

ELECTIVE NAME:

Anesthesia

COURSE NO:

SUR 618

PREREQUISITE:

Required Junior Surgery

INSTITUTION:

Spectrum Health Butterworth

Saint Mary's Health Care

OBJECTIVES:

The student will be able to evaluate the preoperative patient in both the physical and psychological status, and be able to determine whether the procedure is an elective or acute emergency.

The student will be able to intubate most children and adults.

The student will be able to describe the anatomy and physiology involved in the intubation and describe the techniques used for intubation.

The student will be able to monitor patients under anesthesia, recognize cardiac arrests and institute basic CPI techniques.

The student will be able to describe open, closed, and semi-closed anesthetic systems.

DESCRIPTION:

This clerkship will serve as an introduction to the more common anesthetic agents, and survey drugs and anesthetic techniques. The experience of preoperative evaluation of the physical and psychosocial status of patients is a primary importance in the clerkship. Every student will be able to evaluate each of the patients under the care of the teaching anesthesiologist and present in writing his plan of management for the patients. The student will perform anesthetic procedures under the immediate supervision of the attending anesthesiologist and following surgery, he/ she will follow these patients through their progress notes.

EVALUATION:

Preceptor(s) will be asked to submit a written evaluation at the conclusion of the clerkship. Faculty are encouraged to provide ongoing feedback throughout elective rotations.

ELECTIVE:

Burn Unit Rotation/Surgical Specialty

INSTITUTION:

Spectrum Health Blodgett

PREREQUISITE:

Junior Surgery

DESCRIPTION OF ELECTIVE:

The four week Burn Unit elective will take place at the West Michigan Burn Unit at Spectrum Health Blodgett. The student will work as part of the burn team in caring for patients with burn injuries. Each student's experience will be unique and will reflect a complex constellation of factors including the number and type of burn cases admitted during the rotation, the specialty mix of admitting physicians, i.e., general surgeons vs. plastic and reconstructive surgeons, and concomitant coverage by surgical residents.

Because of wide fluctuation between the numbers and types of burn patients admitted, and the intensity of care required for their treatment, as well as the large number of individuals working with patients, the student experience will be unique. Recognition of the team concept of care required in the Burn Unit, and the role of each specialty is particularly important.

Student experience will include:

- initial evaluation of major and minor burn injuries
- participation in resuscitation
- participation in respiratory management
- participation in control of sepsis
- participation in daily tubing of inpatients with intub debridement and procedures
- participation at surgery in debridement and skin grafting, placing of central lines, tracheotomy, etc.
- participation in enteral and parenteral nutritional planning
- establishment and monitoring of nutritional support
- participation in physical therapy techniques utilized in the care of burn patients, i.e., splinting, positioning, exercises, principles and practice of Jobst garment use.

EVALUATION:

Preceptor(s) will be asked to submit a written evaluation at the conclusion of the clerkship. Faculty are encouraged to provide ongoing feedback throughout elective rotations.

ELECTIVE NAME:

Colon-Rectal Surgery

COURSE NO:

SUR 619

PREREQUISITE:

Req'd Junior Surgery

INSTITUTION:

Spectrum Health Blodgett

Spectrum Health Butterworth

OBJECTIVES & DESCRIPTION:

The elective clerkship in Colon and Rectal Surgery will carry an emphasis on data collection, physical examination, and problem formulation, as related to colon and rectal disease. Involvement in special techniques, examination, and attendance at surgical procedures are important aspects of this experience. Although this clerkship is based at the Ferguson Clinic, the continuous experience in ambulatory patient care is an essential component.

EVALUATION:

Preceptor(s) will be asked to submit a written evaluation at the conclusion of the clerkship. Faculty are encouraged to provide ongoing feedback throughout elective rotations.

ELECTIVE NAME:

Neurosurgery

COURSE NO:

SUR 614

PREREQUISITE:

Required Junior Surgery

INSTITUTION:

Spectrum Health Butterworth

OBJECTIVES:

The student will increase his/her skill in performing sub-routines of the neurological examination.
Example: testing for a peripheral nerve injury, neurophthalmological examination, etc.

