

Virginia Western Community College
SUR 210
Surgical Procedures

Prerequisites

SUR 100, 135, 140, 145, 150, 240, 245, 250, 195, 230

Course Description

Introduces surgical procedures and the role of the surgical technologist. Introduces procedures for surgical specialties such as General, Gynecological, Obstetrics, Genitourinary, EENT (Eye, Ear, Nose, and Throat), Orthopedic, Neurosurgery, Cardiac, Vascular, Pediatric, Plastic, Transplant, and Trauma surgery. Pathophysiology, surgical anatomy, instrumentation, and procedural steps are discussed and combined with a consistent method of reinforcement at the clinical site.

Semester Credits: 3**Lecture Hours: 3****Lab/Clinical/Internship Hours: 0****Required Materials****Textbook:**

Title	Author	Edition
Surgical Technology for the Surgical Technologist A Positive Care Approach ISBN: 978-130595641-4	Frey, Kevin B.	5 th
Study Guide to Accompany Surgical Technology for the Surgical Technologist -- Workbook ISBN: 978-1-30-595643-8	Cengage	5 th
LANGE Q&A Surgical Technology Examination ISBN: 978-125958811-2	Sherman, Carolan, Chmielewski, Mary	8 th
Pearson's Surgical Technology Exam Review ISBN: 978-0-13-521342-1	Rogers, Emily M., McGuinness Leary, Ann	4 th
VWCC Surgical Technology Program Student Handbook	VWCC AAS in ST	

Recommended/Supplemental Texts

All previously required textbooks from Surgical Technology and anatomy textbooks are recommended as supplemental texts to enhance the learning experience.

Students are provided textbook materials for the Trauma Surgery chapters.

Other Required Materials:

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Course Outcomes

Upon completion of the course, students will be able to:	Meets Competency #
Identify key anatomical structures of the eye, discuss diagnostic procedures, specific elements of case planning, medications, sutures, specialty equipment and surgical techniques used and common surgical procedures of the eye. Discuss the role of the CST in eye procedures.	#4, #5 and #7
Identify the key anatomical structures of the ear, nasal cavity. Oropharynx, and larynx and neck; discuss key aspects of case planning, common procedures for the ear, nasal cavity, nose and neck. Discuss key aspects of case planning, diagnostic testing, common medications, including instrumentation and specialty equipment. Discuss the role of the CST in ENT procedures.	# 4, # 5, and # 7
Identify key anatomical features of the integumentary system, discuss specific elements of case planning, and skin grafting techniques used in plastic and reconstructive surgery. Discuss common pathology, surgical techniques and procedures, common medication, case planning, surgical instrumentation and equipment and the role of the CST as it relates to the patient in Plastics and Reconstructive Surgery.	#4, #5 and #7
Identify key anatomical features of the peripheral vascular system, discuss diagnostic procedures, specific elements of case planning, surgical techniques used, common medications, vascular pathology and common vascular procedures. Compare and contrast difference between endovascular and open approach in peripheral vascular surgical procedures. Discuss role of the CST in Peripheral Vascular Surgical Procedures.	#4, #5 and #7
Identify key anatomical features of the respiratory structures in the thoracic cavity, describe diagnostic procedures, pathology, instrumentation, specific elements of case planning and common thoracic procedures of the respiratory system. Discuss role of the CST in Thoracic Surgery.	#4, #5 and #7
Identify key anatomical features of the heart and great vessels, describe diagnostic procedures commonly used in cardiac medicine, specific elements of case planning, pathology, primary surgical goals and instruments used for common cardiac procedures. Discuss cardiopulmonary bypass. Discuss role of the CST in cardiac surgical procedures.	#4, #5 and #7
Identify key anatomical structures of the oral cavity and facial structure, discuss common surgical pathology, specific elements of case planning, surgical techniques, and common surgical procedures of oral/maxillofacial surgery. Discuss the role of the CST in oral/maxillofacial surgical procedures.	#4, #5 and #7
Explain the trauma system used in the USA, the lethal triangle of trauma physiology, compartment syndrome, principles of ACLS, what is meant by damage control surgery and discuss the elements of case planning for common trauma surgeries. Discuss common surgical physiology, accidents, patient populations, and case planning. Discuss the role of the CST in emergency trauma procedures.	#4, #5 and #7
Identify key anatomical structures of the brain, spinal cord and neural structures, discuss diagnostic procedures, specific elements of case planning, surgical techniques used and common neurosurgical procedures. Discuss patient positioning, patient population, special equipment and instrumentation, common medications used and the role of the CST in neurosurgical procedures.	#4, #5 and #7

Topical Description

Week of	Content
	<p>Week 1: Introduction to class, syllabus review, course expectations, overview of the course and objectives.</p> <p>Begin Chapter 19 – Plastic and Reconstructive Surgery</p> <p>Lecture & discussion: Introduction to Plastic and Reconstructive Surgery, review of anatomy, case planning and considerations</p> <p>Surgical Procedures: Skin grafts, scar revision, Superficial Lesion/Neoplasm, Pedicle Graft</p>
	<p>Week 2: Surgical Procedures: Blepharoplasty, Brow lift, Cheiloplasty/palatoplasty, Malar implants, Mentoplasty, Otoplasty, Rhinoplasty, Rhytidectomy, Breast Augmentation, Mastopexy, Mammoplasty, Nipple Reconstruction, TRAM Flap, Abdominoplasty, Liposuction, Hand Procedures, Radial dysplasia, release of polydactyly/syndactyly, Surgical procedures related to gender reassignment – phalloplasty, breast augmentation, etc.</p>
	<p>Week 3: Begin Chapter 17: Otorhinolaryngologic Surgery</p> <p>Lecture & discussion: Introduction to Otorhinolaryngology, anatomy review, surgical instrumentation, considerations, case needs, etc.</p> <p>Surgical Procedures: Myringotomy, Tympanoplasty, Mastoidectomy, Stapedectomy, Cochlear Implant, Endoscopic sinus surgery (FESS), Choanal atresia, Nasal Antrotomy, Nasal Polypectomy, Septoplasty, Turbinectomy, Tonsillectomy and Adenoidectomy (T&A), TMJ, Tracheostomy/Tracheotomy, Uvulopalatopharyngoplasty, Parotidectomy, Radical Neck Dissection, Mandibulectomy, Glossectomy, Laryngectomy</p>
	<p>Week 4: Lecture & discussion: Procedures of the Neck & specific case planning</p> <p>Surgical Procedures: Parotidectomy, Radical Neck Dissection, Mandibulectomy, Glossectomy, Laryngectomy</p>

