UNIVERSITEIT VAN PRETORIA
UNIVERSITY OF PRETORIA
YUNIBESITHI YA PRETORIA

Faculty of
Health Sciences

Fakulteit Gesondheidswetenskappe
Lefapha la Disaense tša Maphelo

# RADIATION THERAPY BRIDGING PROGRAM GUIDELINES FOR UNDERGRADUATE DEGREE EQUIVALENCE STATUS

## DEPARTMENT OF RADIOGRAPHY

**2025**

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Revised by J Mahapane 2025

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# 1 Introduction

Thank you for taking the initiative to formally pursue your continued professional development through your application to the Bachelor in Radiography: Radiation Therapy Honours program

## 1.1 PURPOSE OF THE BRIDGING PROGRAMME

Applicants to the Bachelor in Radiography Honours (BRad: Hons) program, Radiation Therapy (code: 10247014) who are in possession of an undergraduate diploma in Radiation Therapy cannot be admitted directly to the honours programme. The reason is that the diploma is assigned to Level 6 and the honours programme is assigned to Level 8 on the National Qualifications framework (NQF) of the Council of Higher Education. It is therefore required that applicants demonstrate competency that they have attained a knowledge level that is equivalent to NQF – level 7 in Radiation Therapy. This bridging is also required to comply with General Regulation G.62 of the University of Pretoria (UP) before admission to the BRad: Hons program.

## 1.2 REQUIREMENTS TO COMPLETE BRIDGING PROGRAM

To successful complete the bridging program, you are required to:

1.1.1. Attend and pass a Research Methodology module that carries a minimum of 16 credits and is offered at NQF – level 7

1.1.2. Self-study and pass the bridging examination on the content of the Radiographic Anatomy 380 (RAN 380) module. The exam is set by the Department of Anatomy at the University of Pretoria. The examination is externally moderated

1.1.3. Self-study and pass the bridging examination in Radiation Therapy theory that is set at the level of the third year of the degree in Radiation Therapy, formerly offered by the Department of Radiography, University of Pretoria. The examination is externally moderated.

1.1.4. Candidates are expected pass the Radiographic Anatomy and the Radiation Therapy examinations with a minimum of 60%.

1.1.5. Only (two) opportunities to pass each part of the bridging program, i.e. the Research Methodology, Radiographic Anatomy and Radiation Therapy, is permitted. Failure to pass after the 2$^{nd}$ attempt of a section/s of the bridging program will permanently exclude the candidate from challenging the bridging process.

## 1.2. STRUCTURE OF THE BRIDGING PROGRAMME

1.2.1. Candidates are able to complete the **Research Methodology module**. This module can be taken through the School of Health Care Sciences, University of Pretoria by enrolling in the Research Methodology module. Students complete this course for non-degree purpose, and are registered as Medical Special: Undergraduate students. Should candidates be unable to enroll in the Research Methodology module, it is acceptable to enroll in a research methodology course offered at any institution of higher education,

provided the Academic Advisory committee of the School of Health Care Sciences approves the curriculum of that institution. (Please contact the Department of Radiography for further advice on acceptable courses that can be followed)

1.2.2. You are required to self study for the bridging examination that includes a section on Anatomy and Radiation Therapy theory. You will require a minimum of six (6) months to prepare for the bridging examination

### 1.3. SITTING THE WRITTEN BRIDGING EXAMINATION

1.3.1. You are required to make online application to the University of Pretoria (UP) at https://www.up.ac.za/online-application. Applications open in April and close at the end of September of each year.

1.3.2. You will require a UP student number in order to sit the bridging examination

1.3.3. The examination will be done online. You will be given special access to the university's Teaching and Learning system to take this examination.

1.3.4. The bridging examination is scheduled for the 24 November 2025. The Radiographic Anatomy (RAN 380) examination will take place from 13:00 to 14:00 and the Radiation therapy (RSZ 380) will follow from 14:00 to 16:00.

1.3.5. Please inform Ms J Mahapane at johncy.mahapane@up.ac.za of your student number and which examination (s) you wish to write. Kindly also attach a copy of your ID.

### 1.4. UNIVERSITY PROCESS ON SUCCESSFUL COMPLETION OF BRIDGING PROGRAMME

On passing the examinations, you will need to submit the following documentation:

a) a certified copy of your diploma/ degree in diagnostic radiography,
**b)** a transcript of your results for the 3 years of training,
**c)** a certified copy of your identity document,
**d)** a certified copy of your matriculation certificate
**e)** a letter addressed to the head of department motivating your reasons for wanting to enrol in the B Rad Honours program.

