

RADIOLOGIC SCIENCES (BS)

Degree Requirements

Code	Title	Hours
General Education Requirements		
Select General Education Requirements (p. 2)		59-60
Major Requirements (67-81 Hours)		
<i>Radiologic Science -First Year Professional Component (13 Courses,37 Hours)</i>		
A. Fall - Complete the following:		
RAD 300	Clinical Education I	2
RAD 304	Patient Care & Ethics	3
RAD 307	Osseous I	4
RAD 310	Radiation Biology	2
RAD 312	Princ of Radiographic Exposure	4
B. Spring - Complete the following:		
RAD 301	Clinical Education II	4
RAD 308	Osseous II	4
RAD 315	Contrast Media	2
RAD 318	Radiologic Physics	4
RAD 335	Pediatric-Geriatric Rad	1
C. Summer - Complete the following:		
RAD 302	Clinical Ed III	4
RAD 320	Cross-Sectional Anatomy	2
RAD 415	Diagnostic Imaging	2
<i>Radiologic Sciences -Second Year Professional Component (35-36 Hours)</i>		
Select one of the following Tracks:		34-44
Track 1: General Radiography to Include One Advanced Modality. (Study of Ultrasound or Radiation Therapy is not an option in the General Radiography Track) see footnote table below (p. 2) ¹		
A. Fall - 11 hours Complete the following:		
RAD 309	Osseous III	3
RAD 403	Clinical Education IV	
RAD 411	Survey of Pathology	
Select one of the following modalities:		
a. Mammography		
RAD 480	Mammography I - W	
& RAD 475	and Advanced Modality Clinical A	
or RAD 476	Advanced Modality Clinical B	
b. Computed Tomography		
RAD 477	Computed Tomography I	
& RAD 475	and Advanced Modality Clinical A	
or RAD 476	Advanced Modality Clinical B	
c. Magnetic Resonance Imaging		
RAD 483	Magnetic Resonance Imaging I	
& RAD 475	and Advanced Modality Clinical A	
or RAD 476	Advanced Modality Clinical B	
d. Vascular Radiography		
RAD 486	Vascular Radiography - W	
& RAD 475	and Advanced Modality Clinical A	
or RAD 476	Advanced Modality Clinical B	
e. Radiology Administration		

RAD 430	Healthcare Communication
& RAD 432	and Healthcare Human Resource Mgmt
B. Spring - Complete the following:	
RAD 404	Clinical Education V
RAD 437	Image Analysis
RAD 496	Radiologic Sci Research I-W
Select one of the following modalities:	
a. Mammography	
RAD 481	Mammography II
& RAD 475	and Advanced Modality Clinical A
or RAD 476	Advanced Modality Clinical B
b. Computer Tomography	
RAD 478	Computed Tomography II-W
& RAD 475	and Advanced Modality Clinical A
or RAD 476	Advanced Modality Clinical B
c. Magnetic Resonance Imaging	
RAD 484	Magnetic Reson Imaging II - W
& RAD 475	and Advanced Modality Clinical A
or RAD 476	Advanced Modality Clinical B
d. Vascular Radiography	
RAD 487	Vascular Radiography II
& RAD 475	and Advanced Modality Clinical A
or RAD 476	Advanced Modality Clinical B
e. Radiology Administration	
RAD 433	Health Care Financial Mgmt
& RAD 435	and Health Care Operations Mgt - W
C. Summer - Complete the following:	
RAD 405	Clinical Education VI
RAD 494	Directed Independent Study
RAD 497	Rad Science Research II
Select one of the following modalities:	
a. Mammography	
RAD 482	Mammography III
& RAD 475	and Advanced Modality Clinical A
or RAD 476	Advanced Modality Clinical B
b. Computer Tomography	
RAD 479	Computed Tomography III
& RAD 475	and Advanced Modality Clinical A
or RAD 476	Advanced Modality Clinical B
c. Magnetic Resonance Imaging	
RAD 485	Magnetic Resonance Imaging III
& RAD 475	and Advanced Modality Clinical A
or RAD 476	Advanced Modality Clinical B
d. Vascular Radiography	
RAD 481	Mammography II
& RAD 475	and Advanced Modality Clinical A
or RAD 476	Advanced Modality Clinical B
e. Radiology Administration	
RAD 440	Radiology Management Preceptor
<i>Track 2: Ultrasound Only</i>	
A. Fall - 12-16 hours; Complete the following:	
RAD 417	Ultrasound Anatomy & Scanning-W
RAD 421	Ultras Physics-Instrumentation
RAD 423	Ultrasound Clinical Educ I

