Radiation Oncology

Chair
• John M. Buatti

Director, Medical Physics Residency Program
• Joël J. St-Aubin

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Faculty: https://medicine.uiowa.edu/radiationoncology/people/primary-appointments
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Radiation oncology specializes in the delivery of radiation treatments for cancer patients. It includes treatments with linear accelerators as well as isotopes and temporary and permanent surgically implanted sources. Radiation oncologists also use these methods to treat some benign diseases, such as Graves' ophthalmopathy and trigeminal neuralgia. Treatments often employ stereotactic CT-image guided and MR-image guided techniques.

The Department of Radiation Oncology is dedicated to educating undergraduate and graduate students, M.D. and other health professions students, and residents. Its faculty members provide instruction for Doctor of Philosophy students in the Free Radical and Radiation Biology Program through their participation in FRRB:3110 Medical Physics I, FRRB:3215 Medical Physics II, FRRB:5000 Radiation Biology, FRRB:7000 Redox Biology and Medicine, and FRRB:7001 Molecular and Cellular Biology of Cancer.

The department's professional staff provides training in radiation therapy technology for undergraduate students in the Radiation Sciences Program by teaching courses RSTH:3120 Radiation Therapy Clinical Internship I, RSTH:3225 Radiation Therapy Clinical Internship II, RSTH:3325 Radiation Therapy Clinical Internship III, RSTH:4125 Radiation Therapy Clinical Internship IV, and RSTH:4225 Radiation Therapy Clinical Internship V.

The department also offers specialized research projects and sponsors postdoctoral students in biology, physics, and clinical disciplines by arrangement with the instructor or mentor. Frequently, students from the Departments of Biomedical Engineering and Electrical and Computer Engineering are involved.

Residency

The department provides a four-year physician residency training program in radiation oncology that includes clinical care and education. It also has a two-year residency program in medical physics.

M.D. students can elect a four-week radiation oncology rotation and/or a two-week multidisciplinary cancer care elective. Nursing students, dental residents, and fellows in gynecologic oncology, breast cancer, and in adult and pediatric hematology and oncology complete rotations in the department.

Courses

Radiation Oncology Courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit(s)</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>RADO:8401</td>
<td>Radiation Oncology for Medical Students</td>
<td>4 s.h.</td>
<td>Integration of clinical oncology, physics, and cancer biology; clinical work with faculty mentors; experience in clinical evaluation, technical physics, biological application.</td>
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<tr>
<td>RADO:8497</td>
<td>Research in Radiation Oncology</td>
<td>arr.</td>
<td>Medical research, clinical or laboratory projects; individual study.</td>
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<tr>
<td>RADO:8498</td>
<td>Radiation Oncology Research</td>
<td>arr.</td>
<td>Arranged by student with department approval.</td>
</tr>
<tr>
<td>RADO:8499</td>
<td>Radiation Oncology Off Campus</td>
<td>arr.</td>
<td>Arranged by student with department approval.</td>
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The courses are designed to provide a comprehensive understanding of radiation oncology from both theoretical and practical perspectives.