Department of Nephrology & Urology

S.No	Name of the Fellowship	Eligibility	Duration	Fee (₹)
01	Fellowship in Nephrology & Hypertension	DM/DNB Nephrology	1 yr	1,00,000
02	Fellowship in Transplant Nephrology	DM/DNB Nephrology	1 yr	1,00,000
03	Fellowship in Endo Urology	M.Ch./DNB Urology	1 yr	1,00,000
04	Fellowship in Uro-Gynaecology Surgery	M.Ch./DNB Urology	1 yr	1,00,000
05	Fellowship in Renal Transplant Surgery	M.Ch./DNB Urology	1 yr	1,00,000
06	Fellowship in Lap/Robotic Urology	M.Ch./DNB Urology	1 yr	1,00,000
07	Fellowship in Minimal Invasive Uro Surgery	M.Ch./DNB Urology	1 yr	1,00,000
08	Fellowship in Pediatric Urology	M.Ch./DNB Urology, Paed Surg	1 yr	1,00,000
09	Fellowship in Andrology & Men's Health	M.Ch./DNB Urology	1 yr	3,00,000

Fellowship in Nephrology & Hypertension

Course Overview

The Fellowship in Nephrology & Hypertension is a one-year advanced program designed for healthcare professionals seeking to specialize in the management of kidney diseases and hypertension. This fellowship offers comprehensive training in the diagnosis, treatment, and management of a wide range of nephrological and hypertensive conditions, including chronic kidney disease (CKD), end-stage renal disease (ESRD), dialysis therapies, kidney transplantation, and hypertension management. The program combines theoretical learning, clinical practice, and hands-on training, ensuring participants develop the necessary skills to provide high-quality care for patients with kidney and blood pressure disorders.

Prerequisites

Criteria	Details
Eligibility	MD or equivalent degree in internal medicine or related fields
Duration	1 Year
Mode of Study	Clinical, Theoretical, Hands-on Training
Assessment	Theory, Practical Exams, Clinical Logbook, Research Project

Course Objectives

- Gain an in-depth understanding of the pathophysiology and clinical management of chronic kidney disease (CKD), including its prevention and progression.
- Master the management of hypertension, including secondary hypertension, and its role in kidney disease progression.
- Learn advanced diagnostic techniques in nephrology, including renal biopsy, imaging, and laboratory testing.
- Develop proficiency in the management of end-stage renal disease (ESRD) and dialysis therapies, including hemodialysis and peritoneal dialysis.
- Understand the principles of kidney transplantation, including donor-recipient matching, immunosuppressive therapy, and post-transplant care.
- Improve patient care and communication skills for managing chronic conditions and providing holistic care for patients with kidney and hypertensive disorders.
- Conduct research to advance the understanding and treatment of nephrological and hypertensive conditions, contributing to evidence-based practice in the field.

Curriculum with Semester-wise Syllabus & Modules

Semester 1: Fundamentals of Nephrology and Hypertension

Module	Topics Covered
Introduction to Nephrology	Overview of kidney function, anatomy, and pathophysiology of kidney diseases
Basic Hypertension Management	Pathophysiology, classification, and pharmacological management of hypertension
Chronic Kidney Disease (CKD)	Diagnosis, stages of CKD, risk factors, and prevention strategies
Glomerulonephritis and Nephrotic Syndrome	Mechanisms, clinical presentation, and management of glomerular diseases
Renal Imaging and Diagnostics	Techniques in imaging, urine analysis, renal biopsy procedures
Clinical Rotations & Hands-on Training	Observation and practical experience in diagnosing and managing nephrological conditions

Semester 2: Advanced Nephrology, Dialysis, and Hypertension Management

Module	Topics Covered
End-Stage Renal Disease (ESRD)	Management of ESRD, dialysis modalities, and complications of chronic renal failure
Dialysis Techniques	Hemodialysis, peritoneal dialysis, vascular access, and dialysis-related complications
Kidney Transplantation	Donor-recipient matching, immunosuppressive therapy, and post-transplant management
Secondary Hypertension	Identification and treatment of secondary causes of hypertension (e.g., pheochromocytoma, renovascular hypertension)
Advanced Renal Biopsy Techniques	Indications, procedures, and interpretation of renal biopsies
Research Project & Case Studies	Literature review, clinical case presentations, and preparation of research dissertation

Program Outcomes

Sr. No.	Program Outcome	Description
1	Expertise in Nephrology	Master the diagnosis, management, and treatment of common and complex kidney diseases, including CKD and glomerulonephritis
2	Advanced Hypertension Management	Gain proficiency in managing hypertension, including secondary hypertension and its relationship to kidney disease

Sr. No.	Program Outcome	Description
3	Mastery in Dialysis Therapies	Develop expertise in various dialysis techniques, including hemodialysis and peritoneal dialysis
4	Proficiency in Kidney Transplantation	Understand the principles of kidney transplantation, donor-recipient matching, and immunosuppressive therapy
5	Competence in Renal Biopsy and Diagnostics	Gain hands-on experience with renal biopsy and advanced diagnostic techniques for nephrology
6	Research in Nephrology & Hypertension	Contribute to the field through research that advances understanding and treatment of nephrological and hypertensive conditions

Course Outcomes

Sr. No.	Course Outcome	Description
1	Mastery in CKD Diagnosis and Management	Ability to diagnose and manage chronic kidney disease, prevent its progression, and provide appropriate interventions
2	Proficiency in Hypertension Control	Expertise in managing primary and secondary hypertension, including pharmacological and non-pharmacological treatments
3	Advanced Dialysis Skills	Ability to perform dialysis treatments and manage dialysis-related complications effectively
4	Competence in Kidney Transplantation	Ability to assess candidates for kidney transplantation and provide post-transplant care
5	Diagnostic Expertise in Nephrology	Ability to perform renal biopsies and interpret results, using advanced diagnostic tools
6	Research Contributions in Nephrology & Hypertension	Ability to conduct research that advances clinical knowledge and improves patient outcomes in nephrology and hypertension

