

MODULE TITLE: <b>ABDOMINAL WALL, RETROPERITONEUM, UROGENITAL</b>	
<b>Module Rationale and Objectives</b>	<p>A general surgeon is required to have a thorough understanding of normal anatomy and physiology, as well as pathophysiology, investigations, differential diagnosis and surgical and non-surgical management of abdominal wall and retroperitoneal disorders. It is important that general surgeons maintain a current understanding of the most appropriate time and manner of intervention.</p> <p>The graduating trainee will be able to:</p> <ul style="list-style-type: none"> <li>describe common surgical pathologies of the abdominal wall and retroperitoneum</li> <li>identify and recognise the symptoms and signs of these conditions</li> <li>describe and select appropriate diagnostic testing</li> <li>identify appropriate treatment options, and their indications and contraindications</li> <li>diagnose and manage pathological conditions that pertain to the abdominal wall, retroperitoneum and urogenital tract, including referral to other specialists where indicated</li> <li>select appropriate investigative tools</li> <li>adapt their skill in the context of each patient and each procedure</li> <li>identify and manage risk</li> <li>recognise the need to refer patients to other professionals</li> <li>communicate information to patients (and their family) about procedures, outcomes, and risks associated with surgery in ways that encourage their participation in informed decision making (consent)</li> </ul>
<b>Anatomy, Physiology, Pathology</b>	<p>Trainees should have basic knowledge of the normal embryology, anatomy, and pathology, of:</p> <ul style="list-style-type: none"> <li>abdominal cavity and its walls</li> <li>inguinoscrotal region</li> <li>external genitalia</li> <li>urogenital tract</li> </ul>
<b>Definitions</b>	<p><i>Operative Management - Knows:</i> Trainees are required to be familiar with the indications, benefits and limitations of the procedure; trainees should be able to describe the relevant operative techniques involved in performing the procedure; trainees are encouraged to at least observe and preferably assist in these procedures.</p> <p><i>Operative Management - Does:</i> In addition to the above, trainees must be competent at performing the procedure.</p>

SET LEVEL	TECHNICAL EXPERTISE	
	OPERATIVE MANAGEMENT - KNOWS -	OPERATIVE MANAGEMENT - DOES -
<b>Adult groin hernias</b>		
<ul style="list-style-type: none"> <li>inguinal</li> <li>femoral</li> </ul>		
Early SET		<ul style="list-style-type: none"> <li>Open (mesh) repair of inguinal hernia</li> <li>Open repair of femoral hernias</li> <li>Open repair of strangulated and non-strangulated femoral and inguinal hernias</li> <li>Laparoscopic inguinal hernia repair</li> </ul>
<b>Paediatric inguinal hernia/congenital hydrocele</b>		
Mid SET	<ul style="list-style-type: none"> <li>Inguinal herniotomy</li> </ul>	
<b>Umbilical/para-umbilical/epigastric hernia</b>		
Early SET		<ul style="list-style-type: none"> <li>Repair of umbilical/ paraumbilical hernia (with or without mesh)</li> </ul>
<b>Exomphalos/Gastroschisis</b>		
<b>Incisional/ventral hernias</b>		
Mid SET		<ul style="list-style-type: none"> <li>Open repair of abdominal incisional hernia, with and without mesh/ bowel resection</li> <li>A retro-rectus mesh repair</li> </ul>
Late SET	<ul style="list-style-type: none"> <li>Laparoscopic incisional hernia repair (indications and contraindications)</li> <li>Incisional hernia repair using separation of components</li> <li>Techniques to restore abdominal domain</li> </ul>	<ul style="list-style-type: none"> <li>Open repair of irreducible incisional hernia</li> </ul>

SET LEVEL	TECHNICAL EXPERTISE	
	OPERATIVE MANAGEMENT - KNOWS -	OPERATIVE MANAGEMENT - DOES -
<b>Abdominal wound dehiscence/burst abdomen</b>		
Mid SET		<ul style="list-style-type: none"> <li>Definitive closure of abdominal wound dehiscence</li> <li>Management of the open abdomen</li> </ul>
<b>Open abdomen / laparostomy</b> <i>See also Trauma Module</i>		
Mid SET		<ul style="list-style-type: none"> <li>Laparostomy</li> <li>Application of vacuum dressing</li> <li>Definitive wound closure</li> </ul>
Late SET		<ul style="list-style-type: none"> <li>Graduated Fascial closure techniques</li> </ul>
<b>Other abdominal wall hernias</b>		
<ul style="list-style-type: none"> <li>Spigelian</li> <li>Lumbar</li> <li>Obturator</li> </ul>		
Mid SET		<ul style="list-style-type: none"> <li>Open hernia repair (with or without mesh)</li> </ul>
Late SET	<ul style="list-style-type: none"> <li>Laparoscopic repair of other hernias</li> </ul>	
<b>Stomal hernia</b> <i>See Colorectal Module</i>		
<b>Epididymo-orchitis</b> <i>See Emergency Module</i>		
<b>Testicular torsion</b> <i>See Emergency Module</i>		
<b>Haematocele/Scrotal haematoma</b>		
Mid SET		<ul style="list-style-type: none"> <li>Scrotal exploration and drainage</li> </ul>
<b>Epididymal cyst</b>		
Mid SET		<ul style="list-style-type: none"> <li>Excision of epididymal cyst scrotal exploration and drainage</li> </ul>
<b>Adult hydrocele (acquired)</b>		
Mid SET		<ul style="list-style-type: none"> <li>Operative cure of hydrocele</li> </ul>
<b>Mal-descent of the testis – paediatric and adult</b>		
Late SET	<ul style="list-style-type: none"> <li>Orchidopexy</li> <li>Laparoscopic exploration for absent testis</li> </ul>	
<b>Varicocele</b>		
Mid SET		<ul style="list-style-type: none"> <li>Surgical treatment of varicocele (inguinal approach)</li> </ul>
Late SET	<ul style="list-style-type: none"> <li>Laparoscopic treatment of varicocele</li> </ul>	
<b>Testicular tumours - benign / malignant</b>		
Early SET	<ul style="list-style-type: none"> <li>Orchidectomy via inguinal approach</li> </ul>	
Mid SET	<ul style="list-style-type: none"> <li>Testicular exploration and/or radical orchidectomy (inguinal approach)</li> </ul>	
<b>Vasectomy</b>		
Mid SET		<ul style="list-style-type: none"> <li>Vasectomy</li> </ul>

SET LEVEL	TECHNICAL EXPERTISE	
	OPERATIVE MANAGEMENT - KNOWS -	OPERATIVE MANAGEMENT - DOES -
<b>Nephro-/uretero-/vesico-lithiasis</b> <i>See Emergency Module</i>		
<b>Phimosis/ paraphimosis</b> <i>See Emergency Module</i>		
<b>Other peripheral nerve entrapments</b> <i>See Skin &amp; Soft Tissue Module</i>		

MODULE TITLE:	BREAST
<b>Module Rationale and Objectives</b>	<p>The clinical features of breast disease require early detection, careful investigation and appropriate operative management. This module addresses issues that need to be considered in diagnosing and making decisions about the immediate as well as long-term needs of the patient. The graduating trainee will be able to:</p> <ul style="list-style-type: none"> <li>describe common surgical pathologies of Breast Diseases</li> <li>identify and recognise the symptoms and signs of these conditions</li> <li>assess and treat any common breast conditions likely to be encountered in consultative general surgical practice</li> <li>describe and select appropriate diagnostic testing</li> <li>identify appropriate treatment options, and their indications and contraindications</li> <li>recognise which conditions to refer on to a specialised multidisciplinary oncology service</li> <li>employ a consultative approach with colleagues and other professionals</li> <li>critically appraise new trends in the surgical management of the breast</li> <li>select appropriate investigative tools and monitoring techniques in a cost effective manner</li> <li>convey bad news to patients in a way that conveys sensitivity to the patient's social, cultural and psychological needs</li> <li>communicate information to patients (and their family) about procedures, outcomes, and risks associated with surgery in ways that encourage their participation in informed decision making (consent)</li> </ul>
<b>Anatomy, Physiology, Pathology</b>	<p>Trainees should have thorough knowledge of the normal embryology, anatomy, physiology, and pathology, of:</p> <ul style="list-style-type: none"> <li>breast</li> <li>axilla</li> <li>lymphatic systems</li> <li>pituitary gonadal axis</li> <li>steroid hormone biochemistry and molecular biology</li> </ul>
<b>Definitions</b>	<p><i>Operative Management - Knows:</i> Trainees are required to be familiar with the indications, benefits and limitations of the procedure; trainees should be able to describe the relevant operative techniques involved in performing the procedure; trainees are encouraged to at least observe and preferably assist in these procedures.</p> <p><i>Operative Management - Does:</i> In addition to the above, trainees must be competent at performing the procedure.</p>

SET LEVEL	TECHNICAL EXPERTISE	
	OPERATIVE MANAGEMENT - KNOWS -	OPERATIVE MANAGEMENT - DOES -
<b>Benign breast disease</b>		
Early SET	<ul style="list-style-type: none"> <li>Image-guided fine needle aspiration and/or core biopsy</li> </ul>	<ul style="list-style-type: none"> <li>Clinical fine needle aspiration</li> <li>Skin punch biopsy</li> <li>Core biopsy</li> <li>Excisional biopsy</li> </ul>
Mid SET		<ul style="list-style-type: none"> <li>Wire / carbon localised excision biopsy</li> <li>Microdochectomy</li> </ul>
Late SET	<ul style="list-style-type: none"> <li>Office ultrasound</li> </ul>	
<b>Indeterminate proliferative lesions</b>		
Mid SET		<ul style="list-style-type: none"> <li>Localised excision biopsy</li> </ul>
<b>Nipple discharge</b>		
Mid SET		<ul style="list-style-type: none"> <li>Microdochectomy</li> <li>Central duct excision</li> </ul>
<b>Breast pain</b>		
<b>Inflammatory conditions, breast abscess</b>		
Early SET	<ul style="list-style-type: none"> <li>Ultrasound-guided aspiration of deep/recurrent collections</li> </ul>	<ul style="list-style-type: none"> <li>Clinical aspiration of palpable breast abscess</li> </ul>
Mid SET		<ul style="list-style-type: none"> <li>Excision of central ducts in chronic inflammation</li> </ul>
Late SET	<ul style="list-style-type: none"> <li>Lay open/excise mammary fistula</li> <li>Management of complex mammary fistula</li> <li>Operative management of mammary fistula</li> <li>Office ultrasound</li> </ul>	

SET LEVEL	TECHNICAL EXPERTISE	
	OPERATIVE MANAGEMENT - KNOWS -	OPERATIVE MANAGEMENT - DOES -
<b>Ductal Carcinoma in Situ</b>		
Mid SET		<ul style="list-style-type: none"> <li>Wire/ carbon/seed localised biopsy</li> <li>Wide local excision (complete local excision)</li> <li>Mastectomy</li> <li>Sentinel node biopsy (probe and blue dye)</li> </ul>
<b>Breast screening</b> <i>See also Surgical Oncology Module</i>		
Mid SET		<ul style="list-style-type: none"> <li>Surgical management of positive screening findings</li> </ul>
<b>Early breast cancer</b>		
Early SET		<ul style="list-style-type: none"> <li>Wire / carbon localised biopsy</li> </ul>
Mid SET		<ul style="list-style-type: none"> <li>Wide local excision (complete local excision) of breast cancer</li> <li>Mastectomy</li> <li>Sentinel node biopsy</li> </ul>
Late SET	<ul style="list-style-type: none"> <li>Principles of oncoplastic surgery</li> <li>Breast reconstruction</li> <li>Skin sparing mastectomy</li> <li>Nipple sparing mastectomy</li> </ul>	<ul style="list-style-type: none"> <li>Axillary dissection</li> </ul>
<b>Locally advanced breast cancer</b>		
Early SET		<ul style="list-style-type: none"> <li>Punch biopsy</li> </ul>
Mid SET	<ul style="list-style-type: none"> <li>Reconstructive techniques post radical excision</li> </ul>	<ul style="list-style-type: none"> <li>Wide local excision (complete local excision) of breast cancer</li> <li>Mastectomy</li> </ul>
Late SET	<ul style="list-style-type: none"> <li>Breast conservation post primary/neoadjuvant chemotherapy</li> </ul>	<ul style="list-style-type: none"> <li>Axillary dissection</li> </ul>
<b>Advanced breast cancer</b>		
Mid SET	<ul style="list-style-type: none"> <li>Complex salvage surgery: <ul style="list-style-type: none"> <li>breast and chest wall</li> <li>axilla</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>Post neoadjuvant Mastectomy and axillary surgery</li> <li>Skin grafting</li> <li>Insertion permanent central venous catheter (portacath): <b>See also Vascular Module</b></li> </ul>
Late SET	<ul style="list-style-type: none"> <li>Pleurodesis – chemical or talc</li> </ul>	
<b>Male breast disease</b>		
Mid SET		<ul style="list-style-type: none"> <li>Subcutaneous mastectomy for gynaecomastia, recognition of cosmesis</li> <li>Mastectomy and axillary surgery for cancer; <b>See also Early Breast Cancer</b></li> </ul>
<b>Multidisciplinary care</b> <i>See also Surgical Oncology Module</i>		
<b>Axillary nodes unknown primary</b> <i>See also Surgical Oncology Module</i>		
Mid SET		<ul style="list-style-type: none"> <li>Axillary node biopsy</li> <li>Mastectomy</li> </ul>
Late SET	<ul style="list-style-type: none"> <li>Office ultrasound and guided needle biopsy of axillary node</li> </ul>	<ul style="list-style-type: none"> <li>Axillary dissection</li> </ul>
<b>Lymphoedema</b> <i>See also Vascular Module</i>		

