retention cysts, ulcers of tongue
- Jaw tumors
- Oral malignancies
- Salivary gland neoplasms
- Neck swellings
- Thoracic outlet syndrome

Breast and endocrine surgery

- Management of nipple discharge
- Breast abscess
- Clinical breast examination, breast self-examination
- Screening and investigation of breast lump
- Concept of Single Stop Breast Clinic
- Cancer breast diagnosis, staging and multimodality management (common neoadjuvant and adjuvant and palliative chemotherapy protocols and indications of radiation and hormonal treatment pathology and interpretation of Tumor Markers, breast cancer support groups and counseling)
- Prevention of Breast cancer
- Thyroglossal cyst and fistula
- Thyrotoxicosis
- Thyroid neoplasms
- Management of solitary thyroid nodule
- Parathyroid
- Adrenal gland tumors
- MEN

Chest

- Postoperative pulmonary complication
- Chest Injuries
- Empyema thoracis
- Surgery for tuberculosis
- Neoplasms of the lung including its prevention by tobacco control
- Lung abscess
- Mediastinal tumours
- Cardiac surgery

Oesophagus

- Recognition of oesophageal atresisa and principles of management
- Cancer oesophagus: principles of management including importance of early detection and timely referral to specialist
- Achalasia cardia

- Gastro-esophageal reflux disease (GERD)
- Diaphragmatic hernia

Stomach

- Congenital hypertrophic pyloric stenosis
- Aetiopathogenesis, diagnosis and management of peptic ulcer including role of H.Pylori and its diagnosis and eradication
- Complications of peptic ulcer
- Cancer stomach
- GIST

Liver

- Signs and tests of liver dysfunction
- Amoebic liver abscess and its non-operative management
- Hydatid cyst and its medical and surgical management including laparoscopic management
- Portal hypertension, index of suspicion, symptoms and signs of liver failure and timely referral to a specialist center
- Jaundice, algorithm of investigation, diagnosis and surgical treatment options
- Neoplasms of liver
- Upper GI Bleeding
- Blunt abdominal trauma Injuries of Liver, Spleen, Bowel etc.

Spleen

- Causes of splenomegaly
- Indications for splenectomy

Gall bladder and biliary tree

- Clinical features, diagnosis, complications and principles of management of cholelithiasis and cholecystitis including laparoscopic cholecystectomy
- Obstructive jaundice with emphasis on differentiating medical vs. surgical
- Management of bile duct stones including endoscopic, open and laparoscopic management

- Carcinoma gall bladder, incidental cancer gallbladder, index of suspicion and its staging and principles of management
- Choledochal cyst
- Gall Bladder cancer

Pancreas

- Acute pancreatitis both due to gallstones and alcohol
- Chronic pancreatitis
- Pancreatic tumors including endocrine tumors
- Carcinoma pancreas

Small Intestine

- Peritonitis: causes, recognition, diagnosis, complications and principles of management with knowledge of typhoid perforation, tuberculous peritonitis, postoperative peritonitis
- Intestinal amoebiasis and other worms manifestation (Ascariasis) and their surgical complications (Intestinal Obstruction, perforation, gastrointestinal bleeding, involvement of biliary tract)
- Abdominal tuberculosis both peritoneal and intestinal
- Intestinal obstruction
- Appendix: Diagnosis and management of acute appendicitis
- Appendicular lump and abscess
- Small bowel tumors

Colon

- Congenital disorders, Congenital megacolon
- Colitis infective / non infective
- Inflammatory bowel diseases
- Premalignant conditions of large bowel
- Ulcerative colitis
- Carcinoma colon
- Principles of management of types of colostomy

Rectum and Anal Canal:

- Congenital disorders, Anorectal anomalies
- Prolapse of rectum
- Carcinoma rectum
- Anal Canal: surgical anatomy, features and management of fissures, fistula - in –Ano.Perianal and ischiorectal abscess
- Haemorrhoids – Non-operative outpatient procedures for the control of bleeding (Banding, cryotherapy, injection) operative options - open and closed haemorrhoidectomy and stapled haemorrhoidectomy
- Anal carcinoma

Abdominal wall

- Abdominal incisions
- Hernias
- Clinical features, diagnosis, complication and principles of management of inguinal hernia including laparoscopic repair
- Umbilical, femoral hernia and epigastric hernia
- Open and Laparoscopic repair of incisional/primary ventral hernia

