# Radiation & Imaging Sciences Medical Dosimetry

## Bachelor of Applied Science Degree

The BAS concentration in Medical Dosimetry is designed for radiation therapists who want to specialize in the planning of optimal radiation treatment techniques and dose calculations in collaboration with the medical physicist and radiation oncologist.

## Learning Outcomes

Degree recipients should possess the following skills and abilities:
- Demonstrate a clear understanding of medical dosimetry in its support of radiation oncology
- Design treatment plans for three-dimension conformal radiotherapy
- Design treatment plans for intensity modulated radiation therapy
- Design treatment plans for brachytherapy treatments
- Perform hand calculations to verify plan accuracy

## Program Requirements

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| PREREQUISITE REQUIREMENTS
| ARRT Certification/National Certification in Radiation Therapy | 65 |
| BIOL & 241 | Human Anatomy and Physiology I | 5 |
| BIOL & 242 | Human Anatomy and Physiology II | 5 |
| ENGL 101 | English Composition I | 5 |
| MATH & 141 | Precalculus I | 5 |
| RADON 127 | Sectional Anatomy | 2 |
| Humanities | From AAS-DTA transfer list | 5 |
| Social Science | From AAS-DTA transfer list | 5 |
| MEDICAL DOSIMETRY REQUIREMENTS
| CMST 330 | Intercultural Health Communication | 5 |
| ENGL 201 | The Research Paper | 5 |
| DOSM 301 | Current Topics in Medical Dosimetry | 3 |
| DOSM 315 | Physics for Medical Dosimetry I | 5 |
| DOSM 321 | Radiation Treatment Planning I | 5 |
| DOSM 322 | Radiation Treatment Planning II | 5 |
| DOSM 331 | Dosimetry of Particle Beam Therapy | 3 |
| DOSM 400 | Treatment Planning System Lab | 2 |
| DOSM 401 | Clinical Education I | 8 |
| DOSM 402 | Clinical Education II | 8 |
| DOSM 403 | Clinical Education III | 8 |
| DOSM 404 | Clinical Education IV | 8 |
| DOSM 405 | Clinical Education V | 8 |
| DOSM 406 | Clinical Education VI | 5 |
| DOSM 442 | Brachytherapy for Medical Dosimetrists | 4 |
| DOSM 443 | Quality Assurance for Medical Dosimetry | 3 |
| DOSM 475 | Concept Integration Case Studies | 3 |
| PHIL 365 | Biomedical Ethics: Theory and Practice | 5 |
| RAIM | BAS Approved Elective | 5 |
| RAIT 312/BIOL 312 | Biology of Cancer | 5 |
| **GRAND TOTAL** | | **200** |
- Effectively communicate with an interdisciplinary radiation oncology team
- Demonstrate an understanding of leadership, ethical and economic issues as they pertain to medical dosimetry

PROGRAM ELIGIBILITY

Individuals must have:
- National certification in ARRT (RTT)
- Demonstrated completion from a regionally accredited college of the following courses, or their equivalent, with a grade point average of 2.5 or better:
  - Precalculus (or assessment into a higher level course)
  - College level English composition
  - Two courses in human anatomy and physiology; or certification in Computed Tomography (CT) or Magnetic Resonance Imaging (MRI)
  - Humanities course
  - Social sciences course

DEGREE REQUIREMENTS

A complete description of the required curriculum for each concentration is shown in the worksheet. In addition to eligibility requirements, students must achieve the following:
- Completion of 103 quarter credits in the general program and concentration requirements, with a grade of “C”, or better
- A minimum cumulative GPA of 2.0 for all coursework taken at BC and the courses applies to the degree, including credits transferred from other colleges
- At least 45 quarter credits for the degree must be completed in residence at BC, of which 30 credits must be upper division

APPLICATION PROCESS

To be considered for the bachelor of applied science program prospective students must submit the following:
- Completed bachelor of applied science application form and notice of right to file a discrimination complaint
- Nonrefundable application fee of $125
- Official transcripts from a regionally accredited college
- Proof of national certification in radiation therapy ARRT (RRT).
- Two letters of recommendation from someone who personally knows your work, such as your current or past manager, discussing your contributions to your work place and how he or she believes you will benefit from completion of the BAS program. For Medical Dosimetry at least one letter must be from an oncologist, medical physicist, dosimetrist, chief therapist, or program director of a radiation therapy program
- Personal statement of no more than 500 words discussing your understanding of the role in your chosen field and how that fits in with your personal or professional goals. You may also discuss your work experience; your advanced certifications; specific or unique attributes that you will bring to the program; challenges or hardships you have overcome in pursuing your educational or work; or other special considerations that would make you a good candidate for the program

Applications and instructions are available on the website at www.bellevuecollege.edu/imaging/.

FOR MOST UP-TO-DATE INFORMATION, GO TO:
www.bellevuecollege.edu/programs/degrees/bachelor/bas/dosm/