RAD 411	Survey of Pathology (see footnote table below (p. 2)) ²	
B. Spring - Complete the following:		
RAD 418	Ultras Anat-Scan Tech-OB-GYN	
RAD 424	Ultrasound Clinical Educ II	
RAD 496	Radiologic Sci Research I-W	
C. Summer - Complete the following:		
RAD 320	Cross-Sectional Anatomy (see footnote table below (p. 2)) ²	
RAD 425	Ultrasound Clinical Educ III	
RAD 427	Procedural Guidelines in Ultra	
RAD 497	Rad Science Research II	
<i>Track 3: Radiation Therapy Only</i>		
A. Fall - Complete the following:		
RAD 441	Clinical Education I	
RAD 448	Radiation Therapy Physics	
RAD 446	Orientation to Oncology - W	
RAD 450	Patient Care in Oncology	
RAD 452	Prin Pract of Rad Oncology I	
B. Spring - Complete the following:		
RAD 442	Clinical Education II	
RAD 455	Dosimetry and Tx Planning I	
RAD 453	Prin Prac of Rad Oncology II	
RAD 458	Cancer Mgt in Oncology - W	
RAD 496	Radiologic Sci Research I-W	
C. Summer - Complete the following:		
RAD 443	Clinical Education III	
RAD 456	Dosimetry and Tx Planning II	
RAD 454	Quality Mgt In Rad Oncology	
RAD 497	Rad Science Research II	
RAD 320	Cross-Sectional Anatomy (see footnote table below (p. 2)) ²	

Minor Requirements

A minor is not required for this degree program 0

Total Hours 134-145**Footnote**

¹ Students who choose to complete Track 1 (Radiography to include one advanced modality) will be eligible to apply for continuation in the program to study any additional modality to include ultrasound and radiation therapy in a non-degree seeking student status. Please note that non-degree seeking students are not eligible for federal financial aid.

² RAD 320 and RAD 411 required if not previously completed.

General Education Requirements

Code	Title	Hours
Area I - Written Composition		
A. Complete the following:		
EH 101	English Composition I	3
B. Complete the following:		
EH 102	English Composition II	3
Area II - Humanities & Fine Arts		

A. Complete the following:

CA 110	Public Speaking	3
B. Select one of the following: see footnote table below (p. 4) ¹		
EH 215	Brit Lit before 1785	
EH 216	Brit Lit after 1785	
EH 225	Am Lit before 1865	
EH 226	Am Lit after 1865	
EH 235	World Lit before 1650	
EH 236	World Lit after 1650	
C. Select one of the following:		
ARH 100	Survey of Art	3
ARH 103	Art History I	
ARH 123	Art History II	
ARS 101	Art Appreciation	
DRA 110	Introduction to Theatre	
MUL 101	Introduction to Music	
D. Select three hours from the following:		
AFR 101	Intro to African Amer Studies	3
ARH 100	Survey of Art	
ARH 103	Art History I	
ARH 123	Art History II	
ARH 203	Survey of Non-Western Art	
ARS 101	Art Appreciation	
CLA 110	Intro Anc Greek Roman Culture	
DRA 110	Introduction to Theatre	
EH 215	Brit Lit before 1785	
EH 216	Brit Lit after 1785	
EH 225	Am Lit before 1865	
EH 226	Am Lit after 1865	
EH 235	World Lit before 1650	
EH 236	World Lit after 1650	
LG 101	Introductory Latin I	
LG 102	Introductory Latin II	
LG 111	Introductory French I	
LG 112	Introductory French II	
LG 121	Introductory Chinese I	
LG 122	Introductory Chinese II	
LG 131	Introductory Spanish I	
LG 132	Introductory Spanish II	
LG 141	Intro Classical Greek I	
LG 142	Intro Classical Greek II	
LG 151	Introductory German I	
LG 152	Introductory German II	
LG 153	Accelerated Intro German	
LG 171	Introductory Russian I	
LG 172	Introductory Russian II	
LG 173	Accelerated Intro Russian	
LG 201	Intermediate Latin I	
LG 202	Intermediate Latin II	
LG 211	Intermediate French I	
LG 212	Intermediate French II	
LG 213	Accelerated Inter French - H	

