# POSTGRADUATE INSTITUTE OF MEDICINE
# UNIVERSITY OF COLOMBO

## PROSPECTUS

# POST MD TRAINING AND BOARD CERTIFICATION IN UROLOGICAL SURGERY

***(To be effective from the year 2018)***

## SPECIALTY BOARD IN UROLOGICAL SURGERY
## BOARD OF STUDY IN SURGERY



***BOM Approved – 03.03.2018***
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## CONTENTS

This prospectus is made under the provisions of the Universities Act, the Postgraduate Institute of Medicine Ordinance, and the General By-Laws: No. 1 of 2016 and By-Laws No. 2 of 2016 for Degree of Doctor of Medicine (MD) and Board Certification as a Specialist.

## 1. BACKGROUND / INTRODUCTION

*The Mission, justification and proposed outcome*

The Specialty Board in Urological Surgery conducts a Post MD subspecialty training programme leading to board certification as a specialist in urological surgery. Changes in the higher education sphere in relation to training and assessments coupled with advances in the subspecialty have necessitated revising the training programme. The programme meets the requirements of the relevant qualification descriptors and level descriptors of the Sri Lanka Qualifications Framework, and is set at Level 12 of the Sri Lanka Qualifications Framework.

The mission of this endeavour is ultimately to produce appropriately selected, properly trained, exquisitely competent and holistically caring Specialist in Urological Surgery who would be able to provide the best possible state-of-the-art urological services and expert attention in the care and follow up of those with urological conditions.

## 2. ENTRY CRITERIA

- Successful at the MD Surgery examination conducted by the PGIM, University of Colombo.
- Trainee should not have been Board Certified by the PGIM in any other Specialty or Subspecialty.

## 3. SELECTION PROCESS

The trainees will be selected on the merit ranking based on the results of the MD (Surgery) Examination. The positions available will be offered to the trainees by the BOS in Surgery. The trainees, on the basis of the order of merit, would make the appropriate selection for training in urological surgery.

The selected trainee would be provided with full and comprehensive details of the training programme on subspecialty training in Urological Surgery at the allocation meeting.

## 4. NUMBER TO BE SELECTED FOR ENTRY

The number of trainees will be predetermined by the Board of Study in Surgery in collaboration with the Specialty Board in Urological Surgery and approved by the Board of Study in Surgery and Board of Management in consultation with the Ministry of Health.

## 5. OUTCOMES, COMPETENCIES, LEARNING OBJECTIVES, AND CONTENT AREAS

A Specialist trained in a subspecialty should:

a) have appropriate diagnostic, operative, counselling, risk management, and medico-legal skills
b) have appropriate professional attitudes
c) be able to clearly document and prioritize problems
d) be able to carry out and also supervise research and clinical audits
e) be committed to Continuing Professional Development
f) be able to disseminate knowledge effectively
g) have adequate communication skills
h) have adequate knowledge and skills in Information Technology
i) have administrative and organizational skills

Outcomes, competencies, learning objectives and content areas of the post MD training programme are given in Annexure I. It is assumed that the trainee embarking on specialist training in the subspecialty has already acquired adequate core knowledge and skills in General Surgery. Hence the curriculum given focuses only on advanced training in the subspecialty.

## 6. STRUCTURE OF TRAINING PROGRAMME

**Overview of training**

The structured training in Urological Surgery outlines core knowledge, skills, attitudes, and mind-set acquired during core training. The trainee undergoing subspecialty training should be actively involved in Urological Surgery within an educational environment under supervision.

**Training schedule**: Post MD training programme in Urological Surgery shall be for a period of three years as described below;

- A total of two years as a senior registrar in a recognized urological surgical unit in Sri Lanka is mandatory.

There is a long learning curve for a general surgical trainee to acquire competence in urological surgery. Trainees are not adequately exposed to procedures such as urological open surgery, endoscopy, and laparoscopic surgery during the general surgical training years. Therefore, specific operative urological training essentially commences with the post MD training.

There is no standardisation of the international training appointments with regard to the spectrum of urological surgical exposure required to practice in this country.

- Satisfactory completion of a minimum period of eighteen months, with recommendation of a local trainer, in the recognized urological surgical unit in Sri Lanka is mandatory before the trainee is allowed to proceed for overseas training. The trainee needs to complete the remaining period of training (up to six months) following return from his overseas training. If the unit he was allocated is vacant, then the training needs to be completed at that unit. However, if the allocated unit is already occupied by a trainee, then a suitable training post would be allocated by the Specialty board in Urological Surgery.
- Mandatory one-year training in a Urological Surgery unit at a recognized overseas centre, preferably with a special interest in a selected area.
- Further optional one-year training in a recognized overseas centre. This training period will not be a requirement for board certification.

The twenty-four months mandatory training in the local centre would be allocated as below:
1st training period of 18 months;

- Eighteen months in a recognised urological surgery training centre

2nd training period of 6 months;

- Option 1: Four months in a recognised urological surgery training centre.
- And
- 2 months in a Transplant and Urology centre

Or

Option 2:

- Five months in a recognised urological surgery training centre.
  And
- 1 month in a Renal transplant unit

The above to be approved by the Specialty board in Urological Surgery. (Transplant training to be completed during the second year of training).

Allocate and log in sessions in Urology related aspects in the following fields as MDT / Clinic sessions / specific OT sessions: all sessions need to be certified by consultant in that specialty. Evidence of satisfactory completion of these activities must be entered in the training portfolio.

**Table 1: Urology related aspects MDT / Clinic sessions / specific OT sessions**

| | MDT | Clinic sessions | OT sessions |
|---|---|---|---|
| Gynaecology and Obstetrics Radiology, Oncology, Pathology | 10 | 4 | 4 |
| Total | Minimum 10 | Minimum 4 | Minimum 4 |

The trainee should be encouraged and given the opportunity to attend and lead appropriate multidisciplinary meetings. The trainee should attend appropriate educational meetings and courses.

The trainee should participate in relevant clinical audit, risk management, and clinical governance, and have a good working knowledge of local and national guidelines (Health Sector Development Project) in relation to Urological practice.

Trainees will be expected to be familiar with current urological literature. The trainee should participate in research projects and clinical audits including publications. An understanding of the principles and techniques of research, including the value of clinical trials and basic biostatistics, should be acquired. The research and audit results should be presented at national and if possible international meetings.

The trainee should continue to participate in the senior registrar on-call rota, with appropriate consultant back-up.

## 7. LEARNING ACTIVITIES AND MONITORING PROGRESS

- **Progress reports** – Trainees will be assessed at the end of each component (At least once in six months if the duration of the component is more than six months) of training during the local and overseas training programme, which would include core knowledge, procedural skills and assessment of the log book. (Annexure II). The Specialty board will adapt **Surgical In-service training assessment (SITA) formats** developed by the Board of Study in Surgery in the future (http://pgim.cmb.ac.lk/?page_id=7436).

- **Training Portfolio**

All trainees are required to maintain a portfolio under the following broad outcomes.

