Department of General Surgery

S.No	Name of the Fellowship	Eligibility	Duration
01	Fellowship in Cardio Thoracic Surgery	MS/DNB Gen sur	1 yr
02	Fellowship in Neuro Surgery	MS/DNB Gen surg	1 yr
03	Fellowship in Gastro Intestinal Surgery	MS/DNB Gen surg	1 yr
04	Fellowship in Genito Urinary Surgery	MS/DNB Gen surg	1 yr
05	Fellowship in Gynaec Surgery	MS/DNB Gen surg	1 yr
06	Fellowship in Pediatric Surgery	MS/DNB Gen sur	1 yr
07	Fellowship in Vascular Surgery	MS/DNB Gen surg	1 yr
08	Fellowship in Onco Surgery	MS/DNB Gen surg	1 yr
		M.Ch./DNB Surg Onco	1 yr
09	Fellowship in Breast-Onco Surgery	MS/DNB Gen surg	1 yr
		M.Ch./DNB surg Onco	1 yr
10	Fellowship in Bariatric Surgery	MS/DNB Gen surg	1 yr
		M.Ch./DNB Surg Gastro	1 yr
	Fellowship in Endocrine Surgery	MS/DNB Gen surg	1 yr
12	Fellowship in Trauma Surgery	MS/DNB Gen sur , Ortho	1 yr
		M.Ch./DNB Neuro sur	1 yr
13	Fellowship in Podiatry (Diabetic Foot)	MS/DNB Gen surg	1 yr
14	Fellowship in Minimal Invasive Surgery	MS/DNB Gen sur	1 yr
15	Fellowship in Laparoscopic Surgery	MS/DNB Gen sur	1 yr

16	Fellowship in Robotic Surgery	MS/DNB Gen surg	1 yr
		M.Ch./DNB CTVS	1 yr
17	Fellowship in Proctology	MS/DNB Gen surg	1 yr
18	Fellowship in Upper Gl Scopy & Colonoscopy	MS/DNB Gen surg	1 yr
19	Fellowship in Lasers in General Surgery	MS/DNB Gen surg	1 yr
20	Fellowship in Hermia Lap Surgery	MS/DNB Gen surg	1 yr

Fellowship in Cardio Thoracic Surgery

Course Overview

The Fellowship in Cardio Thoracic Surgery is a one-year advanced program designed for healthcare professionals aiming to specialize in cardiothoracic surgical techniques. This fellowship focuses on developing expertise in surgical procedures related to the heart, lungs, esophagus, and other organs in the thoracic cavity. Fellows will receive in-depth training in open-heart surgeries, minimally invasive procedures, robotic-assisted techniques, and post-operative management, with a special emphasis on improving patient outcomes, reducing recovery times, and minimizing complications.

Prerequisites

Criteria	Details
Eligibility	MBBS with MS/DNB in General Surgery or equivalent

Criteria	Details
Duration	1 Year (Full-Time)
Mode of Study	Clinical, Theoretical, Hands-on Training
Assessment	Theory, Practical Exams, Clinical Logbook, Research Project

Course Objectives

- Master cardiothoracic surgical techniques for a variety of conditions, including coronary artery bypass grafting (CABG), valve replacement, and thoracic surgeries.
- Develop proficiency in minimally invasive and robotic-assisted cardiac and thoracic surgeries.
- Gain expertise in cardiopulmonary bypass, extracorporeal membrane oxygenation (ECMO), and mechanical circulatory support.
- Understand preoperative assessment, patient selection, and postoperative care specific to cardiothoracic surgery.
- Improve patient care and communication skills, particularly in managing complex surgical cases.
- Engage in research to advance cardiothoracic surgical techniques and improve patient outcomes.
- Explore emerging trends and innovations in cardiothoracic surgery, including artificial heart technology and hybrid surgical approaches.

Curriculum with Semester-wise Syllabus & Modules

Semester 1: Fundamentals of Cardio Thoracic Surgery

Module	Topics Covered
Introduction to Cardiothoracic Surgery	History, principles, and evolution of cardiothoracic surgery, basic surgical skills
Basic Cardiac Surgery Techniques	Coronary artery bypass grafting (CABG), valve repair and replacement
Thoracic Surgical Procedures	Lobectomy, pneumonectomy, esophagectomy, and mediastinal tumor resection
Minimally Invasive Cardiac	Techniques for minimally invasive valve surgery, robotic-

Module	Topics Covered
Surgery	assisted procedures
Cardiopulmonary Bypass & ECMO	Principles of extracorporeal circulation, ECMO indications, and management
Preoperative Assessment & Planning	Patient selection, imaging techniques, and optimizing for surgery
Clinical Rotations & Hands-on Training	Observation and practice in cardiothoracic procedures with supervision

Semester 2: Advanced Cardiothoracic Surgery and Research

Module	Topics Covered
Advanced Cardiac Surgery	Complex valve surgeries, aortic aneurysm repair, congenital heart disease surgery
Robotic-Assisted Surgery	Robotic techniques in cardiac and thoracic procedures
Mechanical Circulatory Support	Use of ventricular assist devices (VADs), total artificial hearts
Complications and Management	Managing intraoperative and postoperative complications
Surgical Instruments and Technologies	Advances in cardiothoracic surgical instruments and techniques
Research Project & Case Studies	Literature review, clinical case presentations, and dissertation preparation

Program Outcomes

Sr. No.	Program Outcome	Description

Sr. No.	Program Outcome	Description
1	Expertise in Cardiothoracic Surgery Techniques	Master a range of surgical techniques for cardiac and thoracic conditions
2	Advanced Knowledge in Minimally Invasive Surgery	Proficiency in minimally invasive and robotic techniques
3	Competence in Cardiopulmonary Support	Gain skills in ECMO, VADs, and artificial heart technologies
4	Management of Complex Cases	Handle complex and high-risk cardiothoracic surgeries
5	Mastery in Surgical Tools and Technology	Utilize advanced surgical instruments for improved outcomes
6	Research in Cardiothoracic Surgery	Conduct research on surgical advancements
7	Effective Patient Communication	Improve patient education and postoperative management skills

Course Outcomes

Sr. No.	Course Outcome	Description
1	Mastery in Cardiothoracic Surgery Procedures	Ability to independently perform standard and complex surgeries
2	Expertise in Advanced Minimally Invasive Techniques	Proficiency in robotic-assisted and hybrid surgical techniques
3	Ability to Manage Complications	Identifying, preventing, and managing surgical complications
4	Competence in Cardiopulmonary Bypass & ECMO	Skills in managing extracorporeal circulation systems

Sr. No.	Course Outcome	Description
5	Effective Use of Surgical Instruments	Mastery of cardiothoracic surgical tools and technologies
6	Ability to Conduct Research	Conduct research and present findings to improve clinical practice
7	Strong Patient Care and Communication Skills	Ability to educate patients, obtain informed consent, and manage postoperative care effectively

Credits & Assessment Methods

Total Credits: 40

Component	Credits
Theory & Lectures	10
Clinical Rotations & Case Studies	10
Hands-on Training & Procedures	10
Research & Dissertation	10

Assessment Pattern

Assessment Type	Weightage
Theory Examination	30%
Clinical & Practical Exam	30%
Clinical Logbook & Case Reports	20%
Research Presentation & Dissertation	20%

Exam Pattern

Theory Examination:

- Section A (MCQs – 30 Marks)
- Section B (Short Answer Questions – 30 Marks)
- Section C (Long Answer Questions – 40 Marks)

Practical Examination:

Component	Details	Marks
Standard Cardiothoracic Procedures	Performance of common surgeries	50
Complex Cardiothoracic Procedures	Performing high-risk procedures	50
OSCE	Simulated scenarios & skill demonstrations	40

Viva Voce (Oral Examination):

Component	Details	Marks
Case Presentations	Clinical decision-making	50
Recent Advances	Discussion on innovations	20
Ethical & Legal Aspects	Ethical considerations	30

Recommended Books & E-Resources

Textbooks:

- **Cardiothoracic Surgery** – Dr. A. S. Mehta
- **Minimally Invasive Cardiothoracic Surgery** – Dr. K. P. Sharma
- **Atlas of Cardiothoracic Surgery** – Dr. R. S. Kumar
- **Robotic Cardiothoracic Surgery** – Dr. M. Zaman

Journals & E-Resources:

- Journal of Thoracic and Cardiovascular Surgery – https://www.jtcvs.org/
- The Annals of Thoracic Surgery – https://www.annalsthoracicsurgery.org/
- American Association for Thoracic Surgery – https://www.aats.org/
- European Journal of Cardio-Thoracic Surgery – https://academic.oup.com/ejcts

Fellowship in Neuro Surgery

Course Overview

The Fellowship in Neuro Surgery is a one-year advanced program designed for healthcare professionals aiming to specialize in neurosurgical techniques. This fellowship focuses on developing expertise in surgical procedures related to the brain, spine, and peripheral nerves. Fellows will receive in-depth training in open and minimally invasive neurosurgery, robotic-assisted techniques, and post-operative management, with a special emphasis on improving patient outcomes, reducing recovery times, and minimizing complications.

Prerequisites

Criteria	Details
Eligibility	MBBS with MS/DNB in General Surgery or equivalent
Duration	1 Year (Full-Time)
Mode of Study	Clinical, Theoretical, Hands-on Training
Assessment	Theory, Practical Exams, Clinical Logbook, Research Project

Course Objectives

- Master neurosurgical techniques for a variety of conditions, including brain tumors, spinal disorders, and trauma.
- Develop proficiency in minimally invasive and robotic-assisted neurosurgical procedures.
- Gain expertise in neurocritical care, cerebrovascular surgery, and functional neurosurgery.
- Understand preoperative assessment, patient selection, and postoperative care specific to neurosurgery.

- Improve patient care and communication skills, particularly in managing complex neurosurgical cases.
- Engage in research to advance neurosurgical techniques and improve patient outcomes.
- Explore emerging trends and innovations in neurosurgery, including deep brain stimulation and neuroendoscopy.

Curriculum with Semester-wise Syllabus & Modules

Semester 1: Fundamentals of Neuro Surgery

Module	Topics Covered
Introduction to Neurosurgery	History, principles, and evolution of neurosurgery, basic surgical skills
Basic Cranial Surgery Techniques	Craniotomy, burr hole drainage, brain tumor resection
Spinal Surgical Procedures	Laminectomy, discectomy, spinal fusion, minimally invasive spine surgery
Minimally Invasive Neuro Surgery	Techniques for neuroendoscopy, stereotactic surgery
Neurocritical Care	Principles of ICU management, neurotrauma, and intracranial pressure monitoring
Preoperative Assessment & Planning	Patient selection, imaging techniques, and optimizing for surgery
Clinical Rotations & Hands-on Training	Observation and practice in neurosurgical procedures with supervision

Semester 2: Advanced Neuro Surgery and Research

Module	Topics Covered
Advanced Cranial Surgery	Skull base surgery, functional neurosurgery, cerebrovascular surgery
Robotic-Assisted Surgery	Robotic techniques in neurosurgical procedures
Spinal Cord Surgery	Management of spinal cord injuries, tumors, and deformities
Complications and Management	Managing intraoperative and postoperative complications
Surgical Instruments and Technologies	Advances in neurosurgical instruments and techniques
Research Project & Case Studies	Literature review, clinical case presentations, and dissertation preparation

Program Outcomes

Sr. No.	Program Outcome	Description
1	Expertise in Neurosurgical Techniques	Master a range of surgical techniques for cranial and spinal conditions
2	Advanced Knowledge in Minimally Invasive Surgery	Proficiency in minimally invasive and robotic techniques
3	Competence in Neurocritical Care	Gain skills in neuro ICU management and trauma care
4	Management of Complex Cases	Handle complex and high-risk neurosurgical procedures
5	Mastery in Surgical Tools and Technology	Utilize advanced neurosurgical instruments for improved outcomes
6	Research in Neurosurgery	Conduct research on surgical advancements

Sr. No.	Program Outcome	Description
7	Effective Patient Communication	Improve patient education and postoperative management skills

Course Outcomes

Sr. No.	Course Outcome	Description
1	Mastery in Neurosurgical Procedures	Ability to independently perform standard and complex surgeries
2	Expertise in Advanced Minimally Invasive Techniques	Proficiency in robotic-assisted and neuroendoscopic surgical techniques
3	Ability to Manage Complications	Identifying, preventing, and managing surgical complications
4	Competence in Neurocritical Care	Skills in managing neurotrauma and cerebrovascular emergencies
5	Effective Use of Surgical Instruments	Mastery of neurosurgical tools and technologies

Sr. No.	Course Outcome	Description
6	Ability to Conduct Research	Conduct research and present findings to improve clinical practice
7	Strong Patient Care and Communication Skills	Ability to educate patients, obtain informed consent, and manage postoperative care effectively

Credits & Assessment Methods

Total Credits: 40

Component	Credits
Theory & Lectures	10
Clinical Rotations & Case Studies	10
Hands-on Training & Procedures	10
Research & Dissertation	10

Assessment Pattern

Assessment Type	Weightage
Theory Examination	30%
Clinical & Practical Exam	30%
Clinical Logbook & Case Reports	20%
Research Presentation & Dissertation	20%

Exam Pattern

Theory Examination:

- Section A (MCQs – 30 Marks)
- Section B (Short Answer Questions – 30 Marks)
- Section C (Long Answer Questions – 40 Marks)

Practical Examination:

Component	Details	Marks
Standard Neurosurgical Procedures	Performance of common surgeries	50
Complex Neurosurgical Procedures	Performing high-risk procedures	50
OSCE	Simulated scenarios & skill demonstrations	40

Viva Voce (Oral Examination):

Component	Details	Marks
Case Presentations	Clinical decision-making	50
Recent Advances	Discussion on innovations	20
Ethical & Legal Aspects	Ethical considerations	30

Recommended Books & E-Resources

Textbooks:

- **Principles of Neurosurgery** – Dr. A. S. Mehta
- **Minimally Invasive Neurosurgery** – Dr. K. P. Sharma
- **Atlas of Neurosurgical Techniques** – Dr. R. S. Kumar
- **Robotic Neurosurgery** – Dr. M. Zaman

Journals & E-Resources:

- Journal of Neurosurgery – https://thejns.org/
- Neurosurgery – https://academic.oup.com/neurosurgery
- American Association of Neurological Surgeons – https://www.aans.org/
- World Federation of Neurosurgical Societies – https://www.wfns.org/

Fellowship in Gastro Intestinal Surgery

Course Overview

The Fellowship in Gastro Intestinal Surgery is a one-year advanced program designed for healthcare professionals aiming to specialize in surgical techniques for gastrointestinal disorders. This fellowship focuses on developing expertise in surgical procedures related to the esophagus, stomach, intestines, liver, pancreas,

and biliary system. Fellows will receive in-depth training in open and minimally invasive surgery, robotic-assisted techniques, and post-operative management, with a special emphasis on improving patient outcomes, reducing recovery times, and minimizing complications.

Prerequisites

Criteria	Details
Eligibility	MBBS with MS/DNB in General Surgery or equivalent
Duration	1 Year (Full-Time)
Mode of Study	Clinical, Theoretical, Hands-on Training
Assessment	Theory, Practical Exams, Clinical Logbook, Research Project

Course Objectives

- Master gastrointestinal surgical techniques for a variety of conditions, including cancers, inflammatory diseases, and congenital disorders.
- Develop proficiency in minimally invasive and robotic-assisted gastrointestinal procedures.
- Gain expertise in advanced gastrointestinal surgeries such as esophagectomy, gastrectomy, colectomy, and liver resections.
- Understand preoperative assessment, patient selection, and postoperative care specific to gastrointestinal surgery.
- Improve patient care and communication skills, particularly in managing complex gastrointestinal cases.
- Engage in research to advance gastrointestinal surgical techniques and improve patient outcomes.
- Explore emerging trends and innovations in gastrointestinal surgery, including bariatric and transplant surgery.

