



ROYAL COLLEGE OF  
PHYSICIANS AND  
SURGEONS OF GLASGOW



**Joint Committee on Intercollegiate Examinations**

# **Intercollegiate Specialty Examination in Urology**

## **Syllabus Blueprint 2016**

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## Principles for Blueprinting Assessment to the Curriculum in Surgical Specialties

1. Standard educational practice requires a curriculum to include an indication of how each aspect of the syllabus is to be assessed. This “blueprinting” process also shows how each aspect relates to Good Medical Practice.
2. Each specialty syllabus has been mapped to a range of assessments:
  - a. CEX
  - b. CBD
  - c. DOPS
  - d. PBA
  - e. MSF
  - f. Section 1 of the specialty FRCS (written section)
  - g. Section 2 of the specialty FRCS (clinical and oral section)
3. This does not imply that the indicated assessments must be used.
4. The indications are not exclusive, and it is possible that other types of assessment which have not been indicated may also be used to assess individual items.
5. In general:
  - a. Knowledge will be assessed by Section 1 and Section 2 FRCS and by CBD.
  - b. Clinical skills will be assessed by CEX and Section 2 FRCS
  - c. The use of scenarios within Section 2 FRCS allows a wide range of clinical skills to be assessed.
  - d. Technical skills will be assessed by DOPS and PBA
  - e. Professional skills will be assessed by MSF
6. The blueprinting indicates which assessments may be used for each item at any stage through training.
7. The Good Medical Practice domains are:
  1. Knowledge, skills and performance
  2. Safety and quality
  3. Communication, partnership and teamwork
  4. Maintaining trust

	CEX	CBD	DOPS	PBA	MSF	FRCS Section 1	FRCS Section 2	GMP
<b>Basic science</b>								
<b>OBJECTIVE</b>								
The trainee should understand the basic anatomy that urologists will encounter during the daily management of urological patients, and basic embryology relevant to clinical practice		X				X	X	1
To understand and apply physiological principles in the management of patient with urological problems.		X				X	X	1
To understand normal physiological processes at different ages and understand the effects of disease and trauma on these processes		X				X	X	1
To understand the pharmacological principles relevant to the genitourinary tract		X				X	X	1
To understand pathological processes as applied to the organs of the urogenital system								
<b>KNOWLEDGE</b>								
<b>Anatomy</b>								
Macro anatomy and Micro anatomy of the urinary tract		X				X	X	1
Vascular anatomy of the urinary tract		X				X	X	1
Neurological supply including central connections		X				X	X	1
3-dimensional relationship to other organs		X				X	X	1
General knowledge of intra abdominal operative anatomy		X				X	X	1
Embryological development in relation to disorders affecting the urinary tract		X				X	X	1
Pathways of pain		X				X	X	1
<b>Physiology</b>								
Mechanism of endocrine homeostasis		X				X	X	1
Control of blood pressure		X				X	X	1
Mechanism of urine production		X				X	X	1
Mechanism of peristalsis initiation		X				X	X	1
Mechanisms of neuromuscular transmission		X				X	X	1
Anti-reflux mechanisms		X				X	X	1
Neuro-physiological control of filling/voiding cycles		X				X	X	1
Physiological properties of bladder musculature		X				X	X	1
Physiological properties of bladder mucosa		X				X	X	1
Bladder sensation		X				X	X	1
Neurophysiology of sphincter mechanisms in male and female		X				X	X	1
Physiology and molecular biology of prostate cell		X				X	X	1
Physiology of prostate secretion		X				X	X	1
Prostate specific antigen and related markers		X				X	X	1
Physiology of erection and ejaculation		X				X	X	1
<b>Urological endocrinology</b>								
Interpretation of semen analysis		X				X	X	1
Mechanisms of spermatogenesis and mechanism of spermatic transport		X				X	X	1
Function of accessory genital organs		X				X	X	1
Effect of disease and drugs on normal genital function		X				X	X	1
Physiology of pain		X				X	X	1
<b>Pharmacology</b>								
Mechanisms of action of commonly used drugs in urology		X				X	X	1
<b>Nephro-pharmacology</b>								
Cholinergic and Adrenergic mechanisms		X				X	X	1
Non-adrenergic, non-cholinergic (NANC) mechanisms		X				X	X	1
Pharmacology of coagulation		X				X	X	1
Pharmacology of inflammation		X				X	X	1
Pharmacology of neoplastic disease		X				X	X	1
Common congenital disorders affecting the urinary tract (eg undescended testis and urinary tract reflux)		X				X	X	1
<b>Changes related to congenital abnormalities</b>								
Chronic inflammatory mechanisms and diseases		X				X	X	1
Oncogenes, growth factors and angiogenesis		X				X	X	1
Mechanisms of chemotherapy, immunotherapy and radiotherapy		X				X	X	1
Abnormalities resulting from trauma		X				X	X	1
<b>Pathology</b>								
Basic genetics of uropathological conditions		X				X	X	1
Common congenital disorders affecting the urinary tract (eg undescended testis and urinary tract reflux)		X				X	X	1
<b>Changes related to congenital abnormalities</b>								
Basic principles of microbiology, resistance, cross infection relevant to the GU tract		X				X	X	1
Antibiotics including mechanism of action		X				X	X	1
Acute and chronic inflammatory response		X				X	X	1
Chronic inflammatory mechanisms and diseases		X				X	X	1
Role of genetic and environmental factors in urological cancer		X				X	X	1
Mechanisms of tumour initiation/growth		X				X	X	1
TNM classification of common urological tumours		X				X	X	1
Oncogenes, growth factors and angiogenesis		X				X	X	1
Mechanisms of chemotherapy, immunotherapy and radiotherapy		X				X	X	1
Familial prostate cancer and renal oncology		X				X	X	1
Abnormalities resulting from trauma		X				X	X	1
Primary and secondary wound healing by anatomical site		X				X	X	1
<b>CLINICAL SKILLS</b>								
<b>Anatomy</b>								
Application of anatomical knowledge in clinical and operative setting		X				X	X	1
<b>Physiology</b>								
To understand the indications and theory of urodynamic studies		X					X	1
To understand the indications and theory of urodynamic studies in the neuropathic patient		X					X	1
Assessment of the normovolaemic patient		X	X					1
Assessment of the anuric patient		X	X				X	1
Assessment and management of the patient in renal failure		X	X				X	1
Management of post obstructive diuresis		X					X	1
Application of knowledge in clinical and operative setting		X	X	X	X		X	1
Assessment and early management of the infertile male		X	X				X	1
Assessment and early management of the subfertile male		X	X				X	1
Application of knowledge in clinical and operative setting		X	X	X	X		X	1
Utilisation of PSA in the clinical setting		X					X	1
Understanding of PSA density and velocity		X				X	X	1
<b>Pharmacology</b>								
Appropriate use of commonly used drugs recognising common side effects, interactions and contra-indications		X					X	1
<b>Pathology</b>								
Recognition of possible genetic component to specified condition		X				X	X	1
Investigation and basic management of patients with congenital disorders of the GU tract		X	X				X	1
Appropriate investigation and management of urinary tract infection		X	X				X	1
Understand and apply principles of infection control		X				X	X	1
Management of multi-resistant organisms		X				X	X	1
Investigation and management of chronic inflammatory diseases affecting the urinary tract		X					X	1
Diagnosis, staging and early management of patients with urological malignancy		X				X	X	1
Diagnosis and early management of patients with trauma ATLS		X					X	1
<b>TECHNICAL SKILLS AND PROCEDURES</b>								
Application of knowledge in operative setting			X	X			X	1
Urodynamic assessment		X	X	X			X	1

Urodynamic assessment of the neuropathic bladder			X	X	X				X	1
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Clinical pharmacology										
<b>OBJECTIVE</b>										
To understand and apply pharmacological principles in the management of patients with urological disease										
<b>KNOWLEDGE</b>										
Clinical pharmacology of commonly used drugs including side-effects and complications of commonly used drugs for the following conditions:										
Acute and chronic infection			X						X	X
Lower urinary tract dysfunction			X						X	X
Erectile dysfunction			X						X	X
Urinary incontinence			X						X	X
Systemic chemotherapy for urological malignancy			X						X	X
Intravesical chemotherapy for urological malignancy			X						X	X
Anticoagulants			X						X	X
Drugs used for pain relief including post-operative pain relief			X						X	X
Immunosuppressants			X						X	X
DVT prophylaxis in Urological surgery			X						X	X
Side effects upon the genitourinary tract of drugs used to treat common conditions (eg cardiovascular and respiratory disease)			X						X	X
<b>CLINICAL SKILLS</b>										
Appropriate use of commonly used drugs recognising common side effects, interactions and contra-indications			X						X	X
Systemic chemotherapy for urological malignancy		X	X	X					X	X
Intravesical chemotherapy for urological malignancy		X	X	X					X	X
<b>TECHNICAL SKILLS AND PROCEDURES</b>										
N/A										

Common research methodology (dry science)											
<b>OBJECTIVE</b>											
To understand statistical mechanisms and be able to critically assess evidence in the literature											
To understand the principles and practice of audit											
<b>KNOWLEDGE</b>											
Understanding of statistical significance, relative risk, odds ratio, weighted mean difference and confidence intervals											
Application of tests e.g. Parametric, Non-parametric, Multivariate and Chi-squared analysis			X						X	X	1
Principles of screening			X						X	X	1
Principles of audit			X						X	X	1
Hierarchy of evidence			X						X	X	1
Principles (including theory and design), applications and limitations of randomised controlled trials, observational studies and retrospective series			X						X	X	1
Methodology that underpin phase 1, 2, 3 and 4 trials			X						X	X	1,2,3
Understanding of Good Clinical Practice including importance of ethics in research and research governance			X						X	X	1,2,4
Basics of meta-analysis, systematic review and narrative review			X						X	X	1
Basics of qualitative research			X						X	X	1
<b>CLINICAL SKILLS</b>											
Critical appraisal of scientific publications including quality assessment			X					X	X	X	1
Ability to interpret the relevance of trial / study outcomes to the care of patients			X					X	X	X	1,2
Application of research methodology to clinical setting			X					X	X	X	1
Audit			X					X	X	X	1,2,3
Systematic review			X					X	X	X	1
Observational study			X					X	X	X	1
<b>TECHNICAL SKILLS AND PROCEDURES</b>											
N/A											

Stone Disease											
<b>OBJECTIVE</b>											
To assess a patient presenting with a urinary stone in kidney, ureter or bladder											
To treat a patient presenting with a urinary stone in kidney, ureter or bladder including onward referral when appropriate											
<b>KNOWLEDGE</b>											
Principles of management of stones in the urinary tract											
Mechanisms of stone formation			X						X	X	1
Natural history and pathophysiology			X						X	X	1
Variable symptom complexes according to site			X						X	X	1
Complications of stone formation			X						X	X	1
Metabolic management of urinary stone disease			X						X	X	1
<b>Renal calculi</b>											
Management of renal calculi			X						X	X	1
<b>Ureteric calculi</b>											
Mechanisms of ureteric colic			X						X	X	1
Renal adaptation to ureteric obstruction			X						X	X	1
The role of IVU/USS and CT in diagnosis			X						X	X	1
Management of ureteric calculi			X						X	X	1
<b>Bladder calculi</b>											
Management of bladder calculi			X						X	X	1
<b>CLINICAL SKILLS</b>											
Requirements for emergency therapy			X						X	X	1
Appropriate multidisciplinary assessment and management			X						X	X	1
Investigation and management of patient with recurrent stone disease			X						X	X	1
<b>Renal calculi</b>											
Assessment of obstruction / sepsis		X	X							X	1
Appropriate management and treatment plans			X						X	X	1,3
Correct referral pathways			X						X	X	1,3
Medical management			X						X	X	1
<b>Ureteric calculi</b>											
Assessment of obstruction / sepsis		X	X							X	1
Appropriate management and treatment plans			X						X	X	1
Correct referral pathways			X						X	X	1,3
Medical management			X						X	X	1
<b>Bladder calculi</b>											
Assessment of obstruction / sepsis		X	X							X	1
Appropriate investigation and treatment plans		X	X						X	X	1
<b>TECHNICAL SKILLS AND PROCEDURES</b>											
ESWL for renal stone							X				1
ESWL for ureteric stone							X				1
Rigid ureteroscopy and therapeutic management lower 1/3 ureteric calculi							X				1
Rigid ureteroscopy and therapeutic management middle and upper 1/3 ureteric calculi							X				1
Cystoscopy and insertion JJ stent							X				1
Endoscopic fragmentation of bladder calculi							X				1
Open removal bladder calculi							X				1

Urinary tract obstruction										
<b>OBJECTIVE</b>										
To assess and treat a patient presenting with lower urinary tract symptoms and dysfunction										
To assess and treat a patient who has urinary tract obstruction including onward referral when appropriate										