1. Subject expertise
2. Research and audit
3. Ethics and medico legal issues
4. Information technology
5. Teaching and sharing knowledge
6. Life-long learning

7. Reflective practice

Details of what should be included in each of the above sections are shown in Annexure III. Details of OPERATIVE SURGERY LOG BOOK which should be a part of the portfolio are given in Annexure IV.

The training portfolio should be reviewed at least every 6 months by the local supervisor(s), with regular feedback to the trainee on how the training may be improved. When the trainee is eligible for PBCA, 3 copies of the completed portfolio should be submitted to the PGIM Examinations Branch.

In addition to the clinical training activities the trainees shall involve themselves in the following;

- Regular meetings with other units / departments
- Participation in Continuing Medical Education activities
- Participation in international meetings in urological surgery
- Conduct of audits (minimum of 2 during the first two years; to be completed at the end of each year of training). Details are given in Annexure V
- Conduct 3 monthly mortality and morbidity meetings for the unit.
- Conducting a research project. This is a mandatory component. A detailed research project proposal shall be submitted (Annexure VI), and approval for the project shall be obtained before carrying it out.
  Instructions to research project supervisors are given in Annexure VII.
  Six monthly progress reports on the research project shall be submitted in the format given in Annexure VIII.
  The final research report shall be submitted according to instructions given in Annexure IX.
  The final research project report shall be evaluated by two evaluators appointed by the Specialty board using the marking scheme given in Annexure X.
  Where a trainee has written up the work from the research project approved by the Board of Study in Surgery, in the form of an original scientific paper which has been published or accepted for publication in a peer-reviewed journal, with the trainee as the first author, then such a trainee shall not be required to submit a research report or face the research report viva. He will be considered to have fulfilled the requirement for satisfactory completion of a research project.
- Publish a minimum of 2 scientific papers in medical journals during the 3 years of post MD urology training
- Engagement in the teaching and training of undergraduate and postgraduate students.

## 8. TRAINERS AND TRAINING UNITS

Specialists with at least 3 years of experience after Board Certification as a Specialist and permanently working as a Consultant Genitourinary Surgeon (urological Surgeon) in a recognised urological centre will be appointed as principal trainers. Training units must be accredited by the PGIM's BOS in Surgery as suitable for training in Urological Surgery. This would require submission of a unit audit as per general PGIM criteria.

## 9. PRE BOARD CERTIFICATION ASSESSMENT (PBCA)

In order to be eligible for Pre-Board Certification Assessment, a trainee should fulfil all of the following requirements

a) Successful completion of the post MD training programme.
b) Satisfactory progress reports.
c) Submitted the duly completed training portfolio.
d) Acceptance of the research report or publication of a research article.
e) Provide evidence of publications of a minimum of 2 scientific papers in medical journals during the 3 years of post MD urology training.

Specialty board in Urological Surgery shall conduct the Pre Board Certification Assessment (PBCA) under the supervision of the board of study in General Surgery.

The PBCA should take the form of a final, summative assessment of the training portfolio, carried out by 2 independent examiners appointed by the relevant Board of Study or Speciality Board and approved by the Senate of the University of Colombo.

The trainee shall be called for an oral examination, during which he will be questioned on the training portfolio. The trainee may be required to start with a presentation of 10 – 15 minutes, on the post-MD training if the Board deems it appropriate. The overall assessment should be based on each of the seven sections of the training portfolio, which should be assessed as satisfactory or not on an overall basis.

In order to pass the PBCA, the trainee must obtain a satisfactory rating for each of the seven sections in the training portfolio (Annexure XI).

If the examiners are of the view that the trainee's performance is unsatisfactory, the examiners must provide the trainee with written feedback on how the portfolio should be improved in order to reach the required standard. The trainee should then re-submit the portfolio within a specified period of time (up to 3 – 6 months), and face another oral examination based on the re-submitted portfolio. If the trainee is successful at this 2nd attempt, the date of Board Certification should be backdated as done routinely. If unsuccessful

again, further training for a minimum period of six months in a unit selected by the Board of Study is required. The date of Board Certification will be based on the date of passing the subsequent PBCA.

After three attempts at the PBCA if the trainee is unsuccessful, the trainee shall undergo further training as stipulated by the subspecialty board of Urological Surgery and BOS in surgery.

The process of board certification should be completed within 8 years of commencement of post MD urology training.

## 10. BOARD CERTIFICATION

A trainee who has successfully completed the Pre-Board Certification Assessment is eligible for Board Certification as a Specialist in urological surgery, on the recommendation of the Speciality Board in urological surgery and the Board of Study in Surgery.

## 11. RECOMMENDED READING MATERIALS

Details of the recommended reading materials are given in Annexure XII.

## ANNEXURE I - CURRICULUM

### Outcomes, competencies, learning objectives and content areas

The aim of establishing a subspecialty training programme in Urological Surgery is to ensure that trainees:

- acquire clinical knowledge relevant to management of urological diseases
- acquire detailed knowledge of current developments in the speciality
- are subjected to direct practical exposure with appropriate guided supervision in all forms of urological surgery and to consolidate and develop their practical skills
- become sufficiently trained to become an integral member of the multidisciplinary teams required in hospitals providing full services to urological patients
- acquire knowledge and skills to enable safe practice of analgesia and sedation
- become fully competent in adult life-support.

### Overview of training

Urology is a major surgical specialty. It is a fast evolving surgical specialty with advances in endoscopic and minimally invasive surgery. It has now developed to such an extent that sub-specialties of urology such endourology, uro-oncology, andrology, reconstructive urology, paediatric urology, female urology are well recognized entities. The aim of the training programme is to offer a structured training with periodic evaluations to produce a urological surgeon who is adequately trained and knowledgeable to provide a high standard of care safely.

### Requirements of subspecialty training

**The relevant syllabus in Urological Surgery would include the following:**

| **1. Topic** | **Basic sciences** | **Comments** |
|---|---|---|
| Objective | To understand and apply physiological principles in the management of patient with urological problems.<br><br>To understand normal physiological processes at different ages and understand the effects of disease and trauma on these processes To understand pathological processes as applied to the organs of the uro-genital system | |
| Knowledge | **Anatomy**<br>Gross and microscopic anatomy of the urinary tract and related organs and structures, including from an endoscopic and laparoscopic perspective. | |

