

# SURGERY (SUR)

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School of Medicine

## **SUR 099 – Cardiovascular Tissue Engineering Research (1-5 units)**

*Course Description:* Multidisciplinary research in cardiovascular tissue engineering and regeneration for acquired and congenital cardiovascular disease.

*Learning Activities:* Laboratory 3-15 hour(s).

*Grade Mode:* Letter.

## **SUR 192 – Internship in General Surgery (1-12 units)**

*Course Description:* Supervised work experience in general surgery and related fields.

*Prerequisite(s):* Consent of instructor. Upper division standing; approval of project prior to period of internship by preceptor.

*Learning Activities:* Internship 3-36 hour(s).

*Grade Mode:* Pass/No Pass only.

## **SUR 199 – Special Study in General Surgery for Advanced Undergraduates (1-5 units)**

*Course Description:* Special study in general surgery for advanced undergraduates.

*Prerequisite(s):* Advanced undergraduate student with consent of instructor.

*Learning Activities:* Variable.

*Grade Mode:* Pass/No Pass only.

## **SUR 299 – Research (1-12 units)**

*Course Description:* Research.

*Prerequisite(s):* Consent of instructor; graduate standing.

*Learning Activities:* Variable.

*Grade Mode:* Satisfactory/Unsatisfactory only.

## **SUR 430 – Surgery Clerkship (3-12 units)**

*Course Description:* Eight week general surgery clerkship includes GI, Burn, Oncology, Plastics, Vascular Cardiothoracic, consult, transplant and trauma. Clerkship assignments are at UCDMC. Daily core material presentations and reading assignments. Student involvement includes work-up and care of surgical patients.

*Prerequisite(s):* Approval by School of Medicine Committee on Student Progress.

*Learning Activities:* Clinical Activity 45 hour(s).

*Grade Mode:* Honors/Pass/Fail.

## **SUR 430F – SJVP Surgery Clerkship at UCSF (6-12 units)**

*Course Description:* General surgery clerkship includes GI, Burn, Oncology, Plastics, Vascular Cardiothoracic, consult, transplant and trauma. Clerkship assignments are at UCSF Fresno. Student involvement includes work-up and care of surgical patients.

*Prerequisite(s):* Approval by School of Medicine Committee on Student Progress.

*Learning Activities:* Clinical Activity 45 hour(s).

*Grade Mode:* Honors/Pass/Fail.

## **SUR 430R – Rural PRIME Surgery Longitudinal Clerkship (2 units)**

*Course Description:* Surgery Longitudinal Integrated Clerkship for the Rural PRIME Program.

*Prerequisite(s):* Consent of instructor.

*Learning Activities:* Clinical Activity 45 hour(s).

*Grade Mode:* Honors/Pass/Fail.

## **SUR 430RA – Rural PRIME Surgery Longitudinal Clerkship (3 units)**

*Course Description:* Surgery Longitudinal Integrated Clerkship for the Rural PRIME Program.

*Prerequisite(s):* Consent of instructor.

*Learning Activities:* Clinical Activity 45 hour(s).

*Grade Mode:* Honors/Pass/Fail.

## **SUR 430RB – Rural PRIME Surgery Longitudinal Clerkship (3 units)**

*Course Description:* Surgery Longitudinal Integrated Clerkship for the Rural PRIME Program.

*Prerequisite(s):* Consent of instructor.

*Learning Activities:* Clinical Activity 45 hour(s).

*Grade Mode:* Honors/Pass/Fail.

## **SUR 430RC – Rural PRIME Surgery Longitudinal Clerkship (3 units)**

*Course Description:* Surgery Longitudinal Integrated Clerkship for the Rural PRIME Program.

*Prerequisite(s):* Consent of instructor.

*Learning Activities:* Clinical Activity 45 hour(s).

*Grade Mode:* Honors/Pass/Fail.

## **SUR 430RD – Rural PRIME Surgery Longitudinal Clerkship (1 unit)**

*Course Description:* Surgery Longitudinal Integrated Clerkship for the Rural PRIME Program.

*Prerequisite(s):* Consent of instructor.

*Learning Activities:* Clinical Activity 45 hour(s).

*Grade Mode:* Honors/Pass/Fail.

## **SUR 439D – Directed Clinical Studies in Surgery (1-12 units)**

*Course Description:* Individual directed studies in extended preparation for modified curriculum or to complete a clinical rotation following a leave of absence.

*Prerequisite(s):* Consent of instructor; partial completion of a Clinical Rotation.

*Learning Activities:* Clinical Activity 40 hour(s).

*Repeat Credit:* May be repeated.

