

## BS RADIOLOGY TECHNOLOGY

### Curriculum Plan and Model

| BSRT- Course Distribution                     |    |            |
|---|----|------------|
| UM for University Mandatory                   | 16 | 52         |
| CO for Common<br>Optional(Compulsory Courses) | 7  | 15         |
| Discipline Related Courses                    | 23 | 62         |
| <b>Total Credit Hours</b>                     |    | <b>129</b> |

### Semester Plan

#### Semester 1

| Code   | Course title                       | CrHr             | Pre-Requisite |
|--------|------------------------------------|------------------|---------------|
| BRT101 | Medical Biochemistry-I             | 3+1              | —             |
| BRT102 | Human Physiology-I                 | 3+1              | —             |
| BRT103 | Human Anatomy –I                   | 3+1              | —             |
| BRT111 | Functional English                 | 2+0              | —             |
| HMT122 | Pak Studies                        | 2+0              | —             |
|        | <b>Total Semester Credit Hours</b> | <b>(13+3)=16</b> |               |

#### Semester 2

| Code   | Course title                       | CrHr             | Pre-Requisite             |
|--------|------------------------------------|------------------|---------------------------|
| BRT107 | Medical Biochemistry –II           | 3+1              | Medical<br>Biochemistry-I |
| BRT108 | Human Physiology –II               | 3+1              | Human Physiology-I        |
| BRT109 | Human Anatomy-II                   | 3+1              | Human Anatomy –I          |
| BRT121 | Academic and Professional Writing  | 2+0              | Functional English        |
| HMT121 | Islamic Studies                    | 1+1              | —                         |
|        | <b>Total Semester Credit Hours</b> | <b>(12+4)=16</b> |                           |

#### Semester 3

| Code   | Course title                       | CrHr             | Pre-Requisite                           |
|--------|------------------------------------|------------------|---|
| BRT114 | Introduction to Computer Science   | 1+1              | —                                       |
| BRT201 | General Pathology                  | 2+1              | —                                       |
| BRT202 | General Pharmacology               | 2+1              | —                                       |
| BRT211 | General Radiology                  | 2+1              | —                                       |
| BRT212 | Radiation Sciences & Technology    | 2+1              | —                                       |
| BRT231 | Communication Skills               | 2+0              | Academic and<br>Professional<br>Writing |
|        | <b>Total Semester Credit Hours</b> | <b>(11+5)=16</b> |   |

#### Semester 4

| Code   | Course title  | CrHr             | Pre-Requisite |
|--------|---|------------------|---------------|
| BRT234 | Clinical Medicine-I                                   | 2+0              | —             |
| BRT210 | Regional and Radiological Anatomy -I                  | 2+1              | —             |
| BRT236 | Conventional Radiology procedures & Clinical Practice | 2+1              | —             |
| BRT237 | Radiological Positioning & Clinical Practice          | 2+1              | —             |
| BRT238 | Computed & Digital Radiography                        | 1+1              | —             |
| BRT239 | Radiobiology & Radiation Protection                   | 1+1              | —             |
|        | <b>Total Semester Credit Hours</b>                    | <b>(10+5)=15</b> |               |

#### Semester 5

| Code   | Course title                                    | CrHr             | Pre-Requisite                        |
|--------|---|------------------|--------------------------------------|
| BRT313 | Computed Tomography (CT)-I                      | 2+1              | —                                    |
| BRT314 | Mammography And Special Radiological Techniques | 2+1              | —                                    |
| BRT315 | Magnetic Resonance Imaging (MRI)-I              | 2+1              | —                                    |
| BRT317 | Interventional Radiography                      | 1+1              | —                                    |
| BRT318 | Clinical Medicine-II                            | 2+0              | Clinical Medicine-I                  |
| BRT235 | Regional And Radiological Anatomy-II            | 2+1              | Regional and Radiological Anatomy –I |
|        | <b>Total Semester Credit Hours</b>              | <b>(11+5)=16</b> |                                      |

#### Semester 6

| Code   | Course title  | CrHr             | Pre-Requisite                      |
|--------|---|------------------|------------------------------------|
| BRT319 | Radiological And Cross Sectional Anatomy                        | 2+1              | —                                  |
| BRT320 | Computed Tomography (CT) Procedures & Clinical Practice         | 2+1              | Computed Tomography (CT)-I         |
| BRT321 | Magnetic Resonance Imaging (MRI) Procedures & Clinical Practice | 2+1              | Magnetic Resonance Imaging (MRI)-I |
| BRT322 | Therapeutic Radiology   | 3+0              | —                                  |
| BRT210 | Biostatistics   | 3+0              | —                                  |
| BUS362 | Research Methodology  | 3+0              | —                                  |
|        | <b>Total Semester Credit Hours</b>                              | <b>(15+3)=18</b> |                                    |

#### Semester 7

| Code   | Course title                          | CrHr | Pre-Requisite |
|--------|---------------------------------------|------|---------------|
| BRT411 | Clinical Sonography                   | 2+1  | —             |
| BRT412 | Angiography And Cardiac Imaging (ACI) | 2+1  | —             |
| BRT413 | Nuclear Medicine                      | 3+0  | —             |

|        |  |                  |   |
|--------|--|------------------|---|
| BRT414 | Echocardiography                               | 1+1              | — |
| BRT415 | Electrocardiography (ECG)                      | 1+1              | — |
| BRT416 | Clinical Pathology & Radiological Presentation | 1+1              | — |
|        | <b>Total</b>                                   | <b>(10+5)=15</b> |   |