Urology

- Urinary symptoms and investigations of urinary tract
- Diagnosis and principles of management of urolithiasis
- Lower Urinary tract symptoms or prostatism
- Benign prostatic hyperplasia; diagnosis and management
- Genital tuberculosis in male
- Phimosis and paraphimosis
- Carcinoma penis
- Diagnosis and principles of treatment of undescended testis
- Torsion testis
- Hydrocele, haematocele and pyocele Varicocele: Diagnosis
- Varicocele: Diagnosis
- Acute and chronic epididymo-orchitis
- Testicular tumors
- Pyelonephritis

- Tuberculosis of kidney
- Renal cell carcinoma

Pediatric surgery

- Inguinoscrotal disorders
- Hypospadias
- Infantile hypertrophic pyloric stenosis
- Intussusception
- Oesophageal atresia
- Congenital diaphragmatic hernia
- Intestinal atresias
- Hirschsprung's disease
- Anorectal malformations
- Neuroblastoma
- Wilms' tumour (nephroblastoma)

Principles of oncology

- Retroperitoneal tumors
- Soft tissue sarcomas
- Skin cancers

Basic surgical skills and anastomoses

Prosthetic materials used in surgical practice

Clinical cases and Symptoms-based approach to the patient with:

Acute cases

- Acute abdominal pain
- Blunt Trauma Abdomen
- Upper gastrointestinal bleeding
- Lower gastrointestinal bleeding
- Acute pancreatitis
- Polytruama
- Acute intestinal obstruction

- Acute retention of Urine
- Bladder outlet obstruction
- Haematuria
- Hydronephrosis
- Pyonephrosis
- perinephric abscess

Chronic cases

Ulcers in oral cavity	Lymph node in the neck
Goitres	Suspected breast lump
Benign breast disease	Gall stone disease
Dysphagia	Chronic abdominal pain
Epigastric mass	Right hypochrondium mass
Right iliac fossa mass	Inguino-scrotal swelling
Renal mass	Scrotal swelling
Gastric outlet obstruction	Anorectal symptoms
Obstructive jaundice	Peripheral vascular disease
Renal tuberculosis	Varicose veins
Renal tumors	Carcinoma prostate
Genital tuberculosis in male	Salivary Gland tumors

At the end of the course, post graduate students should be able to perform independently (including perioperative management) the following:

Ward procedures

- Start IV lines and monitor infusions
- Start and monitor blood transfusion
- Venous cut-down
- Proctoscopy
- Urethral catheterization
- Surgical management of wounds
- Biopsies including image guided
- Infiltration, surface and digital Nerve blocks

Emergency procedures

- Start and manage a C.V.P. line
- Conduct CPR (Cardiopulmonary resuscitation)
- Basic/ advance life support
- Endotracheal intubation
- Insert nasogastric tube
- Surgical management of wounds
- Manage pneumothorax / pleural space collection
- ICD tube insertion
- Control external hemorrhage
- Management of all types of shock
- Assessment and management of burns
- Management of Liver abscess

Elective operative procedures

1. Vasectomy (Preferably non-scalpel)
2. Circumcision
3. Surgery for hydrocele
4. Surgery for hernia
5. Surgery and Injection/banding of piles
6. Haemorrhoidectomy

7. Total thyroidectomy
8. Excision Biopsy of Cervical Lymph node
9. Excision of benign breast lump
10. Modified Radical mastectomy
11. Axillary Lymph node Biopsy
12. Excision of gynaecomastia
13. Excision of skin and subcutaneous swellings
14. Split thickness skin graft
15. Management of hernias
16. Port placement for Laparoscopic surgery
17. Laparoscopic appendicectomy
18. open cholecystectomy
19. Varicose Vein surgery
20. Resection anastomosis of small bowel
21. Splenectomy

Emergency operative procedures

1. Incise and drain superficial abscesses
2. Debridement
3. Amputations
4. Management of intestinal obstruction
5. Small bowel resection and anastomosis
6. Stomach, duodenal and small bowel perforation
7. Colostomy
8. Ileostomy
9. Open appendicectomy
10. Splenectomy

The student must have observed or assisted (the list is illustrative) in the following:

1. Laparoscopic cholecystectomy
2. Anterior resection
3. Abdominoperineal resection
4. Hemicolectomy

5. Hartmann's procedure for cancer rectum
6. Gastrectomy
7. Oesophagectomy
8. Craniotomy (Head Injury)
9. Superficial parotidectomy
10. Submandibular gland excision
11. Soft tissue tumours including sarcoma
12. Pancreaticoduodenal resection
13. Hydatid cyst liver
14. Pancreatic surgery
15. Retroperitoneal operations
16. Nephrectomy

TEACHING AND LEARNING METHODS

Teaching Methods

Didactic lectures are of least importance. Small group discussion gets priority

Small group discussion:

- Clinical case discussions
- Seminars
- Journal clubs
- Operative Surgery discussions
- Symposium
- Problem based learning
- Grand rounds

Clinical postings

- The masters in surgery course is for a period of not less than 36 months
- 30 of the 36 months has to be in General Surgery
- Postgraduate will work in a surgical unit for a minimum period of 6 months
- Rotation in appropriate related subspecialties for a total period not exceeding 06 months.