| | | |
|---|---|---|
| | Blood supply and lymphatics of the urinary tract<br>Innervation of the urinary tract including central connections<br>Intra-abdominal operative anatomy<br>Embryological development in relation to disorders affecting the urinary tract<br>Pathways of pain<br>Surface anatomy<br>Imaging anatomy<br><br>**Physiology**<br>Physiology of erection and ejaculation<br>Urological endocrinology<br>Renal physiology<br>Physiology of bladder function<br>Interpretation of semen analysis<br>Mechanisms of spermatogenesis and mechanism of spermatic transport<br>Function of accessory genital organs<br>Effect of disease and drugs on genital function<br>Physiology of pain<br><br>**Pathology**<br>Common congenital disorders affecting the urinary tract (eg undescended testis and urinary tract reflux)<br>Changes related to congenital abnormalities<br>Chronic inflammatory mechanisms and diseases<br>Oncogenes, growth factors and angiogenesis<br>Mechanisms of chemotherapy, immunotherapy and radiotherapy<br>Abnormalities resulting from trauma<br><br>**Pharmacology**<br>Mechanisms of action of commonly used drugs in urology<br>Nephro-pharmacology<br>Cholinergic and Adrenergic mechanisms<br>Non-adrenergic, non-cholinergic (NANC) mechanisms<br>Pharmacology of coagulation<br>Pharmacology of inflammation<br>Pharmacology of neoplastic disease | |

| | | |
|---|---|---|
| Clinical Skills | To understand the indications and theory of urodynamic studies in neuropathic patient<br>Assessment and early management of the subfertile male<br>Investigation and management of chronic inflammatory diseases affecting the urinary tract | Strongly recommended |
| Technical Skills and Procedures | Urodynamic assessment of the neuropathic bladder | Strongly recommended |

| **2. Topic** | **Clinical pharmacology** | **Assessment Technique** | **Areas in which simulations should be used to develop relevant skills** |
|---|---|---|---|
| Objective | Understand and apply pharmacological principles in the management of patients with urological disease. | | |
| Knowledge | Pharmacology of commonly used drugs including side-effects and complications:<br>Systemic chemotherapy for urological malignancy<br>Intravesical chemotherapy/immunotherapy for urological malignancy | | |
| Clinical Skills | Appropriate use of commonly used drugs recognising common side effects, interactions and contra-indications:<br>Systemic chemotherapy for urological malignancy<br>Intravesical chemotherapy/immunotherapy for urological malignancy | | |
| Technical Skills and Procedures | NA | | |

| **3. Topic** | **Stone Disease** |
|---|---|
| Objective | To assess a patient presenting with a urinary stone in kidney, ureter or bladder<br><br>To treat a patient presenting with a urinary stone in kidney, ureter or bladder including onward referral when appropriate<br>Evaluation of recurrent stone former, paediatric stone former, metabolic evaluation, medical management and prevention |
| Knowledge | N/A |
| Clinical Skills | N/A |
| Technical Skills and Procedures | ESWL for renal stone<br>ESWL for ureteric stone<br>Rigid ureteroscopy and therapeutic management lower 1/3 ureteric calculi<br>Rigid ureteroscopy and therapeutic management middle and upper 1/3 ureteric calculi<br>Open and endoscopic removal bladder calculi<br>Flexible ureterorenoscopy<br>PCNL<br>Open removal of renal stones |
| **4. Topic** | **Urinary tract obstruction** |
| Objective | To assess and treat a patient presenting with lower urinary tract symptoms and dysfunction<br>To assess and treat a patient who has urinary tract obstruction including onward referral when appropriate<br>To assess and treat a patient with urinary retention |
| Knowledge | N/A |
| Clinical Skills | N/A |
| Technical Skills and Procedures | TURP / Bladder neck incision/ TURIS prostate<br>Cystoscopy and insertion JJ stent/ Nephrostomy<br>Optical urethrotomy<br>Retropubic (Millins) prostatectomy |
| **5. Topic** | **Urinary Tract Infections** |
| Objective | To understand the pathogenesis, natural history and complications of urinary tract infection. |

| | |
|---|---|
| | To be able to assess and manage patients presenting with common urinary tract infections,<br>To be able to assess and manage patients presenting with genital infections |
| Knowledge | Pathophysiology, clinical features, and management options of genitourinary tuberculosis<br>Pathophysiology and clinical features of Fournier‟s gangrene Interstitial cystitis<br>Pathogenesis, natural history and complications<br>Clinical presentation<br>NIH criteria for diagnosis<br>Management options<br>Retroperitoneal fibrosis<br>Pathogenesis, natural history and complications<br>Clinical presentation and management |
| Clinical Skills | Appropriate management of Fournier‟s gangrene Interstitial cystitis<br>Assessment of patient<br>Correct interpretation of tests<br>Medical management of patient<br>Retroperitoneal fibrosis<br>Assessment of patient<br>Correct interpretation of tests<br>Medical management of patient |
| Technical Skills and Procedures | Cystoscopy and JJ stent insertion<br>Surgical management of Fournier‟s gangrene, retroperitoneal fibrosis, Genitourinary Tuberculosis related complications and retroperitoneal fibrosis |
| **6. Topic** | **Urinary incontinence** |
| Objective | To assess and manage a patient presenting with symptoms of urinary incontinence including onward referral when appropriate<br>To assess and manage patients with neuropathic bladder dysfunction including onward referral when appropriate. |
| Knowledge | Management of stress, urge and mixed urinary incontinence<br>Management of urogynaecological fistula |

| | |
|---|---|
| | Basic anatomy physiology, pathophysiology, pharmacology of neuropathic bladder<br>Causes of neuropathic bladder<br>Types of neuropathic bladder presentation<br>Clinical presentation and differential diagnosis<br>Management of neuropathic incontinence |
| Clinical Skills | **Urinary incontinence**<br>Formulation of a realistic treatment plan<br>**Neuropathic bladder**<br>Appropriate history and examination<br>Appropriate investigation<br>Interpretation of urine flow rate, frequency volume chart and bladder diary and advanced urodynamics<br>Appropriate liaison with multidisciplinary team (eg neurology and continence services)<br>Appropriate referral for sub-specialist management and surgery<br>Formulation of a realistic treatment plan |
| Technical Skills and Procedures | Cystoscopy and injection of urethral bulking agent<br>Surgical insertion of mid-urethral tape<br>Cystoscopy and injection of Botulinum toxin to bladder<br>VVF repair<br>Colposuspension<br>Cystoplasty |
| **7. Topic** | **Urological Oncology** |
| Objective | To assess and manage patient with suspected urological cancer.<br>To manage patients with a proven urological cancer including onward referral where necessary<br>To treat the patient with empathy |
| Knowledge | Epidemiology of urological cancers<br>Role of genetic and environmental and factors<br>Basic understanding of molecular biology<br>Knowledge of Oncogenes, growth factors and angiogenesis in relation to tumours |