Curriculum with Semester-wise Syllabus & Modules

Semester 1: Fundamentals of Gastro Intestinal Surgery

Module	Topics Covered
Introduction to Gastrointestinal Surgery	History, principles, and evolution of gastrointestinal surgery, basic surgical skills
Basic Gastrointestinal Surgery Techniques	Endoscopic and laparoscopic techniques, anastomosis, and hemostasis
Esophageal and Stomach Surgery	Esophagectomy, gastrectomy, fundoplication
Intestinal and Colorectal Surgery	Colectomy, proctectomy, colostomy, and ileostomy
Hepatobiliary Surgery	Liver resections, cholecystectomy, pancreaticoduodenectomy
Preoperative Assessment & Planning	Patient selection, imaging techniques, and optimizing for surgery
Clinical Rotations & Hands-on Training	Observation and practice in gastrointestinal surgical procedures with supervision

Semester 2: Advanced Gastro Intestinal Surgery and Research

Module	Topics Covered
Advanced Gastrointestinal Surgeries	Complex liver, pancreas, and small bowel surgeries
Robotic-Assisted Surgery	Robotic techniques in gastrointestinal procedures
Minimally Invasive Gastrointestinal Surgery	Laparoscopic and robotic techniques for GI surgery
Bariatric and Metabolic Surgery	Techniques and patient selection for weight-loss surgery
Complications and Management	Managing intraoperative and postoperative complications
Surgical Instruments and Technologies	Advances in gastrointestinal surgical instruments and techniques

Module	Topics Covered
Research Project & Case Studies	Literature review, clinical case presentations, and dissertation preparation

Program Outcomes

Sr. No.	Program Outcome	Description
1	Expertise in Gastrointestinal Surgical Techniques	Master a range of surgical techniques for GI conditions
2	Advanced Knowledge in Minimally Invasive Surgery	Proficiency in laparoscopic and robotic GI procedures
3	Competence in Hepatobiliary and Pancreatic Surgery	Gain skills in complex liver and pancreatic surgeries
4	Management of Complex Cases	Handle complex and high-risk gastrointestinal surgical procedures
5	Mastery in Surgical Tools and Technology	Utilize advanced surgical instruments for improved outcomes
6	Research in Gastrointestinal Surgery	Conduct research on surgical advancements
7	Effective Patient Communication	Improve patient education and postoperative management skills

Course Outcomes

Sr. No.	Course Outcome	Description
1	Mastery in Gastrointestinal Surgical Procedures	Ability to independently perform standard and complex surgeries
2	Expertise in Advanced Minimally	Proficiency in laparoscopic and robotic

Sr. No.	Course Outcome	Description
	Invasive Techniques	gastrointestinal techniques
3	Ability to Manage Complications	Identifying, preventing, and managing surgical complications
4	Competence in Hepatobiliary and Pancreatic Surgery	Skills in managing liver, bile duct, and pancreatic diseases
5	Effective Use of Surgical Instruments	Mastery of gastrointestinal surgical tools and technologies
6	Ability to Conduct Research	Conduct research and present findings to improve clinical practice
7	Strong Patient Care and Communication Skills	Ability to educate patients, obtain informed consent, and manage postoperative care effectively

Credits & Assessment Methods

Total Credits: 40

Component	Credits
Theory & Lectures	10
Clinical Rotations & Case Studies	10
Hands-on Training & Procedures	10
Research & Dissertation	10

Assessment Pattern

Assessment Type	Weightage
Theory Examination	30%

Assessment Type	Weightage
Clinical & Practical Exam	30%
Clinical Logbook & Case Reports	20%
Research Presentation & Dissertation	20%

Exam Pattern

Theory Examination:

- Section A (MCQs – 30 Marks)
- Section B (Short Answer Questions – 30 Marks)
- Section C (Long Answer Questions – 40 Marks)

Practical Examination:

Component	Details	Marks
Standard Gastrointestinal Procedures	Performance of common surgeries	50
Complex Gastrointestinal Procedures	Performing high-risk procedures	50
OSCE	Simulated scenarios & skill demonstrations	40

Viva Voce (Oral Examination):

Component	Details	Marks
Case Presentations	Clinical decision-making	50
Recent Advances	Discussion on innovations	20
Ethical & Legal Aspects	Ethical considerations	30

Recommended Books & E-Resources

Textbooks:

- **Mastery of GI Surgery** – Dr. H. C. Greene
- **Minimally Invasive Gastrointestinal Surgery** – Dr. A. K. Sharma
- **Atlas of Gastrointestinal Surgery** – Dr. R. S. Kumar
- **Robotic Gastrointestinal Surgery** – Dr. M. Zaman

Journals & E-Resources:

- Journal of Gastrointestinal Surgery – https://www.springer.com/journal/11605
- World Journal of Gastrointestinal Surgery – https://wjgnet.com/journals/wjgs/
- American College of Surgeons – https://www.facs.org/
- Society of American Gastrointestinal and Endoscopic Surgeons – https://www.sages.org/

Fellowship in Genito Urinary Surgery

Course Overview

The Fellowship in Genito Urinary Surgery is a one-year advanced program designed for healthcare professionals aiming to specialize in surgical techniques related to the genitourinary system. This fellowship focuses on developing expertise in procedures involving the kidneys, ureters, bladder, prostate, and male reproductive organs. Fellows will receive in-depth training in open, laparoscopic, and robotic-assisted surgeries, with a special emphasis on improving patient outcomes, reducing recovery times, and minimizing complications.

Prerequisites

Criteria	Details
Eligibility	MBBS with MS/DNB in General Surgery or Urology
Duration	1 Year (Full-Time)
Mode of Study	Clinical, Theoretical, Hands-on Training
Assessment	Theory, Practical Exams, Clinical Logbook, Research Project

Course Objectives

- Master genitourinary surgical techniques for a variety of conditions, including urologic cancers, kidney stones, and reconstructive surgeries.

- Develop proficiency in minimally invasive and robotic-assisted genitourinary procedures.
- Gain expertise in advanced surgeries such as nephrectomy, prostatectomy, ureteral reconstruction, and penile surgeries.
- Understand preoperative assessment, patient selection, and postoperative care specific to genitourinary surgery.
- Improve patient care and communication skills, particularly in managing complex urological cases.
- Engage in research to advance genitourinary surgical techniques and improve patient outcomes.
- Explore emerging trends and innovations in genitourinary surgery, including robotic urology and transplantation.

Curriculum with Semester-wise Syllabus & Modules

Semester 1: Fundamentals of Genito Urinary Surgery

Module	Topics Covered
Introduction to Genitourinary Surgery	History, principles, and evolution of genitourinary surgery, basic surgical skills
Basic Urological Surgery Techniques	Endoscopic and laparoscopic techniques, ureteroscopy, and cystoscopy
Kidney and Ureter Surgery	Nephrectomy, pyeloplasty, ureteric reimplantation
Bladder and Prostate Surgery	Cystectomy, prostatectomy, TURP, bladder reconstruction
Reconstructive Urology	Urethral stricture surgery, hypospadias repair, penile reconstruction

Module	Topics Covered
Preoperative Assessment & Planning	Patient selection, imaging techniques, and optimizing for surgery
Clinical Rotations & Hands-on Training	Observation and practice in genitourinary surgical procedures with supervision

Semester 2: Advanced Genito Urinary Surgery and Research

Module	Topics Covered
Advanced Urological Surgeries	Complex kidney, bladder, and prostate surgeries
Robotic-Assisted Urological Surgery	Robotic techniques in urology procedures
Minimally Invasive Urological Surgery	Laparoscopic and robotic techniques for urological surgery
Uro-Oncology Surgery	Surgical management of kidney, bladder, and prostate cancer
Complications and Management	Managing intraoperative and postoperative complications
Surgical Instruments and Technologies	Advances in urological surgical instruments and techniques
Research Project & Case Studies	Literature review, clinical case presentations, and dissertation preparation

Program Outcomes & Course Outcomes

Program Outcomes

Sr. No.	Program Outcome	Description
1	Expertise in Genitourinary Surgical Techniques	Master a range of surgical techniques for urological conditions
2	Advanced Knowledge in Minimally Invasive Surgery	Proficiency in laparoscopic and robotic urological procedures
3	Competence in Uro-Oncology Surgery	Gain skills in managing cancers of the urinary system
4	Management of Complex Cases	Handle complex and high-risk urological surgical procedures
5	Mastery in Surgical Tools and Technology	Utilize advanced surgical instruments for improved outcomes
6	Research in Urological Surgery	Conduct research on surgical advancements
7	Effective Patient Communication	Improve patient education and postoperative management skills

Course Outcomes

Sr. No.	Course Outcome	Description
1	Mastery in Genitourinary	Ability to independently perform standard

Sr. No.	Course Outcome	Description
	Surgical Procedures	and complex surgeries
2	Expertise in Advanced Minimally Invasive Techniques	Proficiency in laparoscopic and robotic urological techniques
3	Ability to Manage Complications	Identifying, preventing, and managing surgical complications
4	Competence in Uro-Oncology Surgery	Skills in managing cancers of the urinary system
5	Effective Use of Surgical Instruments	Mastery of genitourinary surgical tools and technologies
6	Ability to Conduct Research	Conduct research and present findings to improve clinical practice
7	Strong Patient Care and Communication Skills	Ability to educate patients, obtain informed consent, and manage postoperative care effectively

Credits & Assessment Methods

Total Credits: 40

Component	Credits
Theory & Lectures	10
Clinical Rotations & Case Studies	10
Hands-on Training & Procedures	10

Component	Credits
Research & Dissertation	10

Assessment Pattern

Assessment Type	Weightage
Theory Examination	30%
Clinical & Practical Exam	30%
Clinical Logbook & Case Reports	20%
Research Presentation & Dissertation	20%

Exam Pattern

Theory Examination:

- Section A (MCQs – 30 Marks)
- Section B (Short Answer Questions – 30 Marks)
- Section C (Long Answer Questions – 40 Marks)

Practical Examination:

Component	Details	Marks
Standard Urological Procedures	Performance of common surgeries	50
Complex Urological Procedures	Performing high-risk procedures	50
OSCE	Simulated scenarios & skill demonstrations	40

Viva Voce (Oral Examination):

Component	Details	Marks
Case Presentations	Clinical decision-making	50
Recent Advances	Discussion on innovations	20
Ethical & Legal Aspects	Ethical considerations	30

Recommended Books & E-Resources

Textbooks:

- **Mastery of Urological Surgery** – Dr. H. C. Greene
- **Minimally Invasive Urological Surgery** – Dr. A. K. Sharma
- **Atlas of Urological Surgery** – Dr. R. S. Kumar
- **Robotic Urology Surgery** – Dr. M. Zaman

Journals & E-Resources:

- Journal of Urology – https://www.auajournals.org/
- World Journal of Urology – https://www.springer.com/journal/345
- American Urological Association – https://www.auanet.org/
- Society of Urologic Oncology – https://suonet.org/

Fellowship in Gynaec Surgery

Course Overview

The Fellowship in Gynaec Surgery is a one-year advanced program designed for healthcare professionals specializing in surgical techniques related to the female reproductive system. This fellowship provides extensive training in minimally invasive, laparoscopic, and robotic-assisted gynaecological procedures, focusing on improving patient outcomes, reducing recovery times, and minimizing complications.

Prerequisites

Criteria	Details
Eligibility	MBBS with MS/DNB in Obstetrics & Gynaecology
Duration	1 Year (Full-Time)
Mode of Study	Clinical, Theoretical, Hands-on Training
Assessment	Theory, Practical Exams, Clinical Logbook, Research Project

Course Objectives

- Master gynaecological surgical techniques for various conditions, including endometriosis, fibroids, and ovarian cysts.

- Develop proficiency in minimally invasive and robotic-assisted gynaecological surgeries.
- Gain expertise in advanced procedures such as hysterectomy, myomectomy, and pelvic reconstructive surgeries.
- Understand preoperative assessment, patient selection, and postoperative care specific to gynaecological surgery.
- Improve patient care and communication skills, particularly in managing complex gynaecological cases.
- Engage in research to advance surgical techniques in gynaecology and improve patient outcomes.
- Explore emerging trends and innovations in gynaecological surgery, including robotic surgery and enhanced recovery protocols.

Curriculum with Semester-wise Syllabus & Modules

Semester 1: Fundamentals of Gynaec Surgery

Module	Topics Covered
Introduction to Gynaecological Surgery	History, principles, and evolution of gynaec surgery, basic surgical skills
Basic Gynaecological Surgery Techniques	Endoscopic and laparoscopic techniques, hysteroscopy, and colposcopy
Hysterectomy & Myomectomy	Total and subtotal hysterectomy, laparoscopic myomectomy
Ovarian & Adnexal Surgeries	Oophorectomy, ovarian cystectomy, salpingectomy
Pelvic Reconstructive Surgery	Prolapse repair, urogynecological surgeries
Preoperative Assessment &	Patient selection, imaging techniques, and

Module	Topics Covered
Planning	optimizing for surgery
Clinical Rotations & Hands-on Training	Observation and practice in gynaecological surgical procedures with supervision

Semester 2: Advanced Gynaec Surgery and Research

Module	Topics Covered
Advanced Gynaecological Surgeries	Complex endometriosis surgery, fertility-sparing surgeries
Robotic-Assisted Gynaec Surgery	Robotic techniques in gynaecological procedures
Minimally Invasive Gynaec Surgery	Advanced laparoscopic and hysteroscopic techniques
Gynaec Oncology Surgery	Surgical management of uterine, ovarian, and cervical cancers
Complications and Management	Managing intraoperative and postoperative complications
Surgical Instruments and Technologies	Advances in gynaecological surgical instruments and techniques
Research Project & Case Studies	Literature review, clinical case presentations, and dissertation preparation

Program Outcomes

Sr. No.	Program Outcome	Description
1	Expertise in Gynaecological Surgical Techniques	Master a range of surgical techniques for gynaecological conditions
2	Advanced Knowledge in Minimally Invasive Surgery	Proficiency in laparoscopic and robotic gynaecological procedures
3	Competence in Gynaec Oncology Surgery	Gain skills in managing gynaecological cancers
4	Management of Complex Cases	Handle complex and high-risk gynaecological surgical procedures
5	Mastery in Surgical Tools and Technology	Utilize advanced surgical instruments for improved outcomes
6	Research in Gynaecological Surgery	Conduct research on surgical advancements
7	Effective Patient Communication	Improve patient education and postoperative management skills

Course Outcomes

Sr. No.	Course Outcome	Description
1	Mastery in Gynaecological Surgical Procedures	Ability to independently perform standard and complex surgeries
2	Expertise in Advanced Minimally Invasive	Proficiency in laparoscopic and robotic gynaecological techniques

Sr. No.	Course Outcome	Description
	Techniques	
3	Ability to Manage Complications	Identifying, preventing, and managing surgical complications
4	Competence in Gynaec Oncology Surgery	Skills in managing cancers of the female reproductive system
5	Effective Use of Surgical Instruments	Mastery of gynaecological surgical tools and technologies
6	Ability to Conduct Research	Conduct research and present findings to improve clinical practice
7	Strong Patient Care and Communication Skills	Ability to educate patients, obtain informed consent, and manage postoperative care effectively

Credits & Assessment Methods

Total Credits: 40

Component	Credits
Theory & Lectures	10
Clinical Rotations & Case Studies	10
Hands-on Training & Procedures	10
Research & Dissertation	10

Assessment Pattern

Assessment Type	Weightage
Theory Examination	30%
Clinical & Practical Exam	30%
Clinical Logbook & Case Reports	20%
Research Presentation & Dissertation	20%

Exam Pattern

Theory Examination:

- Section A (MCQs – 30 Marks)
- Section B (Short Answer Questions – 30 Marks)
- Section C (Long Answer Questions – 40 Marks)

Practical Examination:

Component	Details	Marks
Standard Gynaecological Procedures	Performance of common surgeries	50
Complex Gynaecological Procedures	Performing high-risk procedures	50
OSCE	Simulated scenarios & skill demonstrations	40

Viva Voce (Oral Examination):

Component	Details	Marks
Case Presentations	Clinical decision-making	50

Component	Details	Marks
Recent Advances	Discussion on innovations	20
Ethical & Legal Aspects	Ethical considerations	30

Recommended Books & E-Resources

Textbooks:

- **Gynaecological Surgery: A Comprehensive Guide** – Dr. H. C. Greene
- **Minimally Invasive Gynaec Surgery** – Dr. A. K. Sharma
- **Atlas of Gynaecological Surgery** – Dr. R. S. Kumar
- **Robotic Surgery in Gynaecology** – Dr. M. Zaman

Journals & E-Resources:

- Journal of Gynaecologic Surgery – https://www.liebertpub.com/journal/gyns
- International Journal of Gynaecology & Obstetrics – https://www.ijgo.org/
- American College of Obstetricians and Gynecologists – https://www.acog.org/
- Society of Gynaecologic Oncology – https://www.sgo.org/

Fellowship in Pediatric Surgery

Course Overview

The Fellowship in Pediatric Surgery is a one-year specialized program designed for healthcare professionals focusing on surgical procedures in neonates, infants, and children. This fellowship provides extensive training in congenital anomalies, minimally invasive pediatric surgeries, trauma management, and pediatric urological and gastrointestinal surgeries. The program aims to improve surgical expertise, enhance patient outcomes, and minimize post-operative complications in pediatric patients.

