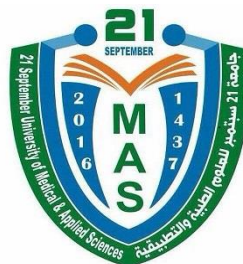


**Republic of Yemen**  
**Ministry of Education & Higher Research**  
**Council of Academic Accreditation & Quality Assurance of**  
**Higher Education (CAQA)**



**21 septamber University of Medical  
and Applied Science**



**Faculty of Applied Medical Science**

Department of **Medical Radiology and Imaging Technology**

**Program of Radiologic Technology and Medical Imaging**

**Course Specification of**

**Sectional Anatomy 2**

**Course Code. (\_\_\_\_)**

**2024**



T4: This Template is Developed and Approved by CAQA-Yemen, 2023

Prepared by:

Reviewed by:

Dr. -----

Head of the Department:

Dr. Awadh Al-Kubati

Quality Unit:

Dr. Mohammed  
Al-shamahi

Dean:

Dr. Abdulsalam  
Dalaq

## I. General Information:

|     |                                                  |                                                       |                      |                   |                         |          |
|-----|--------------------------------------------------|-------------------------------------------------------|----------------------|-------------------|-------------------------|----------|
| 1.  | Course Title:                                    | Sectional Anatomy 2                                   |                      |                   |                         |          |
| 2.  | Course Code:                                     |                                                       |                      |                   |                         |          |
| 3.  | Credit Hours:                                    | Credit Hours                                          | Theory Contact Hours |                   | Practical Contact Hours |          |
|     |                                                  |                                                       | Lecture              | Tutorial/ Seminar | Lab                     | Clinical |
|     |                                                  | 3                                                     | 2                    | --                | 2                       | --       |
| 4.  | Level/ Semester at which this Course is offered: | 3 <sup>rd</sup> Level / 2 <sup>nd</sup> Semester      |                      |                   |                         |          |
| 5.  | Pre –Requisite (if any):                         | Anatomy 1&2                                           |                      |                   |                         |          |
| 6.  | Co –Requisite (if any):                          | None                                                  |                      |                   |                         |          |
| 7.  | Program (s) in which the Course is Offered:      | Bachelor of Radiologic Technology and Medical Imaging |                      |                   |                         |          |
| 8.  | Language of Teaching the Course:                 | English                                               |                      |                   |                         |          |
| 9.  | Location of Teaching the Course:                 | Faculty of Applied Medical Science                    |                      |                   |                         |          |
| 10. | Prepared by:                                     |                                                       |                      |                   |                         |          |
| 11. | Date and Number of Approval by Council:          |                                                       |                      |                   |                         |          |

## II. Course Description:

This course builds upon the foundational concepts introduced in Sectional Anatomy (1). It focuses on advanced sectional anatomy of the extremities, vertebral column, and specialized systems like the vascular and lymphatic systems, as visualized in cross-sectional imaging. Emphasis is placed on correlating anatomical knowledge with diagnostic imaging techniques, including CT, MRI, and ultrasound, to identify both normal and pathological structures.