| | |
|---|---|
| | **Clinical presentation**<br>Symptom complexes arising from urological malignancies kidney, ureter, bladder, prostate, testis, penis and adrenal<br>Current standards for the investigation of common urological cancers<br>TNM classification of common urological tumours<br><br>**Therapy**<br>Current standards of treatment for common urological Cancers<br>Principles of neo-adjuvant versus adjuvant therapy<br>Principles and application of radiotherapy |
| Clinical Skills | High level empathetic and communication skills<br>Rapid and appropriate assessment of patient with possible malignancy<br>Appropriate investigation<br>Role of PSA and other markers, urine cytology etc.<br>Correct interpretation of tests<br>Appropriate liaison with multidisciplinary team<br>High level/empathetic communication skills<br>Appropriate management of urological malignancies<br>Appropriate referral for sub-specialist management and surgery<br>Palliative care of urological malignancies |
| Technical Skills and Procedures | TURBT<br>TURP<br>Ureteroscopy<br>ileal conduit<br>radical Nephrectomy (open/ Lap)<br>partial nephrectomy<br>Nephroureterectomy<br>Radical Prostatectomy<br>Radical Cystectomy<br>Partial and radical penectomy & IBD<br>Radical orchidectomy<br>Adrenalectomy |
| **8. Topic** | **Andrology** |
| Objective | To assess and manage a man with male factor infertility including onward referral as necessary<br>To assess and manage a man with erectile dysfunction including onward referral as necessary |

| | |
|---|---|
| | To assess and manage a man with varicocele, ejaculatory disorders, penile deformity, penile fracture or prolonged erection including onward referral as necessary<br>To assess and counsel a man requesting a vasectomy |
| Knowledge | Embryology and physiology of male reproductive system<br>Causes, assessment and management of male factor infertility<br>Modern methods of assisted fertilization<br>Ejaculatory disorders – anatomy, physiology and management |
| Clinical Skills | **Male infertility**<br>Basic management of the subfertile male<br>Appropriate investigation/treatment plan<br>Appropriate liaison with multidisciplinary team and referral for sub-specialist management and / or surgery<br>Appropriate investigation and treatment plan and onward referral where appropriate for Ejaculatory disorders |
| Technical Skills and Procedures | Nesbit‟s procedure<br>Operative management of priapism (proximal and distal shunt procedures)<br>Operative management of penile fracture<br>Operative management of varicocele<br>Operative management of ED and urinary incontinence – implantation of prostheses |
| **9. Topic** | **Paediatric Urology** |
| Objective | To assess and manage a child with a congenital disorder of the urogenital tract including onward referral as necessary<br>To assess and manage a child with an enuresis, congenital neuropathic bladder or with intersex, including onward referral as necessary<br>To assess and manage a child with an inguinoscrotal abnormality including onward referral as necessary<br>To assess and manage a child with urinary infection, including onward referral as necessary |
| Knowledge | Basic embryology, anatomy of abnormality and natural history of Spina bifida, intersex and posterior urethral valves |

| | |
|---|---|
| Clinical Skills | **Spina bifida, intersex and posterior urethral valves**<br>Appreciation of prognostic possibilities<br>Formulation of realistic treatment plan<br>Appropriate referral for sub-specialist management and / or surgery |
| Technical Skills and Procedures | Circumcision<br>Hydrocele<br>Orchidopexy<br>Correction of congenital urogenital anomalies<br>Surgical exploration for torsion of testis, with fixation<br>Paediatric endourology |
| **10. Topic** | **Renal Function and Nephrology** |
| Objective | To have a good working knowledge of the assessment of renal function and the urological conditions that predispose to the development of renal failure.<br>To understand the pathogenesis, natural history and complications of urological conditions that can lead to renal dysfunction and how urological intervention may prevent or delay the onset of renal failure<br>To understand the different methods of renal replacement including renal transplantation |
| Knowledge | Recipient selection and indications for transplantation<br>Tissue typing and cross matching<br>Relative indications for haemodialysis or transplantation<br>Immunosuppression<br>Complications of renal transplantation |
| Clinical Skills | Evaluation of potential recipients and timing of dialysis<br>Urinary tract workup of potential recipients prior to transplantation<br>Appropriate liaison with other specialties |
| Technical Skills and Procedures | Basic skills in renal transplant surgery |
| **11. Topic** | **Emergency Urology** |
| Objective | To assess and manage patients who present acutely with urological problems, including onward referral when necessary |
| Knowledge | Endoscopic management of ureteric calculi<br>Pathophysiology and clinical features of Fournier‟s Gangrene |

| | |
|---|---|
| Clinical Skills | Appropriate management of Fournier‟s gangrene<br>Massive haematuria<br>Complicated obstructive uropathy<br>Acute scrotum<br>Acute penile condition priapism, paraphymosis<br>Acute retention of urine<br>Urosepsis |
| Technical Skills and Procedures | Rigid ureteroscopy and therapeutic management lower 1/3 ureteric calculi<br>Rigid ureteroscopy and therapeutic management middle and upper 1/3 ureteric calculi<br>Surgical management of Fournier‟s gangrene<br>Operative management of priapism, paraphymosis, acute retention of urine<br>Operative management of penile fracture<br>Management of urosepsis |
| **12. Topic** | **Trauma to the Urinary Tract** |
| Objective | To assess and manage patients who present with genitourinary trauma, including onward referral when necessary |
| Knowledge | Differences In children<br>Causes, pathophysiology, classification and management of renal trauma, ureteric trauma, bladder trauma, urethral trauma and genital trauma |
| Clinical Skills | Appropriate liaison with other relevant specialists in multiple trauma cases<br>Assessment and management of renal, ureteric, bladder, urethral and genital trauma including onward referral where appropriate |
| Technical Skills and Procedures | Cystoscopy and insertion of JJ Stent<br>Surgical management of renal trauma<br>testicular, bladder, ureteric, penile and urethral injury repair |
| **13. Topic** | **Urological Radiology** |
| Objective | To understand the different radiological techniques used in the investigation of urological disease, including practical techniques, indications and safety issues |

| | |
|---|---|
| | To gain hands on experience in diagnostic and interventional radiology<br>To develop technical skills in standard radiological techniques relevant to urology |
| Knowledge | Appreciation of aberrant anatomy<br>CT scan, MRI, DTPA, bone scan, MAG 3, MCUG (nuclear medicine imaging), Urethrogram: Basic theory, practical techniques (including PET scanning: Basic theory, practical techniques (including issues and contraindications)<br>PET scanning: Basic theory, practical techniques (including PET scanning: Basic theory, practical techniques (including issues and contraindications) |
| Clinical Skills | PET scanning: Therapeutic application, interpretation and limitations<br>CT scan, MRI, DTPA, bone scan, MAG 3(nuclear medicine imaging), MCUG, urethrogram application and interpretation and limitation |
| Technical Skills and Procedures | Renal ultrasound<br>Abdominal ultrasound<br>Testicular ultrasound<br>TRUS / TRUS guided prostate biopsy<br>Nephrostomy |
| **14. Topic** | **Reconstructive urology** |
| Objective | To be able to manage patients with congenital or acquired deformities of the kidney, ureter, bladder, penis, urethra and scrotum. |
| Knowledge | Pathophysiology, clinical features, and management options in congenital or acquired deformities of the kidney, ureter, bladder, penis, urethra and scrotum. |
| Clinical Skills | Evaluation of patients with urethral stricture disease, congenital and acquired deformities of the kidney, ureter, bladder, penis, urethra and scrotum.<br>Evaluation and management of iatrogenic injuries and trauma to urinary tract. |
| Technical Skills and Procedures | Urethroplasty<br>Ureteric reimplantation<br>Pyeloplasty<br>Cystoplasty |

| | |
|---|---|
| | Neo-bladder and ileal conduit<br>Boari flap<br>Hypospadias correction<br>Mitrofanoff diversion |
| **15. Topic** | **Laparoscopy and Robotics in urology** |
| Objective | Basic and advanced knowledge regarding laparoscopy in urology.<br>Basics of robotics in urology |
| Knowledge and technical skills | Laparoscopic surgery for upper urinary tract, bladder and prostate and fertility. |

- The trainee should be aware of guidelines on consent, and be capable of obtaining informed consent for practical procedures.
- The details of the curriculum and syllabus can be subject to change with approval of the specialty board in urological surgery and BOS in surgery with adequate notice to the candidate according to the PGIM guidelines.
- It is the responsibility of the trainee to obtain training in all modalities and aspects making use of all the available training centres.