*Grade Mode:* Pass/Fail only.

**SUR 439R – Directed Studies in Surgery (1-12 units)**

*Course Description:* Individual directed studies in extended preparation for remediation of all or part of clinical rotation. Clinical studies to accommodate and satisfy remedial work as directed by the Committee on Student Progress and approved by the course IOR.

*Prerequisite(s):* Consent of instructor.

*Learning Activities:* Clinical Activity 30 hour(s), Independent Study 10 hour(s).

*Repeat Credit:* May be repeated.

*Grade Mode:* Pass/Fail only.

**SUR 450 – Surgical Skills Boot Camp (3-6 units)**

*Course Description:* Goal of the surgical skills boot camp didactic is to enable students to demonstrate competence in basic surgical skills and theory, using analytical thinking and hands-on simulation.

*Prerequisite(s):* Consent of instructor.

*Learning Activities:* Workshop 10 hour(s), Independent Study 30 hour(s).

*Repeat Credit:* May be repeated.

*Grade Mode:* Honors/Pass/Fail.

**SUR 461 – Surgery Burn Unit Clerkship (6-9 units)**

*Course Description:* Rotation through Surgery Specialty Clinics:Vascular, GI, GU, Thoracic, Plastic, Radiotherapy. Student works up one new and two return visit patients. Presents consult to on-site faculty. Weekly review with preceptor and course director. Reading assignments to add perspective for in-depth discussions.

*Prerequisite(s):* SUR 430; and consent of instructor; fourth-year medical student or third-year medical student.

*Learning Activities:* Clinical Activity.

*Grade Mode:* Honors/Pass/Fail.

**SUR 462 – Surgery Trauma Service Clerkship (4.5-9 units)**

*Course Description:* Work as an extern on one of the two general surgery trauma teams. Participate in resuscitation and management of critically injured patients. Team hours consist of 24 hours on, and 24 hours off.

*Prerequisite(s):* SUR 430; consent of instructor; fourth-year medical student, or third-year medical student.

*Learning Activities:* Clinical Activity.

*Grade Mode:* Honors/Pass/Fail.

**SUR 465 – Surgery Intensive Care Unit (3-8 units)**

*Course Description:* Focuses on single family, attached, detached, multi-family, and light commercial development. Study factors which make up successful real estate developments. Consider financial aspects involved in land acquisition, land development, construction, and project lending.

*Learning Activities:* Variable.

*Repeat Credit:* May be repeated 2 time(s).

*Grade Mode:* Honors/Pass/Fail Only.

**SUR 466 – Clinical Plastic Surgery Elective (3-9 units)**

*Course Description:* Total involvement in patient care involving surgical preparation, treatment, operative care, and follow-up. Developing and understanding reconstruction and aesthetic plastic surgery. Microvascular surgery included. Student rotation.

*Prerequisite(s):* SUR 430; and consent of instructor; third- or fourth-year medical students.

*Learning Activities:* Clinical Activity 50 hour(s).

*Grade Mode:* Honors/Pass/Fail.

**SUR 467 – Surgical Oncology (3-9 units)**

*Course Description:* Students actively participate in management of patients requiring surgery for cancer, endocrine disease and selected general surgical problems. Cases include malignant melanoma, sarcomas, gastrointestinal cancer, head and neck pathology, and metastatic malignancies. Attending rounds daily. Four teaching conferences weekly.

*Prerequisite(s):* SUR 430; and consent of instructor; fourth-year medical student, or third-year medical student.

*Learning Activities:* Clinical Activity.

*Grade Mode:* Honors/Pass/Fail.

**SUR 468 – Cardiothoracic Surgery Clerkship (6-9 units)**

*Course Description:* Student works as an extern on the Cardiothoracic Surgical Service, participating in perioperative management and operations on the heart, lungs, mediastinum, and other thoracic structures. Regularly scheduled teaching conferences are conducted.

*Prerequisite(s):* SUR 430; and consent of instructor; fourth-year medical student, or third-year medical student.

*Learning Activities:* Clinical Activity.

*Grade Mode:* Honors/Pass/Fail.

**SUR 471 – Gastrointestinal Surgery (3-9 units)**

*Course Description:* Student participates on the GI Surgery Service, working under the immediate supervision of the faculty and surgical housestaff, involving the full spectrum of gastrointestinal diseases performed by the medical student.

*Prerequisite(s):* SUR 430; IMD 430; PED 430; and consent of instructor. Fourth-year medical student or third-year medical student.

*Learning Activities:* Clinical Activity.

*Grade Mode:* Honors/Pass/Fail.