| III. Course Intended Learning Outcomes (CILOs) :<br>Upon successful completion of the course,<br>students will be able to: |                                                                                                                |                   | Referenced PILOs |                                                                                                                                                                           |
|----------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------|-------------------|------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| A. Knowledge and Understanding:                                                                                            |                                                                                                                | I, P<br>or<br>M/A |                  |                                                                                                                                                                           |
| a1                                                                                                                         | Identify sectional anatomy of the extremities and vertebral column in various imaging modalities.              | A                 | A1               | Demonstrate an understanding of fundamental knowledge of Biomedical sciences (Biology, Biophysics, Anatomy, Physiology, Sectional anatomy and medical imaging technique). |
| a2                                                                                                                         | Understand the structural organization and relationships of vascular and lymphatic systems in sectional views. | A                 |                  |                                                                                                                                                                           |
| B. Intellectual Skills:                                                                                                    |                                                                                                                |                   |                  |                                                                                                                                                                           |
| b1                                                                                                                         | Analyze sectional images of extremities and specialized systems to detect abnormalities.                       | M                 | B3               | Analyze and evaluate evidence-based information needed in medical imaging practice.                                                                                       |
| b2                                                                                                                         | Integrate anatomical knowledge with clinical imaging to evaluate pathological conditions.                      | M                 |                  |                                                                                                                                                                           |
| C. Professional and Practical skills:                                                                                      |                                                                                                                |                   |                  |                                                                                                                                                                           |
| c1                                                                                                                         | Interpret advanced sectional images for clinical applications in radiology.                                    | M                 | C3               | Prepare, process, interpret and present medical images using appropriate qualitative techniques.                                                                          |
| c2                                                                                                                         | Utilize imaging techniques to improve visualization of complex anatomical structures.                          | M                 | C4               | Utilize appropriate manual and automated techniques in radiological imaging investigations.                                                                               |
| D. Transferable Skills:                                                                                                    |                                                                                                                |                   |                  |                                                                                                                                                                           |
| d1                                                                                                                         | Communicate findings effectively in collaborative healthcare environments.                                     | A                 | D1               | Communicate effectively with clinicians, patients, and support staff.                                                                                                     |
| I= Introduced, P=Practiced or M/A= Mastered/Advanced                                                                       |                                                                                                                |                   |                  |                                                                                                                                                                           |

| (A) Alignment of Course Intended Learning Outcomes (Knowledge and Understanding) to Teaching Strategies and Assessment Methods:       |                                                                                               |                                                                                  |
|---------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------|
| Course Intended Learning Outcomes                                                                                                     | Teaching Strategies                                                                           | Assessment Strategies                                                            |
| a1 Identify anatomical structures in the head, neck, thorax, and abdomen in sectional images.                                         | <ul style="list-style-type: none"> <li>Lectures, guided readings</li> </ul>                   | <ul style="list-style-type: none"> <li>Written exams, quizzes</li> </ul>         |
| a2 Describe the spatial relationships of anatomical structures using cross-sectional views.                                           | <ul style="list-style-type: none"> <li>Case-based learning, group discussions</li> </ul>      | <ul style="list-style-type: none"> <li>Written exams, assignments</li> </ul>     |
| (B) Alignment of Course Intended Learning Outcomes (Intellectual Skills) to Teaching Strategies and Assessment Methods:               |                                                                                               |                                                                                  |
| Course Intended Learning Outcomes                                                                                                     | Teaching Strategies                                                                           | Assessment Strategies                                                            |
| b1 Correlate anatomical structures with common clinical conditions and imaging findings.                                              | <ul style="list-style-type: none"> <li>Case studies, image interpretation sessions</li> </ul> | <ul style="list-style-type: none"> <li>Assignments, projects</li> </ul>          |
| b2 Analyze and interpret cross-sectional images for diagnostic purposes.                                                              | <ul style="list-style-type: none"> <li>Hands-on sessions with imaging software</li> </ul>     | <ul style="list-style-type: none"> <li>Practical exams, presentations</li> </ul> |
| (C) Alignment of Course Intended Learning Outcomes (Professional and Practical Skills) to Teaching Strategies and Assessment Methods: |                                                                                               |                                                                                  |
| Course Intended Learning Outcomes                                                                                                     | Teaching Strategies                                                                           | Assessment Strategies                                                            |
| c1 Apply knowledge of sectional anatomy to the interpretation of CT and MRI images.                                                   | <ul style="list-style-type: none"> <li>Practical labs, simulation-based learning</li> </ul>   | <ul style="list-style-type: none"> <li>Practical exams, lab reports</li> </ul>   |
| c2 Utilize imaging tools to enhance the visualization of anatomical structures.                                                       | <ul style="list-style-type: none"> <li>Training with imaging tools</li> </ul>                 | <ul style="list-style-type: none"> <li>Practical exams, reports</li> </ul>       |
| (D) Alignment of Course Intended Learning Outcomes (Transferable Skills) to Teaching Strategies and Assessment Methods:               |                                                                                               |                                                                                  |
| Course Intended Learning Outcomes                                                                                                     | Teaching Strategies                                                                           | Assessment Strategies                                                            |