**ANNEXURE II – FORMATS FOR PROGRESS REPORTS (LOCAL AND OVERSEAS TRAINING)**

Name of trainee :

Name of trainer :

Training centre :

Period of report :

Please use the following key to rate your trainee's performance during the period in question, with regard to each of the areas listed below

| | |
|---|---|
| Excellent | A |
| Good | B |
| Satisfactory | C |
| Deficient | D |
| Poor | E |

| PRACTICAL SKILLS | RATING | SPECIFIC COMMENTS |
|---|---|---|
| **A. Clinical judgment** | | |
| 1 Decision making | | |
| 2. Selection of appropriate Management | | |
| **B. Surgical skills** | | |
| 2. Surgical skills | | |
| **C. Record keeping** | | |

***PROJECTS OR OTHER ACTIVITIES CARRIED OUT DURING THE PERIOD OF TRAINING:***

| INTERPERSONAL SKILLS | | RATING | SPECIFIC COMMENTS |
|---|---|---|---|
| 1. | Communication & working with others in the unit and OT | | |
| 2. | Communication & working with persons of other | | |
| | Disciplines | | |
| 3. | Supervising & helping juniors and willingness to | | |
| | serve when required | | |
| 4. | Following instructions of senior colleagues | | |
| 5. | Power of expression (oral and written) | | |
| 6. | Standard of punctuality, ethics, professional | | |
| | attitudes and reliability | | |
| 7. | Teaching medical students and juniors | | |

| ACADEMIC SKILLS | RATING | SPECIFIC COMMENTS |
|---|---|---|
| 1. Theoretical background and knowledge<br>2. Reads widely in medical literature<br>3. Participates actively in academic discussions<br>4. Thinks independently and rationally | | |

**GENERAL COMMENTS**

**Particular strengths**

**Particular weaknesses**

| | | |
|---|---|---|
| **Signature of trainer** | **Name** | **Date** |

## ANNEXURE III - TRAINING PORTFOLIO

TRAINING PORTFOLIO FOR SUBSPECIALITY TRAINING IN UROLOGICAL SURGERY

1. Name of Specialist Registrar in Urological Surgery: .....
2. Date of Commencement of Training in the Subspecialty: .....
3. Date of Completion of Training in the Subspecialty: .....
4. Local Training:
   Training Centre/s: .....
   Supervisor/s: .....
   Appraisals: Were all the appraisals completed. Yes/No
   If No, details
5. Overseas training:
   Training Centre/s: .....
   Supervisor/s: .....
   Appraisals: Were all the appraisals completed. Yes/No
   If No, details
6. Were all the progress reports received from the local and overseas trainers? Yes/ No
   If No, details
7. Date of Pre – Board Certification Assessment
   No. of attempts:
8. Date of Board Certification as a Specialist in Genitourinary Surgery

**Instructions to trainees**

The portfolio should be maintained under the following broad outcomes.

1. Subject expertise
2. Research and audit
3. Ethics and medico legal issues
4. Information technology
5. Teaching and sharing knowledge
6. Life-long learning (Continuing professional development)
7. Reflective practice

A guideline as to what sections should be considered under these broad outcomes are given below. However, the trainees have the freedom to add any other relevant events which they came across during their training under the above broad outcomes, mentioning the outcome and reflective thinking.

**PART 1 – Subject expertise**

**LOG OF:**

- OPERATIVE PROCEDURES PERFORMED (all as per Annexure V)
- Elaborate on 5 cases mentioned in operative procedures log book (2 A4 pages each)
- EDUCATIONAL COURSES/SCIENTIFIC SESSIONS ATTENDED
- ATTACHMENTS/ROTATIONS COMPLETED
- FINAL APPRAISAL

**PART 2 - Research and Audits**

Please use the format given below for documentation

**Audit/Research, Presentations/Publications**

---

**AUDIT**
Project Title
Start Date
Completion Date
Findings
Implementation of Findings (Y/N)
Re-audit (Y/N) Consultant Supervisor

---

**RESEARCH, 'PRESENTATIONS' and/or 'PUBLICATIONS'**
For presentations and publications indicate whether presented, in press or published.
Put details separately in 'PRESENTATIONS' and/or 'PUBLICATIONS' on following sheets. Title of project
Names of Authors (underline own name) Date study completed
Presented (Y/N)
In press (Y/N)
Published (Y/N)

---

**PRESENTATIONS**
Authors
Title
Meeting
Abstract was peer reviewed (Y/N)
Abstracts published (provide citation)

---

**PUBLICATIONS**

**NB. Published *abstracts* should be placed in PRESENTATIONS section**

Authors
Title
Journal
Year
Vol
Page nos.
In press (Y/N)

---

**PART 3 – Ethical issues**

Reflecting thinking of trainee's clinical experience with obtaining informed consent; palliative care; consent for publishing clinical material etc.

**PART 4 – Information technology**

- Participation in training programmes / workshops
- Evidence of searching for information and application of findings in practice

**PART 5 - Teaching and sharing knowledge**

**TEACHING BY TRAINEE**

One Training Session per month

**PART 6 – Lifelong learning (Continuing professional development)**

- Participation in conferences and meetings

**PART 7 - Reflective practice**

Narration of at least one learning event experienced by the trainee, in relation to each of the above outcomes, with reflection on what and how the trainee learned from this experience