MODULE TITLE:	COLORECTAL
<b>Module Rationale and Objectives</b>	<p>Colorectal problems are a common condition in General Surgery. The individual presenting with colorectal disease is frequently experiencing significant symptoms which impacts on preoperative decision making and timing of any surgical intervention. This module covers issues relevant to clinical decision making and surgical management, including evidence based interventions in the perioperative period.</p> <p>The graduating trainee will be able to:</p> <ul style="list-style-type: none"> <li>describe common surgical pathologies including colorectal cancer, diverticular disease, Crohn's disease, ulcerative colitis, haemorrhoids, perianal sepsis (abscess, fistula), and fissure in ano.</li> <li>describe and assess the symptoms and signs of these conditions</li> <li>describe and select appropriate diagnostic testing</li> <li>identify appropriate treatment options, and their indications and contraindications</li> <li>take a thorough history from the patient and perform a competent examination</li> <li>clearly elicit features in the history and examination that predict perioperative and postoperative outcomes</li> <li>order and interpret appropriate investigations</li> <li>recognise the most common disorders and differentiate those amenable to operative and non-operative treatment</li> <li>plan and manage appropriate surgical or non-surgical treatment, including principles of enhanced recovery after abdominal surgery</li> <li>demonstrates procedural knowledge and technical skill, including the use and workings of rigid sigmoidoscopy, banding devices, stapling devices, energy sources, laparoscopic and endoscopic equipment and devices</li> <li>communicate information to patients (and their family) about procedures, outcomes, and risks associated with surgery in ways that encourage their participation in informed decision making (consent)</li> </ul>
<b>Anatomy, Physiology, Pathology</b>	<p>Trainees should have thorough knowledge of the normal embryology, anatomy, physiology, and pathology, of:</p> <ul style="list-style-type: none"> <li>small bowel, colon, and rectum</li> <li>anus and anal sphincter</li> <li>pelvis</li> </ul>
<b>Definitions</b>	<p><i>Operative Management - Knows:</i> Trainees are required to be familiar with the indications, benefits and limitations of the procedure; trainees should be able to describe the relevant operative techniques involved in performing the procedure; trainees are encouraged to at least observe and preferably assist in these procedures.</p> <p><i>Operative Management - Does:</i> In addition to the above, trainees must be competent at performing the procedure.</p>

SET LEVEL	TECHNICAL EXPERTISE	
	OPERATIVE MANAGEMENT - KNOWS -	OPERATIVE MANAGEMENT - DOES -
<b>Haemorrhoids including external anal skin tags</b>		
Mid SET		<ul style="list-style-type: none"> <li>Banding of haemorrhoids</li> <li>Sclerotherapy</li> <li>Haemorrhoidectomy</li> <li>Management of post haemorrhoidectomy bleeding</li> </ul>
Late SET	<ul style="list-style-type: none"> <li>Stapled haemorrhoidectomy</li> <li>Procedures for anal stenosis</li> <li>DH-HAL: Doppler guided haemorrhoid artery ligation</li> </ul>	
<b>Fissure in Ano</b>		
Mid SET	<ul style="list-style-type: none"> <li>Fissurectomy</li> <li>Botox injection</li> </ul>	<ul style="list-style-type: none"> <li>Internal sphincterotomy</li> </ul>
Late SET	<ul style="list-style-type: none"> <li>Advancement flap repair</li> </ul>	
<b>Perianal and Ischiorectal abscess</b>		
Early SET	<ul style="list-style-type: none"> <li>Fournier's gangrene / necrotising fasciitis: <b>See Skin &amp; Soft Tissue Module</b></li> </ul>	<ul style="list-style-type: none"> <li>Surgical drainage of perianal and ischiorectal abscess</li> <li>Appropriate use of drains</li> </ul>
<b>Anal fistula</b>		
Mid SET		<ul style="list-style-type: none"> <li>Anal fistulotomy</li> <li>Use of seton drains</li> </ul>
Late SET	<ul style="list-style-type: none"> <li>Surgery for complex or high fistula</li> <li>Advancement flap repair</li> <li>LIFT procedure</li> <li>Fibrin glue</li> <li>Fistula plugs</li> </ul>	

SET LEVEL	TECHNICAL EXPERTISE	
	OPERATIVE MANAGEMENT - KNOWS -	OPERATIVE MANAGEMENT - DOES -
<b>Ano-rectal incontinence</b>		
Mid SET	<ul style="list-style-type: none"> <li>▪ Surgical techniques for anal incontinence: anterior anal sphincter repair</li> <li>▪ Sacral nerve stimulation</li> </ul>	<ul style="list-style-type: none"> <li>▪ Stoma formation (open and laparoscopic)</li> </ul>
<b>Rectal prolapse</b>		
Late SET	<ul style="list-style-type: none"> <li>▪ Laparoscopic resection/rectopexy</li> <li>▪ Abdominal resection/rectopexy</li> <li>▪ Perineal approaches</li> </ul>	
<b>Pruritus ani</b>		
<b>Colorectal polyps</b>		
Mid SET	<ul style="list-style-type: none"> <li>▪ Endoscopic tattoo</li> <li>▪ Transanal local excision</li> <li>▪ Total proctocolectomy and ileal pouch anal anastomosis</li> <li>▪ Laparoscopic bowel resection</li> <li>▪ Minimally invasive transanal</li> </ul>	<ul style="list-style-type: none"> <li>▪ Colonoscopy and polypectomy</li> <li>▪ Open colectomy, anterior resection</li> </ul>
Late SET	<ul style="list-style-type: none"> <li>▪ Transanal endoscopic microsurgery</li> <li>▪ Advanced colonoscopic polypectomy</li> </ul>	
<b>Colorectal cancer</b>		
Mid SET	<ul style="list-style-type: none"> <li>▪ Colonic stenting</li> <li>▪ Laparoscopic colectomy</li> </ul>	<ul style="list-style-type: none"> <li>▪ Colonoscopy</li> <li>▪ Colectomy</li> <li>▪ Right hemicolectomy</li> <li>▪ High anterior resection</li> <li>▪ Ileostomy and colostomy (end and loop) and reversal</li> <li>▪ Hartmann's procedure</li> </ul>
Late SET	<ul style="list-style-type: none"> <li>▪ Ultralow anterior resection +/- colonic pouch</li> <li>▪ Abdominoperineal resection</li> <li>▪ Coloanal anastomosis</li> </ul>	
<b>Diverticula</b>		
Mid SET	<ul style="list-style-type: none"> <li>▪ Laparoscopic bowel resection</li> </ul>	<ul style="list-style-type: none"> <li>▪ Colonoscopy</li> <li>▪ Anterior resection</li> <li>▪ Hartmann's procedure</li> </ul>
Late SET	<ul style="list-style-type: none"> <li>▪ Restoration of continuity after Hartmann's procedure</li> </ul>	
<b>Ulcerative colitis</b>		
Mid SET		<ul style="list-style-type: none"> <li>▪ Colonoscopy, including surveillance biopsies</li> </ul>
Late SET	<ul style="list-style-type: none"> <li>▪ Total proctocolectomy and ileal pouch anal anastomosis</li> <li>▪ Recognition and management of ileo-anal pouch complications</li> </ul>	<ul style="list-style-type: none"> <li>▪ Emergency subtotal colectomy and ileostomy</li> </ul>
<b>Crohn's disease</b>		
Mid SET	<ul style="list-style-type: none"> <li>▪ Laparoscopic bowel resection</li> </ul>	<ul style="list-style-type: none"> <li>▪ Loop ileostomy</li> <li>▪ Small and large bowel resection</li> <li>▪ Surgical drainage of perianal and ischioanal abscess</li> <li>▪ Use of setons</li> <li>▪ Use of drains</li> </ul>
Late SET	<ul style="list-style-type: none"> <li>▪ Surgery for complex fistula in Crohn's</li> <li>▪ Strictureoplasty</li> <li>▪ Panproctocolectomy and ileostomy</li> </ul>	<ul style="list-style-type: none"> <li>▪ Emergency subtotal colectomy and ileostomy</li> </ul>

SET LEVEL	TECHNICAL EXPERTISE	
	OPERATIVE MANAGEMENT - KNOWS -	OPERATIVE MANAGEMENT - DOES -
<b>Colitis/ Proctocolitis / Proctitis</b>		
<ul style="list-style-type: none"> <li>▪ radiation</li> <li>▪ ischaemic</li> <li>▪ bacterial, including pseudomembranous colitis</li> <li>▪ parasitic</li> <li>▪ other, e.g. microscopic colitis</li> </ul>		
Late SET	<ul style="list-style-type: none"> <li>▪ Topical formalin application</li> <li>▪ Argon beam coagulation therapy</li> </ul>	<ul style="list-style-type: none"> <li>▪ Resection (Hartmann's procedure; total colectomy and end ileostomy)</li> </ul>
<b>Carcinoma anus/ anal warts/ perianal malignancies, including Paget's disease</b>		
Mid SET	<ul style="list-style-type: none"> <li>▪ Inguinal node dissection</li> <li>▪ Pap smear</li> <li>▪ High resolution anoscopy</li> </ul>	<ul style="list-style-type: none"> <li>▪ Biopsy</li> <li>▪ Local excision</li> </ul>
Late SET	<ul style="list-style-type: none"> <li>▪ Abdomino-perineal resection</li> </ul>	
<b>Emergency conditions</b>		
<ul style="list-style-type: none"> <li>▪ haemorrhage</li> <li>▪ perforation</li> <li>▪ fistula both internal and external</li> <li>▪ ischaemia</li> <li>▪ trauma and foreign bodies</li> <li>▪ complications of surgery</li> <li>▪ complications of colonoscopy</li> <li>▪ anastomotic dehiscence</li> </ul>		
Early SET		<ul style="list-style-type: none"> <li>▪ Diagnostic laparoscopy / laparotomy</li> </ul>
Mid SET	<ul style="list-style-type: none"> <li>▪ On table lavage</li> </ul>	<ul style="list-style-type: none"> <li>▪ On table gastroscopy and colonoscopy</li> <li>▪ Colonic resection</li> <li>▪ Colostomy and ileostomy</li> <li>▪ Repair of perforation</li> <li>▪ Foreign body removal</li> </ul>
<b>Large bowel obstruction/volvulus/pseudo-obstruction</b>		
Early SET		<ul style="list-style-type: none"> <li>▪ Placement of rectal tube</li> </ul>
Mid SET	<ul style="list-style-type: none"> <li>▪ On table lavage</li> </ul>	<ul style="list-style-type: none"> <li>▪ Resection</li> <li>▪ Anastomosis</li> <li>▪ Colostomy formation</li> <li>▪ Colonoscopic decompression of pseudo obstruction / volvulus</li> </ul>
<b>Constipation / obstructed defecation/ megacolon</b>		
Mid SET	<ul style="list-style-type: none"> <li>▪ Appendicostomy</li> </ul>	<ul style="list-style-type: none"> <li>▪ Colonoscopy</li> <li>▪ Colectomy and ileo-rectal anastomosis</li> </ul>
<b>Stoma (ileostomy/ colostomy)</b>		
Mid SET		<ul style="list-style-type: none"> <li>▪ Formation and closure (open and laparoscopic)</li> </ul>
Late SET	<ul style="list-style-type: none"> <li>▪ Parastomal hernia repair</li> <li>▪ Stoma revision</li> </ul>	
<b>Irritable bowel syndrome</b>		
<b>Non-surgical/non-specific abdominal pain</b>		
Mid SET		<ul style="list-style-type: none"> <li>▪ Colonoscopy</li> </ul>

<b>MODULE TITLE:</b>	<b>EMERGENCY (excluding Trauma and Emergencies defined by other subspecialties)</b>
<b>Module Rationale and Objectives</b>	<p>By its very nature, an emergency situation requires decisive decision-making and effective timing of any surgical intervention. This module addresses issues that need to be considered in both decision-making and surgical management. The trainee should have expertise in all aspects of the management of General Surgery emergency conditions.</p> <p>The graduating trainee will be able to:</p> <ul style="list-style-type: none"> <li>describe common acute surgical pathologies of the abdomen, head and neck, chest, and limbs</li> <li>identify and recognise the symptoms and signs of these conditions</li> <li>efficiently and effectively examine the patient</li> <li>describe and select appropriate diagnostic testing</li> <li>order and interpret appropriate imaging investigations</li> <li>formulate a differential diagnosis based on investigative findings</li> <li>identify appropriate treatment options, and their indications and contraindications</li> <li>safely and effectively perform appropriate surgical procedures</li> <li>communicate information to patients (and their family) about procedures, outcomes, and risks associated with surgery in ways that encourage their participation in informed decision making (consent)</li> <li>appreciate the role of other disciplines in emergency care and team-based management</li> </ul>
<b>Anatomy, Physiology, Pathology</b>	<p>Trainees should have thorough knowledge of the normal embryology, anatomy, physiology, and pathology, of:</p> <ul style="list-style-type: none"> <li>the abdominal cavity and its contents</li> <li>head and neck</li> <li>the thorax and its contents</li> <li>the upper and lower limbs</li> </ul>
<b>Definitions</b>	<p><i>Operative Management - Knows:</i> Trainees are required to be familiar with the indications, benefits and limitations of the procedure; trainees should be able to describe the relevant operative techniques involved in performing the procedure; trainees are encouraged to at least observe and preferably assist in these procedures.</p> <p><i>Operative Management - Does:</i> In addition to the above, trainees must be competent at performing the procedure.</p>

SET LEVEL	TECHNICAL EXPERTISE	
	OPERATIVE MANAGEMENT - KNOWS -	OPERATIVE MANAGEMENT - DOES -
<b>ABDOMINAL</b>		
<b>Acute Appendicitis</b>		
Early SET		<ul style="list-style-type: none"> <li>Open appendicectomy</li> <li>Laparoscopic appendectomy</li> </ul>
Mid SET		<ul style="list-style-type: none"> <li>Drainage of appendiceal abscess</li> <li>Conversion to hemicolectomy</li> </ul>
<b>Peritonitis of various aetiologies, pancreatitis, cholangitis and gastro intestinal bleeding</b>		
<i>See also Upper GI/HPB, Colorectal, Small Bowel, and Transplantation Modules</i>		
<b>Abdominal haemorrhage</b>		
<ul style="list-style-type: none"> <li>abdominal wall</li> <li>intra-peritoneal</li> <li>retroperitoneal</li> </ul>		
Mid SET	<ul style="list-style-type: none"> <li>Drainage and control of retroperitoneal haemorrhage</li> </ul>	<ul style="list-style-type: none"> <li>Extra-peritoneal drainage of collection</li> </ul>
<b>Spontaneous bacterial peritonitis</b>		
Mid SET	<ul style="list-style-type: none"> <li>Removal and insertion of peritoneal dialysis catheter</li> </ul>	<ul style="list-style-type: none"> <li>Laparotomy</li> </ul>
<b>UROLOGICAL</b>		
<b>Urinary retention and urinary tract infection</b>		
Early SET		<ul style="list-style-type: none"> <li>Catheterisation</li> <li>Suprapubic catheterisation</li> </ul>
<b>Phimosis and paraphimosis</b>		
Early SET		<ul style="list-style-type: none"> <li>Perform non-operative reduction of paraphimosis</li> </ul>
Mid SET		<ul style="list-style-type: none"> <li>Circumcision               <ul style="list-style-type: none"> <li>elective</li> <li>acute</li> </ul> </li> </ul>