**SUR 472 – Vascular Surgery (3-9 units)**

*Course Description:* Student participates on the vascular surgery service and in the management and operations of arterial and venous system, exclusive of diseases that require cardiopulmonary bypass for treatment. Includes patient care responsibilities with appropriate supervision.

*Prerequisite(s):* SUR 430; IMD 430; PED 430; and consent of instructor; fourth-year medical student or third-year medical student.

*Learning Activities:* Clinical Activity.

*Grade Mode:* Honors/Pass/Fail.

**SUR 474 – Colorectal Surgery (3-6 units)**

*Course Description:* Students actively participate in clinic and the operating room on colon and rectal patients. This includes medical and surgical management. Assignments involve work up and care of the surgical patients.

*Prerequisite(s):* Consent of instructor; fourth-year medical student.

*Learning Activities:* Clinical Activity.

*Repeat Credit:* May be repeated.

*Grade Mode:* Honors/Pass/Fail.

**SUR 475 – Pediatric Surgery (6-9 units)**

*Course Description:* Care of patients with neonatal congenital surgical problems. Fluid and electrolyte management in infants. General experience with acquired surgical diseases in children.

*Prerequisite(s):* SUR 430; and consent of instructor; fourth-year medical student or third-year medical student.

*Learning Activities:* Clinical Activity 4-6 hour(s).

*Grade Mode:* Honors/Pass/Fail.

**SUR 476 – Surgical Consult (3-9 units)**

*Course Description:* Function as acting intern working in parallel with interns on the service. Consult on all non-trauma patients in the emergency room, on the wards, and also participate in the operating room.

*Prerequisite(s):* SUR 430; consent of instructor; successful completion of acting internship in any specialty

*Learning Activities:* Clinical Activity.

*Grade Mode:* Pass/Fail only.

**SUR 477 – Clinically Oriented Anatomy (3 units)**

*Course Description:* Anatomy of selected regions of the body using cadaver dissection, prosections and interactive CD ROMs. Anatomical relationships relevant to common surgical procedures. Surgical and interventional radiology procedures.

*Prerequisite(s):* Completion of three years of medical school.

*Learning Activities:* Clinical Activity 40 hour(s).

*Enrollment Restriction(s):* Restricted to fourth-year medical student only.

*Grade Mode:* Pass/No Pass only.

**SUR 478 – Surgical Preceptorship: Off Campus (3-18 units)**

*Course Description:* Student participates in the preoperative, operative and postoperative care of surgical patients under the supervision of attending staff.

*Prerequisite(s):* Consent of instructor; fourth-year medical student.

*Learning Activities:* Clinical Activity 60 hour(s).

*Grade Mode:* Honors/Pass/Fail.

**SUR 480 – Insights in Surgery (1-3 units)**

*Course Description:* Individualized activities, including ward rounds, subspecialty clinics and conferences, grand rounds, and observation of a variety of surgical procedures.

*Prerequisite(s):* Consent of instructor; medical student in good academic standing.

*Learning Activities:* Clinical Activity 3-9 hour(s).

*Grade Mode:* Honors/Pass/Fail.

**SUR 481 – Interactive Clinical Case Presentation (ICCP) (4 units)**

*Course Description:* Case presentation of common clinical scenarios (i.e. chestpain/MI; fever/pneumonia; abdo pain/cholecystitis, etc.) from various disciplines held in an auditorium with real patients exposure.

Interactive session to review history, physical findings and case management. Students will be asked to perform H&P.

*Prerequisite(s):* Fourth-year medical students; however, course is open for third- and fourth-year student observers.

*Learning Activities:* Clinical Activity 1 hour(s).

*Enrollment Restriction(s):* Course taught as one session (4 hours) per month for three quarters (July to March); students who enroll can earn up to three credits and the minimum requirements will be to attend at least six sessions; students can do all nine sessions and work toward an honor; for the written part students will have to pick two of the nine case presentations and write a detailed paper with a literature review on "The Current management" of that disease-this can in fact be a manuscript submitted for publication with a faculty member as an advisor; maximum of 10-15 students in good standing.

*Grade Mode:* Honors/Pass/Fail.

**SUR 482 – Vascular Surgery Virtual External Rotation (3 units)**

*Course Description:* Vascular surgery is the field of medical and surgical management of vascular pathology ranging from lower extremity claudication to aortic aneurysms. Rotation brings a level of understanding pursuant of an intern. Instruction through daily virtual rounding and self-directed learning through readings and operation videos; direct patient care is not included.

*Learning Activities:* Web Virtual Lecture.

*Grade Mode:* Pass/Fail only.