<b>General</b>									1
Identification of significant infection and asymptomatic bacteriuria;							X	X	1
Correct antibiotic selection							X	X	1
Management of specific patient groups e.g adult females, children							X	X	1
Collection of appropriate samples and interpretation of results							X	X	1
<b>Pyelonephritis</b>									
Rapid and appropriate assessment of patient								X	1
Correct interpretation of tests							X	X	1
Appropriate diagnostic and microbiological requests							X	X	1
Indications for nephrostomy							X	X	1
<b>Renal and peri-renal abscess</b>									1
Rapid and appropriate assessment	X	X						X	1
Correct interpretation of tests								X	1
Appropriate diagnostic and microbiological requests							X	X	1
Appropriate treatment								X	1
<b>Genitourinary tuberculosis</b>									
Rapid and appropriate assessment	X	X						X	1
Correct interpretation of tests							X	X	1
Appropriate diagnostic and microbiological requests							X	X	1
<b>Prostatitis</b>									
Appropriate assessment	X	X						X	1
Correct interpretation of tests							X	X	1
Appropriate diagnostic and microbiological requests							X	X	1
Medical management	X	X						X	1
<b>Epididymitis</b>									
Appropriate assessment of patient	X	X						X	1
Correct interpretation of tests								X	1
Appropriate diagnostic and microbiological requests							X	X	1
Medical management of patient	X	X						X	1
<b>Scrotal abscess</b>									
Appropriate assessment of patient	X	X						X	1
Correct interpretation of tests							X	X	1
Appropriate diagnostic and microbiological requests							X	X	1
Medical management of patient	X	X						X	1
<b>Fournier's gangrene</b>									1
Appropriate management of Fournier's gangrene			X					X	1
Liaison with other teams as appropriate e.g. plastic and colorectal surgeons			X					X	1,2,3
<b>Sexually transmitted diseases including Chlamydia trachomatis, Gonococcal and non-Gonococcal urethritis</b>									
Appropriate assessment of patient	X	X						X	1
Correct interpretation of tests								X	1
Appropriate diagnostic and microbiological requests								X	1
Liaison with other teams as appropriate e.g Gynaecology, GUM			X					X	1,2,3
<b>Interstitial cystitis and chronic pelvic pain syndrome</b>									1
Assessment of patient	X	X						X	1
Correct interpretation of tests							X	X	1
Medical management of patient								X	1
<b>Retroperitoneal fibrosis</b>									
Assessment of patient	X	X						X	1
Correct interpretation of tests							X	X	1
Medical management of patient			X					X	1
<b>TECHNICAL SKILLS AND PROCEDURES</b>									
Rigid and flexible cystoscopy			X	X					1
Cystoscopy and retrograde ureterogram				X					1
Cystoscopy and JJ stent insertion				X					1
Surgical management of scrotal abscess				X					1
Surgical management of Fournier's gangrene				X					1
<b>Retroperitoneal fibrosis</b>									1
Cystoscopy and retrograde ureterogram				X					1
Cystoscopy and JJ stent insertion				X					1
<b>Interstitial cystitis and chronic pelvic pain syndrome</b>									1
Cystoscopy and biopsy			X						1

<b>Urinary incontinence</b>									
<b>OBJECTIVE</b>									1
To assess and manage a patient presenting with symptoms of urinary incontinence including onward referral when appropriate							X	X	1
To assess and manage patients with neuropathic bladder dysfunction including onward referral when appropriate.							X	X	1
<b>KNOWLEDGE</b>									1
Aetiology, epidemiology, pathophysiology and classification incontinence in men and women			X				X	X	1
Clinical presentation and differential diagnosis of urinary incontinence	X	X						X	1
Management of urinary incontinence			X				X	X	1
Aetiology, epidemiology, pathophysiology and classification of neuropathic bladder			X				X	X	1
Clinical presentation and differential diagnosis of urinary incontinence	X	X						X	1
Management of neuropathic incontinence			X				X	X	1
Basic anatomy physiology, pathophysiology, pharmacology of neuropathic bladder			X				X	X	1
Causes of neuropathic bladder			X				X	X	1
Types of neuropathic bladder presentation			X				X	X	1
Clinical presentation and differential diagnosis	X	X						X	1
<b>CLINICAL SKILLS</b>									1
<b>Urinary incontinence</b>									1
Appropriate history and examination	X	X						X	1
Investigation including Interpretation of frequency volume chart			X				X	X	1
Appropriate liaison with multidisciplinary team			X					X	1,2,3
Appropriate referral for sub-specialist management and surgery			X					X	1
Formulation of a realistic treatment plan			X					X	1
Medical management of urinary incontinence			X				X	X	1
<b>Neuropathic bladder</b>									
Appropriate history and examination	X	X						X	1
Appropriate investigation			X				X	X	1
Interpretation of frequency volume chart			X					X	1
Appropriate liaison with multidisciplinary team (eg neurology and continence)			X					X	1
Appropriate referral for sub-specialist management and surgery			X					X	1
Formulation of a realistic treatment plan			X					X	1
Medical management			X					X	1
<b>TECHNICAL SKILLS AND PROCEDURES</b>									1
Urodynamic studies			X						1
Cystoscopy and injection of Botulinum Toxin				X					1
Cystoscopy and injection of urethral bulking agent				X					1
Surgical insertion of mid-urethral tape				X					1
Cystoscopy and insertion of suprapubic catheter			X						1

Urological Oncology							
<b>OBJECTIVE</b>							
To assess and manage patient with suspected urological cancer.	X	X				X	1
To manage patients with a proven urological cancer including onward referral where necessary	X	X				X	1
To treat the patient with empathy	X	X				X	1
<b>KNOWLEDGE</b>							
<b>Aetiology, epidemiology and pathophysiology</b>							
Epidemiology of urological cancer		X				X	X
Role of genetic and environmental and factors in pathogenesis		X				X	X
Basic understanding of molecular biology of urological cancer		X				X	X
Knowledge of Oncogenes, growth factors and angiogenesis factors in relation to tumours		X				X	X
<b>Clinical features</b>							
Symptom complexes arising from urological malignancies kidney, ureter, bladder, prostate, testis and penis		X				X	X
Current standards for the investigation of common urological cancers		X				X	X
TNM classification of common urological tumours		X				X	X
<b>Treatment</b>							
Current standards of treatment for common urological Cancers		X				X	X
Principles of neo-adjuvant versus adjuvant therapy		X				X	X
Principles and application of radiotherapy		X				X	X
Terminal care		X				X	X
<b>Screening</b>							
Principles of screening		X				X	X
PSA and other markers as screening tools		X				X	X
Application of urine cytology to screening		X				X	X
Controversies in screening for urological cancers							1
<b>CLINICAL SKILLS</b>							
High level empathetic and communication skills	X				X		1,2,3
Rapid and appropriate assessment of patient with possible malignancy	X	X				X	X
Role of PSA and other markers, urine cytology etc		X				X	X
Correct interpretation of tests		X				X	X
Appropriate liaison with multidisciplinary team		X				X	X
Appropriate management of urological malignancies		X				X	X
Appropriate referral for sub-specialist management and surgery		X				X	X
Care of the dying patient		X				X	1,3
<b>TECHNICAL SKILLS AND PROCEDURES</b>							
Cystoscopy and biopsy			X				1
Cystoscopy and diathermy bladder lesion			X				1
TURBT			X				1
TURP			X				1
Cystoscopy and JJ stent insertion			X				1
Ureteroscopy			X				1
Cystoscopy and retrograde pyelogram			X				1
Inguinal Orchidectomy			X				1
Ileal conduit			X				1
Nephrectomy (open/ Lap)			X				1
Radical Prostatectomy			X				1
Radical Cystectomy			X				1
<b>Andrology</b>							
<b>OBJECTIVE</b>							
To assess and manage a man with male factor infertility including onward referral as necessary	X						1,3
To assess and manage a man with erectile dysfunction including onward referral as necessary	X						1,3
To assess and manage a man with varicocele, ejaculatory disorders, penile deformity, penile fracture or prolonged erection including onward referral as necessary	X						1,3
To assess and counsel a man requesting a vasectomy	X						1,3
<b>KNOWLEDGE</b>							
Anatomy, embryology and physiology of male reproductive system		X				X	X
Causes, assessment and management of male factor infertility		X				X	X
Modern methods of assisted fertilisation		X				X	X
Anatomy, physiology and pharmacology of erectile mechanism		X				X	X
Effects of concurrent pathology on erectile mechanism		X				X	X
Standards of assessment and investigation of erectile dysfunction		X				X	X
Therapeutic options including the pharmacological basis of modern therapy		X				X	X
Penile deformity – anatomy, physiology and management		X				X	X
Prolonged erection – Causes, pathophysiology and management		X				X	X
Penile fracture – assessment and management	X	X				X	X
Contraception - Methods, results and complications of different methods of contraception		X				X	X
Ejaculatory disorders – anatomy, physiology and management		X				X	X
Varicocele – anatomy, physiology and management		X				X	X
Current standard of treatment for penile cancer		X				X	X
Embryology and physiology of male reproductive system		X				X	X
<b>CLINICAL SKILLS</b>							
<b>Male infertility</b>							
Appropriate investigation and treatment plan		X				X	1
Liaison with multidisciplinary team and referral for sub-specialist management						X	1,2,3
Basic management of the subfertile male		X				X	1
Appropriate liaison with multidisciplinary team and referral for sub-specialist management and / or surgery						X	1,2,3
Appropriate investigation and treatment plan and onward referral where appropriate for Ejaculatory disorders		X				X	1
<b>Erectile dysfunction</b>							
High level and empathetic communication skills	X				X	X	1,2,3
Appropriate investigation and treatment plan		X				X	1
Medical management of erectile dysfunction		X				X	1
Liaison with multidisciplinary team and referral for sub-specialist management						X	1,2,3
<b>Andrology</b>							
Appropriate investigation and treatment plan and onward referral where appropriate for the following:	X	X				X	1
Penile deformity		X				X	1
Prolonged erection		X				X	1
Ejaculatory disorders						X	1
Varicocele	X					X	1
Penile fracture Appropriate referral for sub-specialist management and surgery		X				X	1
Contraception - Assess and counsel a man requesting contraceptive advice	X					X	1,2,3
<b>TECHNICAL SKILLS AND PROCEDURES</b>							
Adult Circumcision				X			1
Hydrocele repair				X			1
Epididymal cyst excision				X			1
Nesbit's procedure				X			1
Operative management of penile cancer				X			1
Operative management of priapism				X			1
Operative management of penile fracture				X			1
Vasectomy				X			1

Operative management of varicocele							X					1
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Paediatric Urology												
<b>OBJECTIVE</b>												
To assess and manage a child with a congenital disorder of the urogenital tract including onward referral as necessary											X	1
To assess and manage a child with an enuresis, congenital neuropathic bladder or with intersex, including onward referral as necessary											X	1
To assess and manage a child with an inguinoscrotal abnormality including onward referral as necessary											X	1
To assess and manage a child with urinary infection, including onward referral as necessary											X	1
<b>KNOWLEDGE</b>												
Embryology and anatomy of common congenital abnormalities, e.g undescended testis, duplex systems, reflux and hydronephrosis										X	X	1
Principles of functional assessment of the genitourinary tract										X	X	1
Basic embryology, anatomy of abnormality and natural history of intersex, spina bifida and posterior urethral valves										X	X	1
Concise knowledge of inguino-scrotal anatomy										X	X	1
Bacteriology of UTI in childhood										X	X	1
Natural history and normal patterns of continence										X	X	1
<b>CLINICAL SKILLS</b>												
<b>Common congenital urological disorders e.g undescended testis, duplex systems reflux and hydronephrosis</b>												
Appreciation of prognostic possibilities										X	X	1
Appropriate investigation plans											X	1
Formulation of realistic treatment plan											X	1
Appropriate referral for sub-specialist management and / or surgery											X	1
Family orientated communication skills		X	X					X			X	1,2,3
<b>Spina bifida, intersex and posterior urethral valves</b>												
Appreciation of prognostic possibilities											X	1
Formulation of realistic treatment plan											X	1
Appropriate referral for sub-specialist management and / or surgery											X	1,2,3
<b>Inguinoscrotal abnormalities (eg undescended testes, hydrocele, testicular torsion) and phimosis.</b>												
Appropriate tests to elicit differential diagnosis										X	X	1
Formulate appropriate treatment plan										X	X	1
Management of condition, including knowledge of indications, results and complications of surgery											X	1
<b>Urinary tract infection</b>												
Practical management of UTI											X	1
Appropriate investigation plans											X	1
Formulation of realistic treatment plan											X	1
Appropriate referral for sub-specialist management and / or surgery											X	1,2,3
<b>Enuresis</b>												
Practical management											X	1
Formulation of realistic treatment plan											X	1
Appropriate referral for sub-specialist management and / or surgery											X	1
<b>TECHNICAL SKILLS AND PROCEDURES</b>												
Circumcision							X					1
Hydrocele							X					1
Orchidopexy							X					1
Surgical exploration for torsions of testis, with fixation							X					1

Renal function and Nephrology												
<b>OBJECTIVE</b>												
To have a good working knowledge of the assessment of renal function and the urological conditions that predispose to the development of renal failure.											X	1
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.											X	1
To understand the different methods of renal replacement including renal transplantation											X	1
<b>KNOWLEDGE</b>												
Physiology of renal function										X	X	1
GFR estimation techniques										X	X	1
Tubular function and dysfunction										X	X	1
Basic pathology of acute and chronic renal failure										X	X	1
Principles of dialysis, renal preservation										X	X	1
Control of blood pressure										X	X	1
Aetiology, diagnosis and early management of Acute tubular necrosis										X	X	1
Aetiology, diagnosis and early management of pre-renal failure										X	X	1
Mechanisms of obstructive uropathy										X	X	1
Causes and pathophysiology of bilateral and unilateral obstruction										X	X	1
Mechanisms of chronic retention and its relationship to obstructive uropathy										X	X	1
Principles of haemodialysis and peritoneal dialysis										X	X	1
Indwelling cannulae for haemodialysis										X	X	1
Continuous ambulatory peritoneal dialysis (CAPD)										X	X	1
Recipient selection and indications for transplantation										X	X	1
Tissue typing and cross matching for transplantation										X	X	1
Relative indications for haemodialysis or transplantation										X	X	1
Immunosuppression for transplantation										X	X	1
Complications of renal transplantation										X	X	1
<b>CLINICAL SKILLS</b>												
Practical methods of GFR assessment											X	1
Assessment of patients with the following:												
Tubular disorders			X								X	1
Anuria			X								X	1
Renal failure			X								X	1
Obstructed uropathy			X								X	1
Liaison with other specialties (nephrology, transplantation)			X								X	1,2,3
Management of fluid/acid base balance			X								X	1
Assessment of fluid balance, renal function and fluid loading		X	X								X	1
Management of post obstructive diuresis			X								X	1
Ambulatory dialysis techniques			X								X	1
Evaluation of potential recipients for renal transplantation and timing of dialysis			X								X	1
Urinary tract workup of potential recipients prior to transplantation			X								X	1
Appropriate liaison with other specialties			X								X	1,2,3
<b>TECHNICAL SKILLS AND PROCEDURES</b>												
Percutaneous supra-pubic catheterisation							X					1