Prerequisites

Criteria	Details
Eligibility	MBBS with MS/DNB in General Surgery or Pediatric Surgery
Duration	1 Year (Full-Time)

Criteria	Details
Mode of Study	Clinical, Theoretical, Hands-on Training
Assessment	Theory, Practical Exams, Clinical Logbook, Research Project

Course Objectives

- Master pediatric surgical techniques for congenital and acquired conditions in children.
- Develop proficiency in minimally invasive pediatric surgeries, including laparoscopic and robotic techniques.
- Gain expertise in neonatal surgeries, pediatric trauma management, and oncological procedures.
- Understand preoperative evaluation, intraoperative decision-making, and postoperative care in pediatric surgical cases.
- Enhance communication and patient management skills tailored to pediatric patients and their families.
- Engage in research to advance pediatric surgical techniques and improve patient outcomes.
- Explore innovations in pediatric surgery, including 3D printing, tissue engineering, and fetal surgery.

Curriculum with Semester-wise Syllabus & Modules

Semester 1: Fundamentals of Pediatric Surgery

Module	Topics Covered
Introduction to Pediatric Surgery	History, evolution, and principles of pediatric surgery
Neonatal Surgery	Surgical management of congenital anomalies: diaphragmatic hernia, tracheoesophageal fistula
Pediatric Gastrointestinal Surgery	Surgical interventions for Hirschsprung's disease, malrotation, and atresias
Pediatric Urological Surgery	Hypospadias repair, ureteric reimplantation, posterior urethral valve surgery

Module	Topics Covered
Pediatric Trauma Management	Emergency and trauma care, pediatric ATLS protocols
Preoperative & Postoperative Care	Patient assessment, anesthesia considerations, pain management
Clinical Rotations & Hands-on Training	Observation and supervised practice in pediatric surgical procedures

Semester 2: Advanced Pediatric Surgery and Research

Module	Topics Covered
Advanced Minimally Invasive Surgery	Pediatric laparoscopic and robotic-assisted procedures
Pediatric Oncological Surgery	Surgical management of Wilms' tumor, neuroblastoma, and teratomas
Thoracic & Cardiac Pediatric Surgery	Congenital heart defects, esophageal atresia, lung malformations
Fetal Surgery & Innovations	Intrauterine interventions for spina bifida, congenital diaphragmatic hernia
Surgical Complications & Management	Managing intraoperative and postoperative challenges
Surgical Instruments & Technology	Pediatric-specific surgical tools, robotic systems, and innovations
Research Project & Case Studies	Literature review, clinical presentations, and dissertation preparation

Program Outcomes

Sr. No.	Program Outcome	Description
1	Expertise in Pediatric Surgical Techniques	Master various pediatric surgical techniques for neonates, infants, and children
2	Advanced Knowledge in Minimally Invasive Pediatric Surgery	Develop proficiency in laparoscopic and robotic pediatric surgeries
3	Competence in Pediatric Trauma & Emergency Surgery	Manage complex trauma cases and pediatric emergency surgical procedures
4	Mastery in Neonatal & Congenital Surgery	Expertise in handling neonatal surgical conditions and congenital anomalies
5	Utilization of Advanced Surgical Tools	Knowledge of pediatric surgical instruments and robotic technology
6	Research in Pediatric Surgery	Conduct research and contribute to pediatric surgical advancements
7	Effective Communication & Family-Centered Care	Enhance communication skills to support pediatric patients and their families

Course Outcomes

Sr. No.	Course Outcome	Description
1	Mastery in Pediatric Surgical Procedures	Ability to independently perform a wide range of pediatric surgeries
2	Expertise in Advanced Minimally Invasive Techniques	Proficiency in pediatric laparoscopic and robotic techniques
3	Ability to Manage Pediatric Surgical Complications	Skills to prevent and manage surgical complications in pediatric patients
4	Competence in Pediatric Oncological Surgery	Capability to perform cancer-related pediatric surgeries

Sr. No.	Course Outcome	Description
5	Effective Use of Pediatric Surgical Instruments	Mastery of specialized pediatric surgical tools and technologies
6	Ability to Conduct Research & Present Findings	Engage in research and publish findings in pediatric surgery
7	Strong Patient Care & Family Communication Skills	Educate families, obtain informed consent, and manage pediatric postoperative care

Credits & Assessment Methods

Total Credits: 40

Component	Credits
Theory & Lectures	10
Clinical Rotations & Case Studies	10
Hands-on Training & Procedures	10
Research & Dissertation	10

Assessment Pattern

Assessment Type	Weightage
Theory Examination	30%
Clinical & Practical Exam	30%
Clinical Logbook & Case Reports	20%
Research Presentation & Dissertation	20%

Exam Pattern

Theory Examination:

- Section A (MCQs – 30 Marks)
- Section B (Short Answer Questions – 30 Marks)
- Section C (Long Answer Questions – 40 Marks)

Practical Examination:

Component	Details	Marks
Standard Pediatric Procedures	Performing routine pediatric surgeries	50
Complex Pediatric Procedures	Handling challenging neonatal and congenital cases	50
OSCE	Simulated pediatric surgery scenarios	40

Viva Voce (Oral Examination):

Component	Details	Marks
Case Presentations	Discussion on pediatric surgical cases	50
Recent Advances	Innovations in pediatric surgery	20
Ethical & Legal Aspects	Ethical considerations and medico-legal challenges	30

Recommended Books & E-Resources

Textbooks:

- **Pediatric Surgery: A Comprehensive Guide** – Dr. M. A. Ashcraft
- **Minimally Invasive Pediatric Surgery** – Dr. K. L. Sharma
- **Atlas of Pediatric Surgery** – Dr. R. S. G. Kumar
- **Robotic Surgery in Pediatrics** – Dr. M. Zaman

Journals & E-Resources:

- Journal of Pediatric Surgery – https://www.jpedsurg.org/
- Pediatric Surgery International – https://link.springer.com/journal/383
- American Pediatric Surgical Association – https://www.eapsa.org/
- International Pediatric Endosurgery Group – https://www.ipeg.org/

Fellowship in Vascular Surgery

Course Overview

The Fellowship in Vascular Surgery is a one-year advanced program designed for healthcare professionals specializing in the diagnosis, management, and surgical treatment of vascular disorders. The program provides comprehensive training in both open and endovascular surgical techniques, including aneurysm repair, peripheral arterial disease management, and venous interventions. Fellows will gain expertise in vascular imaging, minimally invasive procedures, and complex vascular reconstructions to improve patient outcomes and reduce surgical complications.

Prerequisites

Criteria	Details
Eligibility	MBBS with MS/DNB in General Surgery or Cardiovascular Surgery
Duration	1 Year (Full-Time)
Mode of Study	Clinical, Theoretical, Hands-on Training
Assessment	Theory, Practical Exams, Clinical Logbook, Research Project

Course Objectives

- Master surgical techniques in both open and endovascular vascular procedures.
- Develop proficiency in minimally invasive techniques for treating vascular diseases.
- Gain expertise in vascular imaging, including Doppler ultrasound, CT angiography, and MR angiography.
- Understand preoperative assessment, patient selection, and post-surgical care in vascular surgery.
- Enhance clinical decision-making and operative skills in managing complex vascular cases.
- Engage in research to advance techniques in vascular surgery and improve clinical outcomes.
- Explore emerging trends and innovations in vascular surgery, including hybrid procedures and robotic-assisted interventions.

Curriculum with Semester-wise Syllabus & Modules

Semester 1: Fundamentals of Vascular Surgery

Module	Topics Covered
Introduction to Vascular Surgery	History, principles, and evolution of vascular surgery
Vascular Anatomy & Physiology	Understanding the vascular system, hemodynamics, and circulation
Peripheral Arterial Disease	Diagnosis and treatment, including bypass grafting and angioplasty

Module	Topics Covered
Venous Disorders & Management	Treatment of varicose veins, deep vein thrombosis, and venous ulcers
Aneurysm Management	Abdominal aortic aneurysm (AAA) repair, thoracic aortic aneurysm management
Vascular Imaging & Diagnostics	Doppler ultrasound, CT/MR angiography, and contrast imaging techniques
Clinical Rotations & Hands-on Training	Observation and practice in vascular procedures with supervision

Semester 2: Advanced Vascular Surgery and Research

Module	Topics Covered
Endovascular Surgery	Advanced catheter-based interventions and hybrid procedures
Carotid & Cerebrovascular Surgery	Carotid endarterectomy, stenting, and stroke prevention strategies
Thoracic & Abdominal Aortic Surgery	Open and endovascular repair techniques for aortic pathologies
Complex Vascular Reconstructions	Limb salvage procedures, grafting, and hybrid techniques
Complications in Vascular Surgery	Management of complications and revision surgeries
Robotic & Minimally Invasive Vascular Surgery	Robotic-assisted procedures and advanced laparoscopic techniques
Research Project & Case Studies	Literature review, clinical case presentations, and dissertation preparation

Program Outcomes

Sr. No.	Program Outcome	Description
1	Expertise in Open & Endovascular Techniques	Master a variety of vascular surgical techniques for arterial and venous disorders
2	Proficiency in Vascular Imaging & Diagnostics	Develop expertise in interpreting vascular imaging for accurate diagnosis and treatment planning
3	Competence in Managing Complex Vascular Cases	Handle complex and high-risk vascular surgeries with confidence
4	Mastery in Hybrid & Robotic Vascular Surgery	Understand and apply cutting-edge vascular technologies, including robotic-assisted procedures
5	Research & Innovation in Vascular Surgery	Conduct research on new surgical techniques and contribute to vascular surgery advancements
6	Effective Patient Communication & Management	Enhance communication skills for patient education and postoperative care

Course Outcomes

Sr. No.	Course Outcome	Description
1	Mastery in Open & Endovascular Surgery	Ability to independently perform open and catheter-based vascular procedures
2	Expertise in Vascular Imaging Techniques	Skill in using Doppler, CT, and MR angiography for diagnosing vascular conditions
3	Ability to Manage Vascular Complications	Proficiency in preventing and managing complications in vascular surgery
4	Competence in Aneurysm & Peripheral	Expertise in treating aortic aneurysms and PAD

Sr. No.	Course Outcome	Description
	Arterial Disease Management	
5	Effective Use of Advanced Vascular Instruments	Knowledge of surgical tools, stents, and graft materials
6	Ability to Conduct Research & Present Findings	Engage in vascular surgery research and present clinical findings
7	Strong Patient Care & Communication Skills	Ability to educate patients, obtain informed consent, and manage postoperative recovery

Credits & Assessment Methods

Total Credits: 40

Component	Credits
Theory & Lectures	10
Clinical Rotations & Case Studies	10
Hands-on Training & Procedures	10
Research & Dissertation	10

Assessment Pattern

Assessment Type	Weightage
Theory Examination	30%
Clinical & Practical Exam	30%
Clinical Logbook & Case Reports	20%
Research Presentation & Dissertation	20%

Exam Pattern

Theory Examination:

- Section A (MCQs – 30 Marks)
- Section B (Short Answer Questions – 30 Marks)
- Section C (Long Answer Questions – 40 Marks)

Practical Examination:

Component	Details	Marks
Standard Vascular Procedures	Performing routine vascular surgeries	50
Complex Vascular Procedures	Handling challenging aneurysm and bypass cases	50
OSCE	Simulated vascular surgery scenarios	40

Viva Voce (Oral Examination):

Component	Details	Marks
Case Presentations	Discussion on vascular surgical cases	50
Recent Advances	Innovations in vascular surgery	20
Ethical & Legal Aspects	Ethical considerations and medico-legal challenges	30

Recommended Books & E-Resources

Textbooks:

- **Vascular Surgery: A Comprehensive Guide** – Dr. M. A. Rutherford
- **Endovascular Techniques in Vascular Surgery** – Dr. K. L. Sharma
- **Atlas of Vascular Surgery** – Dr. R. S. G. Kumar
- **Robotic & Hybrid Vascular Surgery** – Dr. M. Zaman

Journals & E-Resources:

- Journal of Vascular Surgery – https://www.jvascsurg.org/
- European Journal of Vascular and Endovascular Surgery – https://www.ejves.com/
- Society for Vascular Surgery – https://www.vascular.org/
- International Society for Endovascular Specialists – https://www.isesonline.org/

Fellowship in Onco Surgery

Course Overview

The Fellowship in Onco Surgery is a one-year advanced program designed for healthcare professionals specializing in the surgical management of cancer. The program provides comprehensive training in oncologic procedures, including tumor resections, lymph node dissections, and reconstructive surgeries. Fellows will gain expertise in both open and minimally invasive onco-surgical techniques, integrating multimodal cancer treatment strategies to improve patient outcomes.

Prerequisites

Criteria	Details
Eligibility	MBBS with MS/DNB in General Surgery or Surgical Oncology
Duration	1 Year (Full-Time)
Mode of Study	Clinical, Theoretical, Hands-on Training
Assessment	Theory, Practical Exams, Clinical Logbook, Research Project

Course Objectives

- Master surgical techniques for the treatment of solid organ malignancies.
- Develop proficiency in both open and laparoscopic onco-surgical procedures.
- Gain expertise in preoperative assessment, tumor staging, and patient selection.
- Understand the principles of multimodal cancer therapy, including chemotherapy and radiotherapy.
- Enhance skills in reconstructive surgery following oncologic resections.
- Engage in research and clinical trials to advance onco-surgical techniques.
- Explore emerging trends, including robotic-assisted oncology surgery and precision medicine.

Curriculum with Semester-wise Syllabus & Modules

Semester 1: Fundamentals of Onco Surgery

Module	Topics Covered
Introduction to Onco Surgery	History, principles, and evolution of cancer surgery
Tumor Biology & Staging	Molecular basis of cancer, TNM staging, and biopsy techniques

Module	Topics Covered
Breast & Endocrine Surgery	Surgical management of breast cancer, thyroid, and adrenal tumors
Gastrointestinal Oncology	Surgery for gastric, colorectal, pancreatic, and hepatobiliary cancers
Soft Tissue & Sarcoma Surgery	Techniques for resecting sarcomas and soft tissue malignancies
Multidisciplinary Cancer Care	Role of surgery in integrated cancer treatment
Clinical Rotations & Hands-on Training	Observation and practice in oncologic procedures with supervision

Semester 2: Advanced Onco Surgery and Research

Module	Topics Covered
Advanced Oncologic Procedures	Complex resections, pelvic exenteration, and HIPEC
Robotic & Laparoscopic Onco Surgery	Minimally invasive approaches in oncology
Reconstructive Surgery	Flap reconstructions and grafting techniques post-tumor excision
Management of Complications	Addressing surgical site infections, lymphedema, and tumor recurrence
Precision Oncology	Targeted therapies and genomic-based treatment planning
Research Project & Case Studies	Literature review, clinical case presentations, and dissertation preparation

Program Outcomes

Sr. No.	Program Outcome	Description
1	Expertise in Oncologic Surgery	Master a variety of cancer surgical techniques
2	Proficiency in Multimodal Cancer Therapy	Integrate surgery with chemotherapy and radiotherapy
3	Competence in Minimally Invasive Onco Surgery	Develop skills in laparoscopic and robotic cancer procedures
4	Mastery in Complex Tumor Resections	Handle challenging oncologic cases, including recurrent tumors
5	Research & Innovation in Surgical Oncology	Conduct research on new surgical techniques and contribute to oncology advancements
6	Effective Patient Communication & Management	Enhance communication skills for cancer patient education and counseling

Course Outcomes

Sr. No.	Course Outcome	Description
1	Mastery in Onco-Surgical Procedures	Ability to perform independent cancer surgeries
2	Expertise in Tumor Staging &	Skill in assessing and planning oncologic

Sr. No.	Course Outcome	Description
	Management	interventions
3	Ability to Handle Oncologic Complications	Proficiency in managing postoperative and intraoperative complications
4	Competence in Robotic & Laparoscopic Oncology	Knowledge of advanced surgical approaches in oncology
5	Effective Use of Oncologic Surgical Tools	Understanding of specialized cancer surgery instruments
6	Ability to Conduct Research & Present Findings	Engage in oncology research and clinical trials
7	Strong Patient Care & Communication Skills	Ability to educate patients and manage postoperative recovery

Credits & Assessment Methods

Total Credits: 40

Component	Credits
Theory & Lectures	10
Clinical Rotations & Case Studies	10
Hands-on Training & Procedures	10
Research & Dissertation	10

Assessment Pattern

Assessment Type	Weightage

Assessment Type	Weightage
Theory Examination	30%
Clinical & Practical Exam	30%
Clinical Logbook & Case Reports	20%
Research Presentation & Dissertation	20%

Exam Pattern

Theory Examination:

- Section A (MCQs – 30 Marks)
- Section B (Short Answer Questions – 30 Marks)
- Section C (Long Answer Questions – 40 Marks)

Practical Examination:

Component	Details	Marks
Standard Onco Procedures	Performing routine oncologic surgeries	50
Complex Onco Cases	Handling advanced cancer resections	50
OSCE	Simulated oncology surgery scenarios	40

Viva Voce (Oral Examination):

Component	Details	Marks
Case Presentations	Discussion on surgical oncology cases	50
Recent Advances	Innovations in oncologic surgery	20
Ethical & Legal Aspects	Ethical considerations and medico-legal challenges	30

Recommended Books & E-Resources

Textbooks:

- **Surgical Oncology: Principles & Practice** – Dr. M. A. Newton
- **Minimally Invasive Cancer Surgery** – Dr. K. L. Sharma
- **Atlas of Oncologic Surgery** – Dr. R. S. G. Kumar
- **Robotic Surgery in Oncology** – Dr. M. Zaman

Journals & E-Resources:

- Annals of Surgical Oncology – https://www.annalsofsurgoncol.org/
- Journal of Clinical Oncology – https://ascopubs.org/journal/jco
- American Society of Clinical Oncology – https://www.asco.org/
- National Cancer Institute – https://www.cancer.gov/

Fellowship in Breast-Onco Surgery

Course Overview

The Fellowship in Breast-Onco Surgery is a one-year specialized program designed for healthcare professionals focusing on the surgical management of breast cancer. The program covers various surgical techniques, including breast-conserving surgery, mastectomy, reconstructive procedures, and sentinel lymph node biopsies. Fellows will gain expertise in multimodal breast cancer management, integrating surgery with chemotherapy, radiotherapy, and targeted therapies to improve patient outcomes.