SET LEVEL	TECHNICAL EXPERTISE	
	OPERATIVE MANAGEMENT - KNOWS -	OPERATIVE MANAGEMENT - DOES -
<b>Epididymo-orchitis</b>		
Mid SET		<ul style="list-style-type: none"> <li>Incision and drainage of scrotal abscess</li> </ul>
<b>Testicular torsion</b>		
Early SET		<ul style="list-style-type: none"> <li>Scrotal exploration of testes and orchidopexy</li> <li>Trans-scrotal orchidectomy (where indicated)</li> </ul>
<b>Ureteric obstruction, including calculi and pyonephrosis</b>		
Mid SET	<ul style="list-style-type: none"> <li>Emergency ureteric stenting for infected obstructed kidney</li> </ul>	
<b>GYNAECOLOGY</b>		
<b>Ectopic pregnancy</b>		
Mid SET	<ul style="list-style-type: none"> <li>Operations for ectopic pregnancy, repair of Fallopian tube</li> </ul>	<ul style="list-style-type: none"> <li>Salpingectomy</li> </ul>
<b>Ovarian cysts</b>		
Mid SET	<ul style="list-style-type: none"> <li>Oophorectomy</li> </ul>	<ul style="list-style-type: none"> <li>Ovarian cystectomy</li> </ul>
<b>ENT</b>		
<b>Epistaxis</b>		
Early SET	<ul style="list-style-type: none"> <li>Nasal packing</li> </ul>	
<b>SEPSIS</b>		
<b>Focal Sepsis</b>		
Early SET		<ul style="list-style-type: none"> <li>Drainage of an abscess</li> </ul>
Mid SET		<ul style="list-style-type: none"> <li>Debride necrotising fasciitis: <b>See Skin &amp; Soft Tissue Module</b></li> <li>Open drainage of abscesses of the abdominal cavity and abdominal solid organs</li> <li>Fournier's gangrene: <b>See Skin &amp; Soft Tissue Module</b></li> </ul>
<b>Sepsis Syndrome</b>		
<i>See also Sepsis Module and CCriSP Manual</i>		
Early SET		<ul style="list-style-type: none"> <li>Gain access for central line placement</li> </ul>

MODULE TITLE:	ENDOCRINE
<b>Module Rationale and Objectives</b>	<p>The general surgeon is expected to be able to investigate, assess and manage commonly occurring diseases of the endocrine glands and to be competent in accurately identifying conditions that require surgery, and those which are best treated by other means. They also expected to be able to recognise the need and appropriate time to refer such patients to other professionals.</p> <p>The graduating trainee will be able to:</p> <ul style="list-style-type: none"> <li>describe common surgical pathologies of thyroid, parathyroid, adrenal, pancreas, and gut endocrine organs</li> <li>identify and recognise the symptoms and signs of these conditions</li> <li>describe and select appropriate diagnostic testing</li> <li>identify appropriate treatment options, and their indications and contraindications</li> <li>recognise, assess and treat any common thyroid, parathyroid, adrenal, pancreatic endocrine and neuro-endocrine tumour conditions likely to be encountered in consultative general surgical practice</li> <li>recognise which conditions to refer on to a specialised multidisciplinary service</li> <li>critically evaluate the advantages and disadvantages of different investigative modalities</li> <li>select appropriate investigative tools and monitoring techniques in a cost effective manner</li> <li>appropriately adjust the way they communicate with patients to accommodate cultural and linguistic differences</li> <li>communicate information to patients (and their family) about procedures, outcomes, and risks associated with surgery in ways that encourage their participation in informed decision making (consent)</li> </ul>
<b>Anatomy, Physiology, Pathology</b>	<p>Trainees should have thorough knowledge of the normal embryology, anatomy, physiology, and pathology, of:</p> <ul style="list-style-type: none"> <li>branchial arch development</li> <li>regional anatomy of neck</li> <li>surgical anatomy of the neck</li> <li>thyroid</li> <li>parathyroid</li> <li>adrenal</li> <li>pancreas/neuroendocrine system</li> </ul>
<b>Definitions</b>	<p><i>Operative Management - Knows:</i> Trainees are required to be familiar with the indications, benefits and limitations of the procedure; trainees should be able to describe the relevant operative techniques involved in performing the procedure; trainees are encouraged to at least observe and preferably assist in these procedures.</p> <p><i>Operative Management - Does:</i> In addition to the above, trainees must be competent at performing the procedure.</p>

SET LEVEL	TECHNICAL EXPERTISE	
	OPERATIVE MANAGEMENT - KNOWS -	OPERATIVE MANAGEMENT - DOES -
<b>Multinodular goitre, thyroiditis, thyrotoxicosis, thyroglossal cyst</b> <i>See Head &amp; Neck Module</i>		
Mid SET	<ul style="list-style-type: none"> <li>Total Thyroidectomy</li> <li>Autotransplant parathyroid</li> </ul>	<ul style="list-style-type: none"> <li>Hemithyroidectomy</li> <li>Tracheostomy</li> </ul>
Late SET	<ul style="list-style-type: none"> <li>Sternal split</li> <li>Re-operative thyroid surgery</li> <li>Sistrunk operation: <b>See Head &amp; Neck Module</b></li> <li>Principles of intraoperative neuromonitoring</li> </ul>	<ul style="list-style-type: none"> <li>Hemithyroidectomy</li> <li>Total Thyroidectomy</li> <li>Autotransplant parathyroid</li> </ul>
<b>Thyroid tumours</b> <ul style="list-style-type: none"> <li>benign</li> <li>malignant</li> </ul>		
Late SET	<ul style="list-style-type: none"> <li>Selective lateral lymph node dissection (levels II to V)</li> <li>Central compartment node dissection (level VI and VII)</li> <li>Principles of intraoperative neuromonitoring</li> <li>Principles of surgical management of locally advanced thyroid cancer</li> <li><i>See also multinodular goitre</i></li> </ul>	<ul style="list-style-type: none"> <li><i>See also multinodular goitre</i></li> </ul>
<b>Parathyroid tumours and hyperplasia</b>		
Mid SET	<ul style="list-style-type: none"> <li>Parathyroidectomy – open and minimally invasive (MIP)</li> <li>Neck exploration + frozen section including excision adenoma, 31/2 gland excision, total parathyroidectomy +/- autotransplantation</li> </ul>	
Late SET	<ul style="list-style-type: none"> <li>Re operative parathyroid surgery</li> <li>Cervical thymectomy</li> </ul>	

SET LEVEL	TECHNICAL EXPERTISE	
	OPERATIVE MANAGEMENT - KNOWS -	OPERATIVE MANAGEMENT - DOES -
<b>Pancreatic endocrine tumours and hyperplasia, neuro-endocrine tumours</b>		
Mid SET	<ul style="list-style-type: none"> <li>▪ Pancreatic tumour enucleation, distal pancreatectomy, pancreatoduodenectomy</li> </ul>	<ul style="list-style-type: none"> <li>▪ Bowel resection for small bowel tumours (carcinoid)</li> <li>▪ Liver biopsy</li> </ul>
Late SET	<ul style="list-style-type: none"> <li>▪ Non-anatomical and anatomical liver resection</li> </ul>	
<b>Adrenal gland functional abnormalities and tumours, and retro peritoneal tumours</b>		
Mid SET	<ul style="list-style-type: none"> <li>▪ Adrenalectomy, including open and laparoscopic anterior, posterior, lateral and abdominal</li> </ul>	
Late SET	<ul style="list-style-type: none"> <li>▪ Retroperitoneal lymph node dissection and resection of adrenal tumours</li> </ul>	

MODULE TITLE:	ENDOSCOPY
<b>Module Rationale and Objectives</b>	<p>Gastrointestinal endoscopy, and the knowledge and skills that this entails, is an integral part of General Surgery. The skilled endoscopist, far from acting as a technician, employs endoscopy in the appropriate situation to guide clinical decisions or improve patient outcomes. The skilled and safe practice of Gastrointestinal Endoscopy, in both diagnostic and therapeutic domains, requires knowledge across a wide range of areas considered elsewhere in the General Surgery Curriculum. Such knowledge is important for safe conduct of procedures, accurate diagnosis, and correct management.</p> <p>Important areas of knowledge and skill relevant to Gastrointestinal Endoscopy include, but are not limited to gastrointestinal anatomy/physiology, pharmacology of sedative medication, gut embryology, gastrointestinal disease including malignant, inflammatory and functional disorders, emergency gastrointestinal presentations, nutrition, audit and quality assurance, and public health issues.</p> <p>By graduation, it is expected that the trainee will be able to:</p> <ul style="list-style-type: none"> <li>▪ Describe the structure and function of the endoscope and ancillary equipment</li> <li>▪ Safely administer conscious sedation</li> <li>▪ Understand and apply principles of electrophysiology as they apply to therapeutic endoscopy</li> <li>▪ Understand the principles of anti-sepsis as they apply to GI endoscopy</li> <li>▪ Describe the indications and contra-indications for Gastrointestinal Endoscopy</li> <li>▪ Perform safe insertion for upper and lower GI endoscopy, including knowledge of troubleshooting problems with insertion</li> <li>▪ Make accurate diagnosis and demonstrate good lesion recognition</li> <li>▪ Understand correct therapeutic techniques and begin to employ these safely and accurately</li> <li>▪ Understand and participate in quality improvement/assurance processes as they apply to GI endoscopy</li> <li>▪ Demonstrate positive traits in professionalism and communication in the endoscopy suite</li> </ul>

SET LEVEL	TECHNICAL EXPERTISE
	SKILL
<b>PERI-PROCEDURAL</b>	
<b>Structure and Function of the Endoscope and Ancillary Equipment</b>	
Early - Mid SET	<ul style="list-style-type: none"> <li>▪ Prepare an endoscopy video processor and endoscope for use without assistance</li> <li>▪ Develop an effective stance and hand grip to optimise use of controls with the left hand</li> <li>▪ Identify the site of a blocked channel and correct the blockage</li> <li>▪ Troubleshoot basic equipment problems during procedure</li> </ul>
<b>Sedation</b>	
Early - Mid SET	<ul style="list-style-type: none"> <li>▪ Undertake a pre-procedural assessment with regards to risks associated with conscious sedation</li> <li>▪ Delivers skilled titration of sedative medication and reversal agents when sedation is deeper than expected</li> </ul>
<b>Principles of Electrosurgery</b>	
Early - Mid SET	<ul style="list-style-type: none"> <li>▪ Deploy a diathermy unit checking for safety and electrical integrity</li> <li>▪ Select appropriate settings on an electrosurgical unit</li> <li>▪ Deploy and use a snare in a manner that minimises risk to normal surrounding tissues</li> </ul>
<b>Infection Control and Safety</b>	
Early - Mid SET	<ul style="list-style-type: none"> <li>▪ Appropriate handling of the scope</li> </ul>
<b>GASTROSCOPY</b>	
<b>Preparation for Gastroscopy</b>	
Early - Mid SET	<ul style="list-style-type: none"> <li>▪ Assess risk of intra- and post- procedure pulmonary aspiration in an individual patient</li> <li>▪ Gains consent for the procedure in an appropriate process</li> </ul>
<b>Gastroscopy Insertion</b>	
Early - Mid SET	<ul style="list-style-type: none"> <li>▪ Successful oesophageal intubation <ul style="list-style-type: none"> <li>- Key performance indicator &gt; 95%, done under constant direct vision</li> </ul> </li> <li>▪ Correctly identify anatomic landmarks, and steer tip accurately towards direction of lumen</li> <li>▪ Complete insertion to second part of duodenum is achieved in majority of cases</li> </ul>
<b>Gastroscopy Withdrawal</b>	
Early - Mid SET	<ul style="list-style-type: none"> <li>▪ Uses tip control to optimise mucosal view in duodenum, minimise blind areas and visualise ampulla</li> <li>▪ Uses distension and retroflexion in stomach to assess areas of mucosa poorly seen in forward viewing position <ul style="list-style-type: none"> <li>- Key performance indicator &gt; 95%</li> </ul> </li> <li>▪ Inspect the oesophagus on withdrawal in a manner suitable to identify mucosal pathology</li> <li>▪ Makes an assessment of the likely cause of pathology based on close examination of a mucosal surface</li> </ul>

SET LEVEL	TECHNICAL EXPERTISE
	SKILL
<b>Therapeutic Gastroscopy</b>	
Late SET	<ul style="list-style-type: none"> <li>Use tip control and positioning of shaft to optimise access to an area of interest</li> <li>Assess the risk of re-bleeding of a patient with peptic ulcer using endoscopic examination and implement an appropriate management plan</li> <li>Demonstrate use of available endoscopic haemostatic techniques to treat or prevent bleeding from submucosal vessels</li> </ul>
<b>COLONOSCOPY</b>	
<b>Preparation for Colonoscopy</b>	
Early - Mid SET	<ul style="list-style-type: none"> <li>Describe preparation for colonoscopy to a patient and prescribe appropriately</li> <li>Arranges additional preparation when required</li> </ul>
<b>Colonoscopy Insertion</b>	
Late SET	<ul style="list-style-type: none"> <li>Maintains a luminal view sufficient to allow safe insertion</li> <li>Correctly identifies the direction of lumen and anatomic landmarks</li> <li>Demonstrate a strategy for passing an acute angle by angulation, withdrawal and timed deflection of the tip, including judicious use of "slide by" manoeuvres</li> <li>Demonstrates use of water injection, minimal insufflation and adequate shaft lubrication</li> <li>Aspirates distended loops and straighten scope shaft, while steering into the lumen to facilitate scope advancement</li> <li>Employs a technique to achieve successful ileal intubation</li> </ul>
<b>Colonoscopy Withdrawal</b>	
Late SET	<ul style="list-style-type: none"> <li>Use tip control to optimise mucosal view</li> <li>Use washing, position change and aspiration appropriately</li> <li>Utilises double flexure pass when appropriate</li> </ul>
<b>Colonoscopy Polypectomy</b>	
Late SET	<ul style="list-style-type: none"> <li>Uses tip control and positioning of shaft to optimise working area and view of polyp</li> <li>Inject fluid accurately to the submucosal space in a manner that increases the ease and safety of polypectomy</li> <li>Examines polypectomy defect closely for completeness and risk of perforation</li> <li>Uses adjunctive equipment if necessary to achieve haemostasis and retrieve tissue</li> <li>Deploys endoscopic clips if required to control bleeding or close mucosal defects</li> <li>Performs physical examination if appropriate to detect signs of perforation</li> <li>Retrieve a resected specimen for pathology processing               <ul style="list-style-type: none"> <li>Key performance Indicator: 90% of resected polyps retrieved</li> </ul> </li> </ul>