LG 221	Intermediate Chinese I
LG 222	Intermediate Chinese II
LG 231	Intermediate Spanish I
LG 232	Intermediate Spanish II
LG 234	Inter Spanish Accel -H
LG 241	Interm Classical Greek I
LG 242	Interm Classical Greek II
LG 251	Intermediate German I
LG 252	Intermediate German II
LG 271	Intermediate Russian I
LG 272	Intermediate Russian II
LG 273	Intensive Second Year Russian
LGS 101	Introductory Japanese I
LGS 102	Introductory Japanese II
LGS 106	Introductory Arabic I
LGS 107	Introductory Arabic II
LGS 110	Intro American Sign Language I
LGS 111	Intro American Sign Lang II
LGS 171	Introductory Korean I
LGS 172	Introductory Korean II
LGS 201	Intermediate Japanese I
LGS 202	Intermediate Japanese II
LGS 206	Intermediate Arabic I
LGS 207	Intermediate Arabic II
LGS 210	Intermediate ASL I
LGS 211	Intermediate ASL II
MUL 101	Introduction to Music
PHL 110	Introduction to Philosophy
PHL 120	Critical Thinking
PHL 121	Introduction to Logic
PHL 131	Introduction to Ethics
PHL 231	Social Ethics
PHL 240	Western Philosophy: Classical
REL 100	Intro to the Study of Religion
REL 200	Old Testament/Hebrew Bible
REL 201	Survey of the New Testament

Area III – Natural Sciences & Mathematics

A. Select 3-4 hours from the following: 3

MA 112	Precalculus Algebra
MA 113	Precalculus Trigonometry
MA 115	Precal Algebra-Trigonometry
MA 120	Calculus and Its Applications
MA 125	Calculus I
MA 126	Calculus II
MA 227	Calculus III
MA 237	Linear Algebra I
MA 238	Differential Equations I

B. Complete the following: 4

BLY 101 & 101L	Life Science I and Life Science I Laboratory	4
or BLY 121 & 121L	General Biology I and General Biology I Lab	

C. Select one of the following: 4

BLY 102 & 102L	Life Science II and Life Science II Lab
or BLY 122 & 122L	General Biology II and General Biology II Laboratory
CH 101 & 101L	Survey of Inorg and Org Chem and Survey Inorg-Org Chem Lab
CH 131 & 131L	General Chemistry I and General Chemistry I Lab
CH 132 & 132L	General Chemistry II and General Chemistry II Lab

Area IV – History, Social & Behavioral Sciences see footnote table below (p. 4) ¹

A. Complete the following:

PSY 120	Introduction to Psychology	3
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B. Select one of the following: 3

HY 101	HY of Western Civilization I
HY 102	HY of Western Civilization II
HY 135	US History to 1877
HY 136	US History since 1877

C. Select two of the following: 6

AN 100	Intro to Cultural Anthropology
AN 101	Intro Archaeology-Bio Anthro
CA 100	Intro to Communication
CA 211	Interpersonal Comm
ECO 215	Prin of Microeconomics
ECO 216	Prin of Macroeconomics
GEO 114	People, Places, Environment
GEO 115	World Regional Geography
GS 101	Intro to Gender Studies
HY 101	HY of Western Civilization I
HY 102	HY of Western Civilization II
HY 135	US History to 1877
HY 136	US History since 1877
IS 100	Global Issues
IST 201	Seasons of Life
NAS 101	Intro Native American Studies
PSC 130	Intro to US Government
PSY 250	Life Span Development
SY 109	Introductory Sociology
SY 112	Social Problems