**SUR 483 – General Thoracic Surgery Acting Internship (6 units)**

*Course Description:* This four- week Acting Internship (AI) with the Division of General Thoracic Surgery is designed to be an initial comprehensive exposure to adult general thoracic surgery, including preoperative assessment, perioperative management and postoperative care.

*Learning Activities:* Internship.

*Grade Mode:* Honors/Pass/Fail.

**SUR 484 – Multidisciplinary Experience in Endocrine Neoplasia (3 units)**

*Course Description:* Consists predominately of multidisciplinary clinical experiences focusing on the diagnosis and management of patients with benign and malignant thyroid disease, parathyroid disorders, benign and malignant adrenal disease, pituitary neoplasia, and multiple endocrine neoplasia syndromes.

*Learning Activities:* Clinical Activity, Web Virtual Lecture.

*Grade Mode:* Pass/Fail only.

**SUR 493B – Critically Ill Surgical Patients SSM (6 units)**

*Course Description:* Special Study Module, a four-week course on the topic: Application of Basic Cardiopulmonary Physiology to Problems Encountered in Critically Ill Surgical Patients.

*Prerequisite(s):* Consent of instructor.

*Learning Activities:* Lecture 5 hour(s), Lecture/Lab 10 hour(s), Laboratory 16 hour(s), Clinical Activity 4 hour(s).

*Enrollment Restriction(s):* Restricted to UC Davis School of Medicine students only.

*Grade Mode:* Honors/Pass/Fail.

**SUR 493C – Physiological Principles in SICU SSM (6 units)**

*Course Description:* Special Study Module, a four-week course on the topic: Care of the Critically Ill Surgical Patient: Use of Physiological Principles to Guide Treatment of Patients with Common Surgical Problems.

*Prerequisite(s):* Consent of instructor.

*Learning Activities:* Lecture 5 hour(s), Lecture/Lab 10 hour(s), Laboratory 16 hour(s), Clinical Activity 4 hour(s).

*Enrollment Restriction(s):* Restricted to UC Davis School of Medicine students only.

*Cross Listing:* HPH 493.

*Grade Mode:* Honors/Pass/Fail.

### **SUR 493D – Interdisciplinary Study of Gastrointestinal Cancer (6 units)**

*Course Description:* In-depth study of gastrointestinal, hepatic and pancreatic cancer. Emphasis on an integration of basic science and clinical medicine. Participating departments include pathology, surgical oncology, medical oncology, gastroenterology, radiology and radiotherapy.

*Prerequisite(s):* Consent of instructor.

*Learning Activities:* Lecture 5 hour(s), Clinical Activity 12 hour(s), Laboratory 3 hour(s), Discussion/Laboratory 20 hour(s).

*Cross Listing:* PMD 493.

*Grade Mode:* Honors/Pass/Fail.

### **SUR 494H – Fourth-Year Surgical Honors Program (18 units)**

*Course Description:* To provide intensive and comprehensive training in surgery to students interested in a postgraduate surgical career, that would enable them to succeed during the internship and residency training.

*Prerequisite(s):* SUR 430; and consent of instructor; completion of third year of medical school with superior performance on SUR 430.

*Learning Activities:* Variable.

*Grade Mode:* Honors/Pass/Fail.

### **SUR 495 – Intense Introduction to Cardiac Surgery (3 units)**

*Course Description:* Close contact with vascular surgeon for two-week period. Includes Sunday mornings. Physiology of going on and off cardiopulmonary bypass. Atherosclerotic cardiovascular disease, structural and valvular heart disease and electrical and rhythmic heart disease.

*Prerequisite(s):* Consent of instructor.

*Learning Activities:* Clinical Activity 16 hour(s), Lecture/Discussion 4 hour(s).

*Enrollment Restriction(s):* Restricted to between first- and second-year medical student; 100% mandatory attendance.

*Repeat Credit:* May be repeated 1 time(s).

*Grade Mode:* Pass/Fail only.

### **SUR 498 – Group Study (1-5 units)**

*Course Description:* Directed reading and discussion and/or laboratory investigation on selected topics.

*Prerequisite(s):* Consent of instructor; medical student.

*Learning Activities:* Variable.

*Grade Mode:* Honors/Pass/Fail.

### **SUR 499 – Laboratory Research (1-12 units)**

*Course Description:* Laboratory research on surgically related problems. Participation in projects to include the following: burn, nutrition, oncology, transplant and others.

*Prerequisite(s):* Consent of instructor; completion of second year of medical school.

*Learning Activities:* Laboratory 3-36 hour(s).

*Repeat Credit:* May be repeated.

*Grade Mode:* Honors/Pass/Fail.