All documentation, together with the entrance examination results, is presented by the Department of Radiography to the Academic Advisory Committee of the School of Health Care Sciences, thereafter to the Faculty Board of Health Sciences. The submission is then presented for final approval by the University Senate meeting for permission to be granted special status to be admitted to the honours program. This administrative process takes 9-12 months to complete. Once approval is granted by Senate, you will be able to be admitted to the honours program.

# 2. SCOPE OF THE BRIDGING PROGRAM

## 2.1. RESEARCH MODULE

- Outcomes: Concepts of research; research process; research studies appraisal; planning and developing literature review; developing research idea and research

question; research principles in designing research proposal; research proposal writing

## 2.2. RADIOGRAPHIC ANATOMY (RAN 380)

- Recommended textbooks:
  1. Snell RS. Clinical anatomy by systems. Lippincott, Williams & Wilkins: Baltimore, 2007
  2. Netter FH. Atlas of human anatomy. 5th Ed. Teterboro (N.J.): Icon Learning Systems; 2010
- Learning objectives (see Addendum A)
- Duration of the written examination – one (1) hour

## 2.3. RADIATION THERAPY (RSZ 380)

- Recommended textbook:
  1. **Washington, C. and Leaver, D. Principles and practice of radiation therapy. 4th edition. St. Louis, Missouri: Elsevier, 2016**
- Learning objectives:
  The examination content covers the core areas:- Radiation Physics and Protection; Imaging in Radiation Therapy; Radiation treatment localisation and planning; Brachytherapy; Quality management and control; Cancer epidemiology and pathology; Radiation Oncology of all systems in the body; Chemotherapy and hormones and Patient care; Radiobiology
- Duration of the written examination – two (2) hours

# ADDENDUM A

# RADIOGRAPHIC ANATOMY 380 (RAN 380) LEARNING OBJECTIVES

Organ Systems II: Cardiovascular system
Introductory Neuroanatomy
Reproductive specialities

Cross-sectional Anatomy: Regional and special

**UNIT THEME 1: CARDIOVASCULAR SYSTEM OF THE LIMBS**

SUB-SPECIFIC OUTCOMES:

A thorough study of the cardiovascular system is necessary to acquire an understanding of the vital importance of the heart as a functional pump and the blood vessels as an intact closed system.

SUB-UNITS:

1. Types of blood vessels
2. Axillary artery
3. Arteries of the arm
4. Arteries of the forearm
5. Arteries of the hand
6. Femoral artery
7. Popliteal artery
8. Veins of the upper limb
9. Veins of the lower limb
10. Terminology of the lymphatic system
11. Lymphatic drainage of the upper limb
12. Lymphatic drainage of the lower limb

EMBEDDED KNOWLEDGE:

The student must know and understand the following:

The basic anatomy of the heart and cardiovascular system

The student must be able to:

1. Explain the concepts related to the organization of the cardiovascular system.

2. Explain the importance of the relationship of the cardiovascular system with other organ systems.
3. Explain the organization of the blood supply, lymph drainage and nervous supply in relation to the cardiovascular system as a whole.
4. Interpret the cardiovascular anatomy demonstrated by special radiographic procedures.
5. Differentiate between the systemic and pulmonary circulation.
6. Identify and name the four venous systems of the human body.
7. Describe the axillary artery regarding the following:

• origin, course and relationships• branches and area of supply

8. Identify and briefly describe the brachial artery regarding the following:

• origin, course and relationships.• branches and area of supply.

9. Identify and name the arterial vessels of the forearm and hand, and briefly describe the arteries regarding the following:
   - course and relationships
   - branches and area of supply
10. Identify and name the arteries of the lower limb, and briefly describe the arteries regarding the following:
    • course and relationships
    • branches and area of supply
11. Identify and name the arteries used as pulse or pressure points.
12. Identify and name the venous vessels of the upper and lower limbs, and briefly describe these regarding the following:
    • course and relationships
    • branches and drainage area
13. Describe the lymphatic drainage of the regions mentioned above.
14. Label a diagrammatic sketch of any of the above-mentioned.

REFERENCES:

1. Clinical Anatomy by Systems, p12-17, 192-216, 242-263, 274-275, 279.

TERMINOLOGY:

| | | | |
|---|---|---|---|
| ramus | varices | lymph | venae comittantes |
| capillary | cavernous | sinusoid | visceral |

**UNIT THEME 2: TRIANGLES OF THE NECK**

SUB-SPECIFIC OUTCOMES:

A thorough knowledge of the triangles must be acquired. This knowledge acts as basis during further training in your chosen career.