## ANNEXURE IV- OPERATIVE SURGERY LOG BOOK (should be included in the training portfolio)

| **1. Procedural skills** | **Performed** | **Assisted** | **Observed** |
|---|---|---|---|
| 1.1. Endourology | | | |
| 1.1.1. Lower tract: | | | |
| 1.1.1.1. Cystoscopy- flexible / rigid | | | |
| 1.1.1.2. Urethrotomy | | | |
| 1.1.1.3. Cystolithopexy | | | |
| 1.1.1.4. TURP | | | |
| 1.1.1.5. TURBT | | | |
| 1.1.2. Upper tract: | | | |
| 1.1.2.1. Ureteroscopy | | | |
| 1.1.2.2. Flexible renoscopy | | | |
| 1.1.2.3. Intracorporeal lithotripsy | | | |
| 1.1.2.4. PCNL | | | |
| | | | |
| 1.2. Open surgery | | | |
| 1.2.1. Genitals: | | | |
| 1.2.1.1. Circumcision | | | |
| 1.2.1.2. Hydrocelectomy | | | |
| 1.2.1.3. Orchidopexy | | | |
| 1.2.1.4. Urethroplasty | | | |
| 1.2.1.5. Hypospadias repair | | | |
| 1.2.1.6. Epididymal surgery | | | |
| 1.2.1.7. Vasectomy and vasectomy reversal | | | |
| 1.2.1.8. Varicocelectomy | | | |
| 1.2.1.9. Radical orchidectomy | | | |
| 1.2.1.10. Subcapsular orchidectomy | | | |
| 1.2.1.11. Testicular biopsy | | | |
| 1.2.1.12. Glansectomy and penile amputation | | | |
| 1.2.1.13. Surgery for Peronei's disease | | | |
| 1.2.1.14. Repair of penile rupture | | | |
| 1.2.1.15. Priapism surgery – shunts | | | |
| 1.2.1.16. Penile prosthetic surgery | | | |
| 1.2.2. Lower tract | | | |
| 1.2.2.1. Tapes, slings and artificial sphincters | | | |
| 1.2.2.2. Cystostomy | | | |
| 1.2.2.3. Vesicolithotomy | | | |
| 1.2.2.4. Cystoplasty | | | |
| 1.2.2.5. Partial cystectomy | | | |

| | | | |
|---|---|---|---|
| 1.2.2.6. Diverticulectomy | | | |
| 1.2.2.7. Repair of fistulae | | | |
| 1.2.2.8. Radical cystectomy with ileal conduit | | | |
| 1.2.2.9. Radical cystectomy with neo-bladder | | | |
| 1.2.2.10. Urogynaecological fistula repair | | | |
| 1.2.2.11. Millins prostatectomy | | | |
| 1.2.2.12. Radical prostatectomy | | | |
| 1.2.3. Upper tract: | | | |
| 1.2.3.1. Simple nephrectomy | | | |
| 1.2.3.2. Pyelolithotomy | | | |
| 1.2.3.3. Nephrolithotomy | | | |
| 1.2.3.4. Radical nephrectomy | | | |
| 1.2.3.5. Partial nephrectomy | | | |
| 1.2.3.6. Pyeloplasty | | | |
| 1.2.3.7. Ureterolithotomy | | | |
| 1.2.3.8. Surgery for ureteric strictures – including ureteric substitution | | | |
| 1.2.3.9. Ureteric reimplantation | | | |
| 1.2.3.10. Ureterolysis | | | |
| 1.2.3.11. Adrenal surgery | | | |
| 1.2.4. Prosthetic surgery | | | |
| | | | |
| 1.3. Laparoscopy | | | |
| 1.3.1. Diagnostic | | | |
| 1.3.2. Nephrectomy – radical and simple, partial. | | | |
| 1.3.3. Pyeloplasty | | | |
| 1.3.4. Varicocele ligation | | | |
| 1.3.5. Pyelolithotomy / ureterolithotomy | | | |
| 1.3.6. Urogynaecological fistula repair | | | |
| 1.3.7. Radical prostatectomy | | | |
| | | | |
| 1.4. Urodynamics | | | |
| 1.5. ESWL | | | |
| 1.6. TRUS prostate biopsy | | | |
| 1.7. Ultrasonography | | | |
| 1.8. Other procedures | | | |

Log book should include the following:

- MDT/Clinic/OT sessions in allied fields – certified by signatures of the allied consultants (Radiology / pathology / oncology) and a single page summary

- Unit audits – minimum 2 – certified by signature of the training consultant and a single page summary
- Morbidity and mortality – 3 monthly - certified by signature of the training consultant and a single page summary

Recommendations by the portfolio viva assessors

- Satisfactory -
- Unsatisfactory -
- Further course of action -

*(If it is unsatisfactory the trainee should resubmit the portfolio within two months attending to the recommended amendments and improvements for reassessment by the same pair of examiners. If at the reassessment it is still unsatisfactory another period of six months will be given prior to reassessment.)*

Name of assessors –

Signature –

Date –

## ANNEXURE V - GUIDELINES ON CLINICAL AUDIT REPORTS

The Clinical audit is an activity that has been defined as "a quality improvement process that seeks to improve patient care and outcomes through systematic review of care against explicit criteria. Where indicated, changes are implemented, and further monitoring is used to confirm improvement in health care delivery" [in Principles of Best Practice in Clinical Audit (2002, NICE/CHI)]. The process facilitates learning and helps to evaluate the benefits and pitfalls of selected management options.

The main stages of the clinical audit process are:

1) Selecting a topic.
2) Agreeing standards of best practice (audit criteria).
3) Collecting data.
4) Analysing data against standards.
5) Feeding back results.
6) Discussing possible changes.
7) Implementing agreed changes.
8) Allowing time for changes to embed before re-auditing.
9) Collecting a second set of data.
10) Analysing the re-audit data.
11) Feeding back the re-audit results.
12) Discussing whether practice has improved.

**The number of audits: Two** (2)

**The length of the report:**
An audit report shall be of a maximum of 1000 words.

**Timelines:**
One audit report must be submitted at the end of the local training and the other report at the end of the overseas training. Trainees are expected to formally present the audit findings at the hospital meetings where the work is done and obtain documentary evidence of such presentation. Trainees are encouraged to submit the Clinical Audit Reports as and when they complete the audit cycles during the training programme.

**Assessment:**
Two examiners appointed by the BOS shall assess the audit reports. They should independently assess and subsequently arrive at a consensus as to whether the reports are accepted or not. Both audit reports shall be based on completed audit cycles. In the event the reports are not accepted written feedback should be given to the trainee on how to improve the reports. Based on this feedback the trainee shall resubmit the reports within six weeks.

**Implication of assessment:**

Acceptance of the two audit reports is a prerequisite to be eligible to appear for the Pre Board Certification Assessment (PBCA).