|    |                                                                                  |                                                                                                                    |                                                                                         |
|----|----------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| d1 | Communicate effectively with healthcare professionals about anatomical findings. | <ul style="list-style-type: none"> <li>Group discussions, presentations</li> <li>Case study discussions</li> </ul> | <ul style="list-style-type: none"> <li>Case study reports, group assignments</li> </ul> |
|----|----------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|

## IV. Course Contents:

### A. Theoretical Aspect:

| No. | Units/Topics List                          | Sub Topics List                                                             | Number of Weeks | Contact Hours | Learning Outcomes (CILOs) |
|-----|--------------------------------------------|-----------------------------------------------------------------------------|-----------------|---------------|---------------------------|
| 1   | Introduction to Advanced Sectional Anatomy | – Cross-sectional imaging review, modalities (CT, MRI), advanced techniques | 1               | 2             | a1, a2, c1                |
| 2   | Sectional Anatomy of the Shoulder Joint    | – Bone landmarks, muscle layers, neurovascular structures                   | 1               | 2             | a1, b1                    |
| 3   | Sectional Anatomy of the Arm               | – Humerus, brachial plexus, vascular structures                             | 1               | 2             | a1, b1                    |
| 4   | Sectional Anatomy of the Forearm and Hand  | – Radius and ulna, flexor/extensor groups, vasculature                      | 1               | 2             | a1, b1                    |
| 5   | Sectional Anatomy of the Pelvis            | – Bones, pelvic organs, vascular and lymphatic structures                   | 1               | 2             | a1, a2                    |
| 6   | Sectional Anatomy of the Hip Joint         | – Joint capsule, ligaments, major arteries and nerves                       | 1               | 2             | a1, b1                    |
| 7   | Sectional Anatomy of the Thigh             | – Femoral triangle, muscular compartments, vascular paths                   | 1               | 2             | a1, b1                    |
| 8   | Mid-term Exam                              | – All Previous Topics                                                       | 1               | 2             | a1, a2                    |
| 9   | Sectional Anatomy of the Leg and Foot      | – Tibia and fibula, compartments, plantar arch                              | 1               | 2             | a1, b1                    |
| 10  | Sectional Anatomy of the Cervical Spine    | – Vertebrae, intervertebral discs, spinal cord anatomy                      | 1               | 2             | a1, a2                    |
| 11  | Sectional Anatomy of the Thoracic Spine    | – Rib articulation, spinal cord segments, neurovascular structures          | 1               | 2             | a1, a2                    |
| 12  | Sectional Anatomy of the Lumbar Spine      | – Vertebrae, lumbar plexus, paraspinal musculature                          | 1               | 2             | a1, a2                    |
| 13  | Vascular System Anatomy                    | – Major arteries and veins, imaging correlations                            | 1               | 2             | a2, b2                    |

| No.                                     | Units/Topics List                               | Sub Topics List                                    | Number of Weeks | Contact Hours | Learning Outcomes (CILOs) |
|-----------------------------------------|-------------------------------------------------|----------------------------------------------------|-----------------|---------------|---------------------------|
| 14                                      | Lymphatic System Anatomy                        | – Lymph nodes, thoracic duct, imaging applications | 1               | 2             | a2, b2                    |
| 15                                      | Correlation of Sectional Anatomy with Pathology | – Trauma, neoplasms, vascular anomalies            | 1               | 2             | b2, c1, d1                |
| 16                                      | Final Theoretical Exam                          | – All topics                                       | 1               | 2             | a1, a2                    |
| Number of Weeks /and Units Per Semester |                                                 |                                                    | 16              | 32            |                           |