Emergency Urology												
<b>OBJECTIVE</b>												
To assess and manage patients who present acutely with urological problems, including onward referral when necessary												
<b>KNOWLEDGE</b>												
<b>Ureteric colic</b>												
Pathophysiology of nephrolithiasis			X							X	X	1
Renal adaptation to ureteric obstruction			X							X	X	1
Presentation and clinical course of urinary tract calculi			X								X	1
The role of IVU/USS and CT in diagnosis			X							X	X	1
Management options			X								X	1
Complications of urinary tract calculi including urosepsis			X							X	X	1





Cystoscopy and insertion JJ stent				X					1
Percutaneous suprapubic catheterisation				X					1
Testicular repair				X					1
Orchidectomy				X					1
Circumcision				X					1

Urological Radiology									
<b>OBJECTIVE</b>									
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									
To develop technical skills in standard radiological techniques relevant to urology									
<b>KNOWLEDGE</b>									
Principles of ionising radiation		X					X	X	1
Patient and physician protection		X					X	X	1
Investigation related radiation dose		X					X	X	1
Appreciation of aberrant anatomy		X					X	X	1
Appropriate use of radiological investigations		X					X	X	1
Principles of isotope and isotope imaging		X					X	X	1
Application of isotopes to functional assessment		X					X	X	1
Techniques of interventional radiology		X					X	X	1
Indications, limitations and complications of interventional radiology		X					X	X	1
IVP: Basic theory, practical techniques (including contrast agents), indications, interpretation and limitations, safety issues and contraindications		X					X	X	1
Ultrasound (including Doppler): Basic theory principles, practical techniques (including contrast agents), indications, interpretation and limitations, safety issues and contraindications		X					X	X	1
CT scanning: Basic theory principles, practical techniques (including contrast agents), indications, interpretation and limitations, safety issues and contraindications		X					X	X	1
MR scanning: Basic theory, practical techniques (including contrast agents), indications, interpretation and limitations, safety issues and contraindications		X					X	X	1
PET scanning: Basic theory, practical techniques (including contrast agents), indications, interpretation and limitations, safety issues and contraindications		X					X	X	1
Renography: Basic theory, practical techniques (including contrast agents), indications, interpretation and limitations, safety issues and contraindications		X					X	X	1
<b>CLINICAL SKILLS</b>									
Indications for use of ionising radiation in urological investigation		X					X	X	1
Application in clinical situation	X	X						X	1
Understand role of ultrasound in urological investigations		X					X	X	1
Resuscitation skills following complications	X	X						X	1
Selection of appropriate isotopic investigations		X					X	X	1
Interpretation of renograms		X					X	X	1
IVP: Therapeutic application, interpretation and limitations		X					X	X	1
Ultrasound (including Doppler): Therapeutic application, interpretation and limitations		X					X	X	1
CT scanning: Therapeutic application, interpretation and limitations		X					X	X	1
MR scanning: Therapeutic application, interpretation and limitations		X					X	X	1
PET scanning: Therapeutic application, interpretation and limitations		X					X	X	1
Renography: Therapeutic application, interpretation and limitations	X	X					X	X	1
<b>TECHNICAL SKILLS AND PROCEDURES</b>									
CTUrogram		X						X	1
Cystogram		X						X	1
Urethrogram		X						X	1
Retrograde Pyelogram		X		X				X	1
Renal ultrasound		X						X	1
Bladder ultrasound		X						X	1
Scrotal ultrasound		X						X	1
Transrectal ultrasound (TRUS) including biopsy		X						X	1
Ultrasound guided percutaneous puncture of kidney		X						X	1
Ultrasound guided percutaneous puncture of bladder		X						X	1
Abdominal ultrasound		X						X	1
Testicular ultrasound		X						X	1

Modular Curriculum for urinary tract stone disease: Basic Science									
<b>OBJECTIVE</b>									
To develop advanced skills in the management of patients with urinary tract stone disease									
<b>KNOWLEDGE</b>									
<b>Anatomy</b>									
To understand the detailed anatomy that will be encountered during the management of patients with urinary tract stone disease		X					X	X	1
Embryology, macro and micro anatomy with specific reference to vascular anatomy and neurological anatomy, and its anomalies		X					X	X	1
<b>Physiology</b>									
Mechanism of urine production		X					X	X	1
Mechanism of peristalsis initiation		X					X	X	1
Mechanisms of neuromuscular transmission		X					X	X	1
Anti-reflux mechanisms		X					X	X	1
Principles of isotope and isotope imaging		X					X	X	1
<b>Pharmacology</b>									
Pharmacology of commonly used drugs in the medical management of ureteric colic		X					X	X	1
Pharmacology of commonly used drugs in metabolic stone disease		X					X	X	1
Pharmacology of pain prevention and relief		X					X	X	1
Use of local anaesthetic and regional techniques		X					X	X	1
Pharmacology of commonly used drugs for sepsis of the urinary tract		X					X	X	1
Indications, contraindications and side effects		X					X	X	1
<b>Pathology</b>									
Pathophysiology of upper urinary tract obstruction		X					X	X	1
Pathophysiology of urolithiasis		X					X	X	1
Microbiology of sepsis of the urinary tract		X					X	X	1
<b>CLINICAL SKILLS</b>									
Selection of appropriate isotopic investigations		X					X	X	1
Interpretation of renograms		X					X	X	1
Assessment of the normovolaemic patient	X	X					X	X	1
Assessment of the anuric patient	X	X					X	X	1
Assessment and management of the patient in renal failure	X	X					X	X	1
Appropriate use of commonly used drugs recognising common side effects, interactions and contra-indications		X					X	X	1
Appropriate use of imaging and other investigations		X					X	X	1
Appropriate management choices and operative skills		X					X	X	1
Prevention, diagnosis and management of urinary sepsis		X					X	X	1
Appropriate investigation and management of urinary tract infection		X					X	X	1
Recognition of risks and early diagnosis of sepsis		X					X	X	1
<b>TECHNICAL SKILLS AND PROCEDURES</b>									
Access to the kidney and the retroperitoneum including percutaneous access							X		1
Instrumentation of the ureter							X		1

Modular Curriculum for urinary tract stone disease: Renal calculi									
<b>OBJECTIVE</b>									

To develop advanced skills in the management of patients with urinary tract stone disease

<b>KNOWLEDGE</b>								
Assessment and investigation patients with renal calculi	X	X					X	1
Indications for different treatment modalities		X				X	X	1
Mechanisms of extracorporeal lithotripsy		X				X	X	1
Mechanisms of intracorporeal lithotripsy		X				X	X	1
Complications of treatment including lithotripsy		X				X	X	1
Results of stone treatment in different locations		X				X	X	1
Outcomes of treatment		X				X	X	1
Understanding of normal post-operative progress		X					X	1
Post treatment care		X					X	1
Imaging and access techniques for percutaneous access including supra-costal access		X				X	X	1
Operative management of renal calculi including choice of approach according to size, position etc.		X					X	1
<b>CLINICAL SKILLS</b>								
Assessment and investigation of patients with renal calculi	X	X					X	1
MDT management of stones and ability to formulate management plan including issues of complications		X					X	1
Able to take informed consent and explain procedures and outcomes to patients		X		X			X	1
Team working with theatre staff				X			X	1,2,3
Post-op assessment and communication		X		X			X	1
Prioritisation of further investigation		X					X	1
Post-operative assessment		X					X	1
Able to vary access dependent on stone location		X					X	1
Appropriate intervention to deal with changing parameters		X					X	1
Appropriate use of intracorporeal fragmentation devices including laser, EHL, lithoclast		X				X	X	1
Advanced skills enabling safe treatment of complex renal calculi		X					X	1
<b>TECHNICAL SKILLS AND PROCEDURES</b>								
ESWL				X				1
Percutaneous nephrolithotomy including intracorporeal lithotripsy				X				1
Flexible ureteroscopy including intracorporeal lithotripsy				X				1
Rigid ureteroscopy including intracorporeal lithotripsy				X				1

**Modular Curriculum for urinary tract stone disease: Ureteric calculi**

<b>OBJECTIVE</b>								
To develop advanced skills in the management of patients with urinary tract stone disease								
<b>KNOWLEDGE</b>								
Assessment and investigations of patients with ureteric calculi	X	X					X	1
Indications for different treatment modalities		X				X	X	1
Mechanisms of extracorporeal lithotripsy		X				X	X	1
Mechanisms of intracorporeal lithotripsy		X				X	X	1
Complications of treatment including lithotripsy		X				X	X	1
Results of stone treatment in different locations		X				X	X	1
Outcomes of treatment		X				X	X	1
Understanding of normal post-operative progress		X					X	1
The role of stents		X					X	1
Post treatment care		X				X	X	1
Aware of range and appropriate use of different instruments		X				X	X	1
Operative management of ureteric calculi including choice of approach depending upon stone position, size etc							X	1
<b>CLINICAL SKILLS</b>								
MDT management of stones and ability to formulate management plan including issues of complications	X						X	1
Ability to perform extracorporeal lithotripsy	X		X				X	1
Able to take informed consent and explain procedures and outcomes to patients				X			X	1,2,3
Team working with theatre staff	X		X				X	1
Post-op assessment and communication	X						X	1
Prioritisation of further investigation	X						X	1
Post-operative assessment	X						X	1
Appropriateness of investigation and interventions	X						X	1
Appropriate use of intracorporeal fragmentation devices including laser, EHL, lithoclast	X					X	X	1
Advanced skills enabling safe treatment of complex urinary calculi	X						X	1
<b>TECHNICAL SKILLS AND PROCEDURES</b>								
Rigid ureteroscopy including intracorporeal lithotripsy				X				1
Flexible ureteroscopy including intracorporeal lithotripsy				X				1

**Modular Curriculum for urinary tract stone disease: Bladder calculi**

<b>OBJECTIVE</b>								
To develop advanced skills in the management of patients with urinary tract stone disease								
<b>KNOWLEDGE</b>								
Assessment and investigations of patients with bladder calculi	X	X					X	1
Indications for different treatment modalities		X					X	1
Mechanisms of intracorporeal lithotripsy		X				X	X	1
Complications of treatment		X					X	1
Results of treatment		X					X	1
Outcomes of treatment		X					X	1
Understanding of normal post-operative progress		X					X	1
<b>CLINICAL SKILLS</b>								
Use of endourological techniques to deal with complex bladder calculi		X					X	1
Lower urinary tract endoscopic techniques e.g. cystolitholapaxy		X					X	1
<b>TECHNICAL SKILLS AND PROCEDURES</b>								
Endoscopic litholapaxy				X				1

**Modular curriculum in Benign Disease of the Upper Urinary Tract: Basic Science**

<b>OBJECTIVE</b>								
To develop advanced skills in the management of upper urinary tract obstruction, the surgery of renal failure and other benign conditions of the upper urinary tract								
<b>KNOWLEDGE</b>								
To understand the detailed anatomy that will be encountered during the management of patients undergoing laparoscopy for renal disease		X				X	X	1
Embryology, macro and micro anatomy with specific reference to vascular anatomy and neurological anatomy, and its anomalies		X				X	X	1
Mechanism of urine production		X				X	X	1
Mechanism of peristalsis initiation		X				X	X	1
Mechanisms of neuro-muscular transmission		X				X	X	1
Principles of isotopes and isotope imaging		X				X	X	1
Pharmacology of pain prevention and relief		X				X	X	1
Use of local anaesthetic and regional techniques		X				X	X	1
Pharmacology of commonly used drugs for sepsis of the urinary tract including indications, contraindications and side effects		X				X	X	1
Aetiology, investigation and treatment of acute and chronic urinary tract obstruction including PUJ stenosis and ureteric strictures		X				X	X	1
Pathophysiology of upper urinary tract obstruction		X				X	X	1
Microbiology of sepsis of the urinary tract		X				X	X	1
Acute and chronic inflammatory response		X				X	X	1
<b>CLINICAL SKILLS</b>								
Selection of appropriate isotopic investigations		X				X	X	1
Assessment and management of the patient in renal failure		X				X	X	1
Appropriate use of commonly used drugs recognising common side effects, interactions and contra-indications		X				X	X	1

Appropriate use of imaging and other investigations		X				X	X	1
Appropriate management choices and operative skills		X					X	1
Prevention, diagnosis and management of urinary sepsis		X					X	1
Appropriate investigation and management of urinary tract infection		X				X	X	1
Recognition of risks and early diagnosis of sepsis		X					X	1
<b>TECHNICAL SKILLS AND PROCEDURES</b>								
Access to the kidney and the retroperitoneum including percutaneous access				X				
Instrumentation of the ureter				X				

<b>Modular curriculum in Benign Disease of the Upper Urinary Tract: Upper tract obstruction</b>								
<b>OBJECTIVE</b>								
To develop advanced skills in the management of upper urinary tract obstruction, the surgery of renal failure and other benign conditions of the upper urinary tract								1
<b>KNOWLEDGE</b>								
Causes and pathophysiology of upper urinary tract obstruction		X				X	X	1
Clinical features of upper urinary tract obstruction		X				X	X	1
Endoscopic management of upper urinary tract obstruction		X				X	X	1
<b>CLINICAL SKILLS</b>								
Appropriate assessment including investigation and formulation of management plan	X	X					X	1
Formulate a differential diagnosis		X					X	1
Management of associated urosepsis		X				X	X	1
Management of post obstructive diuresis		X				X	X	1
Ability to choose appropriate surgical approach for the treatment of upper urinary tract obstruction		X					X	1
<b>TECHNICAL SKILLS AND PROCEDURES</b>								
Cystoscopy and insertion JJ stent					1			1
Rigid diagnostic ureteroscopy					1			1
Flexible diagnostic ureteroscopy					1			1