### Semester 8

| Code   | Course title                       | CrHr             | Pre-Requisite |
|--------|------------------------------------|------------------|---------------|
| BRT490 | Patient Care And Management (PCM)  | 2+0              | —             |
| BRT491 | Medical Sociology                  | 3+0              | —             |
| BRT409 | Biosafety And Bio-Ethics           | 3+0              | —             |
| BRT316 | General Surgery                    | 1+1              | —             |
| BRT490 | Seminar                            | 1+0              | —             |
| BRT499 | Research Project                   | 6+0              | —             |
|        | <b>Total Semester Credit Hours</b> | <b>(16+1)=17</b> |               |
|        | <b>Total program Credit Hours</b>  | <b>129</b>       |               |

### Compulsory Courses

| Code   | Course title                      | Type | CrHr      | Pre-Requisite                     |
|--------|-----------------------------------|------|-----------|-----------------------------------|
| BRT111 | Functional English                | core | 2+0       | —                                 |
| HMT122 | Pak Studies                       | core | 2+0       | —                                 |
| BRT121 | Academic and Professional Writing | core | 2+0       | Functional English                |
| HMT121 | Islamic Studies                   | core | 1+1       | —                                 |
| BRT231 | Communication Skills              | core | 2+0       | Academic and Professional Writing |
| BRT114 | Introduction to Computer Science  | core | 1+1       | —                                 |
| BRT210 | Biostatistics                     | Core | 3+0       |                                   |
|        | <b>Credit Hours</b>               |      | <b>15</b> |                                   |

### University Mandatory Courses

| Code   | Course title             | Type | Cr.Hr | Pre-Requisite          |
|--------|--------------------------|------|-------|------------------------|
| BRT101 | Medical Biochemistry-I   | UM   | 3+1   | -                      |
| BRT102 | Human Physiology-I       | UM   | 3+1   |                        |
| BRT103 | Human Anatomy –I         | UM   | 3+1   |                        |
| BRT107 | Medical Biochemistry –II | UM   | 3+1   | Medical Biochemistry-I |
| BRT108 | Human Physiology –II     | UM   | 3+1   | Human Physiology-I     |
| BRT109 | Human Anatomy-II         | UM   | 3+1   | Human Anatomy –I       |
| BRT201 | General Pathology        | UM   | 2+1   |                        |
| BRT202 | General Pharmacology     | UM   | 2+1   |                        |
| BRT234 | Clinical Medicine-I      | UM   | 2+0   |                        |
| BRT318 | Clinical Medicine-II     | UM   | 2+0   | Clinical Medicine-I    |

|        |                                   |    |           |  |
|--------|-----------------------------------|----|-----------|--|
| BUS362 | Research Methodology              | UM | 3+0       |  |
| BRT409 | Biosafety And Bio-Ethics          | UM | 3+0       |  |
| BRT490 | Patient Care And Management (PCM) | UM | 2+0       |  |
| BRT491 | Medical Sociology                 | UM | 3+0       |  |
| BRT490 | Seminar                           | UM | 1+0       |  |
| BRT499 | Research Project                  | UM | 6+0       |  |
|        | <b>Credit Hours</b>               |    | <b>52</b> |  |

### Discipline Related Courses

| Code   | Course title  | Type | CrHr | Pre-Requisite                        |
|--------|---|------|------|--------------------------------------|
| BRT211 | General Radiology   | RT   | 2+1  | –                                    |
| BRT212 | Radiation Sciences & Technology                                 | RT   | 2+1  | –                                    |
| BRT210 | Regional and Radiological Anatomy –I                            | RT   | 2+1  |                                      |
| BRT236 | Conventional Radiology procedures & Clinical Practice           | RT   | 2+1  |                                      |
| BRT237 | Radiological Positioning & Clinical Practice                    | RT   | 2+1  |                                      |
| BRT238 | Computed & Digital Radiography                                  | RT   | 1+1  |                                      |
| BRT239 | Radiobiology & Radiation Protection                             | RT   | 1+1  |                                      |
| BRT313 | Computed Tomography (CT)-I                                      | RT   | 2+1  | –                                    |
| BRT314 | Mammography And Special Radiological Techniques                 | RT   | 2+1  | –                                    |
| BRT315 | Magnetic Resonance Imaging (MRI)-I                              | RT   | 2+1  | –                                    |
| BRT317 | Interventional Radiography                                      | RT   | 1+1  | –                                    |
| BRT235 | Regional And Radiological Anatomy-II                            | RT   | 2+1  | Regional and Radiological Anatomy -I |
| BRT319 | Radiological And Cross Sectional Anatomy                        | RT   | 2+1  | –                                    |
| BRT320 | Computed Tomography (CT) Procedures & Clinical Practice         | RT   | 2+1  | Computed Tomography (CT)-I           |
| BRT321 | Magnetic Resonance Imaging (MRI) Procedures & Clinical Practice | RT   | 2+1  | Magnetic Resonance Imaging (MRI)-I   |
| BRT322 | Therapeutic Radiology   | RT   | 3+0  | –                                    |
| BRT411 | Clinical Sonography   | RT   | 2+1  | –                                    |
| BRT412 | Angiography And Cardiac Imaging (ACI)                           | RT   | 2+1  | –                                    |

|        |   |    |           |   |
|--------|---|----|-----------|---|
| BRT413 | Nuclear Medicine                                  | RT | 3+0       | — |
| BRT414 | Echocardiography                                  | RT | 1+1       | — |
| BRT415 | Electrocardiography (ECG)                         |    | 1+1       |   |
| BRT416 | Clinical Pathology &<br>Radiological Presentation |    | 1+1       |   |
| BRT316 | General Surgery                                   |    | 1+1       |   |
|        | <b>Total</b>                                      |    | <b>62</b> |   |