**B. Practical Aspect (Lab/Clinical) (if any):**

| No.                                     | Tasks/ Experiments                                         | Number of Weeks | Contact Hours | Learning Outcomes (CILOs) |
|-----------------------------------------|------------------------------------------------------------|-----------------|---------------|---------------------------|
| 1                                       | Interpretation of upper extremity MRI and CT images        | 1               | 2             | a1, c1                    |
| 2                                       | Identifying anatomical structures in pelvic MRI scans      | 1               | 2             | a1, c1                    |
| 3                                       | Evaluation of vascular anatomy in cross-sectional imaging  | 1               | 2             | a2, b1                    |
| 4                                       | Analyzing vertebral column injuries on CT                  | 1               | 2             | b2, c1                    |
| 5                                       | Lymph node visualization in cross-sectional imaging        | 1               | 2             | a2, c1                    |
| 6                                       | Correlation of sectional anatomy with soft tissue injuries | 1               | 2             | b1, c2                    |
| 7                                       | Simulation of trauma imaging cases                         | 1               | 2             | b2, d1                    |
| 8                                       | Using imaging software to reconstruct 3D anatomy           | 1               | 2             | c1,                       |
| 9                                       | Case study: Imaging of lower extremity fractures           | 2               | 4             | b1, c1                    |
| 10                                      | Pathology detection in vascular imaging                    | 1               | 2             | b2, c2                    |
| 15                                      | Final Practical Exam                                       | 1               | 2             | b1, c1, c2,               |
| Number of Weeks /and Units Per Semester |                                                            | 14              | 28            |                           |

**C. Tutorial Aspect (if any):**

| No.                                     | Tutorial | Number of Weeks | Contact Hours | Learning Outcomes (CILOs) |
|-----------------------------------------|----------|-----------------|---------------|---------------------------|
| 1                                       | None     |                 |               |                           |
| 2                                       |          |                 |               |                           |
| 3                                       |          |                 |               |                           |
| Number of Weeks /and Units Per Semester |          |                 |               |                           |

**VII. Teaching Strategies:**

- Lectures
- Case-Based Learning
- Hands-on Training
- Simulations
- Group Discussions

**VII. Assessment Methods:**

- Written Exams
- Quizzes
- Practical Exams
- Case Study Reports
- Group Presentations

**VII. Assignments:**

| No. | Assignments                                  | Week Due | Mark | Aligned CILOs (symbols) |
|-----|----------------------------------------------|----------|------|-------------------------|
| 1   | Case report on imaging of shoulder joint     | Week 4   | 3    | a1, b1                  |
| 2   | Comparative analysis of pelvic MRI and CT    | Week 6   | 2    | a2, c1                  |
| 3   | Practical report on vascular anatomy imaging | Week 8   | 2    | a2, b2, c2              |
| 4   | Group presentation on trauma imaging cases   | Week 11  | 3    | b1, d1                  |

Prepared by:

Reviewed by:

Dr. -----

Head of the Department:

Dr. Awadh Al-Kubati

Quality Unit:

Dr. Mohammed  
Al-shamahi

Dean:

Dr. Abdulsalam  
Dalaq

| No.   | Assignments | Week Due | Mark | Aligned CILOs (symbols) |
|-------|-------------|----------|------|-------------------------|
| Total |             |          | 10   |                         |

### VIII. Schedule of Assessment Tasks for Students During the Semester:

| No.   | Assessment Method      | Week Due | Mark | Proportion of Final Assessment | Aligned Course Learning Outcomes |
|-------|------------------------|----------|------|--------------------------------|----------------------------------|
| 1     | Final Practical Exam   | 15       | 30   | 30%                            | C1, C2                           |
| 2     | Midterm Exam           | Week 8   | 10   | 10%                            | a1, a2                           |
| 3     | Assignments & Quizzes  | Week 3   | 10   | 10%                            | a1, b1, b2, c1, c2, d1           |
| 4     | Final Theoretical Exam | Week 16  | 50   | 50%                            | a1, a2                           |
| Total |                        |          | 100  | 100 %                          |                                  |

### IX. Learning Resources:

#### 1- Required Textbook(s) (maximum two ):

- 1- Mark W. Anderson, Michael G Fox, Nicholas C. Nacey, 2024, Sectional Anatomy by MRI and CT, 5th Edition, Elsevier.
- 2- Lorrie L. Kelley, Connie Petersen, 2018, Sectional Anatomy for Imaging Professionals, 4th Edition, Mosby.