Area V - Pre-Professional Required Courses

A. Complete the following:

BMD 251	Human Anatomy & Physiology I	4
BMD 252	Human Anatomy & Physiology II	4

B. Complete the following:

C. Select 4-5 hours from the following: 4-5

PH 104	Concepts of Physics
PH 104L	Concepts of Physics Laboratory
PH 114	Physics with Algebra-Trig I
PH 114L	Alg-Trig Based Physics I Lab

D. Select one of the following: 3

BUS 245	Data Analytics I
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ST 210	Stat Reason and Application
ST 305	Applied Stat Health Sciences
Total Hours	56-57

Footnote

¹ Students must complete a 6 credit hour sequence either in literature (Area II – EH 215 & EH 216, EH 225 & EH 226, or EH 235 & EH 236) or history (Area IV – HY 101 & HY 102 or HY 135 & HY 136).

All undergraduates must complete two designated writing credit (W) courses, at least one of which must be in the student's major or minor.

Graduation Plan

Multiple Degree Plans Available. Select To View Option:

Radiologic Sciences (BS)

(126-153 Total Hours)

The total number of hours for the RAD degree depends on which Track is chosen by the student.

Course	Title	Hours
First Year		
Fall		
Pre-Professional Year		
EH 101	English Composition I	3
Biology	Area III, B ¹	4
PSY 120	Introduction to Psychology	3
Social Science	Area IV, C ¹	3
Hours		13
Spring		
Pre-Professional Year		
EH 102	English Composition II	3
Biology	Area III, C ¹	4
MA 112	Precalculus Algebra	3
CA 110	Public Speaking	3
History	Area IV, B ¹	3
Hours		16
Second Year		
Fall		
Pre-Professional Year		
BMD 251	Human Anatomy & Physiology I	4
Statistics	Area V, D ¹	3
History Sequence/Social Science	Area IV, C ¹	3
Literature	Area II, B ¹	3
Fine Arts	Area II, C ¹	3
Hours		16
Spring		
Pre-Professional Year		
BMD 252	Human Anatomy & Physiology II	4
PH 104 & 104L	Concepts of Physics and Concepts of Physics Laboratory	4
Literature Sequence/Humanities	Area II, D ¹	3
Hours		11
Total Hours		56

¹ See General Education Requirements

Course	Title	Hours
First Year		
Fall		
Professional Year		
RAD 300	Clinical Education I	2
RAD 304	Patient Care & Ethics	3
RAD 307	Osseous I	4
RAD 310	Radiation Biology	2
RAD 312	Princ of Radiographic Exposure	4
Hours		15
Spring		
Professional Year		
RAD 301	Clinical Education II	4
RAD 308	Osseous II	4
RAD 315	Contrast Media	2
RAD 318	Radiologic Physics	4
RAD 335	Pediatric-Geriatric Rad	1
Hours		15
Summer		
Professional Year		
RAD 302	Clinical Ed III	4
RAD 320	Cross-Sectional Anatomy	2
RAD 415	Diagnostic Imaging	2
Hours		8
Total Hours		38

At the end of the first professional year, students will be asked to make a choice on how they wish to complete the degree.

There are three tracks from which to choose to complete the second professional year.

- Track 1 – General Radiography plus one advanced imaging modality (Vascular Imaging, CT, MRI, Mammography)
- Track 2 – Ultrasound only
- Track 3 – Radiation Therapy only

In addition to one of the modalities in Track 1, students may choose to add studies in Radiology Administration.

Students may also choose to complete the second professional year as described for Track 1, and then later apply for admission to any advanced modality including Ultrasound or Radiation Therapy. Please note that students with bachelor's degrees in Radiologic Sciences do not currently qualify for federal financial aid benefits when pursuing additional certifications such as Radiation Therapy.