SUB-UNITS:

1. Muscles of the head, neck and en triangles of the neck
2. Thyroid gland

EMBEDDED KNOWLEDGE:

The student must know and understand the following:

The basic anatomy of the muscles of the human body

The student must be able to:

1. Identify the following muscles:
   - •posterior triangle of the neck: sternocleidomastoideus
   - •midline structures of the neck: digastric
   - •muscles of the tongue: genioglossus
2. Identify the posterior triangle of the neck, and describe it using the following headings:
   - • borders
   - • floor
   - • contents
3. Identify the anterior triangle of the neck, and describe it using the following headings:
   - • borders
   - • subdivisions of the triangle
4. Name the structures that form the submental triangle.
5. Briefly describe the structure of the tongue, with emphasis on extrinsic and intrinsic muscles.
6. Label diagrammatic sketches illustrating any of the above-mentioned aspects or structures.
7. Describe the endocrine glands regarding the following:
   - • Position
   - • Macroscopic structure
   - • Blood supply (where applicable)
   - • Venous drainage (where applicable)
8. Label diagrammatic sketches/specimens/scans of any of the above-mentioned aspects.

REFERENCES:

1. Clinical Anatomy by Systems, p436-449, 903-909

TERMINOLOGY:

| | | | |
|---|---|---|---|
| Voluntary | involuntary | aponeurosis | sarcolemma |
| tendon | muscle | submental | submandibular |
| larynx | trachea | carotid sheath | palpebral |
| pharynx | constrictor | ansa | |

**UNIT THEME 3: CARDIOVASCULAR SYSTEM OF HEAD AND NECK**

SUB-SPECIFIC OUTCOMES:

The student must make a thorough study of the cardiovascular system to understand the vital importance of the heart as a functional pump and the blood vessels as an intact closed system.

SUB-UNITS:

1. Types of blood vessels
2. Aorta
3. Subclavian artery
4. Systemic veins
5. Terminology of the lymphatic system
6. Lymphatic drainage of the head and neck
7. Other lymphoid tissue

EMBEDDED KNOWLEDGE:

The student must know and understand the following:

The basic anatomy of the heart and cardiovascular system

The student must be able to:

1. Differentiate between the systemic and pulmonary circulation.
2. Identify and name the parts of the aorta, and give a brief description of each using the following headings:
   - origin, course and relationships
   - branches and area of supply
3. Identify the subclavian artery and describe it according to the following:
   - origin, course, and relationships
   - branches and area of supply
4. Identify and name the arteries used as pulse or pressure points.

5. Identify and name the venous vessels of the head and neck region, and briefly describe them under the following headings:
   - course and relationships
   - branches and drainage area
6. Differentiate between the azygos system, the portal venous system, and the vertebral venous system.
7. Briefly describe the lymphatic drainage of the various regions.
8. Label diagrammatic sketches of any of the above-mentioned aspects

REFERENCES:

1. Clinical Anatomy by Systems, p160-164, 174-185.

TERMINOLOGY:

| | | | |
|---|---|---|---|
| ramus | plexus | cutaneous | viscera |
| accommodation | lens | pupil | artery |
| vein | systemic | pulse | capillary |
| cavernous | sinusoid | visceral | thyroid gland |
| parietal | visceral | venae comittantes | lymph |
| tonsils | | | |

**UNIT THEME 4: CARDIOVASCULAR SYSTEM OF THE TRUNK**

SUB-SPECIFIC OUTCOMES:

The student must make a thorough study of the cardiovascular system to be able to understand the vital importance of the heart as a functional pump and the blood vessels as an intact closed system.

SUB-UNITS:

1. Types of blood vessels
2. Pericardium
3. Position and surface anatomy of the heart
4. Structure of the heart
5. Impulse conduction in the heart
6. External surface of the heart: borders, surfaces, and grooves
7. Internal appearance of the heart
8. Circulation through the heart: foetal, after birth

9. Blood supply of the heart
10. Aorta
11. Descending aorta
12. Abdominal aorta
13. Internal iliac artery
14. External iliac artery
15. Systemic veins
16. Veins of the thorax
17. Veins of the pelvis and abdomen
18. Terminology of the lymphatic system
19. Thoracic duct
20. Lymphatic drainage of the abdomen and pelvis
21. Lymphatic drainage of the thorax
22. Other lymphoid tissue