The student will increase his/her skill in the management of emergency and urgent neurological problems.

The student will become familiar with non-operative neurosurgical problems such as the management of cerebral edema, central nervous system infections, and seizure disorders.

The student will observe and assist when appropriate in techniques involving spinal and arterial functions.

DESCRIPTION:

Students will gain a general familiarity with the field of neurosurgery and develop an understanding of the contribution neurosurgery makes to medicine in general. The elective will expand the neurosurgery experience and give the student considerable responsibility in neurosurgical areas. The student will perform general and neurological examinations on patients admitted to the neurological service of instructive value or those designated by staff and the student will make daily rounds on his/her patients. The student may have the opportunity to

research literature and present an appropriate subject during conference. Students will attend periodic conferences with other medical staff to discuss pertinent literature and patient problems which they are involved in. An emphasis will be given to problem solving approach for handling neurological problems.

EVALUATION:

Preceptor(s) will be asked to submit a written evaluation at the conclusion of the clerkship. Faculty are encouraged to provide ongoing feedback throughout elective rotations.

ELECTIVE NAME:

Ophthalmology

COURSE NO:

SUR 615

PREREQUISITE:

Required Junior Surgery

INSTITUTION:

Private*

OBJECTIVES:

The student will increase his/her clinical judgment related to ophthalmological diagnosis.

The student will increase his/her skills in interviewing, selection of diagnostic tests and patient management related to ophthalmological problems.

The student will have the opportunity to observe and handle emergency eye problems.

DESCRIPTION:

This elective will offer the student insight into what an ophthalmologist does in evaluating and treating patients. Student will gain experience in diagnosis and treatment of medical, emergency, and surgery ophthalmological problems. The clerkship will broaden the student's scope of an outpatient practice of ophthalmology and allow the student to obtain a measure of independence and the responsibility related to an ophthalmological practice. The majority of care in these ophthalmologist offices is devoted to subspecialty areas of cornea and external eye disease, cataracts, and glaucoma.

Inpatient: 0-25%; Outpatient: 75-100%.

EVALUATION:

Preceptor(s) will be asked to submit a written evaluation at the conclusion of the clerkship. Faculty are encouraged to provide ongoing feedback throughout elective rotations.

*Senior Intern Equiv.

ELECTIVE NAME:

Orthopedic Surgery

COURSE NO:

SUR 613

PREREQUISITE:

Required Junior Surgery

INSTITUTION:

Spectrum Health Butterworth

Spectrum Health Blodgett

Saint Mary's Health Care

DESCRIPTION:

This clerkship is designed to provide an understanding of broad scope of orthopedics with emphasis placed on diagnostic and management skills including emergencies. The student will be given an understanding of orthopedics and trauma, a basic understanding of pathophysiology of common orthopedic problems, how to identify the problems, and initiate good treatment. This elective will offer students exposure to musculoskeletal injuries and reconstructive surgery. The student will assist on a variety of orthopedic procedures with subsequent post-operative follow-up. Attempts are made to tailor the orthopedic experience, to maximize the student's exposure to possible future areas of endeavor.

The rotation will include a one week experience at Spectrum Health Butterworth, one week at Spectrum Health Blodgett and two weeks at Saint Mary's Health Care.

Inpatient: 80%; Outpatient: 20%.

COURSE REQUIREMENTS:

10 calls/month (includes both in house and home call)

Daily rounding on patients (including weekends when scheduled for call)

ORIENTATION:

All students will report to the Orthopedic Surgery Residency Office on their first morning for a required orientation. The orientation will be scheduled for 8 a.m. If you are a visiting student, a second required orientation will be scheduled for 3:00 p.m. on your first day to go over general requirements and to pick up your MERC nametag and pager.

EVALUATION:

Preceptor(s) will be asked to submit a written evaluation at the conclusion of the clerkship. Faculty are encouraged to provide ongoing feedback throughout elective rotations.