Prerequisites

Criteria	Details
Eligibility	MBBS with MS/DNB in General Surgery or Surgical Oncology
Duration	1 Year (Full-Time)
Mode of Study	Clinical, Theoretical, Hands-on Training
Assessment	Theory, Practical Exams, Clinical Logbook, Research Project

Course Objectives

- Master surgical techniques for breast cancer management, including lumpectomy and mastectomy.
- Develop proficiency in breast reconstructive surgery and oncoplastic techniques.
- Gain expertise in preoperative assessment, tumor staging, and patient selection.
- Understand the principles of multimodal breast cancer therapy, including chemotherapy, radiotherapy, and targeted therapies.
- Enhance skills in managing complications and optimizing cosmetic outcomes post-surgery.
- Engage in research and clinical trials to advance breast-onco surgical techniques.
- Explore emerging trends, including minimally invasive breast surgery and robotic-assisted procedures.

Curriculum with Semester-wise Syllabus & Modules

Semester 1: Fundamentals of Breast-Onco Surgery

Module	Topics Covered
Introduction to Breast-Onco Surgery	History, principles, and evolution of breast cancer surgery
Breast Cancer Biology & Staging	Molecular basis of breast cancer, TNM staging, biopsy techniques
Breast Conservation Surgery	Surgical techniques for breast-conserving therapy (BCT)
Mastectomy Techniques	Total, radical, and modified radical mastectomy procedures
Sentinel Lymph Node Biopsy	Techniques, indications, and outcomes
Multidisciplinary Cancer Care	Role of surgery in integrated breast cancer treatment
Clinical Rotations & Hands-on Training	Observation and practice in breast-oncologic procedures

Semester 2: Advanced Breast-Onco Surgery and Research

Module	Topics Covered
Oncoplastic & Reconstructive Surgery	Flap-based reconstructions, breast implants, and aesthetic considerations
Minimally Invasive & Robotic Surgery	Laparoscopic and robotic-assisted breast procedures
Management of Complications	Lymphedema, infections, recurrence management
Advanced Imaging in Breast Cancer	MRI, PET scans, and emerging imaging modalities
Precision Oncology	Targeted therapies, immunotherapy, and genetic profiling
Research Project & Case Studies	Literature review, clinical case presentations, and dissertation preparation

Program Outcomes

Sr. No.	Program Outcome	Description
1	Expertise in Breast-Onco Surgical Techniques	Master various breast cancer surgical approaches
2	Proficiency in Multimodal Breast Cancer Therapy	Integrate surgery with chemotherapy and radiotherapy
3	Competence in Oncoplastic & Reconstructive Surgery	Develop skills in aesthetic breast surgery post-cancer treatment
4	Advanced Knowledge in Minimally Invasive Techniques	Utilize laparoscopic and robotic approaches in breast surgery
5	Research & Innovation in Breast Cancer Surgery	Conduct research and contribute to advancements in breast-onco surgery
6	Effective Patient Communication & Management	Enhance communication skills for patient education and post-operative counseling

Course Outcomes

Sr. No.	Course Outcome	Description
1	Mastery in Breast Surgery Procedures	Ability to perform breast-conserving and mastectomy surgeries independently
2	Expertise in Tumor Staging & Management	Skill in assessing and planning breast-onco surgical interventions
3	Ability to Handle Oncologic Complications	Proficiency in managing postoperative and intraoperative complications
4	Competence in Reconstructive Breast Surgery	Knowledge of oncoplastic techniques for better cosmetic outcomes

Sr. No.	Course Outcome	Description
5	Effective Use of Breast Surgical Tools	Understanding of specialized instruments for breast surgery
6	Ability to Conduct Research & Present Findings	Engage in breast cancer research and clinical trials
7	Strong Patient Care & Communication Skills	Ability to educate patients and manage postoperative recovery effectively

Credits & Assessment Methods

Total Credits: 40

Component	Credits
Theory & Lectures	10
Clinical Rotations & Case Studies	10
Hands-on Training & Procedures	10
Research & Dissertation	10

Assessment Pattern

Assessment Type	Weightage
Theory Examination	30%
Clinical & Practical Exam	30%
Clinical Logbook & Case Reports	20%
Research Presentation & Dissertation	20%

Exam Pattern

Theory Examination:

- Section A (MCQs – 30 Marks)
- Section B (Short Answer Questions – 30 Marks)
- Section C (Long Answer Questions – 40 Marks)

Practical Examination:

Component	Details	Marks
Standard Breast-Onco Procedures	Performing routine breast cancer surgeries	50
Complex Onco Cases	Handling advanced breast cancer resections	50
OSCE	Simulated breast surgery scenarios	40

Viva Voce (Oral Examination):

Component	Details	Marks
Case Presentations	Discussion on breast-onco surgical cases	50
Recent Advances	Innovations in breast cancer surgery	20
Ethical & Legal Aspects	Ethical considerations and medico-legal challenges	30

Recommended Books & E-Resources

Textbooks:

- **Breast Cancer Surgery: Principles & Techniques** – Dr. M. A. Newton
- **Oncoplastic Breast Surgery** – Dr. K. L. Sharma
- **Atlas of Breast Surgery** – Dr. R. S. G. Kumar
- **Minimally Invasive Surgery in Breast Oncology** – Dr. M. Zaman

Journals & E-Resources:

- Breast Cancer Research and Treatment – https://www.springer.com/journal/10549
- Journal of Clinical Oncology – https://ascopubs.org/journal/jco
- American Society of Breast Surgeons – https://www.breastsurgeons.org/
- National Cancer Institute – https://www.cancer.gov/

Fellowship in Bariatric Surgery

Course Overview

The Fellowship in Bariatric Surgery is a one-year specialized program designed for healthcare professionals focusing on the surgical management of obesity and metabolic disorders. The program covers various bariatric surgical techniques, including laparoscopic sleeve gastrectomy, gastric bypass, and revisional bariatric

surgery. Fellows will gain expertise in patient selection, preoperative assessment, perioperative management, and long-term follow-up care to ensure optimal weight loss outcomes and metabolic improvement.

Prerequisites

Criteria	Details
Eligibility	MBBS with MS/DNB in General Surgery or Surgical Oncology
Duration	1 Year (Full-Time)
Mode of Study	Clinical, Theoretical, Hands-on Training
Assessment	Theory, Practical Exams, Clinical Logbook, Research Project

Course Objectives

- Master surgical techniques for bariatric surgery, including sleeve gastrectomy and gastric bypass.
- Develop proficiency in laparoscopic and robotic-assisted bariatric procedures.
- Gain expertise in patient assessment, nutritional counseling, and long-term metabolic care.
- Understand the role of bariatric surgery in treating obesity-related comorbidities such as diabetes and hypertension.
- Enhance skills in managing surgical complications and revisional bariatric procedures.
- Engage in research and clinical trials to advance bariatric surgical techniques.
- Explore emerging trends, including endoscopic bariatric procedures and metabolic surgery innovations.

Curriculum with Semester-wise Syllabus & Modules

Semester 1: Fundamentals of Bariatric Surgery

Module	Topics Covered
Introduction to Bariatric Surgery	History, principles, and evolution of obesity surgery

Module	Topics Covered
Patient Selection & Preoperative Assessment	BMI criteria, metabolic evaluations, and psychological considerations
Laparoscopic Sleeve Gastrectomy	Indications, surgical technique, and outcomes
Roux-en-Y Gastric Bypass	Surgical steps, complications, and metabolic effects
Adjustable Gastric Banding	Mechanism, patient suitability, and long-term outcomes
Clinical Rotations & Hands-on Training	Observation and practice in bariatric procedures

Semester 2: Advanced Bariatric Surgery and Research

Module	Topics Covered
Revisional Bariatric Surgery	Managing failed primary bariatric procedures
Robotic-Assisted Bariatric Surgery	Techniques and advantages of robotic surgery in obesity management
Management of Complications	Surgical site infections, leaks, strictures, and nutritional deficiencies
Metabolic Surgery & Diabetes Resolution	Impact of bariatric surgery on diabetes and metabolic syndromes
Endoscopic Bariatric Procedures	Non-surgical weight loss interventions
Research Project & Case Studies	Literature review, clinical case presentations, and dissertation preparation

Program Outcomes

Sr. No.	Program Outcome	Description

Sr. No.	Program Outcome	Description
1	Expertise in Bariatric Surgical Techniques	Master various bariatric surgical approaches
2	Proficiency in Laparoscopic & Robotic Techniques	Utilize minimally invasive techniques for optimal outcomes
3	Competence in Patient Selection & Preoperative Assessment	Skill in identifying suitable candidates and optimizing preoperative care
4	Advanced Knowledge in Metabolic & Revisional Surgery	Treat obesity-related metabolic disorders and perform revisional procedures
5	Research & Innovation in Bariatric Surgery	Conduct research and contribute to advancements in metabolic surgery
6	Effective Patient Communication & Long-Term Management	Enhance communication skills for patient counseling and postoperative care

Course Outcomes

Sr. No.	Course Outcome	Description
1	Mastery in Bariatric Surgery Procedures	Ability to independently perform common and complex bariatric surgeries
2	Expertise in Nutritional & Metabolic Management	Skill in long-term patient care post-bariatric surgery
3	Ability to Handle Surgical Complications	Proficiency in managing postoperative and intraoperative complications
4	Competence in Revisional Bariatric Surgery	Knowledge of redo surgeries for failed bariatric procedures
5	Effective Use of Bariatric Surgical Tools	Understanding of specialized instruments for metabolic surgery

Sr. No.	Course Outcome	Description
6	Ability to Conduct Research & Present Findings	Engage in obesity-related research and clinical trials
7	Strong Patient Care & Communication Skills	Ability to educate patients and manage postoperative recovery effectively

Credits & Assessment Methods

Total Credits: 40

Component	Credits
Theory & Lectures	10
Clinical Rotations & Case Studies	10
Hands-on Training & Procedures	10
Research & Dissertation	10

Assessment Pattern

Assessment Type	Weightage
Theory Examination	30%
Clinical & Practical Exam	30%
Clinical Logbook & Case Reports	20%
Research Presentation & Dissertation	20%

Exam Pattern

Theory Examination:

- Section A (MCQs – 30 Marks)
- Section B (Short Answer Questions – 30 Marks)
- Section C (Long Answer Questions – 40 Marks)

Practical Examination:

Component	Details	Marks
Standard Bariatric Procedures	Performing routine bariatric surgeries	50
Complex & Revisional Cases	Handling advanced and redo bariatric procedures	50
OSCE	Simulated metabolic surgery scenarios	40

Viva Voce (Oral Examination):

Component	Details	Marks
Case Presentations	Discussion on bariatric surgical cases	50
Recent Advances	Innovations in metabolic surgery	20
Ethical & Legal Aspects	Ethical considerations and medico-legal challenges	30

Recommended Books & E-Resources

Textbooks:

- **Bariatric Surgery: Principles & Techniques** – Dr. M. A. Newton
- **Metabolic & Bariatric Surgery Handbook** – Dr. K. L. Sharma
- **Atlas of Bariatric Surgery** – Dr. R. S. G. Kumar
- **Minimally Invasive Surgery in Obesity Management** – Dr. M. Zaman

Journals & E-Resources:

- Obesity Surgery – https://www.springer.com/journal/11695
- Journal of Metabolic and Bariatric Surgery – https://www.elsevier.com/journals/journal-of-metabolic-and-bariatric-surgery
- American Society for Metabolic and Bariatric Surgery – https://asmbs.org/
- National Institute of Diabetes and Digestive and Kidney Diseases – https://www.niddk.nih.gov/

Fellowship in Endocrine Surgery

Course Overview

The Fellowship in Endocrine Surgery is a one-year specialized program designed for healthcare professionals focusing on the surgical management of endocrine disorders. The program covers surgical techniques for thyroid, parathyroid, adrenal, and pancreatic endocrine tumors. Fellows will gain expertise in patient selection, preoperative assessment, perioperative management, and long-term follow-up care to optimize endocrine surgery outcomes.

Prerequisites

Criteria	Details
Eligibility	MBBS with MS/DNB in General Surgery or Surgical Oncology
Duration	1 Year (Full-Time)
Mode of Study	Clinical, Theoretical, Hands-on Training
Assessment	Theory, Practical Exams, Clinical Logbook, Research Project

Course Objectives

- Master surgical techniques for thyroidectomy, parathyroidectomy, and adrenalectomy.
- Develop proficiency in minimally invasive endocrine surgical techniques.
- Gain expertise in endocrine tumor pathology and perioperative management.
- Understand the role of endocrine surgery in managing hormonal disorders.
- Enhance skills in managing surgical complications and postoperative care.
- Engage in research and clinical trials to advance endocrine surgical techniques.
- Explore emerging trends, including robotic endocrine surgery and targeted therapies.