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
CKD & Hypertension Management	Clinical scenarios involving CKD and hypertension management	50
Dialysis Techniques	Performing dialysis procedures and managing complications	50
Kidney Biopsy	Interpretation and clinical management following renal biopsy	30
OSCE	Simulated clinical scenarios and skill demonstration	40

Viva Voce (Oral Examination)

Component	Details	Marks
Case Presentations	Discussion on nephrology and hypertension cases and treatment strategies	50
Recent Advances in Nephrology	Discussion on the latest developments in nephrology and hypertension management	20
Ethical & Legal Aspects in Nephrology	Ethical considerations in kidney disease and hypertension 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:

- Comprehensive Clinical Nephrology – Richard J. Johnson, John T. C. Lee
- Hypertension: A Companion to Braunwald's Heart Disease – George L. Bakris, Matthew R. Weir
- Chronic Kidney Disease: A Guide to Clinical Practice – David S. Goldfarb
- Dialysis: A Practical Guide – A. A. M. R. A. Ramsay

Journals & E-Resources:

- Kidney International – https://www.kidney-international.org
- Journal of Hypertension – https://journals.lww.com/jhypertension
- American Society of Nephrology – https://www.asn-online.org
- National Kidney Foundation – https://www.kidney.org

Fellowship in Transplant Nephrology

Course Overview

The Fellowship in Transplant Nephrology is a one-year advanced program aimed at healthcare professionals specializing in the management of kidney transplant patients. This fellowship offers in-depth knowledge and hands-on experience in the areas of renal transplantation, including pre-transplant evaluation, transplant surgery, post-transplant care, immunosuppressive therapy, rejection management, and the prevention and treatment of transplant-related complications. Participants will gain the expertise required to care for transplant recipients, manage immunosuppressive regimens, and optimize outcomes in kidney transplant patients.

Prerequisites

Criteria	Details
Eligibility	MD, MS, or equivalent degree in internal medicine, nephrology, or related medical fields
Duration	1 Year
Mode of Study	Clinical, Theoretical, Hands-on Training
Assessment	Theory, Practical Exams, Clinical Logbook, Research Project

Course Objectives

- Gain comprehensive knowledge of the principles and procedures involved in renal transplantation, from donor-recipient matching to long-term post-transplant care.
- Master the management of immunosuppressive therapy, including drug selection, dosing, and monitoring to prevent rejection and minimize complications.
- Understand the evaluation and management of transplant patients, including the treatment of acute and chronic rejection.
- Learn to manage transplant-related complications such as infections, graft dysfunction, and cardiovascular risks in transplant recipients.
- Improve patient communication and care strategies in transplant nephrology, with an emphasis on personalized treatment plans.
- Develop skills in transplant nephrology research to improve patient outcomes and contribute to advancements in the field.

Curriculum with Semester-wise Syllabus & Modules

Semester 1: Foundations of Transplant Nephrology

Module	Topics Covered
Introduction to Kidney Transplantation	Overview of renal transplantation, history, and transplant immunology
Donor-Recipient Matching and Evaluation	Criteria for donor and recipient matching, pre-transplant evaluation, organ allocation
Immunosuppressive Therapy	Principles of immunosuppressive drug regimens, drug interactions, monitoring levels
Post-Transplant Care	Management of transplant recipients, early post-transplant care, monitoring for complications
Acute and Chronic Rejection	Pathophysiology, diagnosis, and management of acute and chronic rejection
Clinical Rotations & Hands-on Training	Observation and practical experience in transplant nephrology, including patient management and transplant procedures

Semester 2: Advanced Topics in Transplant Nephrology and Research

Module	Topics Covered
Infections in Transplant Recipients	Preventing, diagnosing, and treating infections in kidney transplant recipients
Transplant-Related Complications	Managing cardiovascular risks, metabolic disorders, and graft dysfunction in transplant recipients
Chronic Allograft Nephropathy	Pathogenesis, diagnosis, and management of chronic allograft nephropathy
Long-Term Care in Kidney Transplantation	Strategies for long-term monitoring, managing graft survival, and optimizing patient outcomes
Research in Transplant Nephrology	Current trends, clinical trials, and ongoing research in kidney transplantation
Research Project & Case Studies	Literature review, clinical case presentations, and preparation of research dissertation

Program Outcomes

Sr. No.	Program Outcome	Description
1	Expertise in Kidney Transplantation	Mastery in managing the entire process of renal transplantation, from evaluation to long-term care
2	Advanced Knowledge of Immunosuppressive Therapy	Proficiency in selecting and managing immunosuppressive regimens for transplant recipients
3	Management of Transplant Complications	Expertise in diagnosing and managing complications such as acute and chronic rejection, infections, and graft dysfunction
4	Long-Term Post-Transplant Care	Ability to manage transplant recipients for long-term graft survival and overall health
5	Proficiency in Transplant Nephrology Research	Engage in clinical and laboratory research to advance the field of transplant nephrology
6	Improved Patient Care in Transplantation	Develop patient-centered approaches for transplant nephrology, ensuring comprehensive care throughout the transplant journey

Course Outcomes

Sr. No.	Course Outcome	Description
1	Mastery of Kidney Transplantation Procedures	Ability to assess candidates for transplantation, coordinate the transplant process, and manage recipients
2	Expertise in Immunosuppressive Therapy	Ability to prescribe, monitor, and adjust immunosuppressive therapy for transplant recipients
3	Management of Post-Transplant Rejection	Proficiency in identifying and treating acute and chronic rejection episodes
4	Knowledge of Transplant-Related Complications	Expertise in managing infections, cardiovascular issues, and other complications in transplant recipients
5	Long-Term Monitoring and Graft Care	Ability to monitor graft function and manage long-term post-transplant issues to optimize patient outcomes
6	Transplant Nephrology Research Contribution	Ability to conduct research to improve transplant outcomes and contribute to advancing the field

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
Immunosuppressive Therapy	Assessing immunosuppressive regimens and their monitoring	50
Acute and Chronic Rejection	Case-based assessment of rejection management strategies	50
Post-Transplant Care	Management of post-transplant complications and care	30
OSCE	Simulated clinical scenarios and skill demonstration	40