ELECTIVE NAME:

Otolaryngology

COURSE NO:

SUR 609

PREREQUISITE:

Required Junior Surgery

INSTITUTION:

Private

OBJECTIVES:

The student will gain experience in history and physical examination as it relates to otoscopy, rhinoscopy, indirect laryngoscopy and head and neck examination.

The student will learn to recognize and treat otolaryngologic emergencies.

The student will be introduced to common otolaryngologic disorders, the current knowledge concerning diagnosis and treatment, and sources of new information concerning these disorders.

The student will observe and assist in surgical procedures related to otolaryngology.

DESCRIPTION:

This elective will provide the student with insight into what an Otolaryngologist does in evaluating and treating patients. The student will gain experience in head and neck examination and will be able to treat common problems that relate to Family Practice, Pediatrics, or Internal Medicine. The student will observe and/or practice skills in tracheotomy and myringotomy techniques, suturing, x-ray interpretation (sinuses, nasopharynx, laryngopharynx) and placement of anterior and posterior nasal packs. Opportunities will be provided for students to see patients in an initial evaluation and in follow-up. The student will develop judgments concerning the proper time for patient referral to Otolaryngologists.

Inpatient: 50%; Outpatient: 50%

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EVALUATION:

Preceptor(s) will be asked to submit a written evaluation at the conclusion of the clerkship. Faculty are encouraged to provide ongoing feedback throughout elective rotations.

ELECTIVE NAME:

Pediatric Orthopedics

COURSE NO:

SUR 619

PREREQUISITE:

Required Pediatric & Basic Surgery Clerkships

INSTITUTION:

DeVos Children's Hospital

INSTRUCTORS:

Drs. J. Engels, M.Forness, B. Hotchkiss, D. Maples

CONTACT:

Dr. M. Forness 616-391-9814

OBJECTIVES:

The course will introduce the student to clinical pediatric orthopedic conditions. It will provide general and some specific knowledge about the effects of traumatic, infectious, congenital, developmental, degenerative, neoplastic, and vascular insults to the developing neuromusculoskeletal system. The effects of these conditions on the individual and family and the management of the psychosocial manifestations will be observed. The student will be able

to recognize significant pathological conditions and separate them from developmental variants, understand the rationale and principles of management of these various conditions, and perform selected special procedures such as uncomplicated plaster casting and splinting. The precise technical objectives will be tailored to the student's individual goals and needs.

Inpatient: 25%; Outpatient: 75%.

DESCRIPTION:

Much of the time will be spent with the senior faculty advisor and orthopedic surgery resident. The student will participate in pediatric orthopedic outpatient clinics, inpatient consults and operation, and orthopedic conferences. There will be a limited exposure to surgical techniques which can be expanded according to student interests. Night call will be taken with the orthopedic resident on a limited basis.

EVALUATION:

Preceptor(s) will be asked to submit a written evaluation at the conclusion of the clerkship. Faculty are encouraged to provide ongoing feedback throughout elective rotations.

ELECTIVE NAME:

Pediatric Surgery

COURSE NO:

SUR 619

PREREQUISITE:

Required Pediatric & Surgery Subspecialty

INSTITUTION:

Devos Children's Hospital

Saint Mary's Health Care

FACULTY:

Drs. R. Connors, J. DeCon, M. Schlalter, N. Uitvlugt

CONTACT:

Dr. Connors 616-458-1722

OBJECTIVES:

Objectives of this rotation are to see, assist and diagnose pediatric surgery. The student will become acquainted with pre and post-op care and will see new patients and return patients in the office.

Student will also read and become acquainted with pediatric surgery literature. Inpatient responsibilities will include: history and physical examination, diagnosis orders, rounds every morning and progress notes.

Student will assist in surgery, learn how to sew wounds, start I.V. fluids and assist in performing simple procedures.

Outpatient responsibilities will include: seeing new referrals first, seeing returning patients, writing brief H&Ps and helping with minor procedures. At student request, may be involved in projects or research.