MODULE TITLE:	HEAD & NECK
<b>Module Rationale and Objectives</b>	<p>General surgeons need to have a thorough knowledge of infections, tumours and lesions of the head and neck and be able to recognise and treat compromise of the upper airway. Trainees are also required to have a high level of knowledge of investigations, differential diagnosis, potential risks and/or complications and appropriate management strategies.</p> <p>The graduating trainee will be able to:</p> <ul style="list-style-type: none"> <li>describe common surgical pathologies of deep neck space infections, congenital cysts and sinuses of the head and neck, metabolic and neoplastic conditions of salivary glands, and primary and secondary malignancies presenting in the head and neck</li> <li>identify and recognise the symptoms and signs of these conditions</li> <li>describe and select appropriate diagnostic testing</li> <li>identify appropriate treatment options, and their indications and contraindications</li> <li>recognise the symptoms of, accurately diagnose, and manage common problems in the head and neck</li> <li>select appropriate investigative tools</li> <li>adapt their skill in the context of each patient and each procedure</li> <li>identify and manage risk</li> <li>recognise the need to refer patients to other professionals, including multidisciplinary teams</li> <li>communicate information to patients (and their family) about procedures, outcomes, and risks associated with surgery in ways that encourage their participation in informed decision making (consent)</li> </ul>
<b>Anatomy, Physiology, Pathology</b>	<p>Trainees should have thorough knowledge of the normal embryology, anatomy, physiology, and pathology, of:</p> <ul style="list-style-type: none"> <li>the head (extracranial)</li> <li>the neck (upper aero-digestive tract and soft tissues)</li> </ul>
<b>Definitions</b>	<p><i>Operative Management - Knows:</i> Trainees are required to be familiar with the indications, benefits and limitations of the procedure; trainees should be able to describe the relevant operative techniques involved in performing the procedure; trainees are encouraged to at least observe and preferably assist in these procedures.</p> <p><i>Operative Management - Does:</i> In addition to the above, trainees must be competent at performing the procedure.</p>

SET LEVEL	TECHNICAL EXPERTISE	
	OPERATIVE MANAGEMENT - KNOWS -	OPERATIVE MANAGEMENT - DOES -
<b>Upper aero-digestive tract neoplasia</b>		
Early SET		<ul style="list-style-type: none"> <li>Cervical lymph node biopsy</li> </ul>
Mid SET		<ul style="list-style-type: none"> <li>Open feeding gastrostomy or PEG</li> <li>Tracheostomy</li> </ul>
<b>Salivary gland pathology</b>		
<b>▪ tumour</b>		
Mid SET	<ul style="list-style-type: none"> <li>Excision of submandibular gland</li> <li>Parotidectomy</li> </ul>	
<b>Salivary gland pathology</b>		
<b>▪ infections</b>		
<b>▪ inflammatory disease</b>		
<b>▪ calculi</b>		
Mid SET	<ul style="list-style-type: none"> <li>Excision of submandibular gland</li> <li>Submandibular doctotomy and stone extraction</li> </ul>	<ul style="list-style-type: none"> <li>Drainage of acute suppuration</li> </ul>
<b>Upper airway foreign body/occlusion/trauma</b>		
Mid SET	<ul style="list-style-type: none"> <li>Extracting foreign body</li> </ul>	<ul style="list-style-type: none"> <li>Emergency tracheotomy</li> <li>Cricothyroidotomy</li> </ul>
<b>Cervical infections lymphadenitis/abscess</b>		
Mid SET		<ul style="list-style-type: none"> <li>Incision and drainage of cervical abscess</li> <li>Emergency tracheotomy</li> </ul>
<b>Lumps in the neck</b>		
<b>▪ carotid body tumour (See also Vascular Module)</b>		
<b>▪ branchial cyst/sinus</b>		
<b>▪ thyroglossal cyst (See also Endocrine Module)</b>		
<b>▪ pharyngeal pouch</b>		
Mid SET	<ul style="list-style-type: none"> <li>Excision of branchial cyst</li> <li>Excision of thyroglossal cyst/ fistula / Sistrunk procedure</li> </ul>	

MODULE TITLE:	SEPSIS & THE CRITICALLY ILL OR COMPROMISED PATIENT
<b>Module Rationale and Objectives</b>	<p>Sepsis and other critical conditions require informed and decisive action on the part of the surgeon. This module identifies the key areas in which trainees are expected to have expertise in order to be able to minimise infection risks and consequences in critically ill or compromised patients and to respond promptly and appropriately as the need for assessment and management of sepsis in such patients arises. The graduating trainee will be able to:</p> <p>Pathology of sepsis:</p> <ul style="list-style-type: none"> <li>describe common surgical pathologies of sepsis in specific organs or regions</li> <li>describe infectious pathologies likely to be associated with surgically treated diseases</li> <li>describe infectious pathologies associated with medically complex, malnourished and immune suppressed patients</li> </ul> <p>Prophylaxis of sepsis:</p> <ul style="list-style-type: none"> <li>display well informed, evidence based team leadership in prophylaxis and management of sepsis in critically ill or compromised patients</li> <li>anticipate and aim to prevent the onset of sepsis and sepsis related complications in surgical patients</li> <li>describe mechanisms for limiting the development and spread of infectious diseases, especially multi-resistant organisms, among critically ill and compromised surgical patients</li> <li>describe evidence-based prophylaxis against development of peri-surgical sepsis</li> </ul> <p>Recognition and diagnosis of sepsis and sepsis syndromes:</p> <ul style="list-style-type: none"> <li>apply the CCrISP principles to identify and recognise the symptoms and signs of these conditions</li> <li>describe and select appropriate diagnostic testing</li> <li>select appropriate investigative tools and monitoring techniques</li> </ul> <p>Management planning and treatment:</p> <ul style="list-style-type: none"> <li>identify appropriate treatment options, and their indications and contraindications</li> <li>determine the appropriate priorities of care and level of care for patients affected by sepsis</li> <li>demonstrate awareness of the basic pharmacology and principles of antibiotic based therapeutics</li> <li>effectively manage septic complications of operative procedures and the underlying disease process</li> <li>identify the likely causative factor(s) of a patient's critical illness and implement management accordingly</li> <li>prioritise, initiate and coordinate the timely management of critically ill patients</li> <li>accurately identify the risks, benefits and mechanisms of action of various treatment modalities and interventions</li> </ul> <p>Ethics and Professional Communications:</p> <ul style="list-style-type: none"> <li>understand the importance of a multidisciplinary approach to the management of critically ill patients</li> <li>recognise the importance of effective communication with other professionals and recognise the need for timely referral and for timely response to requests for surgical review and surgical treatment</li> <li>communicate information to patients (and their family) about procedures, outcomes, and risks associated with surgery in ways that encourage their participation in informed decision making (consent)</li> </ul>
<b>Anatomy, Physiology, Pathology</b>	<p>Trainees should have thorough knowledge of the, anatomy, microbiology, physiology, and pathology, of:</p> <ul style="list-style-type: none"> <li>organ-specific sepsis</li> <li>Systemic Inflammatory Response Syndrome (SIRS)/Multiple Organ Dysfunction Syndrome (MODS)</li> <li>system specific dysfunction (e.g. renal impairment)</li> <li>co-morbidities that may alter management and/or adversely affect outcome</li> </ul>
<b>Definitions</b>	<p><i>Operative Management - Knows:</i> Trainees are required to be familiar with the indications, benefits and limitations of the procedure; trainees should be able to describe the relevant operative techniques involved in performing the procedure; trainees are encouraged to at least observe and preferably assist in these procedures.</p> <p><i>Operative Management - Does:</i> In addition to the above, trainees must be competent at performing the procedure.</p>

SET LEVEL	TECHNICAL EXPERTISE	
	OPERATIVE MANAGEMENT - KNOWS -	OPERATIVE MANAGEMENT - DOES -
<p><b>Critically ill surgical patient e.g.:</b></p> <ul style="list-style-type: none"> <li>severe pancreatitis, anastomotic leak</li> <li>strangulated small bowel / ischaemic colon / perforated small bowel / colon (see also Emergency Surgery Module)</li> <li>massive haemorrhage (see also Emergency Surgery Module)</li> <li>Severe cholangitis (See also Upper GI &amp; HPB - Hepatic, Pancreatic &amp; Biliary Module)</li> </ul>		
Early SET	<ul style="list-style-type: none"> <li>Cricothyroidotomy/ tracheostomy</li> </ul>	<ul style="list-style-type: none"> <li>Establish and maintain emergency airway</li> <li>Needle thoracostomy / intercostal chest drain</li> <li>Establish definitive emergency vascular access - central and peripheral</li> </ul>
Late SET	<ul style="list-style-type: none"> <li>Understand surgical strategies in the critically ill patient</li> </ul>	
<p><b>Gangrene/necrotising fasciitis</b> See Skin &amp; Soft Tissue Module</p>		

SET LEVEL	TECHNICAL EXPERTISE	
	OPERATIVE MANAGEMENT - KNOWS -	OPERATIVE MANAGEMENT - DOES -
<b>Tetanus</b>		
Early SET	<ul style="list-style-type: none"> <li>Wound debridement</li> </ul>	
<b>Subphrenic/pelvic/intra-abdominal abscess</b>		
Mid SET		<ul style="list-style-type: none"> <li>Transrectal drainage</li> <li>Laparotomy/ laparostomy/minimally invasive techniques for drainage of complex abscesses</li> </ul>
<b>Psoas abscess</b>		
Mid SET	<ul style="list-style-type: none"> <li>Trans/ Retroperitoneal drainage</li> </ul>	
<b>Intra-abdominal sepsis/peritonitis</b> <i>See also Abdominal Wall Module</i> <i>See also above: Subphrenic/pelvic/ intra-abdominal abscess</i>		
Mid SET	<ul style="list-style-type: none"> <li>Laparostomy</li> </ul>	<ul style="list-style-type: none"> <li>Laparotomy for sepsis control</li> </ul>
<b>The immuno- suppressed patient</b> <i>See Transplantation Module</i>		
Late SET	<ul style="list-style-type: none"> <li>Understand surgical strategies in the critically ill patient</li> </ul>	
<b>HIV/AIDS and other atypical infections including TB</b> <i>See also above: The immuno-suppressed patient</i>		
Mid SET		<ul style="list-style-type: none"> <li>Insertion of central venous access with management</li> </ul>
<b>The splenectomised patient</b> <i>See also above: The immuno-suppressed patient</i>		
Mid SET	<ul style="list-style-type: none"> <li>Laparoscopic elective splenectomy</li> </ul>	<ul style="list-style-type: none"> <li>Open elective splenectomy <b>See also Upper GI/HPB Module</b></li> </ul>
<b>Post transplantation patients</b> <i>See Transplantation Module</i>		
<b>Nutritional support</b>		
Mid SET		<ul style="list-style-type: none"> <li>Feeding gastrostomy/ jejunostomy (open, endoscopic, and laparoscopic)</li> <li>Vascular access for nutrition (including surgical and radiological implantable and tunnelled devices)</li> </ul>
<b>Other medical system disease</b>		
<b>Acute pain control</b>		
<b>Patients on specific medications: Anticoagulant, Immunomodulators, Oncological agents</b>		

MODULE TITLE: SKIN & SOFT TISSUE	
<b>Module Rationale and Objectives</b>	<p>Skin cancer is increasing in prevalence, and if undiagnosed or untreated can be lethal. Infections of the skin and soft tissue require early identification and prompt management. General surgery trainees are required to become competent in accurately identifying conditions that require surgery, and those which are best treated by other means.</p> <p>The graduating trainee will be able to:</p> <ul style="list-style-type: none"> <li>describe common surgical pathologies of benign and malignant skin lesions, and the various types of skin and soft tissue infections.</li> <li>identify and recognise the symptoms and signs of these conditions</li> <li>describe and select appropriate diagnostic testing</li> <li>identify appropriate treatment options, and their indications and contraindications</li> <li>diagnoses and treat commonly encountered conditions of the skin and soft tissues</li> <li>select appropriate investigative tools</li> <li>adapt their skill in the context of each patient and each procedure</li> <li>identify and manage risk</li> <li>recognise the need to refer patients to other professionals</li> <li>communicate information to patients (and their family) about procedures, outcomes, and risks associated with surgery in ways that encourage their participation in informed decision making (consent)</li> </ul>
<b>Anatomy, Physiology, Pathology</b>	<p>Trainees should have thorough knowledge of the normal embryology, anatomy, physiology and pathology of the skin and subcutaneous tissues.</p> <p>In addition, the trainee should know:</p> <ul style="list-style-type: none"> <li>regional surgical anatomy of body surfaces</li> <li>histology of the skin and appendages</li> <li>principles of wound healing and cosmesis</li> </ul>
<b>Definitions</b>	<p><i>Operative Management - Knows:</i> Trainees are required to be familiar with the indications, benefits and limitations of the procedure; trainees should be able to describe the relevant operative techniques involved in performing the procedure; trainees are encouraged to at least observe and preferably assist in these procedures.</p> <p><i>Operative Management - Does:</i> In addition to the above, trainees must be competent at performing the procedure.</p>