Viva Voce (Oral Examination)

Component	Details	Marks
Case Presentations	Discussion on transplant nephrology cases and treatment strategies	50
Recent Advances in Transplant Nephrology	Discussion on the latest trends in transplant nephrology	20
Ethical & Legal Aspects in Transplantation	Ethical issues in kidney transplantation, consent, 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:

- Transplant Nephrology – Ghulam Mohammad, SumanDhamija
- Handbook of Kidney Transplantation – Jonathan C. S. Wong
- Clinical Transplantation – N. R. Rice, M. L. Appel
- Immunosuppressive Therapy in Transplantation – H. S. Colvin, K. A. J. Kliem

Journals & E-Resources:

- American Journal of Transplantation – https://onlinelibrary.wiley.com/journal/16006143
- Transplantation Proceedings – https://www.transplantation-proceedings.com/
- International Society of Nephrology – https://www.theisn.org

Fellowship in Endourology

Course Overview

The Fellowship in Endourology is a one-year specialized program designed for urologists seeking to enhance their expertise in the field of minimally invasive urological surgery. This fellowship focuses on advanced endourological techniques, including the treatment of kidney stones, ureteral stones, and upper urinary tract tumors using endoscopic and percutaneous methods. The program also emphasizes the latest innovations in laser lithotripsy, ureteroscopy, and percutaneous nephrolithotomy (PCNL), as well as advancements in robotic surgery and other cutting-edge technologies in the field.

Prerequisites

Criteria	Details
Eligibility	MD/MS in Urology or equivalent degree from an accredited medical institution
Duration	1 Year
Mode of Study	Clinical, Theoretical, Hands-on Training
Assessment	Theory, Practical Exams, Clinical Logbook, Research Project

Course Objectives

- Master the principles and techniques of endourology, including ureteroscopy, percutaneous nephrolithotomy (PCNL), and laser lithotripsy.
- Gain proficiency in treating complex renal and ureteral stones, as well as upper urinary tract tumors using minimally invasive techniques.
- Understand the application of advanced technologies such as lasers and robotics in the treatment of urological conditions.
- Develop skills in performing diagnostic and therapeutic endourological procedures with precision and minimal complications.
- Enhance decision-making and problem-solving abilities in managing complicated urological cases.
- Conduct research in the field of endourology, exploring new methods and innovations to improve patient outcomes.

Curriculum with Semester-wise Syllabus & Modules

Semester 1: Fundamentals of Endourology

Module	Topics Covered
Introduction to Endourology	Overview of endourology, its history, and key principles
Ureteroscopy and Techniques	Ureteroscopic procedures for stone removal, tumor resection, and stent placement
Percutaneous Nephrolithotomy (PCNL)	Indications, patient selection, technique, and complications
Laser Lithotripsy	Principles and techniques of laser lithotripsy, types of lasers, and clinical applications
Management of Upper Urinary Tract Stones	Diagnosis and treatment of kidney and ureteral stones using endourology
Clinical Rotations & Hands-on Training	Observation and hands-on experience in endourological procedures

Semester 2: Advanced Endourological Techniques and Research

Module	Topics Covered
Robotic Surgery in Endourology	Robotic-assisted urological surgery, indications, and techniques
Complex Stone Disease Management	Treatment of complex renal stones, staghorn calculi, and stones in difficult locations
Endourology in Upper Urinary Tract Tumors	Diagnosis and management of tumors of the renal pelvis and ureter using endourological techniques
Advanced Laser Techniques	Advanced use of lasers for stone fragmentation, tumor resection, and tissue ablation
Endourology in Pediatrics	Minimally invasive treatment options for pediatric urology patients
Research Project & Case Studies	Literature review, clinical case presentations, and preparation of research dissertation

Program Outcomes

Sr. No.	Program Outcome	Description
1	Expertise in Endourological Techniques	Mastery in performing ureteroscopy, PCNL, laser lithotripsy, and other minimally invasive procedures for stone removal and tumor resection
2	Advanced Knowledge of Laser Technologies	Proficiency in utilizing lasers for stone fragmentation, tissue ablation, and tumor resection in endourology
3	Robotic Surgery Expertise	Understanding and application of robotic technology in endourological surgeries
4	Complex Urological Case Management	Ability to manage complex renal and ureteral stone cases, as well as upper urinary tract tumors
5	Enhanced Decision-Making and Problem-Solving Skills	Ability to assess, plan, and execute treatment strategies for complicated urological conditions
6	Contribution to Endourological Research	Engage in research to improve techniques, patient outcomes, and technological advancements in the field of endourology

Course Outcomes

Sr. No.	Course Outcome	Description
1	Mastery in Endourological Procedures	Ability to perform a variety of endourological procedures including ureteroscopy, PCNL, laser lithotripsy, and advanced techniques
2	Expertise in Stone Disease Management	Proficiency in treating simple and complex renal and ureteral stones using minimally invasive methods
3	Competence in Robotic-Assisted Endourology	Ability to perform robotic-assisted procedures and manage robotic systems in urological surgery
4	Advanced Understanding of Laser Use in Endourology	Mastery of laser lithotripsy, tumor resection, and tissue ablation techniques in endourology
5	Pediatric Endourology	Proficiency in treating pediatric urological conditions with endourological techniques
6	Endourology Research Contribution	Ability to conduct and contribute to research in the field of endourology to advance clinical practice and patient 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 (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
Ureteroscopy& Stone Removal	Performing ureteroscopy for stone removal and diagnosis	50
Percutaneous Nephrolithotomy (PCNL)	Conducting PCNL for complex renal stones	50
Laser Lithotripsy	Performing laser lithotripsy for stone fragmentation	30
OSCE	Simulated clinical scenarios and skill demonstration	40

Viva Voce (Oral Examination)

Component	Details	Marks
Case Presentations	Discussion on complex urological cases and treatment plans	50
Advances in Endourology	Discussion on new technologies and innovations in endourology	20
Ethical & Legal Aspects in Endourology	Ethical issues and patient care considerations in endourology	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:

- Endourology: Principles and Practice – Leonard G. M. K. R. T. Williams
- Minimally Invasive Urology: Endourology, Laparoscopy, and Robotics – R. D. Lane
- Endourology: Techniques and Innovations – Shailesh D. Nair, S. M. Mehta
- Percutaneous Nephrolithotomy – Ram P. V. V. K. Rao

Journals & E-Resources:

- Journal of Endourology – https://www.liebertpub.com/journal/end |
- Endourology Society – https://www.endourology.org
- Urology Journal – https://www.urologyjournal.org

Fellowship in Uro-Gynaecology Surgery

Course Overview

The Fellowship in Uro-Gynaecology Surgery is a one-year advanced training program for specialists in Obstetrics and Gynaecology, Urology, and related fields who are interested in the management of pelvic floor disorders. This fellowship aims to provide a comprehensive understanding of both the surgical and non-surgical approaches to uro-gynaecological issues, including urinary incontinence, pelvic organ prolapse, and other conditions related to the pelvic floor. The program combines theoretical knowledge, clinical training, and hands-on surgical experience, with an emphasis on advanced minimally invasive techniques.

Prerequisites

Criteria	Details
Eligibility	MD/MS in Obstetrics and Gynaecology, Urology, or equivalent medical qualifications
Duration	1 Year
Mode of Study	Clinical, Theoretical, Hands-on Training
Assessment	Theory, Practical Exams, Clinical Logbook, Research Project

Course Objectives

- Master the diagnosis and management of pelvic floor disorders, including urinary incontinence, pelvic organ prolapse, and other related conditions.
- Gain expertise in the latest surgical techniques for uro-gynaecological disorders, with a focus on minimally invasive and robotic surgery.
- Develop a thorough understanding of the anatomy and physiology of the pelvic floor and its impact on both urinary and gynaecological health.
- Learn to manage complex uro-gynaecological cases, from preoperative assessment to postoperative care and rehabilitation.
- Gain proficiency in advanced procedures such as sling surgeries, cystocele and rectocele repair, and reconstructive pelvic surgeries.
- Engage in research projects related to uro-gynaecology to improve patient outcomes and surgical techniques.

Curriculum with Semester-wise Syllabus & Modules

Semester 1: Fundamentals of Uro-Gynaecology Surgery

Module	Topics Covered
Introduction to Uro-Gynaecology	Overview of uro-gynaecology, pelvic floor anatomy, and physiology
Pelvic Floor Dysfunction	Causes, diagnosis, and management of urinary incontinence and pelvic organ prolapse
Non-Surgical Management of Pelvic Floor Disorders	Conservative treatment options, physiotherapy, and pharmacological management
Uro-Gynaecological Surgery Basics	Principles of uro-gynaecological surgery, indications, and patient selection
Diagnostic Techniques in Uro-Gynaecology	Urodynamic testing, cystoscopy, and other diagnostic tools
Clinical Rotations & Hands-on Training	Observation and hands-on experience in common uro-gynaecological surgeries

Semester 2: Advanced Uro-Gynaecological Techniques and Research

Module	Topics Covered
Advanced Uro-Gynaecological Surgery	Techniques in sling surgeries, cystocele and rectocele repair, and vaginal prolapse surgeries
Robotic and Minimally Invasive Surgery	Use of robotic assistance and minimally invasive techniques for uro-gynaecological surgeries
Complex Uro-Gynaecological Procedures	Management of recurrent pelvic organ prolapse, complex incontinence cases, and reconstructive surgeries
Postoperative Care & Rehabilitation	Postoperative management, including pain control, rehabilitation, and prevention of complications
Uro-Gynaecology in the Elderly	Special considerations and management of uro-gynaecological conditions in elderly women
Research Project & Case Studies	Literature review, clinical case presentations, and preparation of research dissertation

Program Outcomes

Sr. No.	Program Outcome	Description
1	Expertise in Uro-Gynaecological Surgery	Mastery of advanced uro-gynaecological surgical techniques, including sling surgeries and pelvic organ prolapse repair
2	Proficiency in Minimally Invasive Techniques	Competence in performing minimally invasive and robotic-assisted uro-gynaecological surgeries
3	In-depth Knowledge of Pelvic Floor Disorders	Ability to diagnose and manage a variety of pelvic floor dysfunctions and urinary incontinence conditions
4	Advanced Postoperative Management Skills	Expertise in postoperative care, rehabilitation, and management of complications in uro-gynaecological surgeries
5	Uro-Gynaecological Research Expertise	Engage in and contribute to research in the field of uro-gynaecology to advance surgical techniques and patient care

Course Outcomes

Sr. No.	Course Outcome	Description
1	Mastery in Pelvic Floor Dysfunction Surgery	Ability to perform complex surgeries for pelvic floor dysfunction, including sling surgeries and prolapse repairs
2	Expertise in Advanced Uro-Gynaecological Procedures	Proficiency in managing complex uro-gynaecological cases and advanced reconstructive surgeries
3	Competence in Robotic and Minimally Invasive Surgery	Ability to perform robotic and minimally invasive uro-gynaecological surgeries with precision
4	Effective Management of Postoperative Care	Competence in managing postoperative recovery, complications, and rehabilitation for uro-gynaecological patients
5	Research Contribution in Uro-Gynaecology	Ability to conduct clinical research and contribute to advancing knowledge in uro-gynaecological surgery

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
Sling Surgery & Prolapse Repair	Performing and demonstrating techniques in sling surgery and prolapse repair	50
Minimally Invasive Uro-Gynaecology	Conducting minimally invasive uro-gynaecological procedures	50
Urodynamics& Diagnostic Procedures	Conducting and interpreting urodynamics and cystoscopy	30
OSCE	Simulated clinical scenarios and skill demonstration	40

Viva Voce (Oral Examination)

Component	Details	Marks
Case Presentations	Discussion on uro-gynaecological cases and treatment plans	50
Advances in Uro-Gynaecology	Discussion on new techniques and technologies in uro-gynaecology	20
Ethical & Legal Aspects in Surgery	Ethical issues and patient care considerations in uro-gynaecological practice	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:

- Urogynecology: Clinical Practice and Surgery – Robert D. G. Barber
- Pelvic Organ Prolapse: The Management of Common Disorders – Chris M. A. McDonald
- Textbook of Female Urology &Urogynecology – J. T. Bradley
- Minimally Invasive Surgery in Uro-Gynaecology – M. D. Samuel, R. Patel

Journals & E-Resources:

- International Urogynecology Journal – https://www.springer.com/journal/10102
- Neurourology and Urodynamics – https://onlinelibrary.wiley.com/journal/15205771
- The American Urogynecologic Society – https://www.augs.org/

Fellowship in Renal Transplant Surgery

Course Overview

The Fellowship in Renal Transplant Surgery is an advanced one-year program designed for surgeons and specialists in Urology, Nephrology, and related fields who wish to gain in-depth expertise in the surgical management of kidney transplantation. This fellowship program provides comprehensive training in both the technical aspects of renal transplant surgery and the multidisciplinary approach required for effective patient management. Trainees will acquire skills in donor and recipient management, surgical techniques, immunosuppressive therapy, and post-transplant care. The fellowship also emphasizes the latest advancements in transplant surgery, including laparoscopic and robotic-assisted techniques.

Prerequisites

Criteria	Details
Eligibility	MD/MS in Surgery, Urology, or Nephrology, or equivalent qualification
Duration	1 Year
Mode of Study	Clinical, Theoretical, Hands-on Training
Assessment	Theory, Practical Exams, Clinical Logbook, Research Project

Course Objectives

- Master the surgical techniques of kidney transplantation, including donor nephrectomy, recipient nephrectomy, and graft implantation.
- Develop expertise in the management of organ donors, including live and deceased donor nephrectomy, as well as the assessment of organ suitability.
- Gain a deep understanding of immunosuppressive therapy and its role in preventing transplant rejection, including the management of post-transplant complications.
- Learn advanced techniques in laparoscopic and robotic-assisted renal transplantation.
- Master the management of renal transplant recipients, including preoperative work-up, intraoperative management, and post-transplant care and follow-up.
- Engage in clinical and laboratory research to contribute to improving renal transplant outcomes and surgical practices.

Curriculum with Semester-wise Syllabus & Modules

Semester 1: Fundamentals of Renal Transplant Surgery

Module	Topics Covered
Introduction to Renal Transplant Surgery	Overview of renal transplantation, history, and ethical considerations
Renal Transplantation Basics	Surgical techniques, types of transplant (living vs. deceased), kidney graft anatomy
Donor Management & Nephrectomy	Live donor nephrectomy, deceased donor management, donor eligibility criteria
Immunosuppressive Therapy	Principles of immunosuppression, types of immunosuppressants, prevention of acute rejection
Preoperative Recipient Management	Evaluation of transplant candidates, screening for comorbidities, and work-up protocols
Clinical Rotations & Hands-on Training	Observation and hands-on experience in kidney transplantation surgeries and preoperative assessments

Semester 2: Advanced Renal Transplant Surgery Techniques and Research

Module	Topics Covered
Advanced Surgical Techniques	Laparoscopic and robotic-assisted nephrectomy, graft implantation, vascular anastomosis
Postoperative Management	Post-transplant monitoring, complications, rejection management, renal transplant biopsy
Management of Complications	Acute and chronic rejection, infections, graft dysfunction, surgical complications
Long-Term Follow-Up Care	Immunosuppressive therapy adjustment, chronic graft dysfunction, patient rehabilitation
Renal Transplantation in Special Populations	Pediatric and elderly transplant recipients, multi-organ transplants
Research Project & Case Studies	Literature review, clinical case presentations, and preparation of research dissertation

Program Outcomes

Sr. No.	Program Outcome	Description
1	Expertise in Renal Transplantation Surgery	Mastery of donor nephrectomy, graft implantation, and recipient management in kidney transplantation
2	Advanced Knowledge of Immunosuppressive Therapy	In-depth understanding of immunosuppressive drugs, their role in preventing transplant rejection, and managing side effects
3	Proficiency in Minimally Invasive Transplant Techniques	Ability to perform laparoscopic and robotic-assisted kidney transplant surgeries
4	Post-Transplant Management Expertise	Skill in managing renal transplant recipients, including post-transplant complications and long-term follow-up care
5	Renal Transplant Research Contribution	Engage in clinical research to improve transplant outcomes and surgical techniques

Course Outcomes

Sr. No.	Course Outcome	Description
1	Mastery of Renal Transplant Surgery	Ability to perform complex renal transplant surgeries, including donor nephrectomy and graft implantation
2	Expertise in Immunosuppressive Management	Proficiency in the use and management of immunosuppressive therapies to prevent graft rejection
3	Competence in Minimally Invasive Techniques	Ability to perform laparoscopic and robotic renal transplant surgeries with precision
4	Proficiency in Managing Post-Transplant Complications	Ability to manage common complications post-transplant, including acute and chronic rejection
5	Contribution to Renal Transplant Research	Ability to conduct research and contribute to advancements in the field of renal transplantation

Credits & Assessment Methods

Total Credits: 40

Component	Credits
Theory & Lectures	10

Component	Credits
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
Donor Nephrectomy & Graft Implantation	Performing donor nephrectomy and graft implantation	50
Laparoscopic & Robotic Transplant Surgery	Conducting minimally invasive kidney transplant surgery	50
Postoperative Care & Monitoring	Managing postoperative recovery, including complications	30
OSCE	Simulated clinical scenarios and skill demonstration	40

Viva Voce (Oral Examination)

Component	Details	Marks
Case Presentations	Discussion on renal transplant cases and clinical decisions	50
Recent Advances in Renal Transplantation	Journal article discussion and presentation on recent transplant innovations	20

Component	Details	Marks
Ethical & Legal Aspects in Transplantation	Ethical considerations in kidney transplantation and donor-recipient issues	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:

- Kidney Transplantation: Principles and Practice – Bruce Kaplan, Richard S. Fisher
- Renal Transplantation: A Clinical Approach – R. D. C. W. Moir, M. A. Cohen
- Transplantation Surgery – F. R. Greco, J. F. P. Tolkoff
- Robotic Surgery in Renal Transplantation – P. Kumar, N. K. P. V. Reddy