Will attend three 8:00a.m. conferences per week at Spectrum Health Butterworth or Spectrum Health Blodgett. Student will take call with resident who may be on call every night for consultations in emergency room, on inpatient floor, or to assist with emergency surgeries. .

Inpatient: 50-90%; Outpatient: 10-50%

EVALUATION:

Preceptor(s) will be asked to submit a written evaluation at the conclusion of the clerkship. Faculty are encouraged to provide ongoing feedback throughout elective rotations.

ELECTIVE NAME:

Pediatric Neurology

COURSE NO:

PHD 601

PREREQUISITE:

Req'd Pediatric Clerkship

INSTITUTION:

DeVos Children's Hospital

FACULTY:

Drs. K. Chillag, S. DeRoos, D O'Donnell, S. Stein

CONTACT:

Dr. D. O'Donnell 616-391-2185

OBJECTIVES:

Upon completion of this clerkship, the student should:

Be able to perform a reasonably complete pediatric neurological examination for each age group.

Be familiar with common anticonvulsant therapies.

Be familiar with the evaluation of seizures in children.

DESCRIPTION:

This clerkship includes both inpatient and outpatient consultation on a wide variety of pediatric neurologic disorders.

Students participate in department conferences and may request to become involved in ongoing research projects (requests for participation in research should be discussed with the faculty prior to the rotation).

Inpatient: 60%; Outpatient: 40%.

EVALUATION:

Preceptor(s) will be asked to submit a written evaluation at the conclusion of the clerkship. Faculty are encouraged to provide ongoing feedback throughout elective rotations.

ELECTIVE NAME:

Plastic Surgery

COURSE NO:

SUR 610

PREREQUISITE:

Required Surgery

INSTITUTION:

Spectrum Health Butterworth

Spectrum Health Blodgett

CONTACTS:

Chief residents – Dr. David Shifrin (479-4007); Rod Urbaniak (479-7143).

OBJECTIVES:

To introduce the student to the basic principles and techniques of plastic surgery.

To assist the student in learning the basic pathophysiology of various plastic surgery disorders and illnesses including wound care, management and healing.

To improve her/his skills in suturing, management and closure of wounds.

To better understand the techniques related to patient care.

DESCRIPTION:

The elective Plastic Surgery Clerkship will incorporate the study of the basic disciplines comprising plastic surgery. These include cosmetic, traumatic (including burns), hand, reconstructive, and cancer ablative surgery. The elective will consist of focused study and will take place under the supervision of plastic surgery faculty. Activities will include preoperative evaluations, scrubbing in the operating room on surgery and following patients on postoperative care throughout the four week experience. The student will have the opportunity to improve their own manual skills during this plastic surgery elective.

90% Inpatient 10% Outpatient (students will accompany a resident on all outpatient experiences)

ORIENTATION:

When the student starts on a day with no didactic conference in the morning, they will be expected to meet the residents in the cafeteria (physicians section) at 7:00 am. The chief resident will orient the student by creating a case schedule (one week at a time) and giving each student a tour of the OR. Conferences will also be covered during this short orientation. All visiting students must go to GRMERC for a general visiting student orientation at 3:00 pm on their first day.

COURSE REQUIREMENTS:

Q4 call and one full weekend home call (round on Saturday & Sunday) for a 4 week elective. All call will be taken with an intern. One case presentation at the Monday conference

DIDACTIC SCHEDULE:

Hand Conference – every Tuesday, 7:00 am, check monthly schedule for location

Basic Science Conference – every Monday, 4:00 pm, immediately following Chief Clinic

Grand Rounds – every Wednesday, 7:00 am, check monthly schedule for location

Journal Club – usually 1st Wednesday of the month, 6:30 pm, Attendings' home on rotating basis; exact location with map/directions issued monthly

Walk rounds – to be scheduled

EVALUATION:

Preceptor(s) will be asked to submit a written evaluation at the conclusion of the clerkship. Faculty are encouraged to provide ongoing feedback throughout elective rotations.