## ANNEXURE VI - FORMAT OF DETAILED RESEARCH PROJECT PROPOSAL

**Section 1**

1. Name of trainee
2. Name(s) of supervisor(s)
3. Training centre

**Section 2**

1. Project title
2. Background and justification
3. Objectives of study
4. Research plan
    a. Design
    b. Setting
    c. Method
    d. Sample size and sampling techniques
    e. Outcome measures
    f. Statistical analyses and plan of presentation of results
    g. Ethical considerations
    h. Work plan and time lines
5. References
6. Funding for study
7. Signature of trainee

**Section 3**

Recommendation of supervisor(s)

Signature of Supervisor 1 Signature of Supervisor 2

Date Date

**Section 4**

Date of submission to PGIM

Date of approval by BOS Signature of Secretary BOS

## ANNEXURE VII - INSTRUCTIONS TO SUPERVISORS OF RESEARCH PROJECTS

- The research project report is based on a 1-3 year research project.
- Acceptance of the research project report is a requirement to sit the PBCA
- The trainee should write up the project work as a research project report conforming to the format approved by the Board of Study.
- The supervisor should guide the student in planning and designing, carrying out the research and in presentation of the work.
- The supervisor should obtain recommendation of the research proposal from a reviewer.
- The supervisor should forward Progress Report(s) in the prescribed form at the end of 3 months after the trainee commences work on the research project and 3 months after completing the project work.
- The objective of the research project report is to prove the trainee's capability to plan, carry out and present his own research. The purpose of this training is to ensure maturity, discipline and scholarship in research.
- The research project report should comprise the trainee's own account of his research.
- It must contribute to existing knowledge relevant to Sri Lanka and afford evidence of originality as shown by independent, critical assessment and / or discovery of new facts in the area under study.
- It should be satisfactory as regards literary presentation.
- The research project report should be certified by the supervisor as suitable for submission.
- General Comments on the contents: The objectives should be clearly stated and should be feasible to achieve within the time frame. Other published work relevant to the problem (both international and local) should be comprehensively covered and critically evaluated. An appropriate study design and method should be used to achieve the objectives stated. The results should be appropriately analysed, interpreted and presented effectively. The discussion should include comments on the significance of results, how they agree or differ from published work. If they differ, the probable reasons for these differences need to be discussed. Theoretical / practical applications of the results, if any should be given. The

conclusions should be valid and be based on the results obtained on the study.

- Ethics: The candidate should confirm and document that procedures followed were approved by the Ethical Committee of the institution where the work was carried out and ethical approval was obtained by a recognized Ethical Review Committee.

- The trainee is required to make a short (10 min.) presentation of the project proposal in their year 1 training to obtain a feedback from other trainers and invitees, regarding feasibility, appropriateness of study design and method and statistical considerations, prior to commencement of the project.

- Prior to submission of the research project report, the trainee will be required to make a short (15 – 20 minutes) presentation of the project once completed, to the subspecialty BOS members and other invitees This will give the trainee an opportunity to discuss his work and obtain a feedback from peers and colleagues. It will not be used for evaluation in any form. The supervisors will also be invited for these presentations.

- If at any time the supervisor is not satisfied with the work progress of the trainee, the trainee should be made aware of the deficiencies and corrective measures suggested. This should be conveyed in writing to the trainee with a copy to the subspecialty BOS. In such instances, a follow-up report should be forwarded within three months or earlier if necessary to the BOS.

- The trainee will be questioned on the clinical audits and the research project report prior to the portfolio viva which will be the final Pre Board Certification Assessment (PBCA). He will be required to make a 10-minute presentation of the work at the PBCA.

**ANNEXURE VIII – RESEARCH PROJECT PROGRESS REPORT**

To be forwarded by the supervisor to the BOS at least once in SIX months

1. Name of trainee :

2. Training Centre :

3. Supervisor :

4. Title of project :

5. Description of work carried out to date:

To be filled in by trainee: briefly describe progress in lab / field work and research project report writing

**Supervisor's comments**

6. Is the work on schedule? Yes / No

7. Progress in research project report writing: satisfactory / unsatisfactory

8. Constraints (if any)

9. Recommendation of Supervisor:

Signature: Date:

10. Recommendation of the BOS:

Signature of Secretary: Date:

## ANNEXURE IX – RESEARCH REPORT SUBMISSION FORMAT

### General instructions

It is essential to start writing the research project report early and in all cases before the data collection is completed. At the same time, you should make arrangements to have your manuscript word-processed. Your supervisor should be consulted before you start to write and thereafter at regular intervals. It is much easier to make corrections if the draft is double-spaced and printed on only one side of the paper.

The past tense should be used. To avoid exceeding the given word limit, it is suggested that an approximate running total is kept. The metric system and the International System (SI) of units should be used whenever possible.

### Length

An ideal length of text is approximately 5000 words, which equals to about 10-15 pages. With figures, references, etc., the total length is likely to be in the region of 20 pages.

### Number of copies

Three spiral-bound copies should be submitted to the Director/ PGIM.

### Layout

The research project report should be word-processed and printed single-side only, on A4-size photocopying paper.

<u>Layout of typescript</u>

There should be 1.5” on left-hand and top margins, and 1.0” on right -hand and bottom margins. It is especially important that the left-hand (binding) margin is of the regulatory size.

Line spacing should not be less than 1.5.
Lettering should be in Times New Roman, font size 12.

All pages should be numbered consecutively throughout, including appendices. Page numbers should be inserted in the bottom right hand corner.

<u>Tables, diagrams, maps and figures</u>

Wherever possible, these should be placed near the appropriate text. Tables should be numbered in continuous sequence throughout the research project report. Maps, graphs, photographs, etc., should be referred to as Figures. Each of these should also be numbered in a continuous sequence. Colour should be avoided in graphic illustrations (unless it is essential) because of the difficulty of photographic reproduction; symbols or other alternatives should be used instead.

Notes

Notes, if essential, should be inserted, in reduced font, at the foot of the relevant page. If too voluminous for this to be practicable, they should be placed in an Appendix. Notes may be typed in single spacing.

Abbreviations

Where abbreviations are used, a key should be provided.

**Preliminaries**

The preliminaries precede the text. They should comprise the following:

1. Title page

Title of research project report Author's name

Board Certification in Genitourinary Surgery
Postgraduate Institute of Medicine
University of Colombo

Date of submission

2. Statement of originality: The work presented in the research project report should be the trainee's own and no part of the research project report should have been submitted earlier or concurrently for any other degree. The statement should be signed by the author, and countersigned by the supervisor.

3. Abstract: Should be structured (introduction, objectives, method, results, conclusions) should not include figures, tables, graphs or references

Should be limited to 500 words or less

4. Table of contents: The table of contents immediately follows the abstract and lists in sequence, with page numbers, all relevant divisions of the research project report, including the preliminary pages.

5. List of tables: This lists the tables in the order in which they occur in the text, with the page numbers.

6. List of figures: This lists all illustrative material (maps, figures, graphs, photographs etc) in the order in which they occur in the text, with the page numbers.
7. Acknowledgments

**Text**

The research project report should be divided into clearly defined chapters. Chapters may be subdivided, and a decimal number system can be helpful to identify sections and subsections. Topics of the sections should not be mixed, e.g. Results should not appear in the Materials and Methods.

Section 1 – Introduction: The current position and the reasons for carrying out the present work (Rationale /Justification and problem/s identified and quantified.) Hypothesis and expected outcome, impact and relevance of the study should be stated. Generally, only a few references should be cited here.

Section 2 – Literature Review: This section should be reasonably comprehensive, and most of the references to be quoted normally occur here. The relevant references dealing with the general problems should be reviewed first and this should be followed by a detailed review of the specific problem. The review is in many cases approached as a historical record of the development of knowledge of the subject.