<b>Modular curriculum in Benign Disease of the Upper Urinary Tract: Pelviureteric Junction Obstruction</b>								
<b>OBJECTIVE</b>								
To develop advanced skills in the management of upper urinary tract obstruction, the surgery of renal failure and other benign conditions of the upper urinary tract								1
<b>KNOWLEDGE</b>								
Aetiology, pathophysiology and Clinical features		X				X	X	1
Investigation		X				X	X	1
Formulation of appropriate management of patient with PUJ obstruction		X					X	1
Indications, operative steps and complications of the different approaches to the treatment of PUJ obstruction, including:		X					X	1
-Percutaneous approaches		X				X	X	1
-Ureteroscopic approaches		X				X	X	1
-Laparoscopic approaches		X				X	X	1
-Open surgical approaches		X				X	X	1
Practical expertise in the surgical management of PUJ obstruction		X					X	1
<b>CLINICAL SKILLS</b>								
Appropriate management of patient with PUJ obstruction		X					X	1
Interpretation of clinical findings and results of investigations		X					X	1
Ability to organise appropriate management plan		X					X	1
Ability to explain procedures and outcomes to patients and relatives and obtain informed consent		X		X			X	1
Knowledge and appropriate use of treatment options		X					X	1
Ability to choose appropriate surgical approach for the treatment of PUJ obstruction		X					X	1
<b>TECHNICAL SKILLS AND PROCEDURES</b>								
Ureteroscopic treatment of PUJ obstruction					X			1
Percutaneous treatment of PUJ obstruction					X			1
Laparoscopic pyeloplasty					X			1
Laparoscopic nephrectomy					X			1
Open pyeloplasty					X			1

<b>Modular curriculum in Benign Disease of the Upper Urinary Tract: Ureteric strictures</b>								
<b>OBJECTIVE</b>								
To develop advanced skills in the management of upper urinary tract obstruction, the surgery of renal failure and other benign conditions of the upper urinary tract								1
<b>KNOWLEDGE</b>								
Aetiology, pathophysiology and Clinical features		X				X	X	1
Investigation		X				X	X	1
Formulation of appropriate management of patient with ureteric stricture		X					X	1
Indications, operative steps and complications of the different approaches to the treatment of ureteric strictures including:		X					X	1
-Ureteroscopic approaches		X					X	1
-Laparoscopic approaches		X					X	1
Practical expertise in the surgical management of ureteric strictures		X					X	1
<b>CLINICAL SKILLS</b>								
Appropriate management of patient with ureteric stricture		X					X	1
Interpretation of clinical findings and results of investigations		X					X	1
Ability to organise appropriate management plan		X					X	1
Ability to explain procedures and outcomes to patients and obtain informed consent		X		X			X	1
Knowledge of treatment options		X				X	X	1
Team working with other specialties e.g. radiologists, reconstructive surgeon		X					X	1,2,3
Ability to choose appropriate surgical approach for the treatment of ureteric strictures		X					X	1
<b>TECHNICAL SKILLS AND PROCEDURES</b>								
Cystoscopy and insertion JJ stent					X			1
Ureteroscopic treatment					X			1
Extra-anatomical stent insertion					X			1
Open surgical procedures for correction of ureteric stricture					X			1

<b>Modular curriculum in Benign Disease of the Upper Urinary Tract: Renal Failure</b>								
<b>OBJECTIVE</b>								
To develop advanced skills in the management of upper urinary tract obstruction, the surgery of renal failure and other benign conditions of the upper urinary tract								1
<b>KNOWLEDGE</b>								
Knowledge of available management pathways and role of nephrologists		X				X	X	1
Principles of dialysis		X				X	X	1
Indications for transplantation		X				X	X	1
Indications, operative steps and complications of surgery in the treatment of end stage renal failure		X					X	1
Practical expertise in the surgery in the treatment of end stage renal failure		X					X	1
<b>CLINICAL SKILLS</b>								
Appropriate assessment and investigation of renal failure patients	X	X					X	1
Practical management of fluid/electrolyte/acid base balance		X					X	1
Temporary dialysis techniques		X				X	X	1
Team working with other specialties e.g. radiologists, renal physicians, transplant surgeons		X					X	1,2,3
Ability to choose appropriate surgical approach for the treatment of end stage renal failure		X					X	1
<b>TECHNICAL SKILLS AND PROCEDURES</b>								
Laparoscopic nephrectomy					X			1
Open (simple) nephrectomy					X			1

Open donor nephrectomy				X					1
Laparoscopic donor nephrectomy				X					1

Modular curriculum in Prostate Cancer: Basic Science									
<b>OBJECTIVE</b>									
To develop advanced skills in the assessment and treatment of men with prostate cancer									
<b>KNOWLEDGE</b>									
<b>Anatomy</b>									
Embryology and anatomy of the prostate and bladder and male genital sphincters		X				X	X		1
Lymphatic drainage of the pelvic organs		X				X	X		1
<b>Physiology</b>									
Physiology of the prostate		X				X	X		1
Physiology of micturition		X				X	X		1
Physiology of erection		X				X	X		1
<b>Pharmacology</b>									
Pharmacology of pain prevention and relief		X				X	X		1
Use of local anaesthetic and regional techniques		X				X	X		1
Pharmacology of endocrine drugs used in the treatment of prostate cancer		X				X	X		1
Pharmacology of cytotoxic drugs used in the treatment of prostate cancer		X				X	X		1
Pharmacology of other agents used in the treatment of men with prostate cancer		X				X	X		1
<b>Pathology</b>									
Relevance of congenital anomalies to subsequent malignant pre-disposition		X				X	X		1
Role of genetics in prostate cancer		X				X	X		1
Role of oncogenes and growth factors in the pathogenesis of prostate cancer		X				X	X		1
Role of environmental factors in malignancies		X				X	X		1
Current theories of tumour initiation and growth		X				X	X		1
Thorough understanding of current and previous systems for the staging and grading of prostate cancer		X				X	X		1
Understanding of the theoretical basis and techniques of radiotherapy for prostate cancer		X				X	X		1
Understanding of the theoretical basis and techniques of radiological and nuclear medicine imaging		X				X	X		1
<b>CLINICAL SKILLS</b>									
Appropriate use of pharmacological agents in men with prostate cancer either for peri-operative, therapeutic or palliative reasons		X					X		1
Application of the indications, contraindications and side effects		X					X		1
Appropriate use of stage, grade and molecular markers in the management of an individual with prostate cancer		X					X		1
Appropriate use of radiotherapy in the treatment of men with prostate cancer		X					X		1
Appropriate imaging of men with prostate cancer		X					X		1
<b>TECHNICAL SKILLS AND PROCEDURES</b>									
N/A									

Modular curriculum in Prostate Cancer: Locally confined prostate cancer (T1a-T2c)									
<b>OBJECTIVE</b>									
To develop advanced skills in the assessment and treatment of men with prostate cancer									
<b>KNOWLEDGE</b>									
Rationale for, indications, complications of different therapies for locally confined prostate cancer including:		X				X	X		1
-Radical surgery		X				X	X		1
-Radical radiotherapy		X				X	X		1
-Radical brachytherapy		X				X	X		1
-Adjuvant and neo-adjuvant hormones		X				X	X		1
-Active surveillance		X				X	X		1
The rationale, role and limitations of new technology (eg cryotherapy and high intensity focussed ultrasound)		X				X	X		1
Understanding of the biology of prostate cancer		X				X	X		1
Understanding of the relevance of co-morbidity in the choice of therapy		X				X	X		1
Entry into the relevant clinical trial		X				X	X		1,2,4
Practical treatment of locally confined prostate cancer		X				X	X		1
<b>CLINICAL SKILLS</b>									
Assessment of patients with locally confined prostate cancer		X	X				X		1
Indications for relevant radiological and pathological investigations.		X				X	X		1
Formulation of management policy after discussion at an MDT meeting		X					X		1,3
Obtaining informed consent for the relevant procedure offering patient the options of discussion of other therapies		X	X		X		X		1,2,3,4
Co-ordinating the role of non-medical professionals in patient management		X					X		1,2,3,4
Formulation of a relevant follow up plan including location of follow-up		X					X		1,2
Ability to choose appropriate therapeutic approach for the treatment of prostate cancer		X					X		1
<b>TECHNICAL SKILLS AND PROCEDURES</b>									
Radical Prostatectomy (retro-pubic, perineal, laparoscopic procedure or robotic)						X			1
Brachytherapy						X			1

Modular curriculum in Prostate Cancer: Locally advanced (T3-T4) No Mo									
<b>OBJECTIVE</b>									
To develop advanced skills in the assessment and treatment of men with prostate cancer									
<b>KNOWLEDGE</b>									
Rationale for, indications, complications of different therapies for locally advanced prostate cancer including:		X				X	X		1
-Radical surgery		X				X	X		1
-Radiotherapy		X				X	X		1
-Brachytherapy		X				X	X		1
-Hormone treatment		X				X	X		1
-Active surveillance		X				X	X		1
Understanding of the extent and relevance of co-morbidity in the choice of therapy		X				X	X		1,2
Entry into the relevant clinical trial		X				X	X		1,3
<b>CLINICAL SKILLS</b>									
Appropriate assessment of patients with locally advanced prostate cancer		X	X				X		1
Indication of the relevant radiological and pathological investigations.		X				X	X		1
Formulation of a best fit management policy following discussion at an MDT meeting		X					X		1,3
Obtaining informed consent for the relevant procedure offering patient the options of discussion of other therapies		X	X		X		X		1,3,4
Appropriate liaison with other specialities (radiation oncology, medical oncology etc)		X					X		1,3,4
Co-ordinating the role of non-medical professionals in the management of treatment		X					X		1,3,4
Formulation of a relevant follow up plan		X					X		1
<b>TECHNICAL SKILLS AND PROCEDURES</b>									
N/A									

Modular curriculum in Prostate Cancer: Metastatic disease (Any T, and N, M1)									
<b>OBJECTIVE</b>									
To develop advanced skills in the assessment and treatment of men with prostate cancer									
<b>KNOWLEDGE</b>									
Rationale for, indications, complications of different therapies for metastatic prostate cancer including:		X				X	X		1
-Hormone therapy		X				X	X		1
-Radiotherapy		X				X	X		1
-Chemotherapy		X				X	X		1
-Novel therapy		X				X	X		1
Entry into the relevant clinical trials		X				X	X		1,2,3,4
<b>CLINICAL SKILLS</b>									
Assessment of patients with metastatic prostate cancer		X					X		1



Entry into the relevant clinical trial		X					X	1,2,3,4
Practical surgery of muscle invasive bladder cancer including indications, techniques, results, consequences and complications		X				X	X	1
<b>CLINICAL SKILLS</b>								
Assessment of patients with muscle invasive bladder cancer	X						X	1
Indications for radiological and pathological investigations.		X				X		1
Formulation of management after discussion at an MDT meeting		X					X	1,3
Obtaining informed consent following discussion of alternative therapies	X	X					X	1,3,4
Obtaining informed consent for the relevant urinary diversion following cystectomy	X	X					X	1,3,4
Liaison with reconstructive surgeon, where appropriate	X	X					X	1,2,3,4
Co-ordinating the role of non-medical professionals in the management of treatment	X	X					X	1,2,3,4
Formulation of a relevant follow up plan		X					X	1
Ability to choose appropriate therapeutic approach for the treatment of bladder cancer		X				X	X	1
<b>TECHNICAL SKILLS AND PROCEDURES</b>								
TURBT					X			1
Radical cystectomy, cystoprostatectomy, cystourethrectomy etc					X			1
Urethrectomy					X			1
Ileal conduit diversion					X			1
Orthotopic bladder reconstruction					X			1
Construction of a continent urinary diversion					X			1

<b>Modular curriculum in Prostate Cancer: Metastatic bladder cancer</b>								
<b>OBJECTIVE</b>								
To develop advanced skills in the assessment and treatment of men with bladder cancer								
<b>KNOWLEDGE</b>								
Rationale for, indications, complications of different therapies for metastatic bladder cancer including:		X					X	1
-Palliative surgery		X					X	1
-Radiotherapy		X					X	1
-Chemotherapy		X					X	1
-Novel therapy		X					X	1
Entry into the relevant clinical trials		X					X	1,2,3,4
<b>CLINICAL SKILLS</b>								
Assessment of patients with metastatic bladder cancer	X						X	1
Formulations of best fit treatment plan following an MDT meeting		X					X	1
Indication of likely response, duration of that response and survival in the individual patient		X					X	1
Management of patient with metastatic bladder cancer		X				X	X	1
Liaison with other specialties (eg radiotherapy, medical oncology)		X					X	1,3
<b>TECHNICAL SKILLS AND PROCEDURES</b>								
N/A								