Bridge Program Students

Registered Radiographers wishing to complete a bachelor's degree in Radiologic Sciences are responsible for completing all requirements from the first and second year of the pre-professional component of the program prior to enrolling in the professional component of the Radiologic Sciences program. Upon successful completion of the bridge course, the Radiologic Sciences advisor will request for 38 hours of alternative credit (i.e. credit from the first professional year of the Radiologic Sciences program) to be added to the students' Degree Audit. Bridge student will choose either TWO advanced imaging specialties from the Second Professional Year Track I, ONE advanced imaging specialty and Radiologic Administration from the Second Professional Year Track I, the Second Professional Year for Ultrasound--Track II only, or the Second Professional Year for Radiation Therapy-- Track III only. Bridge program students complete the program in 4 semesters (includes 2 summer

terms). Students participating in the bridge program may have RAD 411 waived after successfully completing RAD 491 if the student will otherwise meet the upper-division residency requirement.

Bridge Students Only

Track 1

Course	Title	Hours
First Year		
Summer		
RAD 491	Prof. Radiological Practice	6
Hours		6
Second Year		
Fall		
Professional Year		
Track 1	General Radiography, A and one modality, a-e ¹	17
Track 1 + Rad Admin	General Radiography, A, and one modality, a-d, and e ^{1,2}	23
Bridge Students	Two modalities from a-e, or Ultrasound Only, or Radiation Therapy Only ¹	8-15
Hours		48-55
Spring		
Professional Year		
Track 1	General Radiography, A and one modality, a-e ¹	12
Track 1 + Rad Admin	General Radiography, A, and one modality a-d, and e ¹	18
Bridge Students	RAD 496 and two modalities from a-e, or Ultrasound Only, or Radiation Therapy Only ¹	8-16
Hours		38-46
Summer		
Professional Year		
Track 1	General Radiography, A and one modality, a-e ¹	8-11
Track 1 + Rad Admin	General Radiography, A, and one modality a-d, and e ¹	12
Bridge Students	RAD 497 and two modalities from a-e, or Ultrasound Only, or Radiation Therapy Only	6-13
Hours		26-36
Total Hours		118-143

¹ See General Education Requirements

² Will need Dean's approval for over-the-credit-hour limit override

Track 2

Course	Title	Hours
First Year		
Summer		
RAD 491	Prof. Radiological Practice	6
Hours		6
Second Year		
Fall		
Professional Year		
Track 2	Ultrasound Only, A ¹	9-13
Bridge Students	Two modalities from a-e, or Ultrasound Only, or Radiation Therapy Only ¹	8-15
Hours		17-28
Spring		
Professional Year		
Track 2	Ultrasound Only, A ¹	12
Bridge Students	RAD 496 and two modalities from a-e, or Ultrasound Only, or Radiation Therapy Only ¹	8-16
Hours		20-28
Summer		
Professional Year		
Track 2	Ultrasound Only, A ¹	9-11

Bridge Students	RAD 497 and two modalities from a-e, or Ultrasound Only, or Radiation Therapy Only	6-13
Hours		15-24
Total Hours		58-86

¹ See General Education Requirements

Track 3

Course	Title	Hours
First Year		
Summer		
RAD 491	Prof. Radiological Practice	6
Hours		6
Second Year		
Fall		
Professional Year		
Track 3	Radiation Therapy Only, A ¹	15
Bridge Students	Two modalities from a-e, or Ultrasound Only, or Radiation Therapy Only ¹	8-15
Hours		23-30
Spring		
Professional Year		
Track 3	Radiation Therapy Only, A ¹	16
Bridge Students	RAD 496 and two modalities from a-e, or Ultrasound Only, or Radiation Therapy Only ¹	8-16
Hours		24-32
Summer		
Professional Year		
Track 3	Radiation Therapy Only, A ¹	11-13
Bridge Students	RAD 497 and two modalities from a-e, or Ultrasound Only, or Radiation Therapy Only	6-13
Hours		17-26
Total Hours		70-94

¹ See General Education Requirements

Notes:

The total number of hours to complete the RAD degree is based on which Track is chosen by the student.