EMBEDDED KNOWLEDGE:

The student must know and understand the following:

The basic anatomy of the heart and cardiovascular system

The student must be able to:

1. Differentiate between the systemic and pulmonary circulation.
2. Name and identify the four venous systems of the body.
3. Describe the surface anatomy of the heart, and illustrate it by means of a diagrammatic sketch.
4. Describe the external and internal appearance of all the chambers of the heart.
5. Describe the blood supply and venous drainage of the myocardium (heart), and identify and name the different blood vessels.
6. Give an overview of the conducting system of the heart.
7. Describe the external surface of the heart under the following headings:
   - Borders, apex
   - Surfaces of the heart
   - Grooves [sulci] on the heart
8. Identify and name the structures named under [7].
9. Explain the foetal circulation, as well as the changes in the foetal circulation after birth.
10. Identify and name the parts of the aorta, and briefly describe each part under the following headings:

- Origin, course and relationships
- Branches and area of supply

11. Identify and name the descending aorta and abdominal aorta and their branches, and briefly describe the arteries under the following headings:
- Course and relationships
- Branches and area of supply

12. Identify and name the arterial vessels that supply the pelvis and briefly describe the arteries under the following headings:
- Course and relationships.
- Branches and area of supply

13. Identify and name the venous vessels of the thorax, abdomen and pelvis, and briefly describe them under the following headings:
- Course and relationships
- Branches and area of supply.

14. Explain the portal venous system.
15. Differentiate between the azygos system, the portal venous system and the vertebral venous system.
16. Explain the porto-caval anastomoses.
17. Briefly describe the lymphatic drainage of the human body.
18. Label a diagrammatic sketch of any of the above-mentioned

REFERENCES:

1.. Clinical Anatomy by Systems, p16-17, 136-169, 220-231, 271-272, 276-279

TERMINOLOGY:

| | | | |
|---|---|---|---|
| ramus | plexus | pleura | parietal |
| pericardium | cutaneous | viscera | accommodation |
| lens | pupil | colon | artery |
| vein | systemic | pulmonary | pulse |
| capillary | cavernous | sinusoid | visceral |
| myocardium | node | atrium | ventricle |
| auricle | ascending | descending | pleura |
| mesenterium | oesophagus | bronchi | adrenal glands |
| gonads | testis | ovary | scrotum |
| retroperitoneal | duodenum | pancreas | spleen |

| | | | |
|---|---|---|---|
| hepatic | gastric | pyloric | jejunum |
| ilium | caecum | lingua | varices |
| venae comittantes | phrenic | renal | lymph |
| retroperitoneal | mediastinum | trachea | umbilicus |
| ureter | prostate | penis | vagina |
| clitoris | thymus | | |

**UNIT THEME 5: NERVOUS SYSTEM**

SUB-SPECIFIC OUTCOMES:

The student must have a thorough knowledge of the nervous system to be able to understand the importance of control and co-ordination of bodily functions, and the maintenance of a stable internal homeostasis.

SUB-UNITS:

1. Cerebrum (Forebrain)
2. Hypophysis
3. Pineal body
4. Ventricles
5. Diencephalon (Interbrain)
6. Brainstem
7. Cerebellum
8. Meninges
9. Blood supply of the brain
10. Venous drainage of the brain
11. Spinal cord
12. Introduction to the peripheral nervous system
13. Cranial nerves
14. Introduction to the autonomic nervous system
15. Sympathetic system
16. Parasympathetic system
17. Brachial, Lumbar and Sacral plexuses

EMBEDDED KNOWLEDGE:

The student must know and understand the following:

The basic anatomy of the central and peripheral nervous systems

The student must be able to:

1. Explain how the anatomical structure of the brain is related to its functional areas.
2. Explain the blood supply and CSF system of the brain.
3. Interpret the neuro-anatomy demonstrated by special radiographic procedures.
4. Explain the radiographic picture resultant from various clinical conditions
5. Identify the parts of the central nervous system.
6. Identify and briefly describe the divisions of the cerebrum.
7. Classify white fibres and give examples of each type.
8. Differentiate between white and grey matter and basal nuclei.
9. Identify and name the main basal ganglia.
10. Identify and localise the ventricles, and give a brief description of each ventricle.
11. Give a very brief description of the production, circulation, and reabsorption of cerebrospinal fluid.
12. Identify and briefly describe the structures that form the diencephalon.
13. Identify the parts of the brain stem, and describe each structure.
14. Identify the cerebellum, and name its parts.
15. Name the main sulci of the cerebrum, and identify the position of each on the cerebral hemispheres.
16. Name and identify the five lobes of the cortex of the cerebrum.
17. Identify the meninges, and differentiate between them by explaining the main differences in structure between the different layers.
18. Name and identify the folds of the dura mater, and give a brief description of each.
19. Describe the blood supply of the brain, and identify and name the main arteries.
20. Identify, name and describe the main dural venous sinuses and their positions, as well as the venous drainage of the brain.
21. Understand the macroscopic structure of the spinal cord, and label diagrammatic sketches of the spinal cord.
22. Describe the structure of a typical spinal nerve, and label a diagrammatic sketch of a cross-section through the spinal cord.
23. Identify and name the cranial nerves.
24. Briefly describe the most important functions of the cranial nerves.
25. Describe the origin and course of the cervical nerve plexuses, and identify and name the parts of each.
26. Briefly describe the origin and innervation of the phrenic nerve, and identify and name the nerve.

27. Understand the effect of parasympathetic and sympathetic stimulation on the body, and differentiate between the two systems.
28. Identify the sympathetic trunk, and describe its macroscopic structure.
29. Describe the sympathetic and parasympathetic outflow.
30. Describe the origin and course of the brachial, lumbar and sacral plexuses, and identify, illustrate and name its parts.
31. Label diagrammatic sketches of any of the above-mentioned aspects.

Assess two dimensional brain images in order to devise an anatomical explanation for the presenting clinical picture

REFERENCES:

1. Clinical Anatomy by Systems, p 17-23, 531-547, 556-573, 581-590, 606-629, 631-642

TERMINOLOGY:

| | | | |
|---|---|---|---|
| Cerebrum | diencephalon | subcortical | meninges |
| cerebrospinal fluid | fissure | gyrus | sulcus |
| subarachnoidal | sinus | tectum | tegmentum |
| peduncle | anastomoses | endosteum | sinus |
| subdural | ganglion | epidural | neuroglia |
| retina | motor | sensory | parasympathetic |
| falx | | | |

**UNIT THEME 6: REPRODUCTIVE SPECIALITIES**

SUB-SPECIFIC OUTCOMES:

The student must have a thorough knowledge of the reproductive specialities to be able to understand the importance and relate the macro-anatomy to the radiographic images of these regions.

SUB-UNITS:

1. The breast
2. Pelvimetry

EMBEDDED KNOWLEDGE:

The student must know and understand the following:

The basic anatomy of the female reproductive systems

The student must be able to:

1. Explain the macroscopic structure, blood supply and lymph drainage of the breast.

2. Explain the presence of accessory nipples and rudimentary breast tissue by referring to the embryonic development of the breast.
3. Explain the role of the bony pelvis in the parturition process.
4. Explain the anatomy demonstrated by mammography by using breast carcinoma as an explanatory example.
5. Explain the anatomical metastatic pathways of breast carcinoma.
6. Interpret the reproductive anatomy demonstrated by special radiographic procedures.
7. Assess cephalo-pelvic disproportion in order to devise an anatomical explanation for the presenting clinical picture.
8. Interpret the female pelvic anatomy demonstrated by special radiographic procedures.
9. Explain the radiographic picture resultant from various clinical conditions.

REFERENCES:

1. Anatomy for the medical scientific student, p188-207, 209-210, 215-219, 343-345, 346-347.

TERMINOLOGY:

breast tissue lymph nodes milk-line pelvimetry parturition mammography ultrasound referred pain cephalo-pelvic disproportion

**SECTION B: HISTOLOGY**

**UNIT THEME 7: CIRCULATION SYSTEM**

SUB-SPECIFIC OUTCOMES:

The student must have knowledge of the histology of the cardiovascular system that underlies special procedures involving the circulatory system.

SUB-UNITS:

1. Blood circulation system
2. Heart
3. Lymphatic system

EMBEDDED KNOWLEDGE:

The student must know and understand the following:

Histology of basic tissue

The student must be able to:

1. Blood circulation system
   - Describe the different types of blood capillaries.
   - Describe the different types of arteries.

- Describe the different types of veins.
- Describe artero-venous anastomoses.
- Describe the vasa vasorum.
- Describe the lymph vessels of blood vessels.
- Describe the nerve supply of blood vessels.