<b>Modular curriculum in Renal Cancer: Basic Science</b>								
<b>OBJECTIVE</b>								
To develop advanced skills in the assessment and treatment of men with renal cancer								
To develop advanced skills in the assessment and treatment of upper tract urothelial cancer								
<b>KNOWLEDGE</b>								
<b>Anatomy</b>								
Embryology and anatomy of the urinary tract		X				X	X	1
<b>Physiology</b>								
Physiology of urine production erection		X				X	X	1
<b>Pharmacology</b>								
Pharmacology of pain prevention and relief		X				X	X	1
Use of local anaesthetic and regional techniques		X				X	X	1
Pharmacology of agents used for systemic therapy in men with renal cancer		X				X	X	1
Pharmacology of immunological agents used for therapy in renal cancer		X				X	X	1
Pharmacology of biological agents used in the treatment of renal		X				X	X	1
<b>Pathology</b>								
Pathology of the differing types of renal cancer and other benign and malignant tumours affecting the kidney		X				X	X	1
Role of genetics in renal cancer and upper tract TCC		X				X	X	1
Role of oncogenes and growth factors in renal cancer and upper tract TCC		X				X	X	1
Role of environmental factors in renal cancer and upper tract TCC		X				X	X	1
Current theories of tumour initiation and growth		X				X	X	1
Thorough understanding of current and previous systems for the staging and grading of renal cancer and upper tract TCC		X				X	X	1
Immune response and its relevance to the therapy of renal cancer and upper tract TCC		X				X	X	1
Understanding of the theoretical basis and techniques of radiological and nuclear medicine imaging		X				X	X	1
<b>CLINICAL SKILLS</b>								
Appropriate use of pharmacological, immunological and biological agents in men with renal cancer		X				X	X	1
Application of the indications, contraindications and side effects		X				X	X	1
Appropriate use of stage, grade and molecular markers in the management of an individual with renal cancer		X				X	X	1
Appropriate imaging of men with bladder cancer		X				X	X	1
<b>TECHNICAL SKILLS AND PROCEDURES</b>								
N/A								

<b>Modular curriculum in Renal Cancer: Localised Renal cancer</b>								
<b>OBJECTIVE</b>								
To develop advanced skills in the assessment and treatment of men with renal cancer								
To develop advanced skills in the assessment and treatment of upper tract urothelial cancer								
<b>KNOWLEDGE</b>								
Rationale for, indications, results, and complications of different therapies for localised renal cancer		X				X	X	1
Radical surgery		X				X	X	1
Nephron sparing surgery		X				X	X	1
Minimally invasive therapies		X				X	X	1
The rationale, role and limitations of new technology in the diagnosis and therapy of renal cancer		X				X	X	1
Understanding of the biology of renal cancer		X				X	X	1
Understanding of the extent and relevance of co-morbidity in the choice of therapy		X				X	X	1
Entry into the relevant clinical trial		X				X	X	1,2,3,4
Practical treatment of localised renal cancer		X				X	X	1
<b>CLINICAL SKILLS</b>								
Appropriate assessment of patients with renal cancer	X	X					X	1
Indication of the relevant radiological and pathological investigations.		X				X		1
Formulation of a best fit management policy following discussion at an MDT meeting		X					X	1
Obtaining informed consent for the relevant therapy following discussion of alternative therapies	X	X		X			X	1,2,3,4
Co-ordinating the role of non-medical professionals in the management of treatment		X					X	1,2,3,4
Formulation of a relevant follow up plan		X					X	1
Ability to choose appropriate therapeutic approach for the treatment of renal cancer		X				X	X	1
<b>TECHNICAL SKILLS AND PROCEDURES</b>								
Radical nephrectomy					X			
Partial nephrectomy					X			
Laparoscopic nephrectomy					X			
Laparoscopic partial nephrectomy					X			

Modular curriculum in Renal Cancer: Metastatic renal cancer							
<b>OBJECTIVE</b>							
To develop advanced skills in the assessment and treatment of men with renal cancer							
To develop advanced skills in the assessment and treatment of upper tract urothelial cancer							
<b>KNOWLEDGE</b>							
Rationale for, indications, complications of different therapies for metastatic renal cancer including:							
	X				X	X	1
-Surgery	X				X	X	1
-Biological therapy	X				X	X	1
-Immunotherapy	X				X	X	1
-Hormone therapy	X				X	X	1
-Novel therapy	X				X	X	1
Entry into the relevant clinical trials	X					X	1
<b>CLINICAL SKILLS</b>							
Assessment of patients with metastatic renal cancer	X					X	1
Formulations of best fit treatment plan following an MDT meeting	X					X	1,3
Indication of likely response, duration of that response and survival in the individual patient	X					X	1
Management of patient with metastatic renal cancer	X				X	X	1
Liaison with other specialties (eg radiotherapy, medical oncology)	X					X	1,2,3,4
<b>TECHNICAL SKILLS AND PROCEDURES</b>							
N/A							

Modular curriculum in Renal Cancer: Upper Tract TCC							
<b>OBJECTIVE</b>							
To develop advanced skills in the assessment and treatment of men with renal cancer							
To develop advanced skills in the assessment and treatment of upper tract urothelial cancer							
<b>KNOWLEDGE</b>							
Rationale for, indications, results, and complications of different therapies for upper tract TCC							
	X				X	X	1
Radical surgery	X				X	X	1
Endoscopic therapy	X				X	X	1
The rationale, role and limitations of new technology in the diagnosis and therapy of upper tract TCC	X				X	X	1
Understanding of the biology of upper tract TCC	X				X	X	1
Understanding of the extent and relevance of co-morbidity in the choice of therapy	X				X	X	1
Entry into the relevant clinical trial	X					X	1,3,4
Practical treatment of upper tract TCC	X				X	X	1
<b>CLINICAL SKILLS</b>							
Assessment of patients with Upper tract TCC	X					X	1
Indications for radiological and pathological investigations	X				X		1
Formulation of a best fit management policy following discussion at an MDT meeting	X					X	1
Obtaining informed consent for the relevant therapy following discussion of alternative therapies	X		X			X	1,3
Liaison with reconstructive surgeon, where appropriate	X					X	1,3
Formulation of a relevant follow up plan	X					X	1
Ability to choose appropriate therapeutic approach for the treatment of upper tract TCC	X				X	X	1
<b>TECHNICAL SKILLS AND PROCEDURES</b>							
Radical nephroureterectomy			X				1
Segmental ureterectomy and reconstruction			X				1
Laparoscopic nephroureterectomy			X				1
Rigid Ureteroscopy and endoscopic therapy to TCC			X				1

Modular Curriculum in Penile Cancer: Basic Science							
<b>OBJECTIVE</b>							
To develop advanced skills in the assessment and treatment of men with penile cancer							
<b>KNOWLEDGE</b>							
Embryology and anatomy of the male genitalia including Lymphatic drainage							
	X				X	X	1
Anatomy of the femoral triangle and upper thigh	X				X	X	1
Physiology of erection	X				X	X	1
Pharmacology of pain prevention and relief	X				X	X	1
Use of local anaesthetic and regional techniques	X				X	X	1
Pharmacology of agents used for chemotherapy in men with penile cancer	X				X	X	1
Pathology of the differing types of penile cancer and pre-malignant conditions	X				X	X	1
Role of genetics, oncogenes and growth factors in penile cancer	X				X	X	1
Role of environmental factors in penile cancer	X				X	X	1
Thorough understanding of current and previous systems for the staging and grading of penile	X				X	X	1
Understanding of the theoretical basis and techniques of radiological and nuclear medicine imaging	X				X	X	1
Understanding of the theoretical basis and techniques of radiotherapy for bladder cancer	X				X	X	1
<b>CLINICAL SKILLS</b>							
Appropriate use of pharmacological, immunological and biological agents in men with penile cancer	X				X	X	1
Application of the indications, contraindications and side effects	X				X	X	1
Appropriate use of stage, grade and molecular markers in the management of an individual with penile cancer	X				X	X	1
Appropriate imaging of men with penile cancer	X				X	X	1
Appropriate use of radiotherapy in the treatment of men with penile cancer	X				X	X	1
<b>TECHNICAL SKILLS AND PROCEDURES</b>							
N/A							

Modular Curriculum in Penile Cancer: Management of the primary cancer							
<b>OBJECTIVE</b>							
To develop advanced skills in the assessment and treatment of men with penile cancer							
<b>KNOWLEDGE</b>							
Rationale for, indications, results, and complications of surgery and radiotherapy the treatment of penile cancer							
	X				X	X	1
The rationale, role and limitations of new technology in the diagnosis and therapy of penile cancer	X				X	X	1
Understanding of the biology of penile cancer	X				X	X	1
Understanding of the extent and relevance of co-morbidity in the choice of therapy	X				X	X	1
Entry into the relevant clinical trial	X					X	1
Practical surgery of the primary tumour in penile cancer	X				X	X	1
<b>CLINICAL SKILLS</b>							
Appropriate assessment of patients with penile cancer including radiological assessment	X					X	1
Formulation of a best fit management policy following discussion at an MDT meeting	X					X	1,2,3
Obtaining informed consent for the relevant therapy	X		X			X	1,3,4
Liaison with other specialties (eg plastic surgery, radiotherapy etc)	X					X	1,3,4
Formulation of a relevant follow up plan	X					X	1
Ability to choose appropriate therapeutic approach for the treatment of penile cancer	X				X	X	1
<b>TECHNICAL SKILLS AND PROCEDURES</b>							
Circumcision and penile biopsy			X				1
Partial penectomy			X				1
Glansectomy and skin grafting			X				1
Total penectomy			X				1

Modular Curriculum in Penile Cancer: Management of the lymph nodes							
<b>OBJECTIVE</b>							
To develop advanced skills in the assessment and treatment of men with penile cancer							
<b>KNOWLEDGE</b>							



Rationale for, indications, results, and complications of surgery, chemotherapy and radiotherapy the treatment of lymphatic involvement		X				X	X	1
Understanding of the biology of penile cancer		X				X	X	1
Understanding of the extent and relevance of co-morbidity in the choice of therapy		X				X	X	1
Entry into the relevant clinical trial		X					X	1
Practical aspects of surgery for lymphatic involvement		X				X	X	1
<b>CLINICAL SKILLS</b>								
Assessment of patients with possible lymphatic involvement including radiological assessment	X						X	1
Formulation of treatment policy following discussion at an MDT meeting		X					X	1
Obtaining informed consent for the relevant therapy	X			X			X	1,3
Co-ordinating the role of non-medical professionals in the management		X					X	1,2,3,4
Formulation of a follow up plan		X					X	1
Ability to choose appropriate therapeutic approach for the treatment of penile cancer		X				X	X	1
<b>TECHNICAL SKILLS AND PROCEDURES</b>								
Block dissection inguinal lymph nodes					X			1
Block dissection external iliac lymph nodes					X			1
Laparoscopic pelvic node dissection				X				1

<b>Modular Curriculum in Penile Cancer: Metastatic penile cancer</b>								
<b>OBJECTIVE</b>								
To develop advanced skills in the assessment and treatment of men with penile cancer								
<b>KNOWLEDGE</b>								
Rationale for, indications, complications of different therapies for metastatic penile cancer including:								
Novel therapy		X				X	X	1
Entry into the relevant clinical trials		X					X	1
<b>CLINICAL SKILLS</b>								
Assessment and treatment of patients with metastatic penile cancer	X						X	1
Formulations of best fit treatment plan following an MDT meeting		X					X	1,3
Liaison with other specialties (eg radiotherapy, medical oncology)		X					X	1,3
<b>TECHNICAL SKILLS AND PROCEDURES</b>								
N/A								

<b>Modular curriculum in Testicular Cancer: Basic Science Anatomy</b>								
<b>OBJECTIVE</b>								
To develop advanced skills in the assessment and treatment of men with testis cancer								
<b>KNOWLEDGE</b>								
Embryology and anatomy of male genitalia including Lymphatic drainage								
		X				X	X	1
Anatomy of the retroperitoneum								
		X				X	X	1
Reproductive physiology								
		X				X	X	1
Pharmacology of pain prevention and relief								
		X				X	X	1
Use of local anaesthetic								
		X				X	X	1
Pharmacology of cytotoxic agents used in men with testis cancer								
		X				X	X	1
Pathology of the differing types of testis cancer and pre-malignant conditions								
		X				X	X	1
Role of genetics, oncogenes and growth factors in testis cancer								
		X				X	X	1
Role of environmental factors in testis cancer								
		X				X	X	1
Understanding of past and current systems for the staging and grading of testis cancer								
		X				X	X	1
Understanding of the theoretical basis and techniques of radiological and nuclear medicine imaging								
		X				X	X	1
Understanding of the theoretical basis and techniques of radiotherapy for bladder cancer								
		X				X	X	1
<b>CLINICAL SKILLS</b>								
Appropriate use of pharmacological agents in men with testis cancer								
		X				X	X	1
Application of the indications, contraindications and side effects								
		X				X	X	1
Appropriate use of stage, grade and molecular markers in the management of an individual with testis cancer								
		X				X	X	1
Appropriate imaging of men with testis cancer								
		X				X	X	1
Appropriate use or radiotherapy in the treatment of men with testis cancer								
		X				X	X	1
<b>TECHNICAL SKILLS AND PROCEDURES</b>								
N/A								

<b>Modular curriculum in Testicular Cancer: Management of the primary cancer</b>								
<b>OBJECTIVE</b>								
To develop advanced skills in the assessment and treatment of men with testis cancer								
<b>KNOWLEDGE</b>								
Rationale for, indications, results, and complications of surgery in the treatment of testis cancer								
		X				X	X	1
Understanding of the biology of testis cancer								
		X				X	X	1
Entry into the relevant clinical trial								
		X				X	X	1
Practical surgery of the primary tumour in testis cancer								
		X				X	X	1
<b>CLINICAL SKILLS</b>								
Appropriate assessment of patients with testis cancer including radiological assessment								
		X					X	1
Show appropriate regard to future fertility prospects								
		X				X	X	1,2,3,4
Liaison with other specialties (eg medical oncology, radiotherapy etc)								
		X					X	1,3
Formulation of a relevant follow up plan								
		X					X	1
<b>TECHNICAL SKILLS AND PROCEDURES</b>								
Radical orchidectomy								
				X				1
Insertion of testicular prosthesis								
				X				1