	<p><u>Week 5: Chapter 18: Oral and Maxillofacial Surgery</u></p> <p>Lecture & discussion: Introduction to oral and maxillofacial surgical anatomy, pathology, case planning</p> <p>Surgical Procedures: Maxillary & mandibular fractures (ORIF, Arch Bar Application), Cleft Lip/Palate Repair, Odontectomy, LeFort I, LeFort II, LeFort III, ORIF Orbital Fracture</p>
	<p>Week 6: Begin Chapter 24: Neurosurgery</p> <p>Lecture & discussion: Introduction to Neurosurgery, review of anatomy, related medications, surgical instrumentation, equipment, diagnostic procedures, surgical pathology, case planning, role of CST, special considerations</p> <p>Surgical Procedures: Craniotomy (Aneurysm repair, Cranioplasty, Craniosynostosis Repair), VP shunt, Stereotactic procedures, Transsphenoidal Hypophysectomy, Ventriculoscopy</p>
	<p>Week 7: Finish Neurosurgery Chapter</p> <p>Surgical Procedures: Carpal Tunnel Release, Anterior/Posterior Cervical Discectomy & Fusion, Laminectomy/Fusion, Rhizotomy, Ulnar Nerve Transposition</p>
	<p>Week 8: Begin Chapter 16: Ophthalmic Surgery -- Surgical Anatomy, Pathophysiology, Patient populations</p> <p>Case planning – specialty instrumentation, routine equipment & supplies, surgical techniques in eye surgery, role of the CST</p> <p>Surgical Procedures: Chalazion Repair, Entropion Repair, Iridectomy, Strabismus Correction, Scleral Buckle</p>
	<p>Week 9: Finish Surgical Procedures: Dacryocystorhinostomy, Enucleation, Keratoplasty, Cataract Extraction, Vitrectomy, Laceration Repair, LASIK, Pterygium Excision, Trabeculectomy/Trabeculoplasty, Phacoemulsification, Iridotomy, Tear Duct Dilation/Stent, Pneumatic Retinopexy</p>

	<p>Introduction to Emergency Trauma Surgery (handout chapter): Trauma surgery concepts, patient populations, Types of trauma injuries – intentional versus un- intentional</p>
	<p>Week 10: Finish Emergency Trauma Surgery: Emergent Situations, Pathophysiology, ATLS, Damage Control Surgery</p> <p>Case Planning - specialty instrumentation and equipment, hypothermia versus normothermia, common medications, patient positioning, the golden hour, triage, pre-operative care of the patient, Management of the sterile field</p> <p>Trauma Considerations: Laparotomy w/ staged closure, orthopedic trauma, thoracic injury, major peripheral vascular trauma, injuries of the brain and spinal cord</p>
	<p>Week 11: Begin Chapter 23: Peripheral Vascular Surgery – Surgical anatomy, pathophysiology, patient populations, endovascular vs. open approach, diagnostic procedures & tests</p> <p>Case Planning: specialty instrumentation, commonly used medications in vascular surgery, specialty equipment, role of the CST</p> <p>Surgical Procedures: Angioscopy, CV Catheter insertion, Angioplasty, Embolectomy/Thrombectomy, Carotid Endarterectomy</p>
	<p>Week 12: Finish Peripheral Vascular Surgery- -</p> <p>Surgical Procedures: AAA w/ graft, Aorto- femoral Bypass, Femoropopliteal Bypass, Vein Ligation & Stripping, IVC Filter Placement, AV Fistula & Shunt, Angiography, Venous Access Placement – antibiotic, chemotherapy, hemodialysis</p>
	<p>Week 13: Begin Chapter 22: Cardiothoracic Surgery Surgical Anatomy, Pathophysiology, Patient Populations, Diagnostic procedures, and tests</p> <p>Case Planning – specialty instrumentation, patient monitoring, routine equipment and supplies, suture, grafts, commonly used</p>

	medications, role of CST, Cardiopulmonary Bypass
	<p>Week 14: Finish Cardiothoracic Surgery –</p> <ul style="list-style-type: none"> - Introduction to Pediatric Cardiac Surgery - Introduction to Adult Cardiac Surgery <p>Surgical Procedures: Bronchoscopy, Mediastinoscopy, Video Assisted Thoracic Surgery (VATS), Pectus Excavatum, Pulmonary Thromboendarterectomy, Decortication of the Lung, Upper Lobectomy, Pneumonectomy, Double Lung Transplant, CABG, IABP, VAD Insertion, Heart Transplant, Ventricular Aneurysm Repair, Aortic Valve Replacement, ASD Repair, PDA Repair, VSD, Repair of Coarctation of the Aorta, Tetralogy of Fallot, ICD Placement, Pacemaker Insertion, Radiofrequency Ablation</p>

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