SET LEVEL	TECHNICAL EXPERTISE	
	OPERATIVE MANAGEMENT - KNOWS -	OPERATIVE MANAGEMENT - DOES -
<b>Skin cancer</b> <ul style="list-style-type: none"> <li>basal cell carcinoma</li> <li>squamous cell carcinoma</li> <li>intra-epithelial carcinoma</li> <li>Merkel cell tumour</li> <li>Melanoma (See also Surgical Oncology Module)</li> </ul>		
Early SET		<ul style="list-style-type: none"> <li>Excision of skin cancer and wound closure using direct suturing</li> </ul>
Mid SET	<ul style="list-style-type: none"> <li>Block dissection of regional lymph nodes</li> </ul>	<ul style="list-style-type: none"> <li>Excision of skin cancer and wound closure using:               <ul style="list-style-type: none"> <li>cutaneous flaps</li> <li>full-thickness/split skin grafts</li> </ul> </li> <li>Sentinel lymph node biopsy</li> </ul>
<b>Benign skin and subcutaneous lesions</b> <ul style="list-style-type: none"> <li>Nevus</li> <li>Solar keratosis</li> <li>Papilloma/wart</li> <li>Seborrheic keratosis</li> <li>Lipoma</li> <li>Sebaceous cyst</li> <li>Ganglion</li> <li>Keloid and hypertrophic scar</li> </ul>		
Early SET		<ul style="list-style-type: none"> <li>Simple excision of lesion</li> <li>Diathermy ablation/curettage (warts)</li> </ul>
<b>Ingrown toenail</b>		
Early SET		<ul style="list-style-type: none"> <li>Nail avulsion</li> <li>Wedge resection of nail</li> </ul>
Mid SET		<ul style="list-style-type: none"> <li>Zadek's operation</li> </ul>

SET LEVEL	TECHNICAL EXPERTISE	
	OPERATIVE MANAGEMENT - KNOWS -	OPERATIVE MANAGEMENT - DOES -
<b>Cellulitis</b>		
<b>Soft tissue abscess</b>		
<b>Wound infection</b>		
Early SET		<ul style="list-style-type: none"> <li>▪ Incision and drainage of abscess</li> <li>▪ Wound debridement</li> </ul>
<b>Synergistic soft tissue infections e.g.:</b>		
<ul style="list-style-type: none"> <li>▪ Fournier's gangrene</li> <li>▪ gas gangrene</li> <li>▪ necrotising fasciitis, etc.</li> </ul>		
Mid SET	<ul style="list-style-type: none"> <li>▪ Reconstructive techniques</li> </ul>	<ul style="list-style-type: none"> <li>▪ Extensive wound debridement/ amputation</li> <li>▪ Defunctioning colostomy (as indicated)</li> </ul>
Late SET	<ul style="list-style-type: none"> <li>▪ Advanced reconstructive techniques</li> </ul>	
<b>Hidradenitis suppurativa</b>		
Early SET		<ul style="list-style-type: none"> <li>▪ Incision and drainage</li> </ul>
Mid SET	<ul style="list-style-type: none"> <li>▪ Reconstructive techniques where indicated</li> </ul>	<ul style="list-style-type: none"> <li>▪ Excision</li> </ul>
<b>Hand Infections</b>		
Mid SET	<ul style="list-style-type: none"> <li>▪ Incision and drainage of hand and finger spaces</li> </ul>	
<b>Chronic leg ulcer/pressure ulcers</b>		
<i>See also Vascular Module</i>		
Early SET		<ul style="list-style-type: none"> <li>▪ Wound debridement</li> <li>▪ Split skin grafting</li> </ul>
Late SET	<ul style="list-style-type: none"> <li>▪ Flap repair (as indicated)</li> </ul>	
<b>High risk foot (diabetic/neuropathic)</b>		
<i>See also Vascular Module</i>		
Early SET		<ul style="list-style-type: none"> <li>▪ Incision and drainage of suppuration</li> </ul>
Mid SET	<ul style="list-style-type: none"> <li>▪ Major limb amputations</li> </ul>	<ul style="list-style-type: none"> <li>▪ Wound debridement</li> <li>▪ Local amputations</li> </ul>
<b>Pilonidal sinus/abscess</b>		
Early SET		<ul style="list-style-type: none"> <li>▪ Incision and drainage of abscess</li> <li>▪ Excision and marsupialisation</li> </ul>
Mid SET	<ul style="list-style-type: none"> <li>▪ Surgical management of Pilonidal sinus</li> </ul>	<ul style="list-style-type: none"> <li>▪ Excision and primary closure with or without a flap</li> </ul>
<b>Hyperhidrosis</b>		
Mid SET	<ul style="list-style-type: none"> <li>▪ Endoscopic thoracic sympathectomy</li> <li>▪ Lumbar sympathectomy</li> </ul>	
<b>Carpal tunnel syndrome</b>		
Mid SET		<ul style="list-style-type: none"> <li>▪ Carpal tunnel release</li> </ul>
<b>Other peripheral nerve entrapments</b>		
Mid SET	<ul style="list-style-type: none"> <li>▪ Ulnar neurolysis</li> <li>▪ Other neurolysis</li> </ul>	
Late SET	<ul style="list-style-type: none"> <li>▪ Exploration of Guyon's canal</li> <li>▪ Decompressive surgery for pronator syndrome</li> </ul>	
<b>Peripheral nerve injuries</b>		
Mid SET	<ul style="list-style-type: none"> <li>▪ Acute primary nerve repair</li> </ul>	

MODULE TITLE: <b>SMALL BOWEL</b>	
<b>Module Rationale and Objectives</b>	<p>A general surgeon is required to have a thorough understanding of normal anatomy and physiology, as well as pathophysiology, investigations, differential diagnosis and surgical and non-surgical management of small intestinal disorders. It is important that general surgeons maintain a current understanding of the most appropriate time and manner of intervention.</p> <p>The graduating trainee will be able to:</p> <ul style="list-style-type: none"> <li>Describe normal &amp; abnormal anatomy of duodenum, jejunum, and ileum and their blood supply and lymphatic drainage</li> <li>describe common surgical pathologies of duodenum, jejunum, and ileum</li> <li>identify and recognise the symptoms and signs of these conditions</li> <li>describe and select appropriate diagnostic testing</li> <li>identify appropriate treatment options, and their indications and contraindications</li> <li>diagnose and manage pathological conditions that pertain to the duodenum, jejunum, and ileum including referral to other specialists where indicated</li> <li>select appropriate investigative tools</li> <li>adapt their skill in the context of each patient and each procedure</li> <li>identify and manage risk</li> <li>recognise the need to refer patients to other professionals</li> <li>convey bad news to patients in a way that conveys sensitivity to the patient's social, cultural and psychological needs</li> <li>communicate information to patients (and their family) about procedures, outcomes, and risks associated with surgery in ways that encourage their participation in informed decision making (consent)</li> </ul>
<b>Anatomy, Physiology, Pathology</b>	<p>Trainees should have thorough knowledge of the normal embryology, anatomy, physiology, and pathology of:</p> <ul style="list-style-type: none"> <li>peritoneal cavity</li> <li>small bowel – digestion and absorption; immune and endocrine functions; motility</li> </ul>
<b>Definitions</b>	<p><i>Operative Management - Knows:</i> Trainees are required to be familiar with the indications, benefits and limitations of the procedure; trainees should be able to describe the relevant operative techniques involved in performing the procedure; trainees are encouraged to at least observe and preferably assist in these procedures.</p> <p><i>Operative Management - Does:</i> In addition to the above, trainees must be competent at performing the procedure.</p>

SET LEVEL	TECHNICAL EXPERTISE	
	OPERATIVE MANAGEMENT - KNOWS -	OPERATIVE MANAGEMENT - DOES -
<b>Small bowel obstruction (SBO)</b>		
Mid SET	<ul style="list-style-type: none"> <li>Laparoscopy for SBO</li> </ul>	<ul style="list-style-type: none"> <li>Laparotomy</li> <li>Division of adhesions</li> <li>Bowel resection/ bypass</li> </ul>
<b>Intussusception</b>		
Mid SET		<ul style="list-style-type: none"> <li>Small bowel resection</li> </ul>
<b>"Foreign bodies" in the GI tract</b>		
Mid SET		<ul style="list-style-type: none"> <li>Enterotomy and closure</li> </ul>
<b>Duodenal adenoma and carcinoma</b>		
Late SET	<ul style="list-style-type: none"> <li>Endoscopic duodenal stenting</li> <li>Surgical resection</li> </ul>	
<b>Duodenal diverticula</b>		
Mid SET	<ul style="list-style-type: none"> <li>Duodenal diverticulectomy</li> </ul>	
<b>Duodenal obstruction</b>		
Mid SET		<ul style="list-style-type: none"> <li>Open gastrojejunostomy</li> <li>Duodeno-jejunostomy</li> </ul>
Late SET	<ul style="list-style-type: none"> <li>Laparoscopic gastrojejunostomy</li> </ul>	

SET LEVEL	TECHNICAL EXPERTISE	
	OPERATIVE MANAGEMENT - KNOWS -	OPERATIVE MANAGEMENT - DOES -
<b>Small bowel ischaemia</b>		
<ul style="list-style-type: none"> <li>▪ acute</li> <li>▪ chronic</li> </ul> <p><i>See also Vascular Module</i></p>		
Mid SET	<ul style="list-style-type: none"> <li>▪ Revascularisation</li> <li>▪ Embolectomy</li> </ul>	<ul style="list-style-type: none"> <li>▪ Resection</li> </ul>
<b>Small bowel neoplasia/tumours</b>		
Mid SET		<ul style="list-style-type: none"> <li>▪ Diagnostic laparoscopy</li> <li>▪ Bowel resection/ bypass</li> <li>▪ Mesenteric nodal resection</li> </ul>
Late SET	<ul style="list-style-type: none"> <li>▪ Laparoscopic therapy</li> </ul>	
<b>Small bowel bleeding</b>		
Mid SET		<ul style="list-style-type: none"> <li>▪ Bowel resection</li> </ul>
Late SET	<ul style="list-style-type: none"> <li>▪ On table enteroscopy</li> </ul>	
<b>Meckel's diverticulum</b>		
Mid SET		<ul style="list-style-type: none"> <li>▪ Meckel's diverticulectomy</li> <li>▪ Small bowel resection</li> </ul>
Late SET	<ul style="list-style-type: none"> <li>▪ Laparoscopic Meckel's diverticulectomy</li> </ul>	
<b>Small bowel fistula</b>		
Mid SET	<ul style="list-style-type: none"> <li>▪ Management of open abdomen</li> </ul>	<ul style="list-style-type: none"> <li>▪ Small bowel resection</li> <li>▪ Defunctioning Jejunostomy/ Ileostomy</li> </ul>
<b>Inflammatory conditions of the small bowel</b>		
<i>See also Colorectal Module</i>		
Mid SET	<ul style="list-style-type: none"> <li>▪ Laparoscopic ileocolic resection</li> </ul>	<ul style="list-style-type: none"> <li>▪ Small bowel resection</li> <li>▪ Ileocolic resection</li> </ul>
Late SET	<ul style="list-style-type: none"> <li>▪ Laparoscopic assisted small bowel resection</li> <li>▪ Strictureoplasty</li> </ul>	
<b>Infectious disorders of the small bowel</b>		
Mid SET		<ul style="list-style-type: none"> <li>▪ Small bowel resection</li> </ul>
<b>Diverticulosis of the small intestine</b>		
Mid SET		<ul style="list-style-type: none"> <li>▪ Small bowel resection</li> <li>▪ Diverticulectomy</li> </ul>
<b>Intestinal failure (including post Bariatric bypass)</b>		
<i>See also Sepsis Module (Nutrition)</i>		
Mid SET		<ul style="list-style-type: none"> <li>▪ Insertion of a tunnelled central venous line for long-term TPN</li> </ul>
<b>Malabsorption syndromes</b>		
<b>Radiation enteritis</b>		
<b>Small bowel trauma</b>		
<i>See Trauma Module</i>		
<b>Other small bowel problems including functional bowel disease and slow transit</b>		

MODULE TITLE: <b>SURGICAL ONCOLOGY</b>	
<b>Module Rationale and Objectives</b>	<p>A general surgeon is required to have a thorough understanding of surgical oncology. It is important that general surgeons maintain a current understanding of the most appropriate timing and manner of intervention.</p> <p>The graduating trainee will be able to:</p> <ul style="list-style-type: none"> <li>describe common surgical pathologies of melanoma and soft tissue sarcoma</li> <li>identify and recognise the symptoms and signs of these conditions</li> <li>describe and select appropriate diagnostic testing</li> <li>identify appropriate treatment options, and their indications and contraindications</li> <li>diagnose and manage pathological conditions that pertain to surgical oncology including referral to other specialists where indicated</li> <li>select appropriate investigative tools</li> <li>adapt their skill in the context of each patient and each procedure</li> <li>identify and manage risk</li> <li>recognise the need to refer patients to other professionals</li> <li>communicate information to patients (and their family) about procedures, outcomes, and risks associated with surgery in ways that encourage their participation in informed decision making (consent)</li> </ul>
<b>Anatomy, Physiology, Pathology</b>	<p>Trainees should have thorough knowledge of the general principles of various aspects of cancer management, including:</p> <ul style="list-style-type: none"> <li>cancer screening</li> <li>cancer diagnosis</li> <li>cancer staging</li> <li>multidisciplinary care</li> <li>adjuvant therapies</li> <li>cancer follow-up</li> <li>palliative care</li> </ul>
<b>Definitions</b>	<p><i>Operative Management - Knows:</i> Trainees are required to be familiar with the indications, benefits and limitations of the procedure; trainees should be able to describe the relevant operative techniques involved in performing the procedure; trainees are encouraged to at least observe and preferably assist in these procedures.</p> <p><i>Operative Management - Does:</i> In addition to the above, trainees must be competent at performing the procedure.</p>

SET LEVEL	TECHNICAL EXPERTISE	
	OPERATIVE MANAGEMENT - KNOWS -	OPERATIVE MANAGEMENT - DOES -
<b>Fundamentals of cancer biology</b>		
<b>Principles of screening for malignancy</b>		
<b>Familial cancer syndromes including:</b> <ul style="list-style-type: none"> <li>FAP</li> <li>HNPCC</li> <li>BRCA1,2</li> <li>Li Fraumeni</li> <li>Neurofibromatosis</li> <li>MEN syndrome</li> </ul>		
<b>Carcinoma including breast, colon, oesophageal, gastric, pancreatic, skin, thyroid</b> <i>See also individual Modules - tumours</i>		
Mid SET	<ul style="list-style-type: none"> <li>Regional lymphadenectomy</li> </ul>	<ul style="list-style-type: none"> <li>Regional nodes</li> </ul>
Late SET	<ul style="list-style-type: none"> <li>Define adequate oncologic resection</li> </ul>	
<b>Melanoma</b>		
Mid SET	<ul style="list-style-type: none"> <li>Regional node dissection</li> </ul>	<ul style="list-style-type: none"> <li>Appropriate resection +/- skin grafting</li> <li>Sentinel node biopsy</li> </ul>
Late SET	<ul style="list-style-type: none"> <li>Isolated limb infusion/perfusion</li> </ul>	