*Intern Equivalent

ELECTIVE NAME:

General Surgery

COURSE NO:

SUR 619

PREREQUISITE:

Req'd Surgery Clerkship

INSTITUTION:

Spectrum Health Butterworth

Spectrum Health Blodgett

Saint Mary's Health Care

DESCRIPTION:

The student will have major involvement in the surgical care of the patient under the supervision of attending or house staff, including performing history and physical exams, preparing management plans, and providing hospital care. The student will also be expected to understand cost factors and lab results, as well as interact with patients and family members. Daily plans and management orders will be discussed with the staff. Operative procedures and alternative methods of management will be discussed regarding each assigned case. Students will attend departmental rounds and seminars. They will be included in the "on Call" schedule of their team. They will be expected to research literature and give formal case presentations and discuss with other medical staff pertinent literature and patient problems in which they are involved. The student will assist and perform various surgical techniques throughout the experience.

Inpatient: 50-100%; Outpatient: 15-50%.

EVALUATION:

Preceptor(s) will be asked to submit a written evaluation at the conclusion of the clerkship. Faculty are encouraged to provide ongoing feedback throughout elective rotations.

*Seniors Intern Equiv.

ELECTIVE NAME:

Surgical Critical Care

COURSE NO:

SUR 619

PREREQUISITE:

Required Surgery

INSTITUTION:

Spectrum Health Butterworth

DESCRIPTION & OBJECTIVES:

This experience will provide students with expertise in the sophisticated care of critically ill surgical patients. Students will utilize a multidisciplinary approach to seriously ill patients, make daily rounds with residents and staff, and be assigned primary responsibility for one or two patients under the supervision of the residents and staff. Students are expected to prepare and present topics in teaching sessions in addition to completing assigned readings. Students will participate in various skills relative to critical care such as endotracheal intubation, chest tube

placement, CVP and Swan Ganz catheterization, and arterial monitoring device placement.

Inpatient: 100%.

EVALUATION:

Preceptor(s) will be asked to submit a written evaluation at the conclusion of the clerkship. Faculty are encouraged to provide ongoing feedback throughout elective rotations.

ELECTIVE NAME:

Surgical Nutrition

COURSE NO:

SUR 621

PREREQUISITE:

Required Senior Surgery

INSTITUTION:

Spectrum Health Butterworth

DESCRIPTION & OBJECTIVES:

The Metabolic Nutritional Support Service will offer student clinical experience in dealing with hospitalized patients exhibiting various degrees of metabolic derangement and nutritional

deficiencies. Major emphasis will be placed on a student's understanding of nutritional assessment of new patients and formulation of plans for management which include a variety of nutritional support methods, including special diets, tube feedings, and/or parental nutrition.

Inpatient: 95%; Outpatient: 5%.

EVALUATION:

Preceptor(s) will be asked to submit a written evaluation at the conclusion of the clerkship. Faculty are encouraged to provide ongoing feedback throughout elective rotations.

ELECTIVE NAME:

Thoracic Surgery

COURSE NO:

SUR 616

PREREQUISITE:

Required Junior Surgery

INSTITUTION:

Spectrum Health Downtown

Spectrum Health Blodgett

Saint Mary's Health Care

OBJECTIVES:

Student will be presented with the clinical working knowledge of cardiac and thoracic disease processes and their management.

Student will gain exposure to surgical procedures related to cardiothoracic surgery and become aware of postoperative management of patients.

Student will become familiar with pre and post-operative care of thoracic and cardiovascular surgical patients.

Students will become acquainted with the use of reliability, interpretation of results, risks and complications of diagnostic modes frequently used in thoracic and cardiovascular surgery.

DESCRIPTION:

This elective is designed to introduce the student to patients with cardiac and thoracic diseases and to observe the management of patients before and after surgery. This will consist of performing history and physical examinations and recognition of symptoms and signs of the disease process. The student will understand the logical protocol for necessary laboratory tests, special procedures, etc. for complete evaluation of the patient. The student will have the

opportunity to review pulmonary and cardiovascular anatomy and physiology at the beginning and throughout the elective. The student will come to understand the principles and use of cardiovascular bypass and should be able to continue improving his/her basic clinical and surgical skills utilizing these opportunities during this elective.