- Subspecialties : 1 month each
    1. Urology
    2. Plastic surgery
    3. Pediatric surgery
    4. Neurosurgery
    5. Cardiovascular and thoracic surgery
    6. Anesthesiology / Critical Care ICU

Clinical meetings:

There should be intra- and inter- departmental meetings for discussing the uncommon/interesting cases involving multiple departments.

Log book:

Each student must be asked to present a specified number of cases for clinical discussion, perform procedures/tests/operations/present seminars/review articles from various journals in inter-unit/interdepartmental teaching sessions.

They should be entered in a Log Book.

The Log books shall be checked and assessed fortnightly by a designated faculty member imparting the training.

Thesis writing and research:

Thesis writing is compulsory.

The postgraduate students shall be required to participate in the teaching and training programme of undergraduate students and interns.

A postgraduate student of a postgraduate degree course would be required

- to present one poster presentation
- online course in Research methods will be conducted by NIE
- to read one paper at a national/state conference
- publish one paper in an indexed journal

The student should know the basic concepts of research methodology plan a research project, be able to retrieve information from the library. The student should have a basic knowledge of statistics.

Department should encourage e-learning activities.

During the training programme, patient safety is of paramount importance; therefore, skills are to be learnt initially on the models, later to be performed under supervision followed by performing independently; for this purpose, provision of surgical skills laboratories in the medical colleges is mandatory.

ASSESSMENT

Assessment should be comprehensive & objective. It should address the stated competencies of the course. The assessment needs to be spread over the duration of the course.

FORMATIVE ASSESSMENT,

- Assessment during the training would include: Formative assessment should be continual and should assess medical knowledge, patient care, procedural & academic skills, interpersonal skills, professionalism, self-directed learning and ability to practice in the system.

General Principles

- Internal Assessment should be frequent, cover all domains of learning and used to provide feedback to improve learning; it should also cover professionalism and communication skills.
- The Internal Assessment should be conducted in theory and clinical examination.
- The student to be assessed annually as per categories listed in postgraduate student appraisal form (Annexure I).The postgraduate student appraisal form (Annexure I) will be filled using data derived from regular assessment (Annexure II , III , IV & V)

Regular Quarterly assessment during the MS training should be based on following educational activities:

1. Journal based / recent advances learning
2. Patient based /Laboratory or Skill based learning
3. Self-directed learning and teaching
4. Departmental and interdepartmental learning activity
5. External and Outreach Activities / CMEs

Annual assessment

1. At the end of First year: 12 months
   - Date the first week of June after completing 12 months
   - One paper on basic sciences i.e. surgical anatomy and surgical physiology and single paper on basic surgery topics : 100 marks each
   - Clinical exam single case with emphasis on history taking

2. In the Second year after completing 24 months
   - Date the first week of June after completing 24months
   - Two papers: 100 marks each

   1. Specialties Part-I : Urology, Critical Care, Cardiovascular - thoracic surgery.
   2. Specialties Part-II: Paediatric Surgery, Plastic Surgery & Neurosurgery

   - Clinical exam : Single case

3. During the final year after completing 34 months
   - Date the first week of March in final year
   - Should mimic university examinations
   - 4 papers as prescribed by the MCI POSTGRADUATE MEDICAL EDUCATION REGULATIONS, 2000.Purely written
   - Clinical examination : 3 cases : 1 long case and 2 short cases
   - Ward rounds : 1 case
   - Viva voce

SUMMATIVE ASSESSMENT (assessment at the end of training, University Examinations)

The summative examination would be carried out as per the Rules given in POSTGRADUATE MEDICAL EDUCATION REGULATIONS, 2000.

The examination will be in three parts:

1. **Thesis** :
    - Every post graduate student shall carry out work on an assigned research project under the guidance of a recognized
    - Post Graduate Teacher, the result of which shall be written up and submitted in the form of a Thesis.
    - Work for writing the Thesis is aimed at contributing to the development of a spirit of enquiry, besides exposing the candidate to the techniques of research, critical analysis, acquaintance with the latest advances in medical science and the manner of identifying and consulting available literature.
    - Thesis shall be submitted at least six months before the Theory and Clinical / Practical examination.
    - The thesis shall be examined by a minimum of three examiners; one internal and two external examiners, who shall not be the examiners for Theory and Clinical examination.
    - A candidate shall be allowed to appear for the Theory and Practical/Clinical examination only after the acceptance of the Thesis by the examiners.