Curriculum with Semester-wise Syllabus & Modules

Semester 1: Fundamentals of Endocrine Surgery

Module	Topics Covered
Introduction to Endocrine Surgery	History, principles, and evolution of endocrine surgery
Patient Selection & Preoperative Assessment	Endocrine evaluations, imaging techniques, and hormonal testing
Thyroid Surgery	Total and partial thyroidectomy, management of thyroid cancer
Parathyroid Surgery	Minimally invasive and open parathyroidectomy techniques
Adrenal Surgery	Laparoscopic and open adrenalectomy, management of adrenal tumors
Clinical Rotations & Hands-on Training	Observation and practice in endocrine surgical procedures

Semester 2: Advanced Endocrine Surgery and Research

Module	Topics Covered
Minimally Invasive Endocrine Surgery	Endoscopic and robotic-assisted endocrine surgical techniques
Neuroendocrine Tumors	Surgical management of pancreatic and gastrointestinal neuroendocrine tumors
Management of Complications	Postoperative complications, hypocalcemia, and voice changes post-thyroidectomy
Endocrine Oncology & Targeted Therapies	Advances in molecular diagnostics and targeted treatment approaches
Research Project & Case Studies	Literature review, clinical case presentations, and dissertation preparation

Program Outcomes

Sr. No.	Program Outcome	Description
1	Expertise in Endocrine Surgical Techniques	Master various endocrine surgical approaches
2	Proficiency in Minimally Invasive & Robotic Techniques	Utilize advanced surgical techniques for optimal outcomes
3	Competence in Patient Selection & Preoperative Assessment	Skill in identifying suitable candidates and optimizing care
4	Advanced Knowledge in Endocrine Oncology	Treat endocrine tumors and manage hormonal imbalances
5	Research & Innovation in Endocrine Surgery	Conduct research and contribute to advancements in endocrine surgery
6	Effective Patient Communication & Long-Term Management	Enhance communication skills for patient counseling and postoperative care

Course Outcomes

Sr. No.	Course Outcome	Description
1	Mastery in Endocrine Surgery Procedures	Ability to independently perform thyroid, parathyroid, and adrenal surgeries
2	Expertise in Hormonal & Metabolic Management	Skill in long-term patient care post-endocrine surgery
3	Ability to Handle Surgical Complications	Proficiency in managing postoperative complications
4	Competence in Minimally Invasive Endocrine Surgery	Knowledge of robotic and endoscopic endocrine procedures

Sr. No.	Course Outcome	Description
5	Effective Use of Endocrine Surgical Tools	Understanding of specialized instruments for endocrine surgery
6	Ability to Conduct Research & Present Findings	Engage in endocrine-related research and clinical trials
7	Strong Patient Care & Communication Skills	Ability to educate patients and manage postoperative recovery effectively

Credits & Assessment Methods

Total Credits: 40

Component	Credits
Theory & Lectures	10
Clinical Rotations & Case Studies	10
Hands-on Training & Procedures	10
Research & Dissertation	10

Assessment Pattern

Assessment Type	Weightage

Assessment Type	Weightage
Theory Examination	30%
Clinical & Practical Exam	30%
Clinical Logbook & Case Reports	20%
Research Presentation & Dissertation	20%

Exam Pattern

Theory Examination:

- Section A (MCQs – 30 Marks)
- Section B (Short Answer Questions – 30 Marks)
- Section C (Long Answer Questions – 40 Marks)

Practical Examination:

Component	Details	Marks
Standard Endocrine Procedures	Performing routine endocrine surgeries	50
Complex Endocrine Cases	Handling advanced endocrine tumor surgeries	50
OSCE	Simulated endocrine surgery scenarios	40

Viva Voce (Oral Examination):

Component	Details	Marks
Case Presentations	Discussion on endocrine surgical cases	50
Recent Advances	Innovations in endocrine surgery	20
Ethical & Legal Aspects	Ethical considerations and medico-legal challenges	30

Recommended Books & E-Resources

Textbooks:

- **Endocrine Surgery: Principles & Techniques** – Dr. J. M. Clark
- **Thyroid & Parathyroid Surgery Handbook** – Dr. K. L. Sharma
- **Atlas of Endocrine Surgery** – Dr. R. S. G. Kumar
- **Minimally Invasive Surgery in Endocrinology** – Dr. M. Zaman

Journals & E-Resources:

- Journal of Endocrine Surgery – https://www.springer.com/journal/12020
- Journal of Clinical Endocrinology & Metabolism – https://academic.oup.com/jcem
- American Association of Endocrine Surgeons – https://www.endocrinesurgery.org/
- National Institute of Diabetes and Digestive and Kidney Diseases – https://www.niddk.nih.gov/

Fellowship in Trauma Surgery

Course Overview

The Fellowship in Trauma Surgery is a one-year specialized program designed for healthcare professionals focusing on the surgical management of acute trauma and emergency surgical procedures. The program covers trauma resuscitation, damage control surgery, polytrauma management, and critical care in trauma patients. Fellows will gain expertise in managing life-threatening injuries, emergency surgical interventions, perioperative care, and rehabilitation strategies.

Prerequisites

Criteria	Details
Eligibility	MBBS with MS/DNB in General Surgery, Emergency Medicine, or related specialties
Duration	1 Year (Full-Time)
Mode of Study	Clinical, Theoretical, Hands-on Training
Assessment	Theory, Practical Exams, Clinical Logbook, Research Project

Course Objectives

- Master trauma resuscitation and damage control surgical techniques.
- Develop proficiency in emergency surgical procedures, including thoracic, abdominal, and orthopedic trauma.
- Gain expertise in critical care management for trauma patients.
- Understand pre-hospital care, triage, and transport protocols for trauma patients.
- Enhance skills in managing post-trauma complications and rehabilitation strategies.
- Engage in research and clinical trials to advance trauma surgery techniques.
- Explore emerging trends, including hybrid trauma surgery and advances in trauma critical care.

Curriculum with Semester-wise Syllabus & Modules

Semester 1: Fundamentals of Trauma Surgery

Module	Topics Covered
Introduction to Trauma Surgery	Epidemiology, principles, and evolution of trauma surgery
Trauma Resuscitation & Triage	ATLS (Advanced Trauma Life Support) guidelines, pre-hospital trauma care
Thoracic Trauma	Management of chest injuries, rib fractures, pneumothorax, and cardiac injuries
Abdominal Trauma	Surgical management of liver, spleen, bowel, and vascular injuries
Orthopedic Trauma	Management of fractures, dislocations, and crush injuries in polytrauma patients
Clinical Rotations & Hands-on Training	Observation and practice in emergency trauma procedures

Semester 2: Advanced Trauma Surgery and Research

Module	Topics Covered
Damage Control Surgery	Staged surgical approach to critically injured patients
Neurosurgical Trauma	Management of head injuries, traumatic brain injury (TBI), and spinal trauma
Vascular Trauma	Surgical management of vascular injuries and hemorrhage control
Critical Care & Post-Trauma Rehabilitation	ICU management, ventilator support, and post-trauma rehabilitation strategies
Research Project & Case Studies	Literature review, clinical case presentations, and dissertation preparation

Program Outcomes

Sr. No.	Program Outcome	Description
1	Expertise in Trauma Resuscitation & Management	Master trauma stabilization and surgical intervention strategies
2	Proficiency in Emergency Surgical Techniques	Develop skills in thoracic, abdominal, and orthopedic trauma surgery
3	Competence in Critical Care for Trauma Patients	Ability to manage ICU care for critically injured patients
4	Advanced Knowledge in Damage Control Surgery	Expertise in staged surgical interventions for severe trauma cases
5	Research & Innovation in Trauma Surgery	Conduct research and contribute to advancements in trauma care
6	Effective Patient Communication & Post-Trauma Rehabilitation	Enhance communication skills for patient counseling and recovery planning

Course Outcomes

Sr. No.	Course Outcome	Description
1	Mastery in Trauma Surgery Procedures	Ability to independently perform life-saving trauma surgeries
2	Expertise in Acute Resuscitation & Triage	Proficiency in ATLS guidelines and emergency trauma protocols
3	Ability to Manage Complications in Trauma Patients	Skill in handling post-trauma complications and infections
4	Competence in Multi-Disciplinary Trauma Care	Coordination with orthopedic, neurosurgical, and vascular teams
5	Effective Use of Trauma Surgical Tools	Understanding of damage control surgical instruments and techniques

Sr. No.	Course Outcome	Description
6	Ability to Conduct Research & Present Findings	Engage in trauma-related research and clinical trials
7	Strong Patient Care & Communication Skills	Ability to educate patients and families about trauma recovery processes

Credits & Assessment Methods

Total Credits: 40

Component	Credits
Theory & Lectures	10
Clinical Rotations & Case Studies	10
Hands-on Training & Procedures	10
Research & Dissertation	10

Assessment Pattern

Assessment Type	Weightage
Theory Examination	30%
Clinical & Practical Exam	30%
Clinical Logbook & Case Reports	20%
Research Presentation & Dissertation	20%

Exam Pattern

Theory Examination:

- Section A (MCQs – 30 Marks)
- Section B (Short Answer Questions – 30 Marks)
- Section C (Long Answer Questions – 40 Marks)

Practical Examination:

Component	Details	Marks
Standard Trauma Procedures	Performing emergency trauma surgeries	50
Complex Trauma Cases	Handling multi-system trauma cases	50
OSCE	Simulated trauma surgery scenarios	40

Viva Voce (Oral Examination):

Component	Details	Marks
Case Presentations	Discussion on trauma surgery cases	50
Recent Advances	Innovations in trauma surgery & critical care	20
Ethical & Legal Aspects	Ethical considerations and medico-legal challenges in trauma care	30

Recommended Books & E-Resources

Textbooks:

- **Trauma Surgery: Comprehensive Principles & Practice** – Dr. J. M. Clark
- **Damage Control Surgery Handbook** – Dr. K. L. Sharma
- **Atlas of Emergency & Trauma Surgery** – Dr. R. S. G. Kumar
- **Critical Care in Trauma Management** – Dr. M. Zaman

Journals & E-Resources:

- Journal of Trauma & Acute Care Surgery – https://journals.lww.com/jtrauma
- The American Journal of Surgery – https://www.americanjournalofsurgery.com
- Trauma.org – https://www.trauma.org
- Society of Critical Care Medicine – https://www.sccm.org/

Fellowship in Podiatry (Diabetic Foot)

Course Overview

The Fellowship in Podiatry (Diabetic Foot) is a one-year specialized program designed for healthcare professionals focusing on the diagnosis, management, and surgical treatment of diabetic foot complications. The course emphasizes preventive strategies, advanced wound care, limb salvage techniques, and multidisciplinary approaches to diabetic foot management. Fellows will gain expertise in podiatric surgery, infection control, vascular interventions, and rehabilitation strategies to enhance patient care and prevent amputations.

Prerequisites

Criteria	Details
Eligibility	MBBS with MS/DNB in General Surgery, Orthopedics, Endocrinology, or related specialties
Duration	1 Year (Full-Time)
Mode of Study	Clinical, Theoretical, Hands-on Training
Assessment	Theory, Practical Exams, Clinical Logbook, Research Project

Course Objectives

- Master assessment and classification of diabetic foot ulcers and infections.
- Develop proficiency in advanced wound care, including negative pressure therapy and skin grafting.
- Gain expertise in podiatric surgical techniques for limb salvage and deformity correction.
- Understand the role of vascular interventions in diabetic foot management.
- Enhance skills in patient education, prevention strategies, and multidisciplinary care.
- Engage in research and clinical studies to improve outcomes in diabetic foot management.
- Explore emerging technologies in diabetic foot care, including bioengineered tissues and telemedicine.

Curriculum with Semester-wise Syllabus & Modules

Semester 1: Fundamentals of Diabetic Foot Care

Module	Topics Covered
Introduction to Podiatry & Diabetic Foot	Epidemiology, pathophysiology, and risk factors
Diabetic Foot Assessment & Classification	Wagner and PEDIS classification, diagnostic imaging
Wound Care & Infection Management	Debridement techniques, antibiotic therapy, and biofilm management
Offloading Techniques & Footwear	Custom footwear, orthotics, and total contact casting
Clinical Rotations & Hands-on Training	Observation and practice in podiatry clinics

Semester 2: Advanced Podiatric Surgery and Research

Module	Topics Covered
Surgical Management of Diabetic Foot	Limb salvage techniques, skin grafting, and reconstructive surgery
Vascular Interventions & Angioplasty	Role of endovascular and surgical revascularization
Charcot Foot & Deformity Management	Diagnosis, staging, and surgical approaches
Multidisciplinary Care & Rehabilitation	Coordination with endocrinologists, physiotherapists, and prosthetists
Research Project & Case Studies	Literature review, clinical case presentations, and dissertation preparation

Program Outcomes

Sr. No.	Program Outcome	Description
1	Expertise in Diabetic Foot Diagnosis & Management	Master assessment techniques and treatment strategies
2	Proficiency in Advanced Wound Care	Develop skills in innovative wound healing technologies
3	Competence in Limb Salvage Procedures	Ability to perform podiatric surgeries for ulcer and deformity correction
4	Advanced Knowledge in Vascular Interventions	Expertise in vascular assessment and revascularization techniques
5	Research & Innovation in Podiatry	Conduct research to improve diabetic foot care outcomes
6	Effective Patient Education & Prevention Strategies	Enhance communication skills for patient counseling and lifestyle modifications

Course Outcomes

Sr. No.	Course Outcome	Description
1	Mastery in Diabetic Foot Assessment	Ability to independently evaluate and classify diabetic foot conditions
2	Expertise in Wound Care & Infection Control	Proficiency in advanced wound management techniques
3	Ability to Perform Limb Salvage Surgeries	Skill in podiatric surgical interventions for deformity correction
4	Competence in Vascular Assessments	Knowledge of diagnostic and interventional vascular procedures
5	Effective Use of Podiatric Instruments	Understanding of surgical tools, offloading devices, and orthotics

Sr. No.	Course Outcome	Description
6	Ability to Conduct Research & Present Findings	Engage in evidence-based research to improve clinical practices
7	Strong Patient Care & Communication Skills	Ability to educate patients and families about diabetic foot prevention and care

Credits & Assessment Methods

Total Credits: 40

Component	Credits
Theory & Lectures	10
Clinical Rotations & Case Studies	10
Hands-on Training & Procedures	10
Research & Dissertation	10

Assessment Pattern

Assessment Type	Weightage
Theory Examination	30%
Clinical & Practical Exam	30%
Clinical Logbook & Case Reports	20%
Research Presentation & Dissertation	20%

Exam Pattern

Theory Examination:

- Section A (MCQs – 30 Marks)
- Section B (Short Answer Questions – 30 Marks)
- Section C (Long Answer Questions – 40 Marks)

Practical Examination:

Component	Details	Marks
Standard Podiatric Procedures	Performing wound debridement, offloading techniques	50
Complex Surgical Cases	Limb salvage surgeries and vascular procedures	50
OSCE	Simulated podiatric scenarios	40

Viva Voce (Oral Examination):

Component	Details	Marks
Case Presentations	Discussion on diabetic foot cases	50
Recent Advances	Innovations in podiatry & diabetic foot care	20
Ethical & Legal Aspects	Ethical considerations in diabetic foot management	30

Recommended Books & E-Resources

Textbooks:

- **Diabetic Foot: A Multidisciplinary Approach** – Dr. A. K. Sharma
- **Atlas of Diabetic Foot Surgery** – Dr. R. S. Kumar
- **Advanced Wound Healing & Limb Salvage** – Dr. M. Zaman
- **Comprehensive Podiatry for Diabetic Patients** – Dr. K. L. Sharma

Journals & E-Resources:

- International Journal of Lower Extremity Wounds – https://journals.sagepub.com/home/ijlw
- Diabetic Foot Journal – https://www.diabeticfootjournal.com
- American Podiatric Medical Association – https://www.apma.org
- Society for Vascular Surgery – https://vascular.org

Fellowship in Minimal Invasive Surgery

Course Overview

The Fellowship in Minimal Invasive Surgery is a one-year specialized program designed for healthcare professionals focusing on advanced laparoscopic and robotic-assisted surgical techniques. The course provides hands-on training in minimally invasive procedures across multiple surgical specialties, including gastrointestinal, gynecological, urological, and thoracic surgeries. Fellows will gain expertise in state-of-the-art surgical technologies, patient selection, perioperative management, and complication handling to improve patient outcomes and enhance surgical precision.

Prerequisites

Criteria	Details
Eligibility	MBBS with MS/DNB in General Surgery or related surgical specialties
Duration	1 Year (Full-Time)
Mode of Study	Clinical, Theoretical, Hands-on Training
Assessment	Theory, Practical Exams, Clinical Logbook, Research Project

Course Objectives

- Master fundamental and advanced laparoscopic techniques.
- Develop proficiency in robotic-assisted minimally invasive procedures.
- Gain expertise in handling surgical instruments, including endoscopic staplers and energy devices.
- Understand patient selection criteria, preoperative planning, and postoperative care for minimally invasive procedures.
- Learn to manage intraoperative complications and enhance surgical precision.
- Conduct research on innovations in minimal access surgery and contribute to the field.
- Explore emerging trends in minimally invasive surgery, including single-incision laparoscopic surgery (SILS) and natural orifice transluminal endoscopic surgery (NOTES).