<b>Modular curriculum in Testicular Cancer: Metastatic testis cancer</b>								
<b>OBJECTIVE</b>								
To develop advanced skills in the assessment and treatment of men with testis cancer								
<b>KNOWLEDGE</b>								
Rationale for, indications, results, and complications of surgery, chemotherapy and radiotherapy in the treatment of metastatic testis cancer								
		X				X	X	1
Understanding of the biology of testis cancer								
		X				X	X	1
Understanding of the extent and relevance of co-morbidity in the choice of therapy								
		X					X	1
Entry into the relevant clinical trial								
		X				X	X	1
Practical aspects of surgery for metastatic disease								
		X				X	X	1
<b>CLINICAL SKILLS</b>								
Appropriate assessment of patients with possible metastatic testis cancer including assessment								
		X					X	1
Formulation of a best fit management policy following discussion at an MDT meeting								
		X					X	1,3
Obtaining informed consent for the relevant therapy								
		X			X		X	1,2,3
Liaison with other specialties (eg medical oncology, vascular surgery)								
		X					X	1,2,3
Formulation of a relevant follow up plan								
		X					X	1
<b>TECHNICAL SKILLS AND PROCEDURES</b>								
Retroperitoneal lymph node dissection								

<b>Modular curriculum in Female Urology: Basic Science Anatomy</b>								
<b>OBJECTIVE</b>								
To develop advanced skills in the assessment and treatment of women with lower urinary tract dysfunction								
<b>KNOWLEDGE</b>								
<b>Anatomy</b>								
Detailed knowledge of abdomino-pelvic anatomy especially bony pelvis, all pelvic viscera, pelvic floor, pelvic side wall and the endopelvic fasciae								
		X				X	X	1
Embryology of the genitourinary tract including development of the cloaca, intestinal tract and omentum.								
		X				X	X	1

Neuroanatomy as it relates to normal and abnormal bladder, urethral and pelvic floor function		X				X	X	1
<b>Physiology</b>								
Physiology and neurophysiology of the bladder including the basis of micturition and continence		X				X	X	1
Physiology of bladder musculature		X				X	X	1
Physiology of bladder mucosa		X				X	X	1
Physiological basis of bladder sensation		X				X	X	1
Physiology of female reproduction		X				X	X	1
Understanding of normal female hormonal function		X				X	X	1
Normal female sexuality including genital function and orgasm		X				X	X	1
<b>Pharmacology</b>								
Pharmacology of the urogenital organs including cholinergic, adrenergic and other neurotransmitter systems		X				X	X	1
Pharmacology of drugs used in the management of lower urinary tract dysfunction side-effects and complications		X				X	X	1
Knowledge of the relevant supporting scientific literature		X				X	X	1
Pharmacological agents treating other systems and their side-effects on urogenital tract including side-effects and complications of commonly used drugs		X				X	X	1
The use of hormone replacement therapy in postmenopausal women and hormone manipulation in pre-menopausal women		X				X	X	1
Pharmacological agents treating ano-rectal dysfunction including the pharmacological methods of treating constipation and altering bowel activity		X				X	X	1
<b>Pathology</b>								
Pathophysiology of urinary incontinence in women		X				X	X	1
Pathophysiology of pelvic organ prolapse in women		X				X	X	1
Pathology of ageing in women		X				X	X	1
Pathophysiology of interstitial cystitis and other causes of painful bladder syndrome		X				X	X	1
Pathophysiology of urinary infection in women		X				X	X	1
<b>CLINICAL SKILLS</b>								
Integrate issues of reproductive and sexual issues into the holistic management of women with lower urinary tract dysfunction		X				X		1
Appropriate use of commonly used drugs recognising common side effects, interactions and contra-indications		X				X		1
Appropriate assessment of women with lower urinary tract dysfunction	X						X	1
<b>TECHNICAL SKILLS AND PROCEDURES</b>								
Undertake urodynamic studies to investigate lower urinary tract dysfunction			X					1

**Modular curriculum in Female Urology: Management of continence problems in the elderly and the cognitively impaired**

<b>OBJECTIVE</b>								
To develop advanced skills in the assessment and treatment of women with lower urinary tract dysfunction								
<b>KNOWLEDGE</b>								
Specific needs of the elderly and cognitively impaired		X				X	X	1,2,3,4
<b>CLINICAL SKILLS</b>								
Demonstrate an appreciation of the specific issues posed by old age on management		X				X	X	1,2,3,4
<b>TECHNICAL SKILLS AND PROCEDURES</b>								
N/A								

**Modular curriculum in Female Urology: Urinary frequency/urgency syndrome and urinary urge incontinence**

<b>OBJECTIVE</b>								
To develop advanced skills in the assessment and treatment of women with lower urinary tract dysfunction								
<b>KNOWLEDGE</b>								
An understanding of the investigation, diagnosis and management		X				X	X	1
Clinical assessment techniques according to ICS standards.		X				X	X	1
The role of urodynamic, imaging, endoscopic and other investigative techniques.		X				X	X	1
Knowledge of conservative management techniques		X				X	X	1
Knowledge of surgical management techniques including indications, results and complications		X				X	X	1
Surgical interventions for urge urinary incontinence		X				X	X	1
<b>CLINICAL SKILLS</b>								
Counsel patients for a range of therapeutic options	X						X	1
Plan investigation and treatment		X				X	X	1
Conservative management		X				X	X	1
Appropriate liaison with the multidisciplinary team		X					X	1
Ability to determine appropriate management of patient with resistant overactive bladder		X				X	X	1
<b>TECHNICAL SKILLS AND PROCEDURES</b>								
Cystoscopy and injection Botulinum toxin					X			1
Augmentation and substitution cystoplasty					X			1
Sacral neuromodulation					X			1

**Modular curriculum in Female Urology: Bladder and pelvic pain syndromes (including "interstitial cystitis")**

<b>OBJECTIVE</b>								
To develop advanced skills in the assessment and treatment of women with lower urinary tract dysfunction								
<b>KNOWLEDGE</b>								
Understand the various types of pain syndrome and underlying possible aetiologies and current terminology.		X				X	X	1
An understanding of the investigation, diagnosis and management		X				X	X	1
Clinical assessment techniques according to ICS standards.		X				X	X	1
The role of urodynamics, imaging, endoscopy and other investigations.		X				X	X	1
Knowledge of conservative management techniques		X				X	X	1
Knowledge of surgical management techniques including indications, results and complications		X				X	X	1
Practical intervention for painful bladder syndrome		X				X	X	1
<b>CLINICAL SKILLS</b>								
Counsel patients for a range of therapeutic options	X						X	1
Plan investigation and treatment		X				X	X	1
Conservative management		X				X	X	1
Appropriate liaison with the multidisciplinary team		X					X	1
Ability to determine appropriate management of patient with resistant painful bladder syndrome		X					X	1
<b>TECHNICAL SKILLS AND PROCEDURES</b>								
Cystoscopic assessment painful bladder					X			1
Augmentation and substitution cystoplasty					X			1
Simple cystectomy					X			1
Ileal conduit diversion					X			1
Continent Urinary Diversion					X			1

**Modular curriculum in Female Urology: Stress urinary incontinence and mixed urinary incontinence**

<b>OBJECTIVE</b>								
To develop advanced skills in the assessment and treatment of women with lower urinary tract dysfunction								
<b>KNOWLEDGE</b>								
An understanding of the investigation, diagnosis and management		X				X	X	1
Clinical assessment techniques according to ICS standards.		X				X	X	1
The role of urodynamic, imaging, endoscopic and other investigative techniques.		X				X	X	1
Knowledge of conservative management techniques		X				X	X	1
Knowledge of surgical management techniques including indications, results and complications		X				X	X	1
Surgical interventions for stress urinary incontinence		X				X	X	1
<b>CLINICAL SKILLS</b>								
Counsel patients for a range of therapeutic options	X				X		X	1,3
Plan investigation and treatment		X				X	X	1
Conservative management		X				X	X	1

Appropriate liaison with the multidisciplinary team			X				X	X	1,3
Ability to determine appropriate surgical management of patient with stress urinary incontinence			X				X	X	1
<b>TECHNICAL SKILLS AND PROCEDURES</b>									
Midurethral tapes						X			1
Injection of bulking agents into bladder neck						X			1
Colposuspension						X			1
Pubourethral slings						X			1
Artificial urinary sphincter						X			1

<b>Modular curriculum in Female Urology: Female Urinary retention</b>									
<b>OBJECTIVE</b>									
To develop advanced skills in the assessment and treatment of women with lower urinary tract dysfunction									
<b>KNOWLEDGE</b>									
Knowledge of the underlying causes and mechanisms			X				X	X	1
<b>CLINICAL SKILLS</b>									
Be able and initiate appropriate investigation and management			X				X	X	1
Liaison with other specialties as appropriate			X					X	1,3
<b>TECHNICAL SKILLS AND PROCEDURES</b>									
N/A									

<b>Modular curriculum in Female Urology: Genito-urinary prolapse (primary and recurrent)</b>									
<b>OBJECTIVE</b>									
To develop advanced skills in the assessment and treatment of women with lower urinary tract dysfunction									
<b>KNOWLEDGE</b>									
Understanding of cause, pathophysiology and classification of pelvic organ prolapse			X				X	X	1
Understanding of female sexual function and dysfunction			X				X	X	1
Understanding of indications, techniques, results and complications of surgical and non-surgical therapies for pelvic organ prolapse			X				X	X	1
Surgical interventions for pelvic organ prolapse			X				X	X	1
<b>CLINICAL SKILLS</b>									
Appropriate assessment of pelvic organ prolapse			X					X	1
Be able to identify and advise on the appropriateness of surgery or other conservative approaches.			X				X		1
Able to fit ring pessary					X				1
Be able to advise on the appropriateness of surgery			X					X	1
Liaison with other specialties as appropriate			X					X	1,3
Ability to determine appropriate management of patient with prolapse			X				X	X	1
<b>TECHNICAL SKILLS AND PROCEDURES</b>									
Anterior repair						X			
Paravaginal repair / Vagino-obturator shelf						X			
Sacrocolpopexy						X			
Vaginal hysterectomy						X			

<b>Modular curriculum in Female Urology: Urinary fistula</b>									
<b>OBJECTIVE</b>									
To develop advanced skills in the assessment and treatment of women with lower urinary tract dysfunction									
<b>KNOWLEDGE</b>									
Causes, pathophysiology, presentation and complications of urinary fistulae			X				X	X	1
Knowledge of appropriate management and diagnostic techniques including indications, results, complications			X				X	X	1
Surgical treatment of urinary fistula			X				X	X	1
<b>CLINICAL SKILLS</b>									
Appropriate assessment of urinary fistulae			X					X	1
Be able to advise on the appropriateness of surgery			X					X	1
Liaise with appropriate specialty including pelvic reconstructive surgeon			X					X	1,2
Ability to determine appropriate management of patient with urinary fistula			X				X	X	1
<b>TECHNICAL SKILLS AND PROCEDURES</b>									
Repair vesicovaginal fistula						X			1
Martius flap						X			1
Ileal conduit						X			1
Repair urethrovaginal fistula						X			1
Repair of uretero vaginal fistula						X			1
Simple cystectomy						X			1
Continent urinary diversion						X			1

<b>Modular curriculum in Female Urology: Urethral diverticulum</b>									
<b>OBJECTIVE</b>									
To develop advanced skills in the assessment and treatment of women with lower urinary tract dysfunction									
<b>KNOWLEDGE</b>									
Causes, pathophysiology, presentation and complications of urethral diverticulum			X				X	X	1
Knowledge of appropriate management and diagnostic techniques including indications, results, complications			X				X	X	1
<b>CLINICAL SKILLS</b>									
Appropriate assessment of urethral diverticulum			X					X	1
Be able to advise on the appropriateness of surgery			X					X	1
Liaise with appropriate specialty including pelvic reconstructive surgeon			X	X				X	1,3
<b>TECHNICAL SKILLS AND PROCEDURES</b>									
Surgical excision urethral diverticulum						X			

<b>Modular curriculum in Female Urology: Trauma to the genito-urinary tract in women Effects of radiation and bowel or pelvic surgery on bladder, bowel and pelvic floor function</b>									
<b>OBJECTIVE</b>									
To develop advanced skills in the assessment and treatment of women with lower urinary tract dysfunction									
<b>KNOWLEDGE</b>									
Pathophysiology of congenital, inflammatory, traumatic and radiation damage to the genitourinary tract			X				X	X	1
Knowledge of management and diagnostic techniques			X				X	X	1
Awareness of possible techniques including inverted skin grafts, use of chorionic tissue, gracilis flaps and bowel interposition			X				X	X	1
<b>CLINICAL SKILLS</b>									
Appropriate assessment of women with congenital, traumatic, inflammatory and radiation damage to the genitourinary tract			X					X	1
Be able to advise on the appropriateness of surgery			X					X	1,3
Practical surgical treatment congenital, inflammatory, traumatic and radiation damage to the genitourinary tract			X					X	1
<b>TECHNICAL SKILLS AND PROCEDURES</b>									
Vaginal reconstruction						X			1
Martius flap						X			1
Ileal conduit						X			1
Simple cystectomy						X			1
Continent urinary diversion						X			1

<b>Modular curriculum in Female Urology: Defaecatory disorders and other lower gastrointestinal disorders Anorectal reconstruction</b>									
<b>OBJECTIVE</b>									
To develop advanced skills in the assessment and treatment of women with lower urinary tract dysfunction									
<b>KNOWLEDGE</b>									

Understand the techniques of assessment and treatment of anorectal disorders including:		X				X	X	1
-Anorectal physiology tests including manometry, proctography and endoanal US		X				X	X	1
-Pelvic floor electromyography		X				X	X	1
-Nerve conduction studies		X				X	X	1
<b>CLINICAL SKILLS</b>								
Assessment of bowel dysfunction in women with lower tract dysfunction	X						X	1
Competence in use of dietary regimes, bowel medications and enemas		X				X	X	1
<b>TECHNICAL SKILLS AND PROCEDURES</b>								
N/A								