#### 2- Essential References:

- 1- Adrian Kendal Dixon, David J. Bowden, Bari M. Logan, Harold Ellis, 2017, Human Sectional Anatomy: Pocket atlas of body sections, CT and MRI images, 4th edition, CRC Press.
- 2- Luciano Alves Favorito, Natasha T. Logsdon, 2022, Atlas of Sectional Anatomy: Understanding the Anatomical Aspects of the Thorax, Abdomen and Pelvis 1st Edition, Springer.
- 3- Denise L. Lazo, 2014, Fundamentals of Sectional Anatomy: An Imaging Approach, 2nd Edition, Cengage Learning.
- 4- Edith Applegate, 2009, The Sectional Anatomy Learning System, 3rd Edition, Saunders.
- 5- Michael E. Madden, 2001, Introduction to Sectional Anatomy, Lippincott William.s & Wilkins.

#### 3- Electronic Materials and Web Sites etc.:

Electronic Materials and Websites

- Anatomy Textbooks and Anatomy Atlases, [Anatomy Atlases: A digital library of human anatomy information - Anatomy | Anatomy Atlas | Human Anatomy | Cross Sectional Anatomy | Anatomic Variation](#)
- Radiopaedia ([www.radiopaedia.org](http://www.radiopaedia.org))
- Anatomy.TV ([www.anatomy.tv](http://www.anatomy.tv))
- PubMed ([www.pubmed.ncbi.nlm.nih.gov](http://www.pubmed.ncbi.nlm.nih.gov))
- Medscape ([www.medscape.com](http://www.medscape.com)).

## X. Course Policies: (Based on the Uniform Students' By law (2007))

|   |                                                                                                                                                                                                                                                                                |
|---|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1 | <b>Class Attendance:</b><br>Class Attendance is mandatory. A student is considered absent and shall be banned from taking the final exam if his/her absence exceeds 25% of total classes.                                                                                      |
| 2 | <b>Tardiness:</b><br>A student will be considered late if he/she is not in class after 10 minutes of the start time of class.                                                                                                                                                  |
| 4 | <b>Assignments &amp; Projects:</b><br>Assignments and projects must be submitted on time. Students who delay their assignments or projects shall lose the mark allocated for the same.                                                                                         |
| 5 | <b>Cheating:</b><br>Cheating is an act of fraud that results in the cancelation of the student's exam or assignment. If it takes place in a final exam, the penalties stipulated for in the Uniform Students' Bylaw (2007) shall apply.                                        |
| 6 | <b>Forgery and Impersonation:</b><br>Forgery/Impersonation is an act of fraud that results in the cancelation of the student's exam, assignment or project. If it takes place in a final exam, the penalties stipulated for in the Uniform Students' Bylaw (2007) shall apply. |
| 7 | <b>Other policies:</b><br>The University official regulations in force will be strictly observed and students shall comply with all rules and regulations of the examination set by the Department, Faculty and University Administration.                                     |
| 3 | <b>Exam Attendance/Punctuality:</b><br>No student shall be allowed to the exam hall after 30 minutes of the start time, and shall not leave the hall before half of the exam time has passed.                                                                                  |

## Faculty of Applied Medical Science

Department of **Medical Radiology and Imaging Technology**

Program of Radiologic Technology and Medical Imaging

### Course Plan (Syllabus) of Sectional Anatomy 2 Course Code. ....

| I. Information about Faculty Member Responsible for the Course: |          |              |     |     |     |         |
|-----------------------------------------------------------------|----------|--------------|-----|-----|-----|---------|
| Name of Faculty Member:                                         |          | Office Hours |     |     |     |         |
| Location& Telephone No.:                                        | -----    |              |     |     |     |         |
| E-mail:                                                         | --@--.-- | SAT          | SUN | MON | TUE | WED THU |