2. Heart
   - Describe the endocardium.
   - Describe the myocardium.
   - Describe the epicardium.
   - Describe the skeleton of the heart.
   - Describe the valves of the heart.
   - Describe the conducting tissue of the heart.
3. Lymphatic system
   - Describe the lymph capillaries.
   - Describe larger and smaller lymph vessels

REFERENCES:

Coetzee et al.:245-257

Ross & Romrell:302-329

Wheater:140-152

TERMINOLOGY:

Continuous and fenestrated capillaries sinusoids tunica intima
tunica media adventitia vasa vasorum
endo-, myo- and epicardium sinoatrial node atrioventricular nodes
bundle of His

**UNIT THEME 8: NERVOUS SYSTEM**

SUB-SPECIFIC OUTCOMES:

The student must have knowledge of the histology of the nervous system that underlies special procedures involving the nervous system.

SUB-UNITS:

1. Central nervous system
2. Peripheral nervous system

EMBEDDED KNOWLEDGE:

The student must know and understand the following:

Histology of basic tissue

CRITICAL SKILLS:

The student must be able to:

Central nervous system

- Describe the structure of the different layers that the cerebral cortex is made up of.
- Describe the structure of the different layers that the cerebellar cortex is made up of.
- Describe the fine details of the cerebellar cortex.
- Describe the spinal chord fully.
- Describe the meninges of the central nervous system fully.

Peripheral nervous system

- Describe the cerebro-spinal ganglia of the peripheral nervous system.
- Describe the autonomic ganglia of the peripheral nervous system.

TERMINOLOGY:

| | | |
|---|---|---|
| Climbing fibres | mossy fibres | basket cells |
| stellate cells | white matter | grey matter |
| dura mater | pia mater | arachnoid |
| choroid plexus | ganglion | anatomic core |

REFERENCES:

Coetzee et al.:183-195

Ross & Romrell:273-301

Wheater: 366-373

**UNIT THEME 9: FEMALE REPRODUCTIVE SYSTEM**

SUB-SPECIFIC OUTCOMES:

The student must have knowledge of the histology of the female reproductive system that underlies special procedures involving the female reproductive system.

SUB-UNITS:

1. Ovarium
2. Tuba uterina
3. Uterus
4. Vagina
5. External genitalia
6. Breast

EMBEDDED KNOWLEDGE:

The student must know and understand the following:

Histology of basic tissue

CRITICAL SKILLS:

The student must be able to:

1. Ovarium
   - Describe the general structure of the ovarium.
   - Describe the development, as well as the structure of the follicles.
   - Describe the maturation of the oocyte.
   - Describe the development, structure and function of the corpus luteum.
2. Tuba uterina
   - Describe the structure of the tuba uterina.
3. Uterus
   - Describe the general structure of the uterine wall.
   - Describe the endometrium and the changes that take place during the menstrual cycle.
4. Vagina
   - Describe the structure of the wall of the vagina.
5. External genitalia
   - Describe the structure of the external genitalia.
6. Breast
   - Describe the structure of the lactating as well as the resting mamma.

TERMINOLOGY:

Primary growing and mature follicles atresian follicles
theca-interna & externa granulosacells cumulus oophorus
zona pellucida corona radiata lutein cells
sinus lactiferis corpus hemorrhagicum
corpusalbicans zona functionalis zona basalis
menstrual proliferation and secretory phase
ductuli lactiferi peri-, mio- and endometrium

REFERENCES:

Coetzee et al.:371-387

Ross & Romrell:678-739

Wheater:335-365

**UNIT THEME 1: CROSS-SECTIONAL ANATOMY**

SUB-SPECIFIC OUTCOMES:

A thorough knowledge and understanding of how cross-sectional anatomy (regional and special) is related to the radiographic images created from different regions.

SUB-UNITS:

1. Cross-sectional anatomy overview
2. Regional sectional anatomy of the body

EMBEDDED KNOWLEDGE:

The student must know and understand the following:

Basic human anatomy

CRITICAL SKILLS:

The student must be able to:

1. Identify structures and organs of each region as seen by special procedures and imaging techniques.
2. Understand, explain and interpret the relationships of the structures and organs as seen by special procedures and imaging techniques.
3. Compare anatomical structures as seen by special imaging techniques.
4. Create anatomical reconstructions of three dimensional structures from single dimension images.

REFERENCES:

1. Netter Atlas: Plates 30, 34A, 42, 54, 57, 78A and B, 100-104, 107, 109B, 218, 219, 230, 256, 328, 331-333, 341-350, 357, 363, 368, 410, 475, 480B, 491

TERMINOLOGY:

Cross-sectional anatomy sectional anatomy imaging techniques

special procedures