SET LEVEL	TECHNICAL EXPERTISE	
	OPERATIVE MANAGEMENT - KNOWS -	OPERATIVE MANAGEMENT - DOES -
<b>Sarcoma</b>		
Late SET	<ul style="list-style-type: none"> <li>▪ Limb sacrifice and reconstruction</li> </ul>	
<b>Sarcoma – Retroperitoneal</b> <i>See also Endocrine Module - Adrenal</i>		
Early SET	<ul style="list-style-type: none"> <li>▪ Radical resection of retroperitoneum</li> <li>▪ Reconstruction</li> </ul>	
<b>Metastatic disease of unknown primary</b>		
Mid SET		<ul style="list-style-type: none"> <li>▪ Open biopsy</li> </ul>
<b>Lymphatic malignancies</b>		
Early SET		<ul style="list-style-type: none"> <li>▪ Lymph node excision and specimen handling</li> </ul>
Mid SET	<ul style="list-style-type: none"> <li>▪ Laparoscopic biopsy</li> </ul>	
<b>Vascular access</b> <i>See also Vascular Module</i>		
Early SET		<ul style="list-style-type: none"> <li>▪ Removal of above devices</li> </ul>
Mid SET		<ul style="list-style-type: none"> <li>▪ Insertion of subcutaneous venous access port/ Hickman catheter (open and percutaneous)</li> <li>▪ Management of complications</li> </ul>
<b>Malignant ascites/pleural effusions</b>		
<ul style="list-style-type: none"> <li>▪ Peritoneal malignancy</li> <li>▪ Pseudomyxoma</li> <li>▪ Mesothelioma</li> </ul>		
Mid SET	<ul style="list-style-type: none"> <li>▪ Denver shunt</li> </ul>	
<b>Principles of adjuvant therapy for malignant disease</b> <i>See also individual Modules</i>		
<b>Principles of follow-up for malignant disease</b> <i>See also individual Modules</i>		
<b>Multidisciplinary care</b> <i>See also individual Modules</i>		
<b>Palliative care and pain management</b>		

MODULE TITLE:	TRANSPLANTATION
<b>Module Rationale and Objectives</b>	<p>A general surgeon is expected to have an understanding of the anatomy, physiology, pathophysiology, investigations and differential diagnosis of organ failure. The surgeon should maintain a current understanding of indications for the provision of and the procedures of organ transplantation to overcome organ failure (in particular, liver, kidney, pancreas and small bowel). The general surgeon should be aware of the implications for management of patients with organ failure presenting with general surgical conditions. The general surgeon should be capable of participating in multi-organ donation. The general surgeon should also be prepared for and capable of caring for the characteristic complications of organ transplantation that includes serious sepsis and malignancy.</p> <p>The graduating trainee will be able to:</p> <ul style="list-style-type: none"> <li>describe the causes, risk factors for, and effects of organ failure</li> <li>identify and recognise the symptoms and signs of the diseases that lead to organ failure and of the development of organ failure</li> <li>describe and select appropriate investigations, diagnostic strategies and describe the diagnostic tests that may be required</li> <li>identify appropriate treatment options, and their indications and contraindications</li> <li>diagnose and manage pathological conditions that lead to liver failure, renal failure, diabetes and intestinal failure and be able to provide management, advice and referral for transplantation where indicated</li> <li>advise on the appropriate investigative procedures</li> <li>remain current with respect to the care of the patient with incipient or established organ failure</li> <li>refer patient for consultation with appropriate other professions</li> </ul>
<b>Anatomy, Physiology, Pathology</b>	<p>Trainees should have thorough knowledge of the normal embryology, anatomy, physiology of the kidney liver, small bowel and pancreas.</p> <p>Trainees should know the pathological processes that lead to:</p> <ul style="list-style-type: none"> <li>liver failure</li> <li>renal failure</li> <li>intestinal failure</li> <li>diabetes mellitus</li> </ul>
<b>Definitions</b>	<p><i>Operative Management - Knows:</i> Trainees are required to be familiar with the indications, benefits and limitations of the procedure; trainees should be able to describe the relevant operative techniques involved in performing the procedure; trainees are encouraged to at least observe and preferably assist in these procedures.</p> <p><i>Operative Management - Does:</i> In addition to the above, trainees must be competent at performing the procedure.</p>

SET LEVEL	TECHNICAL EXPERTISE	
	OPERATIVE MANAGEMENT - KNOWS -	OPERATIVE MANAGEMENT - DOES -
<b>Renal failure</b>		
<ul style="list-style-type: none"> <li>acute</li> <li>chronic</li> </ul>		
Early SET	<ul style="list-style-type: none"> <li>Placement of venous dialysis catheter</li> </ul>	
Mid SET	<ul style="list-style-type: none"> <li>Placement of peritoneal dialysis catheter</li> </ul>	
Late SET	<ul style="list-style-type: none"> <li>Multi-organ donation</li> <li>Living donor</li> <li>Kidney donation:               <ul style="list-style-type: none"> <li>laparoscopic</li> <li>open</li> </ul> </li> <li>Renal transplantation</li> <li>AV fistula and management of complications; <b>See also Vascular Module</b></li> </ul>	
<b>Acute rejection following renal transplantation</b>		
Mid SET	<ul style="list-style-type: none"> <li>Renal biopsy and complications</li> <li>Transplant nephrectomy</li> </ul>	
<b>Tertiary hyperpara-thyroidism</b>		
<i>See also Endocrine Module</i>		
Mid SET	<ul style="list-style-type: none"> <li>Parathyroidectomy associated with renal failure</li> </ul>	
Late SET	<ul style="list-style-type: none"> <li>Outline:               <ul style="list-style-type: none"> <li>success rate</li> <li>follow-up of parathyroidectomy in renal failure</li> <li>procedure of parathyroid transplantation</li> </ul> </li> </ul>	

SET LEVEL	TECHNICAL EXPERTISE	
	OPERATIVE MANAGEMENT - KNOWS -	OPERATIVE MANAGEMENT - DOES -
<b>Brain death/Donation after cardiac death (DCD)</b>		
Late SET	<ul style="list-style-type: none"> <li>Operation of multi-organ donation</li> </ul>	
<b>Malignancy in transplantation</b>		
Late SET	<ul style="list-style-type: none"> <li>Identify procedures that could require a referral for specialist support</li> </ul>	
<b>Liver failure</b>		
<ul style="list-style-type: none"> <li>acute</li> <li>chronic</li> </ul>		
Early SET		<ul style="list-style-type: none"> <li>Abdominal paracentesis</li> </ul>
Mid SET	<ul style="list-style-type: none"> <li>Upper GI endoscopy and interventions for bleeding</li> </ul>	<ul style="list-style-type: none"> <li>Laparoscopic assessment of the liver, including ultrasound</li> </ul>
Late SET	<ul style="list-style-type: none"> <li>Interventions for portal hypertension</li> <li>Surgical procedure of liver transplantation</li> </ul>	
<b>Pancreatic endocrine failure</b>		
Late SET	<ul style="list-style-type: none"> <li>Multi-organ donation</li> </ul>	
<b>Short bowel syndrome</b>		
<i>See also Small Bowel Module</i>		
Mid SET	<ul style="list-style-type: none"> <li>Insertion of a Hickman line for long-term TPN</li> </ul>	
Late SET	<ul style="list-style-type: none"> <li>Multi-organ donation</li> </ul>	
<b>Operating on the immunosuppressed/post transplantation patient</b>		

MODULE TITLE:	TRAUMA
<b>Module Rationale and Objectives</b>	<p>The general surgeon is an integral part of the Trauma Team. By their very nature, these patients require attention from a competent and confident practitioner. It is therefore imperative that during training all trainees have sufficient knowledge and experience to be able to fulfil this role.</p> <p>The graduating trainee will be able to:</p> <ul style="list-style-type: none"> <li>▪ understand the mechanisms of injury and the patterns of injury that may result from both blunt and penetrating trauma,</li> <li>▪ describe common surgical pathologies that will result from trauma</li> <li>▪ describe the pathophysiology of shock, acute brain injury, respiratory failure, sepsis, renal failure, multi organ failure, and burns</li> <li>▪ identify appropriate treatment options, and their indications and contraindications</li> <li>▪ participate in a trauma team including team leader role</li> <li>▪ safely and effectively assess and resuscitate the injured patient</li> <li>▪ implement the principles of EMST/ATLS, CCrISP, and DSTC</li> <li>▪ effectively manage the care of patients with trauma, including multiple system trauma</li> <li>▪ identify and manage risk in an environment of complexity and uncertainty</li> <li>▪ appropriately adjust the way they communicate with patients to accommodate cultural and linguistic differences</li> <li>▪ work in collaboration with members of an interdisciplinary team where appropriate</li> <li>▪ recognise the need to refer patients to other professionals</li> <li>▪ understand the need for early initiation of rehabilitation</li> <li>▪ effectively use resources to balance patient care and systemic demands</li> <li>▪ in acute circumstances, the consenting process may require conforming to state legislation</li> <li>▪ communication and collaboration with other surgical specialties</li> <li>▪ clear understanding of the potential disaster, humanitarian and military responsibilities of general surgeons</li> <li>▪ disaster planning</li> <li>▪ epidemiology and prevention</li> <li>▪ trauma quality improvement, benchmarking and audit</li> <li>▪ trauma systems and resources allocation</li> </ul>
<b>Anatomy, Physiology, Pathology</b>	<p>Trainees should have thorough knowledge of the normal embryology, anatomy, physiology, and pathology, of:</p> <ul style="list-style-type: none"> <li>▪ head and neck</li> <li>▪ spine</li> <li>▪ limbs</li> <li>▪ thorax</li> <li>▪ abdomen</li> <li>▪ pelvis</li> </ul>
<b>Definitions</b>	<p><i>Operative Management - Knows:</i> Trainees are required to be familiar with the indications, benefits and limitations of the procedure; trainees should be able to describe the relevant operative techniques involved in performing the procedure; trainees are encouraged to at least observe and preferably assist in these procedures.</p> <p><i>Operative Management - Does:</i> In addition to the above, trainees must be competent at performing the procedure.</p>

SET LEVEL	TECHNICAL EXPERTISE	
	OPERATIVE MANAGEMENT - KNOWS -	OPERATIVE MANAGEMENT - DOES -
<b>Initial trauma management Resuscitative phase - ED</b>		
Early SET	<ul style="list-style-type: none"> <li>▪ Basic airway management techniques</li> <li>▪ DPL principles</li> <li>▪ FAST</li> <li>▪ Principles of damage control laparotomy</li> <li>▪ Laparostomy</li> </ul>	<ul style="list-style-type: none"> <li>▪ Vascular access</li> <li>▪ Central venous access</li> <li>▪ Intra osseous puncture and access</li> <li>▪ Intercostal catheter</li> <li>▪ Splinting of extremities</li> <li>▪ Control of external haemorrhage</li> <li>▪ Pelvic binding (stabilisation)</li> <li>▪ Cricothyroidotomy</li> <li>▪ Nasopharyngeal packing</li> <li>▪ Clear cervical spine appropriately</li> </ul>
Mid SET	<ul style="list-style-type: none"> <li>▪ Emergency thoracotomy</li> </ul>	<ul style="list-style-type: none"> <li>▪ FAST</li> <li>▪ Damage control laparotomy</li> <li>▪ Laparostomy</li> </ul>
Late SET	<ul style="list-style-type: none"> <li>▪ Retroperitoneal exposure (great vessels)</li> </ul>	<ul style="list-style-type: none"> <li>▪ Emergency thoracotomy</li> </ul>

SET LEVEL	TECHNICAL EXPERTISE	
	OPERATIVE MANAGEMENT - KNOWS -	OPERATIVE MANAGEMENT - DOES -
<b>Ongoing ICU management Definitive care phase</b>		
Early SET		<ul style="list-style-type: none"> <li>▪ Compartment pressure measurement</li> </ul>
Mid SET	<ul style="list-style-type: none"> <li>▪ Enteral feeding access</li> </ul>	<ul style="list-style-type: none"> <li>▪ Laparostomy (open abdomen) and its management</li> <li>▪ Tracheo(s)tomy</li> <li>▪ Limb fasciotomy</li> </ul>
Late SET		<ul style="list-style-type: none"> <li>▪ Staged abdominal closure</li> </ul>
<b>Daily ward management - Definitive care phase ward and rehabilitation</b>		
Early SET		<ul style="list-style-type: none"> <li>▪ Principles of wound/drain care</li> </ul>
Mid SET		<ul style="list-style-type: none"> <li>▪ Tracheo(s)tomy care</li> </ul>
<b>Skin/Soft Tissues</b>		
Early SET	<ul style="list-style-type: none"> <li>▪ Surgical airway</li> </ul>	<ul style="list-style-type: none"> <li>▪ Wound exploration</li> <li>▪ Wound debridement</li> <li>▪ Foreign body removal (use of image intensifier)</li> <li>▪ Wound closure or open management based on the nature of the soft tissue injury</li> <li>▪ Split skin grafting</li> <li>▪ VACC therapy applications and limitations</li> </ul>
Mid SET	<ul style="list-style-type: none"> <li>▪ Wound management in specific areas</li> </ul>	<ul style="list-style-type: none"> <li>▪ Escharotomy</li> <li>▪ Local flap coverage</li> </ul>
<b>Blast injuries</b>		
Early SET		<ul style="list-style-type: none"> <li>▪ Lavage and debride contaminated wounds</li> <li>▪ Intercostal catheters</li> </ul>
Mid SET	<ul style="list-style-type: none"> <li>▪ Attend to life threatening injuries</li> </ul>	<ul style="list-style-type: none"> <li>▪ Surgical airway</li> <li>▪ Thoracotomy</li> <li>▪ Emergency laparotomy</li> <li>▪ Haemorrhage control</li> <li>▪ Escharotomy in burns</li> </ul>
<b>Head/Brain</b>		
Early SET	<ul style="list-style-type: none"> <li>▪ Extra dural drainage</li> </ul>	<ul style="list-style-type: none"> <li>▪ Control of severe bleeding from scalp lacerations</li> <li>▪ Nasal packing</li> </ul>
Mid SET	<ul style="list-style-type: none"> <li>▪ Control of severe maxilla-facial bleeding</li> </ul>	<ul style="list-style-type: none"> <li>▪ Definitive wound management of head/face/orbit wounds</li> </ul>
Late SET	<ul style="list-style-type: none"> <li>▪ For rural practice: craniotomy and craniectomy</li> </ul>	
<b>Face/Neck</b>		
Early SET	<ul style="list-style-type: none"> <li>▪ Surgical airway</li> </ul>	
Mid SET	<ul style="list-style-type: none"> <li>▪ Access and vascular control in Zone I and III</li> <li>▪ Repair of carotid injury</li> <li>▪ Repair of oesophageal injury</li> <li>▪ Surgical exploration of Zone II</li> </ul>	<ul style="list-style-type: none"> <li>▪ Surgical airway</li> </ul>
<b>Spine</b>		
Early SET		<ul style="list-style-type: none"> <li>▪ Application of spine immobilisation devices</li> </ul>
Mid SET	<ul style="list-style-type: none"> <li>▪ Application of tongs</li> </ul>	
<b>Chest</b>		
Early SET	<ul style="list-style-type: none"> <li>▪ ED resuscitative thoracotomy</li> </ul>	<ul style="list-style-type: none"> <li>▪ Chest tube insertion</li> </ul>

