RADIATION ONCOLOGY (RAD ONCOL)

RAD ONCOL 130.01 CIEx - Radiation Oncology Apprenticeship (1.5-3 Units) Fall, Winter, Spring, Summer

Instructor(s): Steve E Braunstein
Prerequisite(s): None

Restrictions: Medical Students in Foundations 2

Activities: Clinical

This is a Bridges Curriculum Clinical Immersive Experience (CIEx), which provide medical students in Foundations 2 opportunities to broaden and enhance their professional development in health care settings different from those of their core clerkships. On Attending-Resident paired services, students will assist with components of the Radiation Oncology care pathway, including initial patient consultation, interdisciplinary discussion, radiotherapy planning/delivery, and patient follow up.

School: Medicine
Department: Radiation Oncology
May the student choose the instructor for this course? No
Does enrollment in this course require instructor approval? No
Course Grading Convention: P/NP (Pass/Not Pass) or S/U (Satisfactory/Unsatisfactory)
Graduate Division course: No
Is this a web-based online course? No
Is this an Interprofessional Education (IPE) course? No
May students in the Graduate Division (i.e. pursuing Master or PhD) enroll in this course? No
Repeat course for credit? No

RAD ONCOL 140.01 Radiation Oncology Clerkship (6-8 Units) Fall, Winter, Spring, Summer

Instructor(s): Steve E Braunstein, David R Raleigh
Prerequisite(s): MEDICINE 110

Restrictions: None

Activities: Lecture, Clinical

Mentored by residents and faculty, students will perform H&Ps on patients under evaluation for radiation therapy (mostly cancer patients), participate in clinics, attend teaching conferences, chart rounds, and tumor boards, and have the opportunity to observe a wide variety of radiotherapeutic approaches. Students have the option of giving a 20-60 minute presentation on a topic of their choice toward the end of the rotation.

School: Medicine
Department: Radiation Oncology
May the student choose the instructor for this course? No
Does enrollment in this course require instructor approval? No
Course Grading Convention: P/NP (Pass/Not Pass) or S/U (Satisfactory/Unsatisfactory)
Graduate Division course: No
Is this a web-based online course? No
Is this an Interprofessional Education (IPE) course? No
May students in the Graduate Division (i.e. pursuing Master or PhD) enroll in this course? No
Repeat course for credit? No

RAD ONCOL 140.02 Off-Campus Clerkship (3-6 Units) Fall, Winter, Spring, Summer

Instructor(s): Steve E Braunstein, David R Raleigh
Prerequisite(s): MEDICINE 110

Restrictions: None

Students will perform H&Ps on patients under evaluation for radiation therapy (mostly cancer patients), participate in clinics, attend teaching conferences, and have the opportunity to observe a variety of radiotherapeutic approaches.

School: Medicine
Department: Radiation Oncology
May the student choose the instructor for this course? No
Does enrollment in this course require instructor approval? No
Course Grading Convention: P/NP (Pass/Not Pass) or S/U (Satisfactory/Unsatisfactory)
Graduate Division course: No
Is this a web-based online course? No
Is this an Interprofessional Education (IPE) course? No
May students in the Graduate Division (i.e. pursuing Master or PhD) enroll in this course? No
Repeat course for credit? No

RAD ONCOL 140.03 Virtual Radiation Oncology (3 Units) Fall, Winter, Spring, Summer

Instructor(s): Steve E Braunstein, David R Raleigh
Prerequisite(s): None

Restrictions: 4th year students in good Academic Standing

Activities: Clinical

Via remote distance learning and Telehealth approaches, students perform histories & physicals (H&Ps) on cancer patients, participate in discussions of treatment recommendations, attend tumor boards, teaching conferences, and clinics, and have the opportunity to learn about a wide variety of radiotherapeutic techniques.

School: Medicine
Department: Radiation Oncology
May the student choose the instructor for this course? No
Does enrollment in this course require instructor approval? No
Course Grading Convention: P/NP (Pass/Not Pass) or S/U (Satisfactory/Unsatisfactory)
Graduate Division course: No
Is this a web-based online course? No
Is this an Interprofessional Education (IPE) course? No
May students in the Graduate Division (i.e. pursuing Master or PhD) enroll in this course? No
Repeat course for credit? No

RAD ONCOL 150.01 Research in Radiation Oncology (3-24 Units) Fall, Winter, Spring, Summer

Instructor(s): Steve E Braunstein, David R Raleigh
Prerequisite(s): UCSF students only. \r\nConsent of faculty member in charge of students research project and approval of UME and coordinator.

Restrictions: UCSF students only.

Activities: Project

Students participate in individual radiation oncology clinical or laboratory research under the close supervision of individual staff instructors.

School: Medicine
Department: Radiation Oncology
May the student choose the instructor for this course? No
Does enrollment in this course require instructor approval? No
Course Grading Convention: P/NP (Pass/Not Pass) or S/U (Satisfactory/Unsatisfactory)
Graduate Division course: No
Is this a web-based online course? No
Is this an Interprofessional Education (IPE) course? No
May students in the Graduate Division (i.e. pursuing Master or PhD) enroll in this course? No
Repeat course for credit? Yes

RAD ONCOL 198 Supervised Study (1-6 Units) Fall, Winter, Spring, Summer

Instructor(s): Steve E Braunstein
Prerequisite(s): Consent of instructor preceptor and approval of third- and fourth-year coordinator.