Section 3 – Objectives Clearly defined, general, specific and any subsidiary objectives should be stated

Section 4 – Materials and Methods: Appropriate study design to address the objectives with clear detailed description of subjects, sampling technique and sample size, interventions, data collection and management. The study should be, internally valid and reproducible. Where specific details are available in the literature, reference should be made to the original papers, and comments kept to a minimum. If modifications have been made to the published techniques, these should be described in full. Appropriate statistical tests planned should be mentioned and ethical issues addressed

Section 5 – Results: Presentation of data in a logical sequence commencing with the basic/ baseline characteristics of the subjects. Summarize the data with a figure, table or graph when appropriate. Present appropriate statistical analyses and interpretations. Each figure, table or graph should be complete and clear without reference to the text. Concise explanations in legends and explanation of abbreviations are needed. The text should complement the figure, table or graph not simply describe them but should give valid interpretations of the results. Complete (raw) data should not be included but should be contained in tables in an Appendix if needed. Only data from the present study should be included and in particular no comparison should be made at this stage with results from other studies.

Section 6 – Discussion: Interpret and explain the results so as to provide answers to the study question(s). Comment on the relevance of these answers to the present knowledge of the subject. Consider alternate interpretations. Comment on interesting or unexpected

observations and about the method. Critically compare the results with results and conclusions of other published studies within and outside the country, and explain possible reasons for any differences observed. Comment an unexpected outcomes comment on further follow-up research required on the subject.

Section 7 – Limitations: Any inherent and / or inadvertent limitations / biases and how they were dealt with should be described

Section 8 - Conclusions and recommendations**:** Based of the results of the study and to address the objectives

## ANNEXURE X – FORMAT FOR ASSESSMENT OF RESEARCH REPORT

The two examiners appointed by the BOS shall use the following marking grid to allocate marks for the research report.

| | |
|---|---|
| Title | (05 marks) |
| Abstract | (10 marks) |
| Introduction | (20 marks) |
| Objectives | (15 marks) |
| Review of literature | (20 marks) |
| Materials and methods | (50 marks) |
| Results | (40 marks) |
| Discussion (including limitations) | (45 marks) |
| Conclusion and recommendations (if any) | (10 marks) |
| References (Vancouver system should be used) | (15 marks) |
| The overall presentation | (20 marks) |
| **Total** | **(250 marks)** |

Two examiners will be appointed by the Board of Study in Surgery to assess and award a mark independently out of 250 using the marking system described above. The final mark for the research project report out of 500 shall be the total of the marks given by each examiner.

The candidate should obtain a minimum of 50% of the total 500 marks in order to be eligible for the Pre Board Certification Assessment (PBCA).

<u>REPORT OF THE RESEARCH REPORT REVIEWER</u>

1. Name of Trainee
2. Training Centre
3. Supervisor
4. Reviewer
5. Name
6. Designation
7. Address Official
8. Tel//Fax
9. Email
10. Title of Project

1. Please comment on each of the following headings.

Introduction: Rationale (Justification) – problem identified and quantified. Hypothesis and expected outcome, impact and relevance of the study.
Comment: …….

Literature Review: Adequacy (evidence of a systematic search for related. similar, relevant studies)
Comment: …….

Objectives: Clearly defined. Relevant and stated in measurable terms
Comment: …….

Method: Appropriate study design to address the objectives with clear detailed description of subjects, sampling technique and sample size, interventions, data collection and management. The study should be, internally valid and reproducible. Where specific details are available in the literature, reference should be made to the original papers, and comments kept to a minimum. If modifications have been made to the published techniques, these should be described in full. Appropriate statistical tests planned should be mentioned and ethical issues addressed
Comment: …….

Results: Order of presentation and appropriate presentation of tables, figures, graphs. Appropriate statistical analyses and interpretations
Comment: …….

Discussion: The findings of the study should be discussed taking into consideration findings of relevant studies, within and outside the country. The discussion should not be a repetition of the results only. Limitations should be included.
Comment: …….

Conclusion and recommendation: Based of the results of the study and to address the objectives
Comment: …….

Limitations: Any inherent and / or inadvertent biases and how they were dealt with. Comment: …….

References: According to the Vancouver system and relevant to the study. Properly documented in the Bibliography and appropriately cited in the text
Comment: …….

Institution(s) where work would be carried out:
Ethical considerations/institution from where ethical approval will be /has been obtained:
Comment: …….

Overall presentation: Overall presentation of the proposal (grammar, spelling, typographical mistakes etc.)
Comment: …….

Recommendation of reviewer:
Comment: …….

- Is the research project report acceptable? Yes / No
- If No, what corrections are required? (Attach a separate sheet of paper if necessary)

Signature: Date:

Recommendation of the BOS:

Signature of Chairperson/Secretary: Date:

If it is less than 50% the trainee should resubmit the Research project report within two months attending to the recommended amendments and improvements for reassessment by the same pair of examiners. At the reassessment the maximum mark to be awarded shall be 50%. If still unsuccessful another period of six months will be given prior to reassessment.

***Where a trainee has written up the work from the research project approved by the Board of Study in Surgery, in the form of an original scientific paper which has been published or accepted for publication in a peer-reviewed journal, with the trainee as the first author, then such a trainee shall not be required to submit a research report or face the research report viva. He will be considered to have fulfilled the requirement for satisfactory completion of a research project.***

## ANNEXURE XI - MARKING SCHEME FOR THE PRE BOARD CERTIFICATION ASSESSMENT

The assessors will mark each of the seven sections of the training portfolio independently and on completion of the PBCA decide on a consensus mark for each section.
Assessment grading;

A- Satisfactory
B- Unsatisfactory

In order to pass the PBCA all areas should be graded Satisfactory.

If the examiners are of the view that the trainee's performance is unsatisfactory, the examiners must provide written feedback on how the training portfolio should be improved in order to counsel the candidate. The trainee should then re-submit the training portfolio within three (3) months, and face another PBCA based on the re-submitted training portfolio. If the trainee is successful at this attempt, the date of Board Certification shall not be affected. If unsatisfactory again, the date of Board Certification will depend on the date of passing the subsequent PBCA following further training for a period of six (6) months in a unit selected by the Board of Study.

## ANNEXURE XII - RECOMMENDED READING MATERIALS

1. Campbell-Welsh Urology, Latest edition
2. Smith's General Urology, Latest edition
3. Operative Urology at the Cleveland Clinic, Latest edition
4. BJUI Knowledge, Online resource
5. Urology Clinics of North America
6. Sri Lanka Journal of Urology
7. Journal of Clinical Urology
8. Hinman's Atlas of Urologic Surgery
9. European Association of Urology Guidelines
10. Urology Association of Asia Guidelines
11. American Urology Association Guidelines
12. Smith's endourology
13. Reconstructive urology by Mundy
14. Stone surgery (Practice of Surgery) - by John M. Fitzpatrick (Author), Michael Marberger (Editor)