Modular Curriculum in Bladder and Upper urinary tract reconstruction: Basic Science								
<b>OBJECTIVE</b>								
To develop advanced skills in the reconstruction of the bladder and the upper urinary tract								
<b>KNOWLEDGE</b>								
<b>Anatomy</b>								
Detailed knowledge of abdomino-pelvic anatomy especially Bony pelvis, all pelvic and abdominal viscera, pelvic floor, pelvic side wall and the endopelvic fasciae		X				X	X	1
Embryology of the genitourinary tract including development of the cloaca, intestinal tract and omentum		X				X	X	1
Neuroanatomy as it relates to normal and abnormal bladder, urethral and pelvic floor function		X				X	X	1
Anatomy and vascular blood supply of intestine		X				X	X	1
<b>Physiology</b>								
Physiology and neurophysiology of the bladder including the basis of micturition and continence		X				X	X	1
Physiology of bladder musculature		X				X	X	1
Physiology of bladder mucosa		X				X	X	1
Physiological basis of bladder sensation		X				X	X	1
Physiology of gastrointestinal function		X				X	X	1
<b>Pharmacology</b>								
Pharmacology of the urogenital organs including cholinergic, adrenergic and other neurotransmitter systems		X				X	X	1
Pharmacology of drugs used in the management of lower urinary tract dysfunction side-effects and complications		X				X	X	1
Knowledge of the relevant supporting scientific literature		X				X	X	1
Pharmacological agents treating other systems and their side-effects on urogenital tract including side-effects and complications of commonly used drugs		X				X	X	1
<b>Pathology</b>								
Causes / pathophysiology of conditions that might require reconstruction of the bladder and ureter including:		X				X	X	1
-Congenital and acquired conditions of the central nervous system		X				X	X	1
-Congenital abnormalities of the urinary tract		X				X	X	1
-Genitourinary tumours		X				X	X	1
-Inflammatory conditions of the urinary tract		X				X	X	1
-Iatrogenic damage		X				X	X	1
-Trauma		X				X	X	1
Pathophysiology of urinary incontinence		X				X	X	1
Pathophysiology of pelvic organ prolapse in women		X				X	X	1
Pathophysiology of urinary infection		X				X	X	1
<b>CLINICAL SKILLS</b>								
Appropriate assessment of patients with upper and lower urinary tract dysfunction who require urinary tract reconstruction	X							
<b>TECHNICAL SKILLS AND PROCEDURES</b>								
Undertake urodynamic studies to investigate lower urinary tract dysfunction			X					1

Modular Curriculum in Bladder and Upper urinary tract reconstruction: Assessment and follow-up of patients requiring urinary tract reconstruction								
<b>OBJECTIVE</b>								
To develop advanced skills in the reconstruction of the bladder and the upper urinary tract								
<b>KNOWLEDGE</b>								
Causes and pathophysiology of conditions requiring bladder and ureteric reconstruction		X				X	X	1
Techniques of assessment for bladder and urinary tract reconstruction including urodynamics, radiology and nuclear medicine techniques		X				X	X	1
Metabolic effects of urinary tract reconstruction and interposition of intestine within the urinary tract		X				X	X	1
Complications of urinary tract reconstruction and interposition of intestine within the urinary tract		X				X	X	1
Knowledge of endourological techniques relevant to urinary tract reconstruction		X				X	X	1
Practical surgical techniques in reconstruction of the bladder and ureter		X				X	X	1
<b>CLINICAL SKILLS</b>								
Appropriate assessment of patients requiring urinary tract reconstruction	X						X	1
Be able to advise on the surgical and non-surgical options and the appropriateness of surgery		X					X	1
Management of post-operative consequences of urinary tract reconstruction and interposition of intestine within the urinary tract		X					X	1
Arrange appropriate follow up of patients with urinary tract reconstruction and interposition of intestine within the urinary tract		X					X	1
Liaison with other specialties e.g. radiology, GI surgeons		X					X	1.3
Ability to determine appropriate choice of reconstructive technique		X				X	X	1
<b>TECHNICAL SKILLS AND PROCEDURES</b>								
Intestinal anastomosis				X				1
Mobilisation omentum				X				1
For the following the achievement will typically be 1-2 and the exact level of competence will largely depend upon casemix to which the trainee is exposed:				X				1
Ureteric anastomosis				X				1
Ureteric reimplantation				X				1
Psoas hitch				X				1
Boari flap				X				1
Transuretero-ureterostomy				X				1
Simple cystectomy				X				1
Augmentation cystoplasty				X				1
Substitution cystoplasty				X				1
Ileal conduit diversion				X				1
Continent urinary diversion				X				1
Orthotopic bladder reconstruction				X				1
Artificial urinary sphincter insertion				X				1
Vaginal reconstruction				X				1

Modular Curriculum in Urethral Reconstruction: Basic Science								
<b>OBJECTIVE</b>								
To develop advanced skills in the reconstructive surgery of the urethra								
<b>KNOWLEDGE</b>								
Knowledge of the pelvis, male genitalia and urethra including embryology of urethra including hypospadias and epispadias		X				X	X	1
Neuroanatomy as it relates to normal and abnormal bladder, urethral and pelvic floor function		X				X	X	1
Physiology and neurophysiology of micturition and continence		X				X	X	1
Physiology of erection and ejaculation		X				X	X	1
Reproductive physiology		X				X	X	1
Pharmacology of drugs used in the management of lower urinary tract dysfunction		X				X	X	1
Causes, pathophysiology and complications of urethral strictures		X				X	X	1
Pathophysiology of traumatic urethral injury		X				X	X	1
<b>CLINICAL SKILLS</b>								
Appropriate assessment of men with urethral strictures	X						X	1



Augmentation cystoplasty				X							1
Substitution cystoplasty				X							1
Continent diversion				X							1
Insertion artificial urinary sphincter				X							1
Insertion spinal stimulator				X							1
Neuromodulation				X							1

**Modular curriculum in Male Factor Infertility: Basic Science**

<b>OBJECTIVE</b>											
To develop advanced skills in the assessment and treatment of patients with male factor infertility											
<b>KNOWLEDGE</b>											
<b>Anatomy</b>											
A detailed knowledge of the anatomy and embryology of the genitalia and reproductive system								X		X	1
Knowledge of the vascular, lymphatic and nerve supply to the genitalia and reproductive system and abdominal/pelvic organs.			X							X	1
Embryology of the male genitalia with particular emphasis on congenital anomalies and their effects on male sexual function.			X				X		X		1
Micro/macrosopic anatomy of the reproductive system including their anatomical relationship to other genito-urinary organs			X				X		X		1
Micro/macrosopic anatomy of the male genitalia			X				X		X		1
<b>Physiology</b>											
Genetics and male sexual function (Normal sexual differentiation, Abnormal sexual differentiation, Intersex states Genetic anomalies and infertility)			X					X		X	1
The male reproductive axis (Hypothalamic- pituitary function, Endocrinology of the Testis, Testosterone metabolism, Effects of aging on male endocrinology)			X							X	1
Spermatogenesis (Genetic basis of spermatogenesis, Hormonal regulation of spermatogenesis, Sertoli cell function)			X					X		X	1
Physiology of male reproduction (Epididymal function, Physiology of the vas deferens, Physiology of the seminal vesicles, Ejaculation, Role of the prostate in sexual function)			X					X		X	1
Physiology of female sexual function			X					X		X	1
Physiology of female reproduction			X					X		X	1
<b>Pharmacology</b>											
Drugs / gonadotoxins and their effects on male reproduction and sexual function			X					X		X	1
The pharmacological treatment of male factor infertility			X					X		X	1
<b>Pathology</b>											
Aetiology and pathogenesis of male infertility			X					X		X	1
Anti-sperm anti-bodies and fertility			X					X		X	1
Varicocele and male fertility			X					X		X	1
Pathophysiology of testicular obstruction			X					X		X	1
<b>CLINICAL SKILLS</b>											
Appropriate assessment and treatment of man or couple with male factor infertility			X					X		X	1
Appropriate use of commonly used drugs recognising common side effects, interactions and contra-indications			X					X		X	1
<b>TECHNICAL SKILLS AND PROCEDURES</b>											
N/A											

**Modular curriculum in Male Factor Infertility: Male factor infertility**

<b>OBJECTIVE</b>											
To develop advanced skills in the assessment and treatment of patients with male factor infertility											
<b>KNOWLEDGE</b>											
Causes of male factor infertility			X					X		X	1
Causes of female factor infertility			X					X		X	1
Appropriate investigation of male sub-fertility			X					X		X	1
Varicocele and male fertility			X					X		X	1
Endocrine disease and infertility			X					X		X	1
Causes of testicular obstruction			X					X		X	1
The role of assisted conception techniques in the treatment of the infertile couple			X					X		X	1
Treatment of male factor infertility			X					X		X	1
Anti-sperm anti-bodies and fertility			X					X		X	1
Surgical treatment of male factor infertility			X					X		X	1
Indications for, methods, results and complications of sperm retrieval			X					X		X	1
Indications for, methods, results and complications of assisted conception			X					X		X	1
Regulatory rules relating to sperm storage and assisted conception			X					X		X	1
Microsurgical treatment of male factor infertility			X					X		X	1
<b>CLINICAL SKILLS</b>											
Evaluation of the female			X					X		X	1
Clinical assessment of the sub-fertile male			X					X		X	1
Investigation of male sub-fertility			X					X		X	1
Treatment of male sub-fertility			X					X		X	1
Appropriate liaison with multidisciplinary team			X							X	1,2,3
Empathetic assessment of fertility issues			X			X				X	1
Ability to determine appropriate surgical plan for male factor infertility			X							X	1
Treatment of male sub-fertility			X					X		X	1
Appropriate liaison with multidisciplinary team and referral for assisted reproductive techniques			X							X	1,2,3
Empathetic assessment of fertility issues			X			X				X	1
Ability to determine appropriate surgical plan for male factor infertility			X					X		X	1
<b>TECHNICAL SKILLS AND PROCEDURES</b>											
Varicocele						X					1
Testicular exploration and Vasography						X					1
Transurethral resection of ejaculatory ducts						X					1
Electroejaculation						X					1
Vaso-vasostomy						X					1
Testicular exploration and sperm extraction (TESE)						X					1
Percutaneous sperm extraction (PESA)						X					1
Micro-epididymal sperm aspiration (MESA)						X					1
Tubulo-vasostomy						X					1

**Modular curriculum in benign disorders of male sexual dysfunction: Basic Science**

<b>OBJECTIVE</b>											
To develop advanced skills in the assessment and treatment of patients with benign disease of male sexual dysfunction											
<b>KNOWLEDGE</b>											
<b>Anatomy</b>											
A detailed knowledge of the anatomy and embryology of the genitalia and reproductive system			X					X		X	1
Knowledge of the vascular, lymphatic and nerve supply to the genitalia and reproductive system and abdominal/pelvic organs.			X					X		X	1
Embryology of the male genitalia with particular emphasis on congenital anomalies and their effects on male sexual function.			X					X		X	1
Micro/macrosopic anatomy of the reproductive system including their anatomical relationship to other genito-urinary organs			X					X		X	1
Micro/macrosopic anatomy of the male genitalia			X					X		X	1
<b>Physiology</b>											
Functional anatomy (blood supply and venous/lymphatic drainage of the penis)			X					X		X	1
Physiology and neurophysiology of penile erection including neurotransmitters involved in penile erection			X					X		X	1
Cardiovascular function relevant to sexual dysfunction			X					X		X	1
Endocrinology of male sexual function (Hypothalamic- pituitary function, Endocrinology of the Testis, Testosterone metabolism)			X					X		X	1
Desire			X					X		X	1
Orgasm			X					X		X	1
Physiology of ejaculation (Physiology of the vas deferens, Physiology of the seminal vesicles, Role of the prostate in sexual function)			X					X		X	1
Physiology of female sexual function			X					X		X	1



To develop advanced skills in the assessment and treatment of patients with benign disease of male sexual dysfunction

<b>KNOWLEDGE</b>								
Causes and classification			X				X	X 1
Knowledge of range of therapies			X				X	X 1
Surgical therapy of penile dysmorphism			X				X	X 1
<b>CLINICAL SKILLS</b>								
Appropriate investigation and management of man with penile dysmorphism			X				X	X 1
Appropriate liaison with other specialities			X				X	X 1
Empathetic assessment of male sexual difficulties		X						1
<b>TECHNICAL SKILLS AND PROCEDURES</b>								
Division of suspensory ligament						X		1
Repair of suspensory ligament						X		1

<b>Modular curriculum in Male Factor Infertility: Penile fracture</b>								
<b>OBJECTIVE</b>								
To develop advanced skills in the assessment and treatment of patients with benign disease of male sexual dysfunction								
<b>KNOWLEDGE</b>								
Mechanisms of injury			X				X	X 1
Knowledge of range of therapies			X				X	X 1
<b>CLINICAL SKILLS</b>								
Appropriate investigation and management of man with penile fracture			X				X	X 1
<b>TECHNICAL SKILLS AND PROCEDURES</b>								
Surgical repair of penile fracture						X		

<b>Modular curriculum in Paediatric Urology: Basic Science</b>								
<b>OBJECTIVE</b>								
To develop advanced skills in the assessment and treatment of urological disease in children								
<b>KNOWLEDGE</b>								
Detailed knowledge of the pelvis, male genitalia and urethra including the embryology of urethra including hypospadias and epispadias			X				X	X 1
Neuroanatomy as it relates to normal and abnormal bladder, urethral and pelvic floor function			X				X	X 1
Physiology and neurophysiology of micturition and continence			X				X	X 1
Physiology of erection and ejaculation			X				X	X 1
Reproductive physiology			X				X	X 1
Pharmacology of drugs used in the management of lower urinary tract dysfunction side-effects and complications			X				X	X 1
Causes, pathophysiology and complications of urethral strictures			X				X	X 1
Pathophysiology of traumatic injury to the urethra			X				X	X 1
<b>CLINICAL SKILLS</b>								
Appropriate assessment of children with hypospadias and epispadias			X				X	X 1
Appropriate use of commonly used drugs recognising common side effects, interactions and contra-indications			X				X	X 1
<b>TECHNICAL SKILLS AND PROCEDURES</b>								
N/A								