RT to BS Students

Only (32 Total Hours)

First Semester- Summer 1

Course	Title	Hours
Summer		
RAD 491	Prof. Radiological Practice	6
Hours		6
Total Hours		6

Course	Title	Hours
Fall		
RAD 432	Healthcare Human Resource Mgmt	3
RAD 433	Health Care Financial Mgmt	3
RAD 428	Computed Tomography Procedures (Computed Tomography Procedures)	3
RAD 426	CT Phys Princ and Qual Cont (Computed Tomography Physical Principles and QC)	3
Hours		12
Total Hours		12

Course	Title	Hours
Spring		
RAD 496	Radiologic Sci Research I-W	1
RAD 435	Health Care Operations Mgt - W	3
RAD 430	Healthcare Communication	3
RAD 429	Adv Sect Imag - CT and MRI Pth (Advanced Sectional Imaging of CT and MRI Pathologies)	3
Hours		10
Total Hours		10

Course	Title	Hours
Summer		
RAD 497	Rad Science Research II	1
EMS 340	Disaster Mgt & Event Planning	3
Hours		4
Total Hours		4

Certificate Students

Registered Radiographers wishing to complete a certificate program in Radiology Administration, Radiation Therapy, Ultrasound, Magnetic Resonance Imaging, Computed tomography, Interventional Radiology or Mammography are responsible for completing outlined requirements for the modality certificate they are obtaining.

Certificate Students Only Mammography, MRI, IR, CT (12 Total Hours)

Course	Title	Hours
Fall		
RAD 475	Advanced Modality Clinical A	2
Select one of the following:		2
RAD 480	Mammography I - W	
RAD 483	Magnetic Resonance Imaging I	
RAD 486	Vascular Radiography - W	
RAD 477	Computed Tomography I	
Hours		4
Spring		
RAD 475	Advanced Modality Clinical A	2
Select one of the following:		2
RAD 481	Mammography II	
RAD 484	Magnetic Reson Imaging II - W	
RAD 487	Vascular Radiography II	
RAD 478	Computed Tomography II-W	
Hours		4
Summer		
RAD 475	Advanced Modality Clinical A	2
Select one of the following:		2
RAD 482	Mammography III	
RAD 485	Magnetic Resonance Imaging III	
RAD 488	Vascular Radiography III	
RAD 479	Computed Tomography III	
Hours		4
Total Hours		12

Radiology Administration (7 Total Hours)

Course	Title	Hours
Fall		
RAD 430	Healthcare Communication	3
RAD 432	Healthcare Human Resource Mgmt	3
Hours		6

Course	Title	Hours
Spring		
RAD 433	Health Care Financial Mgmt	3
RAD 435	Health Care Operations Mgt - W	3
Hours		6
Summer		
RAD 440	Radiology Management Preceptor	1
Hours		1
Total Hours		13

Ultrasound (29-31 Total Hours)

Course	Title	Hours
Fall		
RAD 423	Ultrasound Clinical Educ I	5
RAD 411	Survey of Pathology	4
RAD 417	Ultrasound Anatomy & Scanning-W	4
Hours		13
Spring		
RAD 424	Ultrasound Clinical Educ II	5
RAD 421	Ultras Physics-Instrumentation	3
RAD 418	Ultras Anat-Scan Tech-OB-GYN	3
RAD 496	Radiologic Sci Research I-W	1
Hours		12
Summer		
RAD 425	Ultrasound Clinical Educ III	5
RAD 427	Procedural Guidelines in Ultra	3
RAD 320	Cross-Sectional Anatomy	2
RAD 497	Rad Science Research II	1
Hours		11
Total Hours		36

Radiation Therapy

The total number of hours for the RAD degree depends on which Track is chosen by the student.

Course	Title	Hours
Spring		
RAD 455	Dosimetry and Tx Planning I	3
RAD 442	Clinical Education II	6
RAD 453	Prin Prac of Rad Oncology II	3
RAD 458	Cancer Mgt in Oncology - W	3
Hours		15
Summer		
RAD 443	Clinical Education III	7
RAD 456	Dosimetry and Tx Planning II	2
RAD 454	Quality Mgt In Rad Oncology	1
Hours		10
Fall		
RAD 441	Clinical Education I	5
RAD 448	Radiation Therapy Physics	3
RAD 320	Cross-Sectional Anatomy	2
RAD 446	Orientation to Oncology - W	3
RAD 450	Patient Care in Oncology	1
RAD 452	Prin Pract of Rad Oncology I	3
Hours		17
Total Hours		42