2024/2025

## I. General Information:

|     |                                                  |                                                       |                      |                   |                         |          |
|-----|--------------------------------------------------|-------------------------------------------------------|----------------------|-------------------|-------------------------|----------|
| 12. | Course Title:                                    | Sectional Anatomy 2                                   |                      |                   |                         |          |
| 13. | Course Code:                                     |                                                       |                      |                   |                         |          |
| 14. | Credit Hours:                                    | Credit Hours                                          | Theory Contact Hours |                   | Practical Contact Hours |          |
|     |                                                  |                                                       | Lecture              | Tutorial/ Seminar | Lab                     | Clinical |
|     |                                                  | 3                                                     | 2                    | --                | 2                       | --       |
| 15. | Level/ Semester at which this Course is offered: | 3 <sup>rd</sup> Level / 2 <sup>nd</sup> Semester      |                      |                   |                         |          |
| 16. | Pre –Requisite (if any):                         | Anatomy 1&2                                           |                      |                   |                         |          |
| 17. | Co –Requisite (if any):                          | None                                                  |                      |                   |                         |          |
| 18. | Program (s) in which the Course is Offered:      | Bachelor of Radiologic Technology and Medical Imaging |                      |                   |                         |          |
| 19. | Language of Teaching the Course:                 | English                                               |                      |                   |                         |          |
| 20. | Location of Teaching the Course:                 | Faculty of Applied Medical Science                    |                      |                   |                         |          |
| 21. | Prepared by:                                     |                                                       |                      |                   |                         |          |
| 22. | Date and Number of Approval by Council:          |                                                       |                      |                   |                         |          |

## II. Course Description:

This course builds upon the foundational concepts introduced in Sectional Anatomy (1). It focuses on advanced sectional anatomy of the extremities, vertebral column, and specialized systems like the vascular and lymphatic systems, as visualized in cross-sectional imaging. Emphasis is placed on correlating anatomical knowledge with diagnostic imaging techniques, including CT, MRI, and ultrasound, to identify both normal and pathological structures.

| III. Course Intended Learning Outcomes (CILOs) :<br>Upon successful completion of the course,<br>students will be able to: |                                                                                                                | Referenced PILOs |
|----------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------|------------------|
| <b>A. Knowledge and Understanding:</b>                                                                                     |                                                                                                                |                  |
| a1                                                                                                                         | Identify sectional anatomy of the extremities and vertebral column in various imaging modalities.              |                  |
| A2                                                                                                                         | Understand the structural organization and relationships of vascular and lymphatic systems in sectional views. |                  |
| <b>B. Intellectual Skills:</b>                                                                                             |                                                                                                                |                  |
| b1                                                                                                                         | Analyze sectional images of extremities and specialized systems to detect abnormalities.                       |                  |
| B2                                                                                                                         | Integrate anatomical knowledge with clinical imaging to evaluate pathological conditions.                      |                  |
| <b>C. Professional and Practical skills:</b>                                                                               |                                                                                                                |                  |
| c1                                                                                                                         | Interpret advanced sectional images for clinical applications in radiology.                                    |                  |
| C2                                                                                                                         | Utilize imaging techniques to improve visualization of complex anatomical structures.                          |                  |
| <b>D. Transferable Skills:</b>                                                                                             |                                                                                                                |                  |
| d1                                                                                                                         | Communicate findings effectively in collaborative healthcare environments.                                     |                  |

| IV. Course Contents:   |                                                   |                                                                             |                 |               |
|------------------------|---------------------------------------------------|-----------------------------------------------------------------------------|-----------------|---------------|
| A. Theoretical Aspect: |                                                   |                                                                             |                 |               |
| No.                    | Units/Topics List                                 | Sub Topics List                                                             | Number of Weeks | Contact Hours |
| 1                      | <b>Introduction to Advanced Sectional Anatomy</b> | – Cross-sectional imaging review, modalities (CT, MRI), advanced techniques | 1               | 2             |
| 2                      | <b>Sectional Anatomy of the Shoulder Joint</b>    | – Bone landmarks, muscle layers, neurovascular structures                   | 1               | 2             |