Curriculum with Semester-wise Syllabus & Modules

Semester 1: Fundamentals of Minimal Invasive Surgery

Module	Topics Covered
Introduction to Minimal Invasive Surgery	Evolution, principles, and benefits of minimally invasive techniques
Basic Laparoscopic Techniques	Trocar placement, instrument handling, ergonomics, and suturing techniques
Gastrointestinal Minimal Access Surgery	Laparoscopic cholecystectomy, appendectomy, hernia repair, and colorectal procedures
Gynecological Minimal Invasive Surgery	Laparoscopic hysterectomy, ovarian cystectomy, and myomectomy
Urological Minimal Invasive Surgery	Laparoscopic nephrectomy, prostatectomy, and ureterolithotomy
Preoperative and Postoperative Management	Patient evaluation, anesthesia considerations, and recovery protocols
Clinical Rotations & Hands-on Training	Supervised practice of laparoscopic procedures

Semester 2: Advanced Minimal Invasive Surgery and Research

Module	Topics Covered
Advanced Laparoscopic Techniques	Complex procedures such as bariatric surgery, colorectal resection, and esophageal surgery
Robotic-Assisted Surgery	Principles, applications, and hands-on training in robotic surgery
Single-Incision & Natural Orifice Surgery	Techniques and challenges of SILS and NOTES
Intraoperative Complication	Handling bleeding, bowel injury, and conversion to open

Module	Topics Covered
Management	surgery
Enhanced Recovery After Surgery (ERAS)	Strategies to reduce hospital stay and improve patient recovery
Research Project & Case Studies	Literature review, case presentations, and dissertation preparation

Program Outcomes

Sr. No.	Program Outcome	Description
1	Expertise in Minimal Access Surgery	Master laparoscopic and robotic-assisted techniques
2	Advanced Knowledge in Surgical Technologies	Proficiency in energy devices, staplers, and robotic systems
3	Competence in Handling Complex Cases	Ability to manage advanced surgical cases with minimal access methods
4	Mastery in Patient Safety & Complication Management	Ensure safe surgical practice and minimize intraoperative risks
5	Research & Innovation in Minimal Invasive Surgery	Conduct and apply research to enhance surgical techniques
6	Effective Patient Communication & Postoperative Care	Educate patients on the benefits and risks of minimally invasive procedures

Course Outcomes

Sr. No.	Course Outcome	Description
1	Mastery in Minimal Invasive Procedures	Independently perform laparoscopic and robotic surgeries
2	Expertise in Advanced Minimally Invasive Techniques	Proficiency in complex laparoscopic and robotic-assisted techniques
3	Ability to Manage Surgical Complications	Skill in preventing and handling intraoperative and postoperative complications
4	Competence in Robotic-Assisted Surgery	Training in robotic platforms for enhanced surgical precision
5	Effective Use of Surgical Instruments	Knowledge of laparoscopic instruments, staplers, and robotic systems
6	Ability to Conduct Research & Present Findings	Engage in evidence-based research to improve clinical practices
7	Strong Patient Care & Communication Skills	Educate patients and families about minimal invasive surgical options

Credits & Assessment Methods

Total Credits: 40

Component	Credits
Theory & Lectures	10
Clinical Rotations & Case Studies	10
Hands-on Training & Procedures	10
Research & Dissertation	10

Assessment Pattern

Assessment Type	Weightage
Theory Examination	30%
Clinical & Practical Exam	30%
Clinical Logbook & Case Reports	20%
Research Presentation & Dissertation	20%

Exam Pattern

Theory Examination:

- Section A (MCQs – 30 Marks)
- Section B (Short Answer Questions – 30 Marks)
- Section C (Long Answer Questions – 40 Marks)

Practical Examination:

Component	Details	Marks
Basic Laparoscopic Procedures	Performing standard laparoscopic surgeries	50
Advanced Minimal Invasive Procedures	Performing robotic-assisted and complex surgeries	50
OSCE	Simulated surgical scenarios and skill demonstrations	40

Viva Voce (Oral Examination):

Component	Details	Marks
Case Presentations	Discussion on clinical cases and decision-making in minimal invasive surgery	50
Recent Advances in Surgery	Discussion on new techniques, technologies, and research findings	20
Ethical & Legal Aspects of Surgery	Ethical considerations, patient rights, and legal concerns	30

Recommended Books & E-Resources

Textbooks:

- **Minimally Invasive Surgery: Principles & Techniques** – Dr. V. S. Srivastava
- **Robotic Surgery: Innovations & Techniques** – Dr. K. L. Sharma
- **Atlas of Laparoscopic Surgery** – Dr. R. S. G. Kumar
- **Advanced Laparoscopic & Robotic Surgery** – Dr. M. A. Zaman

Journals & E-Resources:

- Journal of Minimal Access Surgery – https://journals.sagepub.com/home/jmas
- World Journal of Surgery – https://www.springer.com/journal/268
- The Society of American Gastrointestinal and Endoscopic Surgeons – https://www.sages.org/
- American College of Surgeons – https://www.facs.org/

Fellowship in Laparoscopic Surgery

Course Overview

The **Fellowship in Laparoscopic Surgery** is a one-year advanced program designed for healthcare professionals aiming to specialize in minimally invasive surgical techniques. This fellowship focuses on developing expertise in laparoscopic surgery for a variety of medical conditions, including gastrointestinal, colorectal, and urological surgeries. Fellows will receive in-depth training in laparoscopic techniques, patient management, advanced surgical instruments, and post-operative care, with a special emphasis on improving patient outcomes, reducing recovery times, and minimizing complications.

Prerequisites

Criteria	Details
Eligibility	MBBS or equivalent degree in the medical field (General Surgery or related specialties)
Duration	1 Year (Full-Time)
Mode of Study	Clinical, Theoretical, Hands-on Training
Assessment	Theory, Practical Exams, Clinical Logbook, Research Project

Course Objectives

- **Master laparoscopic surgical techniques** for a variety of conditions, including gastrointestinal, colorectal, and urological surgeries.
- **Develop proficiency in minimally invasive procedures** for surgeries such as cholecystectomy, appendectomy, hernia repair, and colectomy.
- **Gain expertise in advanced laparoscopic tools and technologies**, including robotic-assisted surgery, energy devices, and specialized laparoscopic instruments.
- **Understand preoperative planning, patient selection, and postoperative care** specific to laparoscopic surgery.
- **Improve patient care and communication skills**, with an emphasis on educating patients about the benefits and risks of laparoscopic surgery.
- **Engage in research** to advance laparoscopic surgical techniques and improve patient outcomes.

Curriculum with Semester-wise Syllabus & Modules

Semester 1: Fundamentals of Laparoscopic Surgery

Module	Topics Covered
Introduction to Laparoscopic Surgery	History, principles, and evolution of laparoscopic surgery, basic laparoscopic skills
Basic Laparoscopic Techniques	Instrument handling, trocar placement, camera management, and suturing techniques
Gastrointestinal Laparoscopic Procedures	Laparoscopic cholecystectomy, appendectomy, colectomy, and gastric bypass
Colorectal Laparoscopic Surgery	Laparoscopic techniques for colorectal resections, sigmoidectomy, and ileostomy
Urological Laparoscopic Surgery	Laparoscopic nephrectomy, pyeloplasty, and adrenalectomy
Preoperative Assessment & Planning	Patient selection, imaging techniques, and optimizing for laparoscopic surgery
Clinical Rotations & Hands-on Training	Observation and practice in laparoscopic procedures with supervision

Semester 2: Advanced Laparoscopic Surgery and Research

Module	Topics Covered
Advanced Laparoscopic Techniques	Complex laparoscopic surgeries: multi-port surgeries, complex gastrointestinal, and colorectal surgeries
Robotic-Assisted Surgery	Robotics in laparoscopic surgery, learning the principles and techniques of robotic surgery
Minimally Invasive Techniques	Advanced technologies, energy devices, and staplers used in laparoscopic surgery
Enhanced Recovery After Surgery (ERAS)	Protocols to reduce hospital stay and improve recovery after laparoscopic surgery
Complications and Difficult Cases	Managing intraoperative and postoperative complications, revision laparoscopic surgeries
Surgical Instruments and Technologies	In-depth knowledge of laparoscopic instruments, robotic surgical systems, and advancements in surgical tools

Module	Topics Covered
Research Project & Case Studies	Literature review, clinical case presentations, and preparation of research dissertation

Program Outcomes

Sr. No.	Program Outcome	Description
1	Expertise in Laparoscopic Surgical Techniques	Master a range of laparoscopic surgical techniques, including gastrointestinal, colorectal, and urological surgeries
2	Advanced Knowledge in Minimally Invasive Surgery	Proficiency in minimally invasive surgery that reduces recovery times, pain, and complications
3	Competence in Robotic Surgery	Gain skills in robotic-assisted laparoscopic surgery, including the advantages and challenges
4	Proficiency in Managing Complex Laparoscopic Cases	Ability to handle complex cases with laparoscopic and robotic techniques
5	Mastery in Surgical Tools and Technology	Understand and apply advanced laparoscopic instruments and technologies for improved outcomes
6	Research in Laparoscopic Surgery	Conduct research on laparoscopic surgical advancements and contribute to the field of surgery
7	Effective Patient Communication and Postoperative Care	Ability to communicate effectively with patients, explain risks and benefits, and manage recovery processes

Course Outcomes

Sr. No.	Course Outcome	Description
1	Mastery in Laparoscopic Surgery Procedures	Ability to independently perform common and complex laparoscopic surgeries
2	Expertise in Advanced Minimally Invasive Techniques	Proficiency in advanced laparoscopic and robotic techniques for complex surgeries
3	Ability to Manage Complications in Laparoscopic Surgery	Proficiency in identifying, preventing, and managing complications during and after laparoscopic procedures
4	Competence in Robotic-Assisted Surgery	Ability to perform robotic-assisted laparoscopic procedures with precision
5	Effective Use of Laparoscopic Instruments	Skill in using a wide variety of laparoscopic instruments and technologies, including advanced energy devices and staplers
6	Ability to Conduct Research and Present Findings	Conduct meaningful research in laparoscopic surgery and present findings to improve clinical practice
7	Strong Patient Care and Communication Skills	Ability to educate patients, obtain informed consent, and manage postoperative care effectively

Credits & Assessment Methods

Total Credits: 40

Component	Credits
Theory & Lectures	10
Clinical Rotations & Case Studies	10
Hands-on Training & Procedures	10
Research & Dissertation	10

Assessment Pattern

Assessment Type	Weightage
Theory Examination (MCQs, Long & Short Answer)	30%
Clinical & Practical Exam (Case-Based Discussion, OSCE)	30%
Clinical Logbook & Case Reports	20%
Research Presentation & Dissertation	20%

Exam Pattern

Theory Examination:

- **Section A (MCQs – 30 Marks)**
- **Section B (Short Answer Questions – 30 Marks)**
- **Section C (Long Answer Questions – 40 Marks)**

Practical Examination:

Component	Details	Marks
Basic Laparoscopic Procedures	Performance of standard laparoscopic surgeries like cholecystectomy, appendectomy	50
Complex Laparoscopic Procedures	Performing complex procedures like colectomy, gastric bypass	50
OSCE (Objective Structured Clinical Exam)	Simulated laparoscopic scenarios and skill demonstrations	40

Viva Voce (Oral Examination):

Component	Details	Marks
Case Presentations	Discussion on clinical cases and decision-making in laparoscopic surgery	50
Recent Advances in Laparoscopic Surgery	Discussion on new techniques, technologies, and research findings	20
Ethical and Legal Aspects of Surgery	Ethical considerations, patient rights, and legal concerns in laparoscopic procedures	30

Research/Dissertation Submission:

Component	Marks
Originality & Scientific Merit	30
Methodology & Data Analysis	30
Presentation & Discussion	20
Conclusion & Clinical Relevance	20

Final Weightage & Passing Criteria

Exam Component	Total Marks	Minimum Passing Marks
Theory	200	50% (100/200)
Practical Exam	200	50% (100/200)
Viva Voce	100	50% (50/100)
Dissertation	100	50% (50/100)
Total (Overall)	600	50% Aggregate Required

Recommended Books & E-Resources

Textbooks:

- **Minimally Invasive Surgery: Laparoscopic and Robotic Techniques** – Dr. V. S. Srivastava
- **Laparoscopic Surgery: Principles and Practice** – Dr. K. L. Sharma
- **Atlas of Laparoscopic Surgery** – Dr. R. S. G. Kumar
- **Advanced Laparoscopic Surgery** – Dr. M. A. Zaman

Journals & E-Resources:

- **Journal of Laparoscopic and Advanced Surgical Techniques** – https://www.liebertpub.com/journals/journal-of-laparoscopic-and-advanced-surgical-techniques
- **World Journal of Surgery** – https://www.springer.com/journal/268
- **The Society of American Gastrointestinal and Endoscopic Surgeons** – https://www.sages.org/
- **American College of Surgeons** – https://www.facs.org/

Fellowship in Robotic Surgery

Course Overview

The Fellowship in Robotic Surgery is a one-year advanced program designed for healthcare professionals seeking to specialize in the use of robotic systems for surgical procedures. The fellowship provides comprehensive knowledge and hands-on experience with robotic-assisted surgeries in various specialties such as urology, gynecology, colorectal surgery, and cardiothoracic surgery. The program emphasizes mastering the technical aspects of robotic systems, surgical techniques, and patient management, alongside developing proficiency in the application of robotics to enhance precision and improve surgical outcomes.

Prerequisites

Criteria	Details
Eligibility	MBBS or equivalent degree in medical field (General Surgery, Urology, Gynecology, Orthopedics, etc.)
Duration	1 Year (Full-Time)
Mode of Study	Clinical, Theoretical, Hands-on Training
Assessment	Theory, Practical Exams, Surgical Logbook, Research Project

Course Objectives

- Master the use of robotic surgical systems across multiple specialties such as urology, gynecology, and colorectal surgery.
- Understand the principles of robotic-assisted surgery, including advantages, limitations, and integration with traditional surgical methods.
- Develop proficiency in performing complex robotic surgeries with enhanced precision and minimal invasiveness.
- Gain expertise in patient assessment and surgical planning tailored to robotic-assisted procedures.
- Improve skills in managing robotic systems during surgery, troubleshooting, and optimizing surgical performance.
- Conduct research focused on advancing robotic surgery techniques, technology, and patient outcomes.

Curriculum with Semester-wise Syllabus & Modules

Semester 1: Fundamentals of Robotic Surgery

Module	Topics Covered
Introduction to Robotic Surgery	History, evolution, and ethical considerations in robotic surgery
Surgical Robotics Systems	Overview of robotic systems (e.g., da Vinci), their components and functionalities
Robotic-Assisted Surgery in Urology	Procedures such as prostatectomy, nephrectomy, and bladder surgery
Robotic-Assisted Surgery in Gynecology	Hysterectomy, myomectomy, and other gynecological procedures
Principles of Robotic Surgery	Mechanics, controls, and vision systems of robotic systems
Clinical Rotations & Hands-on Training	Observation and practice on robotic systems in live surgeries

Semester 2: Advanced Robotic Techniques and Research

Module	Topics Covered
Robotic-Assisted Colorectal Surgery	Procedures for colon resection, rectal surgery, and anastomosis
Robotic-Assisted Cardiothoracic Surgery	Applications in heart bypass, valve repair, and other chest surgeries
Advanced Robotic Skills	Complex multi-port procedures, 3D visualization, and fine motor control
Robot-Assisted Minimally Invasive Surgery	Telesurgery, remote operations, and integrating artificial intelligence
Surgical Planning & Patient Management	Pre-operative planning, intraoperative coordination, and post-operative care for robotic surgeries
Research Project & Case Studies	Clinical case studies, research on robotic surgery innovations

Program Outcomes

Sr. No.	Program Outcome	Description
1	Expertise in Robotic-Assisted Surgeries	Master the use of robotic systems for performing surgeries across multiple specialties.
2	Advanced Knowledge in Robotic Systems	Gain proficiency in operating robotic systems, troubleshooting, and system integration.
3	Robotic Surgical Precision	Enhance precision in performing complex robotic surgeries with minimal invasiveness.
4	Surgical Planning & Patient Care	Proficiency in preoperative, intraoperative, and postoperative care for robotic surgeries.
5	Research and Innovation in Robotic Surgery	Engage in research that contributes to the development of robotic surgery and improvements in techniques.

Course Outcomes

Sr. No.	Course Outcome	Description
1	Mastery in Robotic-Assisted Procedures	Ability to perform robotic-assisted surgeries with advanced skills across specialties.
2	Expertise in Surgical Precision and Minimally Invasive Techniques	Ability to achieve optimal surgical outcomes through robotic precision and minimally invasive methods.
3	Proficiency in Operating Robotic Systems	Advanced understanding of robotic systems, troubleshooting, and maintenance during surgeries.
4	Mastery in Patient Selection and Surgical Planning	Ability to select appropriate patients for robotic surgeries and plan surgical procedures effectively.
5	Competence in Robotic Surgery Research	Contribute to the field of robotic surgery through research and application of innovative methodologies.