Restrictions: Medical students only

Activities: Independent Study, Project

Focused study and directed reading under supervision of a member of the faculty with the approval of the chairperson of the department.

School: Medicine
Department: Radiation Oncology
May the student choose the instructor for this course? No
Does enrollment in this course require instructor approval? No
Course Grading Convention: P/NP (Pass/Not Pass) or S/U (Satisfactory/Unsatisfactory)
Graduate Division course: No
Is this a web-based online course? No
Is this an Interprofessional Education (IPE) course? No
May students in the Graduate Division (i.e. pursuing Master or PhD) enroll in this course? No
Repeat course for credit? Yes

RAD ONCOL 235A Radiation Therapy Physics I (3 Units) Winter

Instructor(s): Adam Cunha
Prerequisite(s): The course expects knowledge of radiation detection and measurement.

Restrictions: None

Activities: Lecture, Laboratory

The two quarters of this course series (235 A and B) cover the fundamentals of the physics of radiation therapy: the physics of radiation interactions relevant to radiation therapy, the machines that produce this radiation, the measurement of radiation quantities, and dose calculation. The physics of photon, electron, proton, and ion beams, brachytherapy, and hyperthermia are covered. Monte Carlo techniques are introduced as well as the basics of machine commissioning.

School: Graduate Division
Department: Bioengineering Program
May the student choose the instructor for this course? No
Does enrollment in this course require instructor approval? No
Course Grading Convention: Letter Grade, P/NP (Pass/Not Pass) or S/U (Satisfactory/Unsatisfactory)
Graduate Division course: Yes
Is this a web-based online course? No
Is this an Interprofessional Education (IPE) course? No
May students in the Graduate Division (i.e. pursuing Master or PhD) enroll in this course? Yes
Repeat course for credit? No

RAD ONCOL 235B Radiation Therapy Physics II (3 Units) Spring

Instructor(s): Adam Cunha
Prerequisite(s): 235A

Restrictions: None

Activities: Lecture, Laboratory

The two quarters of this course series (235 A and B) cover the fundamentals of the physics of radiation therapy: the physics of radiation interactions relevant to radiation therapy, the machines that produce this radiation, the measurement of radiation quantities, and dose calculation. The physics of photon, electron, proton, and ion beams, brachytherapy, and hyperthermia are covered. Monte Carlo techniques are introduced as well as the basics of machine commissioning.

School: Graduate Division
Department: Bioengineering Program
May the student choose the instructor for this course? No
Does enrollment in this course require instructor approval? No
Course Grading Convention: Letter Grade, P/NP (Pass/Not Pass) or S/U (Satisfactory/Unsatisfactory)
Graduate Division course: Yes
Is this a web-based online course? No
Is this an Interprofessional Education (IPE) course? No
May students in the Graduate Division (i.e. pursuing Master or PhD) enroll in this course? Yes
Repeat course for credit? No

RAD ONCOL 235C Clinical Rotation in Radiation Therapy Physics (3 Units) Spring, Summer

Instructor(s): Adam Cunha
Prerequisite(s): Radiation Oncology 235A and 235B

Restrictions: None

Activities: Clinical

This course will provide exposure to clinical medical physics activities commonly encountered in radiation oncology clinics. The student will rotate through various treatment modalities in the Radiation Oncology clinic to become familiar with medical physics procedures involved. The course will be divided into multi-week blocks. During each block the student will participate in clinical activities of a single service under the mentorship of one physics faculty.

School: Graduate Division
Department: Bioengineering Program
May the student choose the instructor for this course? No
Does enrollment in this course require instructor approval? Yes
Course Grading Convention: P/NP (Pass/Not Pass) or S/U (Satisfactory/Unsatisfactory)
Graduate Division course: Yes
Is this a web-based online course? No
Is this an Interprofessional Education (IPE) course? No
May students in the Graduate Division (i.e. pursuing Master or PhD) enroll in this course? Yes
Repeat course for credit? No

RAD ONCOL 236 Special Topics in Basic and Translational Medical Physics (1.5 Units) Fall, Winter, Spring, Summer

Instructor(s): Adam Cunha
Prerequisite(s): None. Completion of first year curriculum in Medical Physics or another experimental physics graduate program is helpful, but not essential.

Restrictions: None

Activities: Seminar

Each lecture/seminar offering will focus on the literature of a current important area of the physics of radiation oncology. Residents and students will be expected to read assigned papers critically before class and to present and discuss papers in class. These may include topics in Monte Carlo simulation, thermal therapy, treatment imaging, dose calculation / dose treatment planning, brachytherapy, external beam therapy.\r\nEach quarter will cover different topics to stay current with the field.

School: Graduate Division
Department: Bioengineering Program
May the student choose the instructor for this course? No
Does enrollment in this course require instructor approval? No
Course Grading Convention: P/NP (Pass/Not Pass) or S/U (Satisfactory/Unsatisfactory)
Graduate Division course: Yes
Is this a web-based online course? No
Is this an Interprofessional Education (IPE) course? No
May students in the Graduate Division (i.e. pursuing Master or PhD) enroll in this course? Yes
Repeat course for credit? Yes