2. **Theory**
    - The examinations shall be organized on the basis of 'Marking system' to evaluate and to certify candidate's level of knowledge, skill and competence at the end of the training. Obtaining a minimum of 50% marks in 'Theory' as well as 'Practical' separately shall be mandatory for passing examination as a whole. The examination for MS shall be held at the end of 3rd academic year. An academic term shall mean six month's training period.

Theory shall consist of four papers of 3 hours each.

Paper I:	Basic Sciences and Basic Principles of Surgery
Paper II:	Systemic Surgery including Operative surgery
Paper III:	Subspecialties including Operative surgery
Paper IV:	Recent Advances in Surgery

3. Clinical / Practical and viva voce Examination

Clinical examination shall be conducted to test the knowledge, skills, attitude and competence of the post graduate students for undertaking independent work as a specialist/Teacher. Exam will be conducted by a panel of 4 postgraduate teachers. 2 of them will be external faculty from external universities will be from outside the state. The Oral examination shall be thorough and shall aim at assessing the post graduate student's knowledge and competence about the subject, investigative procedures, therapeutic technique and other aspects of the specialty, which form a part of the examination.

The examination will include

- Clinical cases :
  Post graduate students shall examine a minimum one long case and two short cases.
  Ward rounds: Comprising of 1 postoperative case.

- Oral/Viva-voce examination needs to assess knowledge on X-rays, instrumentation, operative procedures. Due weightage should be given to Log Book Records and day- to-day observation during the training.

Recommended Reading: Books (latest edition)

1. Bailey and love short practice of surgery
2. Maingot's abdominal operations
3. Mastery of surgery
4. Sabiston textbook of surgery
5. Schwartz text book of surgery
6. Surgical clinics of north america
7. Recent advances in surgery: irving taylor

8. Recent advances in surgery by roshan lal gupta
9. A manual of clinical surgery, by s das
10. Hamilton bailey’s demonstration of clinical signs
11. Blumgart's surgery of the liver, biliary tract and pancreas
12. Emergency surgery by hamilton bailey
13. Atlas of general surgery: selected from operative surgery 5th ed. (rob and smith)
14. Zollinger’s atlas of surgical operations
15. Shackelford's surgery of the alimentary tract
16. Jatin shah's head and neck surgery and oncology
17. Bed side clinics in surgery by makhanlal saha
18. Last's anatomy: regional and applied
19. Acs surgery: principles and practice
20. Farquharson’s textbook of operative general surgery
21. Cancer : principles and practice of oncology (devita)

Journals

03-05 international Journals and 02 national (all indexed) journals

1. Annals of surgery
2. American journal of surgery
3. British journal of surgery
4. Seminars in oncology
5. Surgery
6. Indian journal of surgery
7. Indian journal of gastroentrology
8. Surgical clinics of north america

Postgraduate Students Appraisal Form

Pre / Para /Clinical Disciplines :
Name of the Department/Unit :
Name of the PG Student :

Period of Training : FROM……TO……

Annexure I

SL. No.	PARTICULARS	Consolidated Score assessme	Not Satisfactory	Satisfactory	More Than Satisfactory	Remarks
			1 2 3	4 5	7 8 9	
1.	Journal based / recent advances learning	Refer Annexure II				
2.	Patient based /Laboratory or Skill based learning	Refer Annexure V				
3.	Self-directed learning and teaching	Refer Annexure III				
4.	Departmental and interdepartmental learning activity	Refer Annexure IV				
5.	External and Outreach Activities / CMEs	NA				
6.	Thesis / Research work	NA				
7.	Log Book Maintenance	Refer Log Book				

Publications

Yes/ No

Remarks*

**Note: Any significant positive or negative attributes of a postgraduate student to be mentioned. For score less than 4 in any category, remediation must be suggested. Individual feedback to postgraduate student is strongly recommended.*

SIGNATURE OF ASSESSEE SIGNATURE OF CONSULTANT SIGNATURE OF HOD

Annexure II

SDM COLLEGE OF MEDICAL SCIENCES AND HOSPITAL, SATTUR, DHARWAD.
DEPARTMENT OF SURGERY

LIST FOR EVALUATION OF JOURNAL REVIEW PRESENTATIONS

Date:

Name of the student: **Name of the Faculty/Observer:**
Topic :

Sl.No.	Items for observation during presentation	Poor 0	Below Average 1	Average 2	Good 3	Very Good 4
1	Article chosen was					
2	Extent of understanding of scope & objectives of the paper by the candidate					
3	Whether cross references have been consulted					
4	Whether other relevant publications consulted					
5	Ability to respond to questions on the paper/ subject					
6	Audio-Visual aids used					
7	Ability to defend the paper					
8	Clarity of presentation					
9	Any other observation					
	Total Score					

Annexure III

SDM COLLEGE OF MEDICAL SCIENCES AND HOSPITAL, SATTUR, DHARWAD.
DEPARTMENT OF GENERAL SURGERY

LIST-2
LIST FOR EVALUATION OF SEMINAR PRESENTATIONS

Date:

Name of the student: **Name of the Faculty/Observer:**
Topic :

Sl.No.	Items for observation during presentation	Poor 0	Below Average 1	Average 2	Good 3	Very Good 4
1	Whether other relevant publications consulted					
2	Whether cross references have been consulted					
3	Completeness of Preparation					
4	Clarity of Presentation					
5	Understanding of subject					
6	Ability to answer questions					
7	Time scheduling					
8	Appropriate use of Audio-Visual aids					
9	Overall Performance					
10	Any other observation					
	Total Score					

Annexure IV

SDM COLLEGE OF MEDICAL SCIENCES AND HOSPITAL, SATTUR, DHARWAD.

DEPARTMENT OF GENERAL SURGERY

LIST-3

LIST FOR EVALUATION OF CLINICAL WORK IN WARD / HOSPITAL

(To be completed once a month by respective Unit Heads including posting in other departments) (For the month)

Date :

Name of the Student :

Name of the Unit Chief :

Sl.No.	Points to be considered:	Poor 0	Below Average 1	Average 2	Good 3	Very Good 4
1	Regularity of attendance					
2	Punctuality					
3	Interaction with colleagues and supportive staff					
4	Maintenance of case records					
5	Presentation of cases during rounds					
6	Investigations work up					
7	Bedside manners					
8	Rapport with patients					
9	Counseling patent's relatives for blood donation or Postmortem and Case follow up.					
10	Overall quality of Ward work					
	Total Score					

SDM COLLEGE OF MEDICAL SCIENCES AND HOSPITAL, SATTUR, DHARWAD.
DEPARTMENT OF GENERAL SURGERY
LIST-4
EVALUATION FORM FOR CLINICAL PRESENTATION

Name of the student:
Name of the Faculty:
Topic :

Sl. No	Points to be considered	Poor 0	Below Average 1	Average 2	Good 3	Very Good 4
1	Completeness of history					
2	Whether all relevant points elicited					
3	Clarity of Presentation					
4	Logical order					
5	Mentioned all positive and negative points of importance					
6	Accuracy of general physical examination					
7	Whether all physical signs elicited correctly					
8	Whether any major signs missed or misinterpreted					
9	Diagnosis: Whether it follows logically from history and findings					
10	Investigations required					
	* Complete list					
	*Relevant order					
	*Interpretation of investigations					
11	Ability to react to questioning Whether it follows logically from history and findings					
12	Ability to defend diagnosis					
13	Ability to justify differential diagnosis					
14	Others					
	GRAND TOTAL					

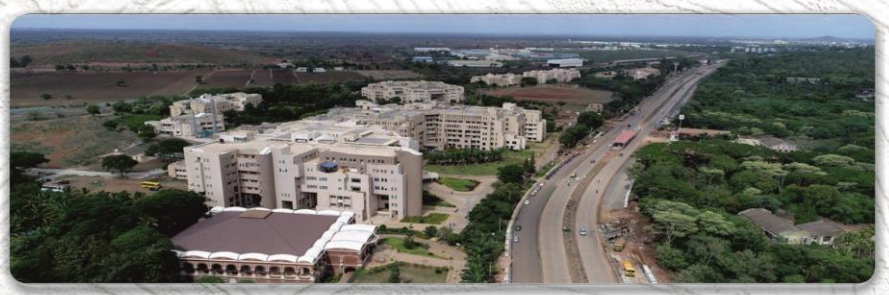
SDM College of Medical Sciences & Hospital

SDM College of Dental Sciences & Hospital

SDM College of Physiotherapy &
SDM Institute of Nursing Sciences

Shri Dharmasthala Manjunatheshwara University

SDM Research Institute for Biomedical Sciences



Panoramic View of Campus