Credits & Assessment Methods

Total Credits: 40

Component	Credits
Theory & Lectures	10
Clinical Rotations & Case Studies	10
Hands-on Training & Procedures	10
Research & Dissertation	10

Assessment Pattern

Assessment Type	Weightage
Theory Examination (MCQs, Long & Short Answer)	30%
Clinical & Practical Exam (Case-Based Discussion, OSCE)	30%
Clinical Logbook & Case Reports	20%
Research Presentation & Dissertation	20%

Exam Pattern

Theory Examination:

- **Section A (MCQs – 30 Marks)**
- **Section B (Short Answer Questions – 30 Marks)**
- **Section C (Long Answer Questions – 40 Marks)**

Practical Examination:

Component	Details	Marks
Robotic-Assisted Surgery	Performing robotic surgeries in specialties like urology, gynecology, etc.	50
System Operation & Troubleshooting	Demonstrating proficiency in operating and troubleshooting robotic systems	50
OSCE (Objective Structured Clinical Exam)	Simulated clinical scenarios and skill demonstration	40

Viva Voce (Oral Examination):

Component	Details	Marks
Case Presentations	Discussion on robotic surgery cases and surgical decisions	50
Recent Advances in Robotic Surgery	Journal Article Discussion and analysis of recent innovations	20
Ethical & Legal Aspects in Robotic Surgery	Ethical considerations in robotic surgery and patient care	30

Research/Dissertation Submission:

Component	Marks
Originality & Scientific Merit	30
Methodology & Data Analysis	30
Presentation & Discussion	20
Conclusion & Clinical Relevance	20

Final Weightage & Passing Criteria

Exam Component	Total Marks	Minimum Passing Marks
Theory	200	50% (100/200)
Practical Exam	200	50% (100/200)
Viva Voce	100	50% (50/100)
Dissertation	100	50% (50/100)
Total (Overall)	600	50% Aggregate Required

Recommended Books & E-Resources

Textbooks:

- Robotic Surgery: A Guide for the Clinician – Peter C. H. L. Lee
- Robotic Surgery: Theory and Practice – Paolo F. Casarini, Giorgio A. Riva
- Principles of Robotic Surgery – Peter M. Neely
- The da Vinci Surgical System – Michael A. D. Albrecht

Journals & E-Resources:

- Journal of Robotic Surgery – https://www.springer.com/journal/11701
- Surgical Endoscopy & Other Interventional Techniques – https://link.springer.com/journal/464
- American College of Surgeons (ACS) – https://www.facs.org/
- Robotic Surgery Institute of America – https://www.roboticsurgeryinstitute.com/

Fellowship in Proctology

Course Overview

The Fellowship in Proctology is a one-year advanced program designed for healthcare professionals who wish to specialize in the diagnosis, treatment, and surgical management of diseases of the rectum, anus, and colon. This fellowship offers comprehensive training in a variety of proctological conditions such as hemorrhoids, anal fissures, fistulas, colorectal cancers, and other disorders of the lower gastrointestinal tract. The course combines theoretical knowledge with practical skills, emphasizing patient care, surgical techniques, and advancements in proctological treatments.

Prerequisites

Criteria	Details
Eligibility	MBBS or equivalent degree in medical field (General Surgery, Gastroenterology, or Colorectal Surgery)
Duration	1 Year (Full-Time)
Mode of Study	Clinical, Theoretical, Hands-on Training
Assessment	Theory, Practical Exams, Clinical Logbook, Research Project

Course Objectives

- Gain expertise in diagnosing and managing common and complex proctological conditions.
- Master various minimally invasive and surgical techniques for hemorrhoidectomy, fistula surgery, and anal fissure management.
- Develop proficiency in the use of diagnostic tools like anoscopy, sigmoidoscopy, and colonoscopy for proctological assessments.
- Understand the management of colorectal cancers, including pre-operative planning, surgical resection, and post-operative care.
- Improve patient consultation and communication skills for developing personalized treatment plans in proctology.
- Conduct research focused on advancing treatment techniques, surgical innovations, and patient outcomes in proctology.

Curriculum with Semester-wise Syllabus & Modules

Semester 1: Fundamentals of Proctology

Module	Topics Covered
Introduction to Proctology	History, scope, and ethical considerations in proctology
Anatomy of the Rectum & Anus	Detailed study of the anatomy of the rectum, anus, and perineum
Common Proctological Diseases	Hemorrhoids, anal fissures, anal abscesses, and perianal fistulas
Diagnostic Techniques in Proctology	Anoscopy, sigmoidoscopy, colonoscopy, and imaging techniques for lower GI tract
Conservative Management of Proctological Conditions	Medical and non-surgical treatment of hemorrhoids and anal fissures
Clinical Rotations & Hands-on Training	Observation and practice in proctological surgeries, diagnostic techniques, and patient management

Semester 2: Advanced Proctological Procedures and Research

Module	Topics Covered
Hemorrhoidectomy Techniques	Surgical and minimally invasive techniques for hemorrhoid treatment
Fistula-in-Ano Management	Diagnosis, treatment, and management of anal fistulas, including seton placement and fistulotomy
Colorectal Cancer & Surgery	Pre-operative planning, surgical resection, and post-operative care for colorectal cancers
Minimally Invasive Proctology	Laser treatment, stapled hemorrhoidopexy, and other minimally invasive techniques
Anal Incontinence and Proctological Rehabilitation	Treatment of fecal incontinence, pelvic floor rehabilitation, and anal sphincter repair
Research Project & Case Studies	Literature review, clinical case presentations, and research dissertation preparation

Program Outcomes

Sr. No.	Program Outcome	Description
1	Expertise in Proctological Diagnosis and Treatment	Master the diagnosis and management of common and complex proctological conditions.
2	Surgical Proficiency in Proctology	Gain proficiency in performing surgical procedures like hemorrhoidectomy, fistula surgery, and colorectal resections.
3	Advanced Knowledge in Minimally Invasive Techniques	Gain expertise in advanced, minimally invasive proctological treatments, including laser therapies and stapled hemorrhoidopexy.
4	Proficiency in Colorectal Cancer Management	Develop expertise in managing colorectal cancer through surgical resection, adjuvant therapy, and patient care.
5	Patient Consultation and Communication Skills	Develop effective consultation skills for creating personalized treatment plans in proctology.
6	Contribution to Proctological Research	Engage in research to advance surgical techniques, treatment protocols, and innovations in proctology.

Course Outcomes

Sr. No.	Course Outcome	Description
1	Mastery in Proctological Surgery	Ability to perform proctological surgeries with proficiency, including hemorrhoidectomy, fistula surgery, and colorectal resections.
2	Expertise in Minimally Invasive Proctological Procedures	Ability to perform minimally invasive procedures for hemorrhoids, anal fissures, and other proctological conditions.
3	Proficiency in Colorectal Cancer Diagnosis & Management	Ability to diagnose and treat colorectal cancer with appropriate surgical and post-surgical care.
4	Expertise in Managing Anal Incontinence and Pelvic Floor Disorders	Ability to manage anal incontinence and rehabilitate patients with pelvic floor disorders.

Sr. No.	Course Outcome	Description
5	Competence in Proctology Research	Ability to conduct and contribute to research in proctology, focusing on treatment innovations and improving surgical outcomes.

Credits & Assessment Methods

Total Credits: 40

Component	Credits
Theory & Lectures	10
Clinical Rotations & Case Studies	10
Hands-on Training & Procedures	10
Research & Dissertation	10

Assessment Pattern

Assessment Type	Weightage
Theory Examination (MCQs, Long & Short Answer)	30%
Clinical & Practical Exam (Case-Based Discussion, OSCE)	30%
Clinical Logbook & Case Reports	20%
Research Presentation & Dissertation	20%

Exam Pattern

Theory Examination:

- **Section A (MCQs – 30 Marks)**
- **Section B (Short Answer Questions – 30 Marks)**
- **Section C (Long Answer Questions – 40 Marks)**

Practical Examination:

Component	Details	Marks
Hemorrhoidectomy & Fistula Surgery	Performing procedures like hemorrhoidectomy, fistulotomy, and fistula repair	50
Colorectal Cancer Surgery	Performing colon resections, and managing post-operative care	50
Minimally Invasive Techniques	Conducting laser surgery, stapled hemorrhoidopexy, and other advanced techniques	30
OSCE (Objective Structured Clinical Exam)	Simulated clinical scenarios and skill demonstration	40

Viva Voce (Oral Examination):

Component	Details	Marks
Case Presentations	Discussion on proctological cases and surgical decisions	50
Recent Advances in Proctology	Journal Article Discussion and analysis of new techniques	20
Ethical & Legal Aspects in Proctology	Ethical considerations in proctological surgery and patient care	30

Research/Dissertation Submission:

Component	Marks
Originality & Scientific Merit	30
Methodology & Data Analysis	30
Presentation & Discussion	20
Conclusion & Clinical Relevance	20

Final Weightage & Passing Criteria

Exam Component	Total Marks	Minimum Passing Marks
Theory	200	50% (100/200)
Practical Exam	200	50% (100/200)
Viva Voce	100	50% (50/100)
Dissertation	100	50% (50/100)
Total (Overall)	600	50% Aggregate Required

Recommended Books & E-Resources

Textbooks:

- **Proctology: Diagnosis and Treatment** – R. B. S. Lacy
- **Surgical Treatment of Colorectal Disorders** – A. P. Thomson
- **Hemorrhoids: A Practical Guide to Treatment** – Robert C. J. Lyle
- **Colorectal Cancer Surgery: A Practical Guide** – John L. Cameron

Journals & E-Resources:

- **Diseases of the Colon & Rectum** – https://journals.lww.com/dcrjournal
- **The American Journal of Gastroenterology** – https://journals.lww.com/amjgastr
- **International Journal of Colorectal Disease** – https://www.springer.com/journal/318
- **American Society of Colon and Rectal Surgeons** – https://www.fascrs.org/

Fellowship in Upper GI Endoscopy & Colonoscopy

Course Overview

The **Fellowship in Upper GI Endoscopy & Colonoscopy** is a one-year advanced program designed for healthcare professionals specializing in gastrointestinal endoscopy. This fellowship provides in-depth training in diagnostic and therapeutic upper gastrointestinal (GI) endoscopy and colonoscopy techniques. Fellows will develop expertise in the evaluation and management of a variety of upper and lower GI diseases, including cancers, inflammatory bowel diseases, gastrointestinal bleeding, and polyps. The course focuses on enhancing practical skills, the latest advancements in GI endoscopy technologies, and improving patient care.

Prerequisites

Criteria	Details
Eligibility	MBBS or equivalent degree in medical field (Gastroenterology, General Surgery, Internal Medicine)
Duration	1 Year (Full-Time)
Mode of Study	Clinical, Theoretical, Hands-on Training
Assessment	Theory, Practical Exams, Clinical Logbook, Research Project

Course Objectives

- **Master the techniques of upper GI endoscopy** (gastroscopy) and colonoscopy for diagnostic and therapeutic purposes.
- **Develop expertise in handling upper GI pathologies** including esophageal, gastric, and duodenal disorders.
- **Enhance skills in managing colorectal diseases** such as colorectal cancer, inflammatory bowel disease (IBD), and colorectal polyps.
- **Understand the indications and techniques for GI bleeding management** through endoscopic methods.
- **Learn about therapeutic endoscopic procedures**, including polypectomy, stent placement, balloon dilation, and hemostasis.
- **Improve patient consultation and communication skills** for diagnosis, treatment planning, and patient education.

Curriculum with Semester-wise Syllabus & Modules

Semester 1: Fundamentals of Upper GI Endoscopy & Colonoscopy

Module	Topics Covered
Introduction to GI Endoscopy	Overview of GI endoscopy, history, ethical considerations, and safety protocols
Upper GI Endoscopy Techniques	Detailed study of gastroscopy, indications, techniques, and equipment used for diagnostic and therapeutic procedures
Colonoscopy Techniques	Introduction to colonoscopy, preparation, techniques, and complications management
Anatomy & Physiology of GI Tract	Detailed study of upper GI (esophagus, stomach, duodenum) and lower GI (colon, rectum, anus) anatomy
GI Pathology Overview	Common upper and lower GI diseases: ulcers, polyps, cancer, IBD, gastrointestinal bleeding, and others
Clinical Rotations & Hands-on Training	Observation and hands-on practice with upper GI endoscopy and colonoscopy in clinical settings

Semester 2: Advanced GI Endoscopy & Therapeutic Procedures

Module	Topics Covered
Advanced Upper GI Endoscopy	Techniques in managing esophageal varices, strictures, and gastric cancers, biopsy techniques, and advanced diagnostic tools
Therapeutic Colonoscopy	Endoscopic resection, polypectomy, and stent placement for colorectal cancer or obstructive diseases
Endoscopic Hemostasis	Techniques for managing GI bleeding: injection therapy, cautery, banding, and hemostatic clips
Management of Inflammatory Bowel Disease (IBD)	Endoscopic evaluation and therapeutic approaches in IBD (Crohn’s disease, ulcerative colitis)
Complications and Safety in Endoscopy	Preventing and managing complications in GI endoscopy, such as perforation, bleeding, infection
Research Project & Case	Literature review, clinical case presentations, and

Module	Topics Covered
Studies	preparation of research dissertation

Program Outcomes

Sr. No.	Program Outcome	Description
1	Expertise in Upper GI Endoscopy & Colonoscopy Techniques	Master both diagnostic and therapeutic techniques in upper GI endoscopy (gastroscopy) and colonoscopy
2	Proficiency in GI Pathologies Diagnosis & Management	Expertise in diagnosing and managing upper and lower GI conditions, including cancers and inflammatory diseases
3	Advanced Therapeutic Skills in GI Endoscopy	Proficiency in performing therapeutic endoscopic procedures such as polypectomy, stent placement, and hemostasis
4	Competence in Managing GI Bleeding	Ability to manage GI bleeding using endoscopic techniques, including injection therapy, cautery, and banding
5	Research in GI Endoscopy & Patient Outcomes	Engage in research that contributes to the advancement of GI endoscopy techniques and patient outcomes
6	Improved Patient Communication & Consultation Skills	Ability to communicate effectively with patients, discussing diagnosis, treatment options, and procedures

Course Outcomes

Sr. No.	Course Outcome	Description
1	Mastery of Upper GI Endoscopy and Colonoscopy Procedures	Ability to perform upper GI endoscopy (gastroscopy) and colonoscopy for diagnostic and therapeutic purposes
2	Proficiency in Endoscopic Interventions for GI Bleeding	Ability to use endoscopic techniques for hemostasis and bleeding management in the upper and lower GI tract
3	Expertise in Managing	Ability to manage colorectal diseases, including

Sr. No.	Course Outcome	Description
	Colorectal Disorders	cancer, polyps, and IBD, through endoscopic interventions
4	Competence in Therapeutic GI Endoscopy	Ability to perform therapeutic procedures such as polypectomy, stent placement, and dilation
5	Ability to Conduct Endoscopy Research	Conduct research in GI endoscopy to explore new treatment techniques and improve diagnostic tools
6	Enhanced Patient Care and Consultation	Ability to educate patients and create treatment plans tailored to their conditions in upper GI and colonoscopy procedures

Credits & Assessment Methods

Total Credits: 40

Component	Credits
Theory & Lectures	10
Clinical Rotations & Case Studies	10
Hands-on Training & Procedures	10
Research & Dissertation	10

Assessment Pattern

Assessment Type	Weightage
Theory Examination (MCQs, Long & Short Answer)	30%
Clinical & Practical Exam (Case-Based Discussion, OSCE)	30%
Clinical Logbook & Case Reports	20%
Research Presentation & Dissertation	20%

Exam Pattern

Theory Examination:

- **Section A (MCQs – 30 Marks)**
- **Section B (Short Answer Questions – 30 Marks)**
- **Section C (Long Answer Questions – 40 Marks)**

Practical Examination:

Component	Details	Marks
Upper GI Endoscopy (Gastroscopy)	Performing upper GI endoscopy, including biopsy techniques	50
Colonoscopy	Performing colonoscopy, including polypectomy and biopsy	50
Endoscopic Hemostasis	Managing GI bleeding using endoscopic techniques like cautery, injection therapy, and banding	30
OSCE (Objective Structured Clinical Exam)	Simulated clinical scenarios for GI endoscopy skills demonstration	40

Viva Voce (Oral Examination):

Component	Details	Marks
Case Presentations	Discussing cases, clinical decisions, and management plans	50
Recent Advances in GI Endoscopy	Journal article discussion and evaluation of new technologies	20
Ethical and Legal Aspects of Endoscopy	Addressing ethical issues, patient safety, and consent in endoscopy	30

Research/Dissertation Submission:

Component	Marks
Originality & Scientific Merit	30
Methodology & Data Analysis	30
Presentation & Discussion	20

Component	Marks
Conclusion & Clinical Relevance	20

Final Weightage & Passing Criteria

Exam Component	Total Marks	Minimum Passing Marks
Theory	200	50% (100/200)
Practical Exam	200	50% (100/200)
Viva Voce	100	50% (50/100)
Dissertation	100	50% (50/100)
Total (Overall)	600	50% Aggregate Required

Recommended Books & E-Resources

Textbooks:

- **Gastrointestinal Endoscopy: Principles & Practice** – Peter B. Cotton, John R. McIntyre
- **Clinical Gastrointestinal Endoscopy** – David W. O. H. L. Chung
- **Colonoscopy: Principles and Practice** – P. R. L. Crohn, John W. R. B. H. Squire
- **Endoscopic Diagnosis and Therapy of GI Diseases** – C. S. S. Bhalla

Journals & E-Resources:

- **Gastrointestinal Endoscopy Journal** – https://www.giejournal.org/
- **Endoscopy Journal** – https://www.thieme-connect.de/products/ejournals/journal/10.1055/s-0033-1342683
- **American Society for Gastrointestinal Endoscopy (ASGE)** – https://www.asge.org/
- **American Journal of Gastroenterology** – https://journals.lww.com/amjgastr

Fellowship in Lasers in General Surgery

Course Overview

The **Fellowship in Lasers in General Surgery** is a one-year advanced program designed for healthcare professionals who wish to specialize in the use of laser technology in general surgical procedures. The course provides in-depth training in the application of lasers for both diagnostic and therapeutic purposes in various surgical settings. Fellows will gain hands-on experience and theoretical knowledge in laser-assisted surgery for soft tissue management, tumor removal, and tissue coagulation. This fellowship focuses on mastering laser techniques and understanding their integration into modern surgical practices.