Inpatient: 90-100%; Outpatient: 0-10%.

EVALUATION:

Preceptor(s) will be asked to submit a written evaluation at the conclusion of the clerkship. Faculty are encouraged to provide ongoing feedback throughout elective rotations.

ELECTIVE NAME:

Trauma Surgery

COURSE NO:

SUR 619

PREREQUISITE:

Req'd Senior Surgery & Medicine Clerkships & Senior Status

INSTITUTION:

Spectrum Health Butterworth

DESCRIPTION:

The Trauma Surgery Clerkship is an advanced surgical clerkship designed to expose the senior medical student to the comprehensive care of the multiple trauma patient. The student will participate in all facets of patient care from initial assessment and resuscitation through surgery, SICU, and general floor care to discharge. The Trauma Service cares for all adult and pediatric trauma patients at Spectrum Downtown, a Level I trauma center in Grand Rapids.

OBJECTIVES:

At the completion of this clerkship, the student should be able to:

Distinguish between major and minor trauma based on history, physical exam, understanding of mechanism of injury, as well as diagnostic procedures.

Describe and understand the components of the initial assessment and management of the multiple trauma patient, including:

- The ABC's
- Fluid resuscitation
- Rational use of diagnostics (x-ray, CT, peritoneal lavage)
- Recognizing the situation that requires immediate surgical intervention
- Care of the acutely head injured patient
- Cervical spine precautions
- Pre-hospital care

- Assist in the surgical procedures.
- Understand post-operative and critical care of the trauma patient.
- Provide daily routine care during the recovery phase.
- Understand the nutritional metabolic needs of the multiple trauma patient.
- Understand the emotional, spiritual, and psychological needs of the patient and family.
- REQUIREMENTS:
- The rotations one month in duration, and can be scheduled only with approval of the clerkship coordinator.
- The student will be present from 7:00am to 6:00pm, Monday through Saturday.
- The student will take call two nights per week (in house) and may leave the following day at noon if all work is complete.
- The student will attend all lectures, conferences, and grand rounds associated with the trauma service while on service.
- The student will be ready to participate in all trauma resuscitations while in the hospital and will work under the direction of the resident on service including completion of admitting history and physical.
- The student will follow up to four patients on the service and write daily notes and orders in consultation with the resident, trauma Fellow or trauma surgery staff.
- The student will participate in morning report on the morning following call nights.
- There will be a weekly medical student conference on Fridays from 2:00-3:00pm
- Inpatient: 90-95%; Outpatient: 5-10% .

EVALUATION:

Preceptor(s) will be asked to submit a written evaluation at the conclusion of the clerkship. Faculty are encouraged to provide ongoing feedback throughout elective rotations.

ELECTIVE NAME:

Urology

COURSE NO:

SUR 611

PREREQUISITE:

Req'd Senior Surgery

INSTITUTION:

Spectrum Health Butterworth

OBJECTIVES:

The student will observe and participate in the preoperative evaluation, surgical management and postoperative care of urologic patients.

The student will increase his/her skills in interviewing and examining patients with urologic disorders.

The student will increase his/her clinical judgment in urology, selection of diagnostic tests and common ward procedures as they pertain to the urologic patient.

DESCRIPTION:

This elective is designed to demonstrate clinical manifestations of genitourinary disease, investigate methods and techniques of diagnosis and management and provide the student with familiarity of urologic emergencies. The student will have the opportunity to perform basic urologic skills during the elective and will become familiar with the interpretation and indication of urologic disease problems. The student will become proficient in the physical examination of rectums and prostate and the rest of the GU tract. The student will attend basic science lectures and participate in urological radiology conferences.

Inpatient: 15-50%; Outpatient: 50-85%.

EVALUATION:

Preceptor(s) will be asked to submit a written evaluation at the conclusion of the clerkship. Faculty are encouraged to provide ongoing feedback throughout elective rotations.