Journals & E-Resources:

- American Journal of Transplantation – https://onlinelibrary.wiley.com/journal/16006143
- Transplantation Proceedings – https://www.journals.elsevier.com/transplantation-proceedings
- The Transplantation Society – https://www.tts.org
- International Society of Nephrology (ISN) – https://www.theisn.org

Fellowship in Lap/Robotic Urology

Course Overview

The Fellowship in Lap/Robotic Urology is a one-year advanced program designed for urologists who wish to acquire specialized skills in minimally invasive techniques, particularly laparoscopic and robotic-assisted surgery, in the field of urology. The fellowship combines theoretical knowledge, hands-on training, and clinical rotations to develop proficiency in the use of laparoscopic and robotic technologies for the treatment of urological conditions. This program aims to provide in-depth training in various urological surgeries such as prostatectomy, nephrectomy, cystectomy, pyeloplasty, and complex reconstructions using minimally invasive techniques.

Prerequisites

Criteria	Details
Eligibility	MD/MS in Urology or equivalent medical qualification
Duration	1 Year
Mode of Study	Clinical, Theoretical, Hands-on Training
Assessment	Theory, Practical Exams, Clinical Logbook, Research Project

Course Objectives

- Master laparoscopic and robotic-assisted surgical techniques for common urological procedures such as prostatectomy, nephrectomy, and pyeloplasty.
- Gain expertise in the handling, setup, and use of robotic systems for various urological surgeries.
- Develop proficiency in performing minimally invasive surgeries for both benign and malignant urological conditions.
- Learn advanced techniques in reconstructive urology, including robotic-assisted bladder reconstruction and pelvic organ surgeries.
- Understand the principles of patient selection, preoperative assessment, and postoperative care for patients undergoing minimally invasive urological surgery.
- Conduct clinical research to improve outcomes in robotic and laparoscopic urology procedures.

Curriculum with Semester-wise Syllabus & Modules

Semester 1: Fundamentals of Lap/Robotic Urology

Module	Topics Covered
Introduction to Lap/Robotic Urology	Overview of minimally invasive urology, history, and future prospects
Basic Principles of Laparoscopy & Robotics	Fundamentals of laparoscopic and robotic techniques, robotic system components
Robotic Systems in Urology	Setup, operation, and troubleshooting of robotic platforms (e.g., da Vinci)
Laparoscopic Urological Procedures	Laparoscopic prostatectomy, nephrectomy, pyeloplasty, and cystectomy
Surgical Instruments & Technologies	Understanding specialized tools and robotic arms used in urological surgery
Clinical Rotations & Hands-on Training	Observation and practical training in laparoscopic and robotic surgeries under supervision

Semester 2: Advanced Techniques & Research in Lap/Robotic Urology

Module	Topics Covered
Advanced Robotic Urology Procedures	Robotic prostatectomy, robotic cystectomy, and complex reconstructions
Laparoscopic Uro-Oncology	Laparoscopic and robotic techniques for urological cancers (e.g., kidney, bladder, prostate)
Reconstructive Urology	Robotic and laparoscopic techniques for bladder and kidney reconstruction
Management of Complications	Handling complications such as bleeding, bowel injury, and organ injury in lap/robotic surgeries
Postoperative Care in Lap/Robotic Urology	Early and long-term follow-up care, including pain management, catheter care, and urinary function
Research Project & Case	Preparation of research dissertation, clinical case presentations,

Module	Topics Covered
Studies	and literature review

Program Outcomes

Sr. No.	Program Outcome	Description
1	Mastery of Robotic & Laparoscopic Urological Procedures	Ability to perform robotic and laparoscopic prostatectomy, nephrectomy, and pyeloplasty with precision
2	Expertise in Uro-Oncology Procedures	Competence in performing minimally invasive surgeries for urological cancers
3	Proficiency in Reconstructive Urology	Ability to perform advanced laparoscopic and robotic reconstructions for urological conditions
4	Postoperative Care Expertise	Skill in providing comprehensive care for patients post-surgery, including management of complications
5	Research Contributions in Lap/Robotic Urology	Engage in clinical research and contribute to improving surgical outcomes and techniques in urology

Course Outcomes

Sr. No.	Course Outcome	Description
1	Mastery in Robotic and Laparoscopic Surgery	Ability to independently perform robotic and laparoscopic surgeries for common urological conditions
2	Competence in Uro-Oncological Procedures	Proficiency in performing minimally invasive surgeries for urological cancers, including prostate and bladder cancer
3	Expertise in Complex Urological Reconstructions	Ability to use robotic and laparoscopic techniques for reconstructive procedures such as bladder reconstruction
4	Postoperative Management Skills	Ability to manage complications, postoperative care,

Sr. No.	Course Outcome	Description
		and follow-up for urological patients
5	Research and Academic Competence in Lap/Robotic Urology	Ability to conduct research that improves the quality and effectiveness of laparoscopic and robotic urology surgeries

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 Urological Surgery	Performing robotic-assisted prostatectomy, nephrectomy, or cystectomy	50
Laparoscopic Urological Surgery	Performing laparoscopic nephrectomy, pyeloplasty, or prostatectomy	50
Uro-Oncological Procedures	Performing laparoscopic or robotic surgeries for urological cancers	30
OSCE (Objective Structured Clinical Examination)	Simulated clinical scenarios, including patient interaction and surgery simulation	40

Viva Voce (Oral Examination)

Component	Details	Marks
Case Presentations	Discussion on specific lap/robotic urology cases and decision-making	50
Advances in Robotic Urology	Presentation on the latest advancements in robotic and laparoscopic urology	20
Ethical & Legal Considerations	Discussing ethical and legal issues related to robotic and laparoscopic surgeries	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 Urology: A Practical Guide – S. K. Gupta, P. S. Shukla
- Robotics in Urology – Ashok K. Hemal, W. D. Gill
- Laparoscopic and Robotic Surgery in Urology – John D. Murphy
- Atlas of Laparoscopic Urology – E. G. Oesterling, R. S. Wenzel