SET LEVEL	TECHNICAL EXPERTISE	
	OPERATIVE MANAGEMENT - KNOWS -	OPERATIVE MANAGEMENT - DOES -
<b>Chest (continued)</b>		
Mid SET	<ul style="list-style-type: none"> <li>▪ Diaphragmatic repair from the abdomen</li> <li>▪ Pericardial window (extra-peritoneal vs. intra-peritoneal)</li> <li>▪ Diaphragmatic repair from chest</li> </ul>	
Late SET	<ul style="list-style-type: none"> <li>▪ Vascular control in the chest</li> <li>▪ Periclavicular approaches for the thoracic outlet</li> <li>▪ Repair simple cardiac wounds</li> <li>▪ Thoracoscopy, thoracotomy</li> <li>▪ VATS</li> </ul>	<ul style="list-style-type: none"> <li>▪ Diaphragmatic repair from the abdomen</li> </ul>
<b>Abdomen</b>		
Early SET		<ul style="list-style-type: none"> <li>▪ Local wound exploration</li> </ul>
Mid SET	<ul style="list-style-type: none"> <li>▪ Exploration of the retroperitoneum – left and right medial visceral rotation manoeuvres</li> <li>▪ Control of major vessels</li> </ul>	<ul style="list-style-type: none"> <li>▪ Damage control laparotomy</li> <li>▪ Temporary abdominal closure</li> <li>▪ Trauma laparoscopy</li> <li>▪ Control of the environment, preparation and execution</li> <li>▪ Systematic approach</li> <li>▪ Haemorrhage and contamination control</li> <li>▪ Anatomical liver packing</li> <li>▪ Pringle manoeuvre</li> <li>▪ Splenectomy</li> <li>▪ Repair resection hollow viscus injury</li> </ul>
Late SET	<ul style="list-style-type: none"> <li>▪ Major abdominal vascular repair</li> <li>▪ Vascular isolation of the liver</li> <li>▪ Splenic and kidney salvage techniques</li> <li>▪ Exploration of the retroperitoneum – left and right medial visceral rotation manoeuvres</li> </ul>	
<b>Pelvis</b>		
Early SET		<ul style="list-style-type: none"> <li>▪ Application of pelvic binder</li> </ul>
Mid SET		<ul style="list-style-type: none"> <li>▪ Trauma laparotomy</li> </ul>
Late SET	<ul style="list-style-type: none"> <li>▪ Pre-peritoneal packing for pelvic traumas</li> </ul>	<ul style="list-style-type: none"> <li>▪ Pelvic packing</li> </ul>
<b>Extremities</b>		
Early SET		<ul style="list-style-type: none"> <li>▪ Realignment</li> <li>▪ Splinting</li> <li>▪ Washout and debridement of open wounds</li> <li>▪ Compartment pressure measurement</li> </ul>
Mid SET	<ul style="list-style-type: none"> <li>▪ Vascular exploration and control on extremities</li> </ul>	<ul style="list-style-type: none"> <li>▪ Amputations</li> <li>▪ Fasciotomy</li> </ul>

MODULE TITLE: UPPER GI & HPB - BARIATRIC/OBESE PATIENTS	
<b>Module Rationale and Objectives</b>	<p>A general surgeon is required to have a thorough understanding of normal anatomy and physiology, as well as pathophysiology, investigations, differential diagnosis and surgical and non-surgical management of abdominal disorders. It is important that general surgeons maintain a current understanding of the most appropriate time and manner of intervention. It is also important that they keep abreast of the most current developments in investigative and surgical procedures.</p> <p>The graduating trainee will be able to:</p> <ul style="list-style-type: none"> <li>describe common surgical pathologies of the foregut and associated structures</li> <li>identify and recognise the symptoms and signs of these conditions</li> <li>describe and select appropriate diagnostic testing</li> <li>identify appropriate treatment options, and their indications and contraindications</li> <li>diagnose and manage pathological conditions that pertain to the foregut</li> <li>effectively manages patients</li> <li>maintains skills and learns new skills</li> <li>analyses their own clinical performance for consistent improvement</li> <li>recognise the need to refer patients to other professionals</li> <li>communicate information to patients (and their family) about procedures, outcomes, and risks associated with surgery for the morbidly obese patient in ways that encourage their participation in informed decision making (consent)</li> </ul>
<b>Anatomy, Physiology, Pathology</b>	<p>Trainees should have thorough knowledge of the normal embryology, anatomy, physiology and pathology, of:</p> <ul style="list-style-type: none"> <li>foregut</li> </ul>
<b>Definitions</b>	<p><i>Operative Management - Knows:</i> Trainees are required to be familiar with the indications, benefits and limitations of the procedure; trainees should be able to describe the relevant operative techniques involved in performing the procedure; trainees are encouraged to at least observe and preferably assist in these procedures.</p> <p><i>Operative Management - Does:</i> In addition to the above, trainees must be competent at performing the procedure.</p>

SET LEVEL	TECHNICAL EXPERTISE	
	OPERATIVE MANAGEMENT - KNOWS -	OPERATIVE MANAGEMENT - DOES -
<b>MORBID OBESITY</b>		
Early SET		<ul style="list-style-type: none"> <li>Gastric band deflation</li> </ul>
Mid SET		<ul style="list-style-type: none"> <li>Removal of Gastric Band (open or laparoscopic) in emergency situations</li> <li>Management of internal hernia after gastric bypass in emergency situations</li> </ul>
Late SET	<ul style="list-style-type: none"> <li>Options for managing complications</li> </ul>	

MODULE TITLE: UPPER GI & HPB - HEPATIC, PANCREATIC & BILIARY	
<b>Module Rationale and Objectives</b>	<p>A general surgeon is required to have a thorough understanding of normal anatomy and physiology, as well as pathophysiology, investigations, differential diagnosis and surgical and non-surgical management of abdominal disorders. It is important that general surgeons maintain a current understanding of the most appropriate time and manner of intervention. It is also important that they keep abreast of the most current developments in investigative and surgical procedures.</p> <p>The graduating trainee will be able to:</p> <ul style="list-style-type: none"> <li>describe common surgical pathologies of the foregut and associated structures</li> <li>identify and recognise the symptoms and signs of these conditions</li> <li>describe and select appropriate diagnostic testing</li> <li>identify appropriate treatment options, and their indications and contraindications</li> <li>diagnose and manage pathological conditions that pertain to the foregut</li> <li>effectively manages patients</li> <li>maintains skills and learns new skills</li> <li>analyses their own clinical performance for consistent improvement</li> <li>recognise the need to refer patients to other professionals</li> <li>communicate information to patients (and their family) about procedures, outcomes, and risks associated with surgery in ways that encourage their participation in informed decision making (consent)</li> </ul>
<b>Anatomy, Physiology, Pathology</b>	<p>Trainees should have thorough knowledge of the normal embryology, anatomy, physiology and pathology, of:</p> <ul style="list-style-type: none"> <li>foregut</li> </ul>
<b>Definitions</b>	<p><i>Operative Management - Knows:</i> Trainees are required to be familiar with the indications, benefits and limitations of the procedure; trainees should be able to describe the relevant operative techniques involved in performing the procedure; trainees are encouraged to at least observe and preferably assist in these procedures.</p> <p><i>Operative Management - Does:</i> In addition to the above, trainees must be competent at performing the procedure.</p>

SET LEVEL	TECHNICAL EXPERTISE	
	OPERATIVE MANAGEMENT - KNOWS -	OPERATIVE MANAGEMENT - DOES -
<b>HEPATIC</b>		
<b>Primary liver malignancy</b>		
<ul style="list-style-type: none"> <li>HCC</li> <li>cholangiocarcinoma</li> <li>others</li> </ul>		
Mid SET		<ul style="list-style-type: none"> <li>Staging Laparoscopy</li> </ul>
Late SET	<ul style="list-style-type: none"> <li>Liver resection in patient with cirrhosis</li> <li>Intra Operative US</li> <li>Laparoscopic Liver Biopsy in Cirrhosis</li> </ul>	
<b>Liver metastases</b>		
Mid SET		<ul style="list-style-type: none"> <li>Staging laparoscopy</li> <li>Staging at laparotomy</li> </ul>
Late SET	<ul style="list-style-type: none"> <li>Principles of hepatic mobilisation, localisation of the tumour and dissection of the liver</li> <li>Intra Operative US</li> </ul>	<ul style="list-style-type: none"> <li>Laparoscopic Liver Biopsy</li> </ul>
<b>Incidental liver lesions</b>		
<ul style="list-style-type: none"> <li>adenoma</li> <li>FNH</li> <li>haemangioma</li> <li>non-parasitic cysts</li> </ul>		
Mid SET		<ul style="list-style-type: none"> <li>Evaluation at open operation</li> <li>Laparoscopic liver biopsy</li> </ul>
Late SET	<ul style="list-style-type: none"> <li>Principles of hepatic mobilisation, localisation of the tumour and dissection of the liver</li> <li>Intra Operative US</li> </ul>	
<b>Liver infections</b>		
<ul style="list-style-type: none"> <li>abscess pyogenic</li> <li>parasitic</li> <li>others</li> </ul>		

SET LEVEL	TECHNICAL EXPERTISE	
	OPERATIVE MANAGEMENT - KNOWS -	OPERATIVE MANAGEMENT - DOES -
<b>Portal hypertension</b>		
Early SET	<ul style="list-style-type: none"> <li>Operative strategies for patient with portal hypertension</li> </ul>	
Mid SET	<ul style="list-style-type: none"> <li>Management of variceal bleeding</li> </ul>	
<b>Ascites</b>		
Early SET	<ul style="list-style-type: none"> <li>Impact of ascites on abdominal surgery</li> </ul>	
Mid SET	<ul style="list-style-type: none"> <li>Operative management of patient with ascites</li> </ul>	
<b>Hepatic trauma</b> <i>See also Trauma Module</i>		
Mid SET	<ul style="list-style-type: none"> <li>Understand the principles of use of various haemostatic agents</li> <li>Understand the role of low CVP anaesthesia in liver injuries</li> </ul>	<ul style="list-style-type: none"> <li>Laparotomy</li> <li>Assessment of severity of injury</li> <li>Methods to obtain haemostasis including packing a liver injury for referral/transfer</li> </ul>
<b>Hepatic Failure (Acute &amp; Chronic)</b>		
Mid SET	<ul style="list-style-type: none"> <li>Methods to achieve haemostasis</li> </ul>	
<b>BILIARY</b>		
<b>Gallstone disease</b>		
Mid SET		<ul style="list-style-type: none"> <li>Cholecystectomy for uncomplicated and complicated disease, including performance of operative cholangiography</li> <li>Open exploration of the common bile duct</li> <li>Laparoscopic transcystic exploration of the common bile duct</li> </ul>
Late SET	<ul style="list-style-type: none"> <li>Laparoscopic exploration of the common bile duct</li> </ul>	<ul style="list-style-type: none"> <li>Open cholecystectomy including techniques for the "difficult" gall bladder</li> </ul>
<b>Gall bladder polyp</b>		
Mid SET		<ul style="list-style-type: none"> <li>Laparoscopic cholecystectomy</li> </ul>
Late SET	<ul style="list-style-type: none"> <li>Role of laparoscopic IOUS</li> </ul>	
<b>Gallbladder carcinoma/cholangiocarcinoma</b>		
Mid SET	<ul style="list-style-type: none"> <li>Laparoscopic assessment</li> <li>Laparoscopic IOUS</li> </ul>	<ul style="list-style-type: none"> <li>Staging laparoscopy</li> <li>Laparoscopic liver biopsy</li> </ul>
<b>Benign biliary bile duct/strictures injuries</b>		
Mid SET	<ul style="list-style-type: none"> <li>Roux-en-Y hepatico-jejunostomy</li> </ul>	<ul style="list-style-type: none"> <li>Intra-operative <ul style="list-style-type: none"> <li>recognition</li> <li>call for help or</li> <li>drain and refer</li> </ul> </li> <li>Postoperative <ul style="list-style-type: none"> <li>recognition</li> <li>laparoscopic or open drainage and refer</li> </ul> </li> </ul>
<b>Choledochal anomalies</b>		
Late SET	<ul style="list-style-type: none"> <li>Biliary resection</li> <li>Roux-en-Y hepatico-jejunostomy</li> </ul>	
<b>PANCREATIC</b>		
<b>Acute pancreatitis</b>		
Mid SET	<ul style="list-style-type: none"> <li>Percutaneous necrosectomy</li> </ul>	<ul style="list-style-type: none"> <li>Operative recognition of acute pancreatitis</li> <li>Percutaneous abscess drainage</li> </ul>
Late SET	<ul style="list-style-type: none"> <li>Open, laparoscopic and endoscopic cysto-gastrostomy</li> <li>Open necrosectomy</li> <li>Laparoscopic necrosectomy</li> </ul>	