<b>Modular curriculum in Paediatric Urology: Congenital disorders affecting the urinary tract</b>								
<b>OBJECTIVE</b>								
To develop advanced skills in the assessment and treatment of urological disease in children								
<b>KNOWLEDGE</b>								
Common congenital disorders affecting the urinary tract (e.g undescended testis and urinary tract reflux)			X				X	X 1
Changes related to congenital abnormalities			X				X	X 1
<b>CLINICAL SKILLS</b>								
Investigation and management of patients			X				X	X 1
Investigation and basic management of patients			X				X	X 1
<b>TECHNICAL SKILLS AND PROCEDURES</b>								
Surgical Management of cryptorchidism			X				X	X 1
Surgery for ureteric reflux			X				X	X 1
See below								

<b>Modular curriculum in Paediatric Urology: Principles of human genetics</b>								
<b>OBJECTIVE</b>								
To develop advanced skills in the assessment and treatment of urological disease in children								
<b>KNOWLEDGE</b>								
Basic genetics of uropathological conditions			X				X	X 1
<b>CLINICAL SKILLS</b>								
Recognition of possible genetic component to specified condition		X	X					X 1
<b>TECHNICAL SKILLS AND PROCEDURES</b>								
N/A								

<b>Modular curriculum in Paediatric Urology: Urinary Tract Infections</b>								
<b>OBJECTIVE</b>								
To develop advanced skills in the assessment and treatment of urological disease in children								
<b>KNOWLEDGE</b>								
Biological mechanisms of upper and lower urinary tract infection – virulence			X				X	X 1
Host defence			X				X	X 1
Detailed knowledge of reflux			X				X	X 1
Antibiotics - Mechanisms of action			X				X	X 1
<b>CLINICAL SKILLS</b>								
Identification of:								
- Significant infection			X					X 1
- Asymptomatic bacteruria			X					X 1
Correct antibiotic selection			X					X 1
Management of children			X					X 1
Choice of surgical approach for vesicoureteric reflux			X					X 1
<b>TECHNICAL SKILLS AND PROCEDURES</b>								
Endoscopic treatment of reflux disease						X		1
Open ureteric re-implantation						X		1

<b>Modular curriculum in Paediatric Urology: The acute scrotum</b>								
<b>OBJECTIVE</b>								
To develop advanced skills in the assessment and treatment of urological disease in children								
<b>KNOWLEDGE</b>								
Pathogenesis, natural history and complications			X				X	X 1
Clinical presentation and management			X				X	X 1
<b>CLINICAL SKILLS</b>								
Assessment of patient		X	X					X 1,3
Correct interpretation of tests			X					X 1
Medical management of patient			X					X 1
<b>TECHNICAL SKILLS AND PROCEDURES</b>								
Surgical management of the acute scrotum						X		1

<b>Modular curriculum in Paediatric Urology: Upper urinary tract obstruction</b>								
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OBJECTIVE										
To develop advanced skills in the assessment and treatment of urological disease in children										
KNOWLEDGE										
Aetiology, pathophysiology and clinical features in childhood										
			X					X	X	1
Investigation										
			X					X	X	1
Formulation of appropriate management of children with Pelvi-ureteric junction obstruction (PUJ) obstruction										
			X						X	1
Indications, operative steps and complications of the different approaches to the treatment of PUJ obstruction, including:										
-Percutaneous approaches										
			X						X	1
-Laparoscopic approaches										
			X						X	1
-Open surgical approaches										
			X						X	1
Practical expertise in the surgical management of PUJ obstruction										
			X						X	1
CLINICAL SKILLS										
Appropriate assessment of unilateral and bilateral renal obstruction										
		X	X						X	1,3
Recognition and early management of sepsis										
		X	X						X	1,3
Appropriate management of patient with PUJ obstruction										
			X						X	1
Interpretation of clinical findings and results of investigations										
			X						X	1
Ability to organise appropriate management plan										
			X						X	1
Ability to explain procedures and outcomes to parents and obtain informed consent										
		X	X						X	1,3
Knowledge and appropriate use of treatment options										
			X						X	1
TECHNICAL SKILLS AND PROCEDURES										
Percutaneous treatment of PUJ obstruction										
						X				1
Laparoscopic pyeloplasty										
						X				1
Laparoscopic nephrectomy										
						X				1
Open pyeloplasty										
						X				1

#### Modular curriculum in Paediatric Urology: Wilm's tumour and Neuroblastoma

OBJECTIVE										
To develop advanced skills in the assessment and treatment of urological disease in children										
KNOWLEDGE										
TNM classification										
			X					X	X	1
Pathology of the differing types of benign and malignant tumours affecting the kidney										
			X					X	X	1
Current theories of tumour initiation and growth										
			X					X	X	1
Thorough understanding of current and previous systems for staging										
			X					X	X	1
CLINICAL SKILLS										
Appropriate use of stage, grade and molecular markers in the management of a child with renal cancer										
			X						X	1
TECHNICAL SKILLS AND PROCEDURES										
N/A										

#### Modular curriculum in Paediatric Urology: Radiology

OBJECTIVE										
To develop advanced skills in the assessment and treatment of urological disease in children										
KNOWLEDGE										
Understanding of the theoretical basis and techniques of radiological and nuclear medicine imaging										
			X					X	X	1
CLINICAL SKILLS										
Appropriate imaging of children with renal cancer										
			X					X	X	1
TECHNICAL SKILLS AND PROCEDURES										
N/A										

#### Modular curriculum in Paediatric Urology: Treatment

OBJECTIVE										
To develop advanced skills in the assessment and treatment of urological disease in children										
KNOWLEDGE										
Current standards of treatment for common urological cancers										
			X					X	X	1
Practical treatment of localised renal cancer										
			X					X	X	1
CLINICAL SKILLS										
High level/empathetic communication skills										
		X							X	1
Appropriate management of urological malignancies										
			X						X	1
Appropriate referral for sub-specialist management and surgery										
			X						X	1
TECHNICAL SKILLS AND PROCEDURES										
Radical nephrectomy										
						X				1
Laparoscopic nephrectomy										
						X				1

#### Modular curriculum in Paediatric Urology: Urinary incontinence and neuropathic bladder To include spina bifida, epispadias/ extrophy complex and posterior urethral valves

OBJECTIVE										
N/A										
KNOWLEDGE										
Anatomy/physiology and pharmacology of bladder and sphincter mechanisms										
			X					X	X	1
Aetiology, epidemiology, pathophysiology and classification incontinence in childhood										
			X					X	X	1
Natural history of enuresis										
			X					X	X	1
Causes of neuropathic bladder										
			X					X	X	1
Types of neuropathic bladder presentation										
			X					X	X	1
Clinical presentation and differential diagnosis										
			X					X	X	1
Management of neuropathic incontinence										
			X					X	X	1
Clinical presentation and differential diagnosis										
			X					X	X	1
Management of urinary incontinence										
			X					X	X	1
CLINICAL SKILLS										
Appropriate history and examination										
		X							X	1
Investigation including Interpretation of frequency volume chart										
			X					X	X	1
Appropriate liaison with multidisciplinary team (eg neurology and continence services)										
			X				X			1
Appropriate referral for sub-specialist management and surgery										
			X						X	1
Formulation of a realistic treatment plan										
			X						X	1
Medical management of urinary incontinence										
			X						X	1
TECHNICAL SKILLS AND PROCEDURES										
Urodynamic studies										
			X	X					X	

#### Modular curriculum in Paediatric Urology: Assessment of children requiring urinary tract reconstruction

OBJECTIVE										
To develop advanced skills in the assessment and treatment of urological disease in children										
KNOWLEDGE										
Practical surgical techniques in reconstruction of the bladder and ureter										
			X					X	X	1
CLINICAL SKILLS										
Appropriate choice of surgical procedure for a child requiring reconstruction										
			X						X	1
TECHNICAL SKILLS AND PROCEDURES										
Intestinal anastomosis										
						X				1
Mobilisation omentum										
						X				1
(exact level of competence will depend upon casemix):										
Ureteric anastomosis										
						X				1
Ureteric reimplantation										
						X				1
Psoas hitch										
						X				1

Boari flap					X						1
Transuretero-ureterostomy					X						1
Simple cystectomy					X						1
Augmentation cystoplasty					X						1
Substitution cystoplasty					X						1
Ileal conduit diversion					X						1
Continent urinary diversion					X						1
Artificial urinary sphincter insertion					X						1
Vaginal reconstruction					X						1

<b>Modular curriculum in Paediatric Urology: Assessment and management of boys requiring urethral reconstruction</b>											
<b>OBJECTIVE</b>											
N/A											
<b>KNOWLEDGE</b>											
Pathophysiology of congenital abnormalities including hypospadias and epispadias											
					X				X	X	1
Causes, pathophysiology and complications of urethral strictures											
					X				X	X	1
Pathophysiology of traumatic injury to the urethra											
					X				X	X	1
Techniques of assessment for bladder and urinary tract reconstruction including urodynamics, radiology and nuclear medicine techniques											
					X				X	X	1
Techniques and complications of urethral reconstruction											
					X				X	X	1
<b>CLINICAL SKILLS</b>											
Appropriate assessment of patients requiring urethral											
					X	X				X	1,3
Be able to advise on the surgical options and the appropriateness of surgery											
					X	X				X	1,3
Management of post-operative consequences of urethral reconstruction											
					X					X	1
Arrange appropriate follow up of boys with urethral reconstruction											
					X					X	1
Liaison with other specialties e.g. radiology, orthopaedics, GI surgeons											
					X					X	1
Appropriate choice of surgical procedure for child with hypospadias											
					X					X	1
<b>TECHNICAL SKILLS AND PROCEDURES</b>											
MAGPI repair											
								X			
Harvesting buccal mucosa graft											
								X			
Snodgrass repair											
								X			
Two stage buccal graft urethroplasty											
								X			
Surgery for epispadias											
								X			

<b>Modular Curriculum in Renal Transplantation: Renal Transplantation</b>											
<b>OBJECTIVE</b>											
To develop advanced skills in renal transplantation and surgical aspects of renal replacement therapy											
<b>KNOWLEDGE</b>											
<b>Anatomy</b>											
Retroperitoneum and the great vessels											
					X				X	X	1
Embryology of the genitourinary tract including development of the kidney and the common variations in vascular supply to the kidney.											
					X				X	X	1
Anatomy and blood supply of the kidney, ureter and bladder.											
					X				X	X	1
Neuroanatomy as it relates to normal and abnormal bladder, urethral and pelvic floor function											
					X				X	X	1
Arterial supply and venous drainage of the upper and lower limbs.											
					X				X	X	1
<b>Physiology</b>											
Physiology of the kidney											
					X				X	X	1
Physiology of fluid balance											
					X				X	X	1
Physiology of the lower urinary tract											
					X				X	X	1
<b>Pharmacology</b>											
Pharmacology of drugs used in immunosuppression											
					X				X	X	1
Pharmacology of perfusion fluids and use of diuretics											
					X				X	X	1
Pharmacology of inotropes and blood pressure control and effects of drugs on renal blood flow.											
					X				X	X	1
<b>Immunology</b>											
HLA matching.											
					X				X	X	1
Cytotoxic cross match											
					X				X	X	1
Rejection											
					X				X	X	1
Immunosuppression											
					X				X	X	1
<b>Renal failure</b>											
Causes and classification											
					X				X	X	1
Pathophysiology											
					X				X	X	1
Clinical features											
					X				X	X	1
Treatment options for renal failure											
					X				X	X	1
Indications and contraindications for kidney transplantation											
					X				X	X	1
Indications and types of dialysis											
					X				X	X	1
Access for dialysis											
					X				X	X	1
complications of dialysis											
					X				X	X	1
<b>Organ donation</b>											
Criteria for brainstem death											
					X				X	X	1
Pathophysiology of brainstem death											
					X				X	X	1
Principles of donor management and organ preservation											
					X				X	X	1
<b>CLINICAL SKILLS</b>											
Assess and manage organ donors (including live and NHB donors)											
					X	X				X	1,3
<b>Vascular Access</b>											
Assess patients referred for vascular access:											
Identify appropriate access site											
					X	X				X	1
Manage complications including thrombosis, haemorrhage and vascular complications such as steal, venous hypertension, cardiac failure and aneurysm											
					X	X				X	1
<b>Peritoneal dialysis</b>											
Assess patients referred for peritoneal dialysis											
					X	X				X	1
Manage post-op care of patients with peritoneal dialysis catheter											
					X	X				X	1
manage complications including peritonitis											
					X	X				X	1
<b>Renal transplantation</b>											
Select appropriate patient from the waiting list											
					X	X				X	1
Assessment of patients requiring renal transplantation or renal replacement therapy											
					X	X				X	1
Counsel patients regarding organ donation.											
					X	X				X	1
Manage transplant recipient perioperatively											
					X	X				X	1
Manage post-operative complications.											
					X	X				X	1
Follow up of patients with renal transplants.											
					X	X				X	1
Liaison with other specialties e.g. nephrology and radiology.											
					X	X				X	1
<b>TECHNICAL SKILLS AND PROCEDURES</b>											
Peritoneal dialysis catheter-insert											
							X				1
Peritoneal dialysis catheter-removal											
							X				1
Central venous line insertion											
							X				1
Form arterio-venous fistula at wrist and elbow											
							X				1
Ligate arterio-venous fistula at wrist and elbow											
							X				1
Cadaveric donor nephrectomy for transplantation											
							X				1
Open donor nephrectomy for transplantation											
							X				1
Laparoscopic donor nephrectomy for transplantation											
							X				1
Renal transplantation including:											
							X				1
Preparation of kidney for transplant											
							X				1
End to end and end to side anastomosis of renal artery to recipient											
							X				1

End to side venous anastomosis and vein patch				X				1
Ureteric reimplantation				X				1
Transplant nephrectomy				X				1