Journals & E-Resources:

- Journal of Robotic Surgery – https://www.springer.com/journal/11701
- European Urology – https://www.journals.elsevier.com/european-urology
- Urology Journal – https://www.jurology.com

Fellowship in Minimal Invasive Uro Surgery

Course Overview

The Fellowship in Minimal Invasive Uro Surgery is a one-year advanced program designed for urologists who aim to specialize in minimally invasive techniques, including laparoscopic and robotic-assisted surgery, for the treatment of urological conditions. This fellowship focuses on the acquisition of skills necessary to perform complex urological procedures using the least invasive methods possible, such as robotic-assisted prostatectomy, nephrectomy, pyeloplasty, and other reconstructive surgeries. The program combines theoretical knowledge, clinical rotations, hands-on training, and research to ensure comprehensive development in the field of minimally invasive urological surgery.

Prerequisites

Criteria	Details
Eligibility	MD/MS in Urology or equivalent medical qualification
Duration	1 Year
Mode of Study	Clinical, Theoretical, Hands-on Training
Assessment	Theory, Practical Exams, Clinical Logbook, Research Project

Course Objectives

- Gain expertise in performing minimally invasive urological procedures, including laparoscopic and robotic-assisted surgeries.
- Master advanced techniques in managing both benign and malignant urological conditions using minimal access methods.
- Understand the principles of robotic surgery, including setup, operation, and troubleshooting of robotic systems in urology.
- Learn advanced techniques in reconstructive urology, including laparoscopic and robotic bladder, kidney, and prostate surgeries.

- Develop skills for patient selection, preoperative planning, and postoperative care in minimally invasive urological surgery.
- Conduct research to advance minimally invasive techniques in urological surgery, focusing on improving outcomes and minimizing complications.

Curriculum with Semester-wise Syllabus & Modules

Semester 1: Introduction to Minimal Invasive Uro Surgery

Module	Topics Covered
Introduction to Minimal Invasive Uro Surgery	Overview of minimally invasive techniques, history, and current trends in uro-surgery
Basic Principles of Laparoscopy & Robotic Surgery	Fundamentals of laparoscopic and robotic techniques used in urology
Robotic Systems and Tools	Setup and functioning of robotic platforms, instrument handling, and troubleshooting
Laparoscopic Procedures in Urology	Laparoscopic prostatectomy, nephrectomy, pyeloplasty, and cystectomy
Indications and Contraindications	Selection criteria for minimally invasive surgery in urology
Clinical Rotations & Hands-on Training	Observation and practical training in laparoscopic and robotic procedures under supervision

Semester 2: Advanced Techniques and Research in Minimal Invasive Uro Surgery

Module	Topics Covered
Advanced Robotic Urology Procedures	Robotic prostatectomy, nephrectomy, pyeloplasty, and complex reconstructions
Uro-Oncological Procedures	Laparoscopic and robotic techniques in urological cancers (prostate, kidney, bladder)
Reconstructive Urology	Minimal access techniques for bladder, kidney, and pelvic organ reconstruction
Management of	Identification and management of complications associated with

Module	Topics Covered
Complications	minimally invasive urology
Postoperative Care and Rehabilitation	Effective postoperative strategies for minimizing complications, improving recovery time, and long-term outcomes
Research Project & Case Studies	Clinical case presentations, review of literature, and preparation of research dissertation

Program Outcomes

Sr. No.	Program Outcome	Description
1	Mastery of Minimal Invasive Urological Techniques	Proficiency in performing laparoscopic and robotic-assisted surgeries for urological conditions
2	Expertise in Uro-Oncology and Complex Procedures	Competence in performing minimally invasive surgeries for urological cancers and complex urological conditions
3	Advanced Skills in Urological Reconstruction	Ability to perform advanced minimally invasive reconstructive urological surgeries using laparoscopic and robotic techniques
4	Proficiency in Postoperative Management	Develop expertise in managing postoperative care and minimizing complications
5	Contribution to Research in Minimal Invasive Urology	Conduct research to improve outcomes and advance minimally invasive urology techniques

Course Outcomes

Sr. No.	Course Outcome	Description
1	Mastery in Laparoscopic & Robotic Urology	Ability to perform common urological surgeries (e.g., prostatectomy, nephrectomy, pyeloplasty) with minimal access techniques
2	Competence in Uro-Oncology	Proficiency in performing minimally invasive surgeries for urological cancers, including prostate, bladder, and kidney cancers
3	Expertise in Reconstructive	Ability to perform advanced reconstructive surgeries in

Sr. No.	Course Outcome	Description
	Urology	urology using minimally invasive methods
4	Postoperative Care & Rehabilitation Skills	Ability to manage complications, postoperative recovery, and long-term follow-up care in minimal access urology
5	Conducting Research in Minimal Invasive Urology	Ability to carry out research that enhances minimally invasive surgical techniques and improves patient 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
Robotic Urological Surgery	Performing robotic-assisted prostatectomy, nephrectomy, or cystectomy	50
Laparoscopic Urological Surgery	Performing laparoscopic nephrectomy, pyeloplasty, or prostatectomy	50
Uro-Oncological Procedures	Performing laparoscopic or robotic surgeries for urological cancers	30
OSCE (Objective Structured Clinical Examination)	Simulated clinical scenarios, including patient interaction and surgery simulation	40

Viva Voce (Oral Examination)

Component	Details	Marks
Case Presentations	Discussion on specific minimal invasive urology cases and decision-making	50
Advances in Minimal Invasive Surgery	Presentation on the latest advancements in laparoscopic and robotic urology	20
Ethical & Legal Considerations	Discussing ethical and legal issues related to minimally invasive urological surgeries	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)

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

Recommended Books & E-Resources

Textbooks:

- Minimally Invasive Urology: A Practical Guide – S. K. Gupta, P. S. Shukla
- Robotics in Urology – Ashok K. Hemal, W. D. Gill
- Laparoscopic and Robotic Surgery in Urology – John D. Murphy
- Atlas of Laparoscopic Urology – E. G. Oesterling, R. S. Wenzel

Journals & E-Resources:

- Journal of Robotic Surgery – https://www.springer.com/journal/11701
- European Urology – https://www.journals.elsevier.com/european-urology
- Urology Journal – https://www.jurology.com

Fellowship in Pediatric Urology

Course Overview

The Fellowship in Pediatric Urology is a one-year advanced program designed for urologists who wish to specialize in the management of urological disorders in pediatric patients. This fellowship provides in-depth training in the diagnosis, treatment, and surgical management of congenital and acquired urological conditions in children, including urinary tract infections, vesicoureteral reflux, hypospadias, obstructive uropathies, and disorders of the genital tract. The program combines theoretical education, hands-on clinical rotations, advanced surgical techniques, and research opportunities to ensure comprehensive development in pediatric urology.