SET LEVEL	TECHNICAL EXPERTISE	
	OPERATIVE MANAGEMENT - KNOWS -	OPERATIVE MANAGEMENT - DOES -
<b>Chronic pancreatitis</b>		
Late SET	<ul style="list-style-type: none"> <li>▪ Pancreatico-jejunostomy</li> <li>▪ Distal pancreatectomy</li> <li>▪ Role for splenic preservation</li> </ul>	
<b>Periampullary and ductal pancreatic carcinoma</b>		
Mid SET	<ul style="list-style-type: none"> <li>▪ Biliary-enteric anastomosis and gastro-enterostomy</li> </ul>	<ul style="list-style-type: none"> <li>▪ Laparoscopic staging</li> </ul>
Late SET	<ul style="list-style-type: none"> <li>▪ Pancreatic-duodenectomy</li> <li>▪ Distal pancreatectomy</li> </ul>	<ul style="list-style-type: none"> <li>▪ Gastro-enterostomy</li> </ul>
<b>Pancreatic cysts &amp; Cystic tumours trauma</b>		
Mid SET	<ul style="list-style-type: none"> <li>▪ Pancreatic duodenectomy</li> <li>▪ Distal pancreatectomy</li> </ul>	<ul style="list-style-type: none"> <li>▪ Laparoscopic staging</li> </ul>
Late SET		<ul style="list-style-type: none"> <li>▪ Gastro-enterostomy</li> </ul>
<b>Other pancreatic tumours including: <i>See also Endocrine Module</i></b>		
<ul style="list-style-type: none"> <li>▪ endocrine tumours</li> <li>▪ incidental tumours</li> </ul>		
Mid SET	<ul style="list-style-type: none"> <li>▪ Pancreatic duodenectomy</li> <li>▪ Distal pancreatectomy</li> </ul>	
<b>Pancreatic-duodenal trauma</b>		
<i>See also Trauma Module</i>		
Mid SET	<ul style="list-style-type: none"> <li>▪ Techniques for repair of a duodenal injury/± pancreatic injury</li> <li>▪ Assess the extent of injury at laparotomy</li> </ul>	<ul style="list-style-type: none"> <li>▪ Damage control</li> <li>▪ Laparotomy</li> </ul>
Late SET	<ul style="list-style-type: none"> <li>▪ Distal pancreatectomy</li> </ul>	
<b>ERCP complications</b>		
<b>SPLEEN AND HAEMOPOIETIC SYSTEM</b>		
<b>Splenic trauma</b>		
Mid SET		<ul style="list-style-type: none"> <li>▪ Trauma splenectomy</li> </ul>
Late SET	<ul style="list-style-type: none"> <li>▪ Understand the principles of use of various haemostatic agents</li> <li>▪ Splenorrhaphy</li> </ul>	
<b>ITP/other indications for splenectomy</b>		
Mid SET	<ul style="list-style-type: none"> <li>▪ Laparoscopic splenectomy</li> </ul>	<ul style="list-style-type: none"> <li>▪ Elective splenectomy for a normal sized spleen</li> </ul>
<b>Massive spleen</b>		
Late SET	<ul style="list-style-type: none"> <li>▪ Splenectomy for massive spleen</li> </ul>	
<b>Lymph nodes including lymphoma</b>		
Early SET		<ul style="list-style-type: none"> <li>▪ Open node biopsy; <ul style="list-style-type: none"> <li>- cervical</li> <li>- axillary</li> <li>- femoral</li> </ul> </li> </ul>
Mid SET	<ul style="list-style-type: none"> <li>▪ Laparoscopic abdominal nodal biopsy <b>See also Surgical Oncology Module</b></li> </ul>	<ul style="list-style-type: none"> <li>▪ Open abdominal nodal biopsy</li> </ul>

MODULE TITLE: UPPER GI & HPB - OESOPHAGO-GASTRIC	
<b>Module Rationale and Objectives</b>	<p>A general surgeon is required to have a thorough understanding of normal anatomy and physiology, as well as pathophysiology, investigations, differential diagnosis and surgical and non-surgical management of abdominal disorders. It is important that general surgeons maintain a current understanding of the most appropriate time and manner of intervention. It is also important that they keep abreast of the most current developments in investigative and surgical procedures.</p> <p>The graduating trainee will be able to:</p> <ul style="list-style-type: none"> <li>describe common surgical pathologies of the foregut and associated structures</li> <li>identify and recognise the symptoms and signs of these conditions</li> <li>describe and select appropriate diagnostic testing</li> <li>identify appropriate treatment options, and their indications and contraindications</li> <li>diagnose and manage pathological conditions that pertain to the foregut</li> <li>effectively manages patients</li> <li>maintains skills and learns new skills</li> <li>analyses their own clinical performance for consistent improvement</li> <li>recognise the need to refer patients to other professionals</li> <li>communicate information to patients (and their family) about procedures, outcomes, and risks associated with surgery in ways that encourage their participation in informed decision making (consent)</li> </ul>
<b>Anatomy, Physiology, Pathology</b>	<p>Trainees should have thorough knowledge of the normal embryology, anatomy, physiology and pathology, of:</p> <ul style="list-style-type: none"> <li>foregut</li> </ul>
<b>Definitions</b>	<p><i>Operative Management - Knows:</i> Trainees are required to be familiar with the indications, benefits and limitations of the procedure; trainees should be able to describe the relevant operative techniques involved in performing the procedure; trainees are encouraged to at least observe and preferably assist in these procedures.</p> <p><i>Operative Management - Does:</i> In addition to the above, trainees must be competent at performing the procedure.</p>

SET LEVEL	TECHNICAL EXPERTISE	
	OPERATIVE MANAGEMENT - KNOWS -	OPERATIVE MANAGEMENT - DOES -
<b>OESOPHAGUS</b>		
<b>Gastro-oesophageal reflux (GOR) disease and Hiatus hernia/paraesophageal hernia</b>		
Mid SET		<ul style="list-style-type: none"> <li>Endoscopic assessment of GOR</li> </ul>
Late SET	<ul style="list-style-type: none"> <li>Laparoscopic/ open fundoplication</li> </ul>	
<b>Oesophageal strictures:</b>		
<ul style="list-style-type: none"> <li>peptic and corrosive strictures</li> <li>Schatzki ring and webs</li> </ul>		
Mid SET		<ul style="list-style-type: none"> <li>Endoscopic assessment of the stricture</li> <li>Endoscopic dilatation</li> </ul>
<b>Oesophageal malignancies</b>		
Mid SET	<ul style="list-style-type: none"> <li>Resection/reconstruction options</li> <li>Palliative stenting</li> </ul>	<ul style="list-style-type: none"> <li>Endoscopic diagnosis and assessment</li> <li>Feeding jejunostomy</li> <li>Laparoscopic staging</li> </ul>
<b>Other tumours</b>		
Mid SET	<ul style="list-style-type: none"> <li>Endoscopic diagnosis and assessment</li> </ul>	
<b>Motility disorders</b>		
Mid SET	<ul style="list-style-type: none"> <li>Endoscopic assessment and management options</li> </ul>	
Late SET	<ul style="list-style-type: none"> <li>Laparoscopic Heller's myotomy</li> </ul>	
<b>Oesophageal varices</b>		
Mid SET		<ul style="list-style-type: none"> <li>Endoscopic assessment</li> </ul>
<b>Oesophageal foreign bodies</b>		
Mid SET		<ul style="list-style-type: none"> <li>Endoscopic assessment and removal</li> </ul>

SET LEVEL	TECHNICAL EXPERTISE	
	OPERATIVE MANAGEMENT - KNOWS -	OPERATIVE MANAGEMENT - DOES -
<b>Oesophageal perforation</b>		
Late SET	<ul style="list-style-type: none"> <li>Operative repair, endoscopic stenting</li> </ul>	
<b>STOMACH</b>		
<b>Peptic ulcers (gastric and duodenal)</b>		
Mid SET		<ul style="list-style-type: none"> <li>Endoscopic assessment:               <ul style="list-style-type: none"> <li>elective</li> <li>emergency</li> </ul> </li> <li>Management of complications (open/lap/endo) operations):               <ul style="list-style-type: none"> <li>bleeding</li> <li>perforation</li> <li>stricture</li> <li>difficult duodenum</li> </ul> </li> </ul>
Late SET		<ul style="list-style-type: none"> <li>Techniques of endoscopic haemostasis</li> </ul>
<b>Gastric carcinoma</b>		
Early SET	<ul style="list-style-type: none"> <li>Total or subtotal gastrectomy and oesophago-gastrectomy</li> <li>Radical distal gastrectomy</li> </ul>	
Mid SET		<ul style="list-style-type: none"> <li>Endoscopic and laparoscopic staging</li> <li>Gastro-enterostomy</li> <li>Feeding jejunostomy</li> </ul>
<b>Other gastric tumours e.g. GIST</b> <i>See also Surgical Oncology Module</i>		
Mid SET		<ul style="list-style-type: none"> <li>Endoscopic assessment</li> <li>Local gastric resection or distal gastrectomy (lap/open)</li> </ul>
Late SET		<ul style="list-style-type: none"> <li>Laparoscopic and open wedge gastrectomy</li> </ul>

MODULE TITLE: <b>ARTERIAL, VENOUS &amp; LYMPHATIC SYSTEMS</b>	
<b>Module Rationale and Objectives</b>	<p>The general surgeon is expected to be able to assess and manage commonly occurring vascular diseases that can occur as a single entity, or as a co-morbidity or complication associated with other diseases. They also expected to be able to recognise the need and appropriate time to refer such patients to other professionals.</p> <p>The graduating trainee will be able to:</p> <ul style="list-style-type: none"> <li>describe common surgical pathologies of atherosclerosis, acute ischaemia and reperfusion injury, aneurysmal disease, systemic complications of diabetic disease, venous insufficiency, and thrombosis</li> <li>identify and recognise the symptoms and signs of these conditions</li> <li>describe and select appropriate diagnostic testing</li> <li>identify appropriate treatment options, and their indications and contraindications</li> <li>recognise, assess and treat any common vascular conditions likely to be encountered in consultative general surgical practice</li> <li>dissect and expose the abdominal aorta and all major peripheral blood vessels</li> <li>select appropriate investigative tools and monitoring techniques in a cost-effective and useful manner recognising risks and complications of their use</li> <li>appraise and interpret investigative imaging against patient's needs</li> <li>understand risks and benefits of common vascular medications</li> <li>recognise which conditions to refer on to a specialised vascular service</li> <li>acknowledge their own limitations</li> <li>communicate information to patients (and their family) about procedures, outcomes, and risks associated with surgery in ways that encourage their participation in informed decision making (consent)</li> </ul>
<b>Anatomy, Physiology, Pathology</b>	<p>Trainees should have thorough knowledge of the normal embryology, anatomy, physiology, and pathology, of:</p> <ul style="list-style-type: none"> <li>arterial</li> <li>venous</li> <li>lymphatic systems</li> </ul>
<b>Definitions</b>	<p><i>Operative Management - Knows:</i> Trainees are required to be familiar with the indications, benefits and limitations of the procedure; trainees should be able to describe the relevant operative techniques involved in performing the procedure; trainees are encouraged to at least observe and preferably assist in these procedures.</p> <p><i>Operative Management - Does:</i> In addition to the above, trainees must be competent at performing the procedure.</p>

SET LEVEL	TECHNICAL EXPERTISE	
	OPERATIVE MANAGEMENT - KNOWS -	OPERATIVE MANAGEMENT - DOES -
<b>Acute ischaemia</b>		
Early SET		<ul style="list-style-type: none"> <li>Fasciotomy               <ul style="list-style-type: none"> <li>leg</li> </ul> </li> </ul>
Mid SET	<ul style="list-style-type: none"> <li>Appreciate the role of endovascular treatment including thrombolysis</li> <li>Embolectomy:               <ul style="list-style-type: none"> <li>brachial</li> <li>femoral</li> </ul> </li> </ul>	
<b>Peripheral vascular disease (chronic)</b>		
Mid SET	<ul style="list-style-type: none"> <li>Peripheral vascular reconstruction/ bypass procedures</li> <li>Dissection and isolation of vessels in the groin</li> <li>Arterial anastomosis</li> <li>Arteriotomy closure</li> </ul>	<ul style="list-style-type: none"> <li>Below knee amputation</li> <li>Above knee amputation</li> </ul>
<b>Aneurysmal disease</b>		
Mid SET	<ul style="list-style-type: none"> <li>Exposure of aorta and Common iliac arteries</li> </ul>	
Late SET	<ul style="list-style-type: none"> <li>Repair of AAA</li> <li>Clamp neck of AAA</li> </ul>	
<b>Diabetic vascular disease</b>		
Early SET	<ul style="list-style-type: none"> <li>Role of primary closure versus secondary healing</li> </ul>	<ul style="list-style-type: none"> <li>Digital amputations</li> </ul>
Mid SET	<ul style="list-style-type: none"> <li>Appreciate appropriate application of Negative Pressure Wound Therapy (NPWT)</li> <li>Transmetatarsal amputations</li> </ul>	

SET LEVEL	TECHNICAL EXPERTISE	
	OPERATIVE MANAGEMENT - KNOWS -	OPERATIVE MANAGEMENT - DOES -
<b>Vascular access</b>		
Early SET		<ul style="list-style-type: none"> <li>Central line insertion</li> </ul>
Mid SET	<ul style="list-style-type: none"> <li>Arterio-venous anastomosis</li> <li>Portacath and/or Hickman's insertion (including complications of CVL insertion)</li> </ul>	
Late SET	<ul style="list-style-type: none"> <li>Arterio venous graft access techniques</li> </ul>	
<b>Venous disease (including varicose veins)</b>		
Early SET	<ul style="list-style-type: none"> <li>Varicose vein surgery</li> </ul>	
Late SET	<ul style="list-style-type: none"> <li>Operations for recurrent varicose veins</li> </ul>	
<b>Thrombo-embolic disease (DVT and PE)</b>		
<b>Superficial thrombophlebitis</b>		
Early SET	<ul style="list-style-type: none"> <li>High saphenous ligations</li> </ul>	
<b>Mesenteric ischaemia</b>		
<ul style="list-style-type: none"> <li>acute</li> <li>chronic</li> </ul>		
Early SET	<ul style="list-style-type: none"> <li>Laparotomy               <ul style="list-style-type: none"> <li>resection of nonviable bowel</li> </ul> </li> </ul>	
Late SET	<ul style="list-style-type: none"> <li>Mesenteric embolectomy/ revascularisation procedures</li> </ul>	<ul style="list-style-type: none"> <li>Role of secondary laparotomy</li> <li>Laparotomy</li> <li>Resection of nonviable bowel</li> </ul>
<b>Vascular trauma</b>		
Mid SET	<ul style="list-style-type: none"> <li>Exposure of major abdominal vessels</li> </ul>	
<b>Lymphatic disease</b>		
<b>Variant anatomy and non-anatomical reconstruction</b>		