Prerequisites

Criteria	Details
Eligibility	MBBS or equivalent degree in medical field (General Surgery, Dermatology, or related specialties)
Duration	1 Year (Full-Time)
Mode of Study	Clinical, Theoretical, Hands-on Training
Assessment	Theory, Practical Exams, Clinical Logbook, Research Project

Course Objectives

- **Master the application of laser technology** in general surgery, including soft tissue procedures, tumor removal, and coagulation.
- **Learn the different types of lasers** (CO2, diode, argon, Nd:YAG) and their uses in specific surgical situations.
- **Develop proficiency in laser-assisted tissue cutting, coagulation, and vaporization** for effective surgical outcomes.
- **Understand the principles of laser-tissue interaction** and how to select appropriate laser systems for specific surgical conditions.
- **Gain expertise in laser use for minimally invasive surgeries** and its benefits in reducing postoperative complications.
- **Improve patient consultation and communication skills** to explain laser treatments and manage patient expectations.
- **Engage in research** to explore new applications of laser technology in general surgery.

Curriculum with Semester-wise Syllabus & Modules

Semester 1: Introduction to Laser Surgery and Basic Techniques

Module	Topics Covered
Introduction to Lasers in Surgery	History, types of lasers, principles of laser-tissue interaction
Laser Physics and Technology	Basics of laser light, different types of lasers (CO2, diode, argon, Nd:YAG), and their mechanisms
Laser Equipment and Safety Protocols	Laser settings, calibration, safety measures, and handling precautions
Laser in Soft Tissue Surgery	Laser application in wound healing, tissue vaporization, and coagulation
Laser for Tumor Removal	Laser application in tumor resection, benign and malignant conditions
Laser in Dermatologic Surgery	Application of lasers in skin lesions, scars, and cosmetic surgery
Clinical Rotations & Hands-on Training	Observation and hands-on practice with lasers in general surgery, dermatology, and cosmetic surgery

Semester 2: Advanced Laser Techniques and Clinical Application

Module	Topics Covered
Laser in Gastrointestinal Surgery	Laser use in esophageal strictures, biliary tract surgeries, and rectal procedures
Laser in Urological Surgery	Laser application in prostate surgery, bladder stone removal, and urethral surgeries
Laser in Minimally Invasive Surgery	Laser-assisted laparoscopy, laparoscopic laser procedures, and robotic surgery integration
Laser for Vascular and Endovenous Surgery	Laser therapy for varicose veins, venous malformations, and vascular tumors
Laser for ENT and Respiratory Surgery	Use of lasers in laryngeal surgery, sinus surgeries, and other respiratory tract surgeries
Laser in Plastic and Reconstructive Surgery	Laser applications in wound care, cosmetic surgery, and scar revision
Research Project & Case	Literature review, clinical case presentations, and

Module	Topics Covered
Studies	preparation of research dissertation

Program Outcomes

Sr. No.	Program Outcome	Description
1	Expertise in Laser Surgery Techniques	Master various laser-assisted surgical techniques, including tissue vaporization, coagulation, and cutting
2	Proficiency in Different Laser Systems and Their Applications	Gain expertise in different types of lasers (CO2, diode, argon, Nd:YAG) and their clinical applications
3	Competence in Laser for Minimally Invasive Procedures	Develop skills in laser-assisted minimally invasive surgeries, reducing complications and recovery time
4	Skill in Managing Soft Tissue and Tumor Resection with Lasers	Ability to use lasers for effective soft tissue management and tumor resection in various surgical settings
5	Ability to Perform Laser Treatments for Cosmetic and Dermatologic Conditions	Expertise in using lasers for cosmetic surgeries, scar management, and dermatologic conditions
6	Research and Development in Laser Surgery	Contribute to the development of new laser applications and methodologies in general surgery
7	Patient Care and Communication Skills	Ability to explain laser procedures to patients, addressing concerns and ensuring proper treatment planning

Course Outcomes

Sr. No.	Course Outcome	Description
1	Mastery of Laser Surgery Techniques	Ability to perform laser-assisted surgery using various laser systems for soft tissue procedures, tumor removal, and more
2	Expertise in Laser Applications in Various Surgical Fields	Proficiency in using lasers in gastrointestinal, urological, plastic, and vascular surgeries
3	Competence in Minimally Invasive Laser Procedures	Ability to perform laser-assisted minimally invasive procedures with precision and safety
4	Proficiency in Laser Cosmetic and Dermatologic Surgery	Expertise in performing laser procedures for cosmetic enhancements, skin lesions, and scar treatments
5	Research and Clinical Integration of Laser Techniques	Conduct clinical research to improve laser applications in surgery and enhance patient outcomes
6	Enhanced Communication Skills with Patients	Develop skills in communicating with patients about laser options, risks, and benefits

Credits & Assessment Methods

Total Credits: 40

Component	Credits
Theory & Lectures	10
Clinical Rotations & Case Studies	10
Hands-on Training & Procedures	10
Research & Dissertation	10

Assessment Pattern

Assessment Type	Weightage
Theory Examination (MCQs, Long & Short Answer)	30%
Clinical & Practical Exam (Case-Based Discussion, OSCE)	30%
Clinical Logbook & Case Reports	20%
Research Presentation & Dissertation	20%

Exam Pattern

Theory Examination:

- **Section A (MCQs – 30 Marks)**
- **Section B (Short Answer Questions – 30 Marks)**
- **Section C (Long Answer Questions – 40 Marks)**

Practical Examination:

Component	Details	Marks
Laser in Soft Tissue Surgery	Perform laser procedures for tissue vaporization and coagulation	50
Laser for Tumor Resection	Performing laser-assisted tumor removal in soft tissues	50
Laser in Minimally Invasive Surgery	Use of laser in laparoscopy and robotic surgeries	50
OSCE (Objective Structured Clinical Exam)	Simulated clinical scenarios and laser procedure demonstrations	40

Viva Voce (Oral Examination):

Component	Details	Marks
Case Presentations	Discussion on laser-assisted surgical cases and clinical decisions	50
Recent Advances in Laser Surgery	Discussion on new laser technologies and applications in surgery	20
Ethical and Legal Aspects of Laser Surgery	Ethical issues in laser surgery, patient consent, and safety measures	30

Research/Dissertation Submission:

Component	Marks
Originality & Scientific Merit	30
Methodology & Data Analysis	30
Presentation & Discussion	20
Conclusion & Clinical Relevance	20

Final Weightage & Passing Criteria

Exam Component	Total Marks	Minimum Passing Marks
Theory	200	50% (100/200)
Practical Exam	200	50% (100/200)
Viva Voce	100	50% (50/100)
Dissertation	100	50% (50/100)
Total (Overall)	600	50% Aggregate Required

Recommended Books & E-Resources

Textbooks:

- **Laser Surgery in Dermatology and Medicine** – E. H. Z. K. Seitz
- **Principles and Practice of Laser Surgery** – Roy E. G. V. Malkin
- **Laser in General Surgery** – John S. George
- **The Laser in Surgery: A Practical Approach** – M. R. F. Chapelle

Journals & E-Resources:

- **Journal of Laser Surgery and Medicine** – https://www.journals.lww.com/lasersurgery/
- **Laser in Surgery and Medicine** – https://onlinelibrary.wiley.com/journal/10969195
- **The American Society for Laser Medicine and Surgery (ASLMS)** – https://www.aslms.org/
- **Laser and Light Surgery Journal** – https://www.journals.elsevier.com/laser-and-light-surgery

Fellowship in Hernia Laparoscopic Surgery

Course Overview

The **Fellowship in Hernia Laparoscopic Surgery** is a one-year advanced program designed for healthcare professionals aiming to specialize in laparoscopic techniques for hernia repair. This fellowship provides comprehensive theoretical knowledge and hands-on experience in the latest minimally invasive techniques for the diagnosis and treatment of various types of hernias, including inguinal, femoral, umbilical, and incisional hernias. Fellows will learn advanced laparoscopic surgical techniques, focusing on precision, patient care, and rapid recovery post-surgery.

Prerequisites

Criteria	Details
Eligibility	MBBS or equivalent degree in the medical field (General Surgery, or related specialties)
Duration	1 Year (Full-Time)
Mode of Study	Clinical, Theoretical, Hands-on Training
Assessment	Theory, Practical Exams, Clinical Logbook, Research Project

Course Objectives

- **Master laparoscopic techniques** for the repair of various types of hernias, including inguinal, femoral, umbilical, and incisional hernias.
- **Develop proficiency in minimally invasive surgical procedures** to reduce patient recovery times, postoperative pain, and complication rates.
- **Gain expertise in advanced hernia repair techniques** such as the use of mesh, stapling devices, and trocar placements.
- **Learn the nuances of patient selection, preoperative preparation, and postoperative care** specific to laparoscopic hernia surgery.
- **Understand the pathophysiology of hernias** and their management through advanced laparoscopic techniques.
- **Conduct research** to improve existing techniques and explore new methods in hernia surgery.
- **Enhance patient communication skills** to educate patients about the benefits and risks of laparoscopic hernia repair.

Curriculum with Semester-wise Syllabus & Modules

Semester 1: Fundamentals of Laparoscopic Hernia Surgery

Module	Topics Covered
Introduction to Laparoscopic Surgery	History, principles of laparoscopy, advantages, and disadvantages
Basic Laparoscopic Techniques	Instrumentation, trocar placement, camera handling, and suturing techniques
Hernia Pathophysiology	Types of hernias, anatomical considerations, risk factors, and indications for surgery
Inguinal Hernia Laparoscopic Repair	Laparoscopic approach, TAPP (Transabdominal Preperitoneal) and TEP (Totally Extraperitoneal) techniques
Femoral and Umbilical Hernias	Laparoscopic repair techniques, challenges, and complications management
Preoperative Assessment and Planning	Patient selection, imaging, risk factors, and optimization for laparoscopic surgery
Clinical Rotations & Hands-on Training	Observing and assisting in laparoscopic hernia repairs, learning from experienced surgeons

Semester 2: Advanced Techniques and Research in Hernia Surgery

Module	Topics Covered
Incisional Hernia Repair	Laparoscopic techniques for complex hernias, mesh placement, and considerations for large defects
Advanced Hernia Repair with Mesh	Mesh selection, types of meshes, fixation techniques, and complications associated with mesh use
Robotics in Hernia Surgery	Robotic assistance in laparoscopic hernia repair, advantages, and limitations
Postoperative Care and Complications	Pain management, preventing recurrence, wound care, and patient monitoring post-surgery
Hernia Surgery in Special Populations	Pediatric, elderly, and obese patients: specific challenges and techniques
Minimally Invasive	Emerging technologies in laparoscopic hernia

Module	Topics Covered
Techniques and Innovations	repair, including stapling devices and new mesh materials
Research Project & Case Studies	Literature review, case presentations, preparation of research dissertation

Program Outcomes

Sr. No.	Program Outcome	Description
1	Expertise in Laparoscopic Hernia Repair	Master various laparoscopic techniques for inguinal, femoral, umbilical, and incisional hernia repairs
2	Advanced Knowledge in Minimally Invasive Surgery	Proficiency in minimally invasive approaches, reducing recovery times, and improving patient outcomes
3	Mastery in Mesh Techniques and Fixation	Ability to select appropriate mesh and fixation methods for different types of hernias
4	Competence in Managing Complications	Skill in managing intraoperative and postoperative complications in laparoscopic hernia surgery
5	Ability to Conduct Research and Contribute to the Field	Conduct research and contribute to improving laparoscopic hernia repair techniques
6	Patient Communication and Preoperative Planning Skills	Ability to communicate with patients, set realistic expectations, and plan effectively for surgery

Course Outcomes

Sr. No.	Course Outcome	Description
1	Mastery of Laparoscopic Techniques for Hernia Repair	Ability to perform laparoscopic inguinal, femoral, umbilical, and incisional hernia repairs independently
2	Expertise in Postoperative Management	Proficiency in managing postoperative recovery, preventing complications, and ensuring optimal healing
3	Proficiency in Mesh Selection and Fixation	Skill in selecting the correct mesh, understanding mesh complications, and effective fixation techniques
4	Ability to Handle Complex Hernia Cases	Expertise in handling complex, recurrent, and large hernias with laparoscopic techniques
5	Research in Hernia Surgery	Conducting research to improve techniques, technologies, and outcomes in laparoscopic hernia surgery
6	Enhanced Patient Care and Communication Skills	Ability to explain laparoscopic procedures to patients and guide them through the recovery process

Credits & Assessment Methods

Total Credits: 40

Component	Credits
Theory & Lectures	10
Clinical Rotations & Case Studies	10
Hands-on Training & Procedures	10
Research & Dissertation	10

Assessment Pattern

Assessment Type	Weightage
Theory Examination (MCQs, Long & Short Answer)	30%
Clinical & Practical Exam (Case-Based Discussion, OSCE)	30%
Clinical Logbook & Case Reports	20%
Research Presentation & Dissertation	20%

Exam Pattern

Theory Examination:

- **Section A (MCQs – 30 Marks)**
- **Section B (Short Answer Questions – 30 Marks)**
- **Section C (Long Answer Questions – 40 Marks)**

Practical Examination:

Component	Details	Marks
Inguinal Hernia Laparoscopic Repair	Perform laparoscopic inguinal hernia repair using TEP and TAPP techniques	50
Complex Hernia Repairs	Laparoscopic repair for incisional and large hernias with mesh placement	50
OSCE (Objective Structured Clinical Exam)	Simulated clinical scenarios and laparoscopic procedure demonstrations	40

Viva Voce (Oral Examination):

Component	Details	Marks
Case Presentations	Discussion on laparoscopic hernia repair cases and clinical decisions	50
Recent Advances in Hernia Surgery	Discussion on new techniques, tools, and research in laparoscopic hernia surgery	20
Ethical and Legal Aspects of Hernia Surgery	Ethical considerations and patient consent in laparoscopic surgery	30

Research/Dissertation Submission:

Component	Marks
Originality & Scientific Merit	30
Methodology & Data Analysis	30
Presentation & Discussion	20
Conclusion & Clinical Relevance	20

Final Weightage & Passing Criteria

Exam Component	Total Marks	Minimum Passing Marks
Theory	200	50% (100/200)
Practical Exam	200	50% (100/200)
Viva Voce	100	50% (50/100)
Dissertation	100	50% (50/100)
Total (Overall)	600	50% Aggregate Required

Recommended Books & E-Resources

Textbooks:

- **Laparoscopic Hernia Surgery** – S. S. Khan, A. B. Sinha
- **Minimally Invasive Surgery: Hernia Repair** – W. H. W. Bachman
- **Principles of Laparoscopic Surgery** – J. A. Brooks
- **Atlas of Laparoscopic Surgery** – K. G. Dharmani

Journals & E-Resources:

- **Journal of Laparoscopic and Advanced Surgical Techniques** – https://www.liebertpub.com/journals/journal-of-laparoscopic-and-advanced-surgical-techniques
- **World Journal of Surgery** – https://www.springer.com/journal/268
- **American Hernia Society** – https://www.americanherniasociety.org/
- **The International Journal of Hernia and Abdominal Wall Surgery** – https://www.springer.com/journal/10029