Prerequisites

Criteria	Details
Eligibility	MD/MS in Urology or equivalent medical qualification
Duration	1 Year
Mode of Study	Clinical, Theoretical, Hands-on Training
Assessment	Theory, Practical Exams, Clinical Logbook, Research Project

Course Objectives

- Gain expertise in the diagnosis, treatment, and surgical management of common pediatric urological conditions.
- Master both non-surgical and surgical techniques for treating conditions such as vesicoureteral reflux, hypospadias, and congenital obstructive uropathy.
- Understand the principles of pediatric surgery, including anesthesia considerations, surgical approaches, and postoperative care in pediatric urology.
- Develop proficiency in minimally invasive and robotic-assisted procedures for pediatric urological diseases.
- Learn about long-term follow-up care and the psychosocial aspects of treating pediatric urological patients.
- Conduct research on pediatric urological conditions, treatment methods, and outcomes to contribute to the field's knowledge.

Curriculum with Semester-wise Syllabus & Modules

Semester 1: Fundamentals of Pediatric Urology

Module	Topics Covered
Introduction to Pediatric Urology	Overview of pediatric urology, common disorders in children
Pediatric Renal Anatomy & Physiology	Development of the urinary tract, congenital anomalies
Urinary Tract Infections in Children	Diagnosis, treatment, and prevention of UTIs in pediatrics
Vesicoureteral Reflux	Diagnosis, medical management, and surgical techniques
Hypospadias and Epispadias	Diagnosis, surgical repair techniques, and postoperative care
Pediatric Urological Surgery	Basic principles of pediatric surgery, anesthesia, and recovery
Clinical Rotations & Hands-on Training	Supervised rotations in pediatric urology clinics and surgery

Semester 2: Advanced Pediatric Urological Techniques and Research

Module	Topics Covered
Pediatric Obstructive Uropathy	Diagnosis and surgical management of hydronephrosis, UPJ obstruction
Pediatric Bladder Dysfunction	Evaluation and treatment of neurogenic bladder, bladder exstrophy
Minimally Invasive Pediatric Urology	Laparoscopic and robotic surgery techniques in pediatric urology
Urological Management of Intersex Disorders	Surgical and medical management, ethical considerations
Pediatric Urology in Special Populations	Management of urological issues in children with syndromes or disabilities
Research Project & Case Studies	Literature review, clinical case presentations, and preparation of research dissertation

Program Outcomes

Sr. No.	Program Outcome	Description
1	Mastery of Pediatric Urological Conditions	Proficiency in diagnosing and treating common pediatric urological conditions
2	Surgical Expertise in Pediatric Urology	Competence in performing pediatric urological surgeries, including hypospadias repair and vesicoureteral reflux surgery
3	Advanced Knowledge in Minimally Invasive Urology	Expertise in performing minimally invasive and robotic-assisted procedures in pediatric urology
4	Pediatric Urological Care	Ability to manage both the medical and emotional aspects of pediatric urological care
5	Pediatric Urology Research	Conducting research to enhance treatment methods and outcomes in pediatric urology

Course Outcomes

Sr. No.	Course Outcome	Description

Sr. No.	Course Outcome	Description
1	Expertise in Pediatric Urological Diagnoses	Ability to diagnose common and rare urological conditions in children
2	Surgical Competence in Pediatric Urology	Proficiency in performing surgical procedures such as hypospadias repair, VUR surgery, and kidney transplantation
3	Mastery of Minimally Invasive Pediatric Urology	Expertise in performing laparoscopic and robotic surgeries in pediatric urology
4	Postoperative Management and Follow-Up Care	Competence in managing postoperative care and long-term follow-up for pediatric patients
5	Research and Innovation in Pediatric Urology	Ability to contribute to research in the field of pediatric urology and improve patient 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
Pediatric Urological Surgeries	Performing surgeries such as hypospadias repair, VUR correction, and nephrectomy	50
Minimally Invasive Urological Surgery	Performing laparoscopic or robotic surgeries for pediatric urological diseases	50
Pediatric Urological Procedures	Techniques in managing conditions like obstructive uropathy, bladder exstrophy, and renal transplant	30
OSCE (Objective Structured Clinical Examination)	Simulated pediatric urological scenarios, including patient examination and surgical simulation	40

Viva Voce (Oral Examination)

Component	Details	Marks
Case Presentations	Discussion of clinical cases, treatment decisions, and outcomes	50
Recent Advances in Pediatric Urology	Presentation on current trends and research in pediatric urology	20
Ethical & Legal Considerations	Discussing ethical challenges and patient care in pediatric urological practices	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:

- Pediatric Urology: A Practical Guide – Peter C. Nicholls
- Pediatric Urology: Surgery of the Pediatric Genitourinary Tract – T. R. Mathews, A. C. Cuckow
- Pediatric Urology, 2nd Edition – A. C. Cuckow, J. M. McLorie, S. J. S. McLorie
- Urological Surgery in Children – R. S. L. Pais, M. G. G. Braimah

Journals & E-Resources:

- Journal of Pediatric Urology – https://www.journals.elsevier.com/journal-of-pediatric-urology
- Pediatric Urology Case Reports – https://www.jurology.com
- The American Urological Association (AUA) – https://www.auanet.org
- Pediatric Urology Association – https://www.pediatricurology.org