| No.                                     | Units/Topics List                               | Sub Topics List                                                    | Number of Weeks | Contact Hours |
|-----------------------------------------|-------------------------------------------------|--------------------------------------------------------------------|-----------------|---------------|
| 3                                       | Sectional Anatomy of the Arm                    | – Humerus, brachial plexus, vascular structures                    | 1               | 2             |
| 4                                       | Sectional Anatomy of the Forearm and Hand       | – Radius and ulna, flexor/extensor groups, vasculature             | 1               | 2             |
| 5                                       | Sectional Anatomy of the Pelvis                 | – Bones, pelvic organs, vascular and lymphatic structures          | 1               | 2             |
| 6                                       | Sectional Anatomy of the Hip Joint              | – Joint capsule, ligaments, major arteries and nerves              | 1               | 2             |
| 7                                       | Sectional Anatomy of the Thigh                  | – Femoral triangle, muscular compartments, vascular paths          | 1               | 2             |
| 8                                       | Mid-term Exam                                   | – All Previous Topics                                              | 1               | 2             |
| 9                                       | Sectional Anatomy of the Leg and Foot           | – Tibia and fibula, compartments, plantar arch                     | 1               | 2             |
| 10                                      | Sectional Anatomy of the Cervical Spine         | – Vertebrae, intervertebral discs, spinal cord anatomy             | 1               | 2             |
| 11                                      | Sectional Anatomy of the Thoracic Spine         | – Rib articulation, spinal cord segments, neurovascular structures | 1               | 2             |
| 12                                      | Sectional Anatomy of the Lumbar Spine           | – Vertebrae, lumbar plexus, paraspinal musculature                 | 1               | 2             |
| 13                                      | Vascular System Anatomy                         | – Major arteries and veins, imaging correlations                   | 1               | 2             |
| 14                                      | Lymphatic System Anatomy                        | – Lymph nodes, thoracic duct, imaging applications                 | 1               | 2             |
| 15                                      | Correlation of Sectional Anatomy with Pathology | – Trauma, neoplasms, vascular anomalies                            | 1               | 2             |
| 16                                      | Final Theoretical Exam                          | – All topics                                                       | 1               | 2             |
| Number of Weeks /and Units Per Semester |                                                 |                                                                    | 16              | 32            |

**B. Practical Aspect (Lab/Clinical) (if any):**

| No. | Tasks/ Experiments                                        | Number of Weeks | Contact Hours |
|-----|-----------------------------------------------------------|-----------------|---------------|
| 1   | Interpretation of upper extremity MRI and CT images       | 1               | 2             |
| 2   | Identifying anatomical structures in pelvic MRI scans     | 1               | 2             |
| 3   | Evaluation of vascular anatomy in cross-sectional imaging | 1               | 2             |

| No.                                            | Tasks/ Experiments                                         | Number of Weeks | Contact Hours |
|------------------------------------------------|------------------------------------------------------------|-----------------|---------------|
| 4                                              | Analyzing vertebral column injuries on CT                  | 1               | 2             |
| 5                                              | Lymph node visualization in cross-sectional imaging        | 1               | 2             |
| 6                                              | Correlation of sectional anatomy with soft tissue injuries | 1               | 2             |
| 7                                              | Simulation of trauma imaging cases                         | 1               | 2             |
| 8                                              | Using imaging software to reconstruct 3D anatomy           | 1               | 2             |
| 9                                              | Case study: Imaging of lower extremity fractures           | 2               | 4             |
| 10                                             | Pathology detection in vascular imaging                    | 1               | 2             |
| 15                                             | <b>Final Practical Exam</b>                                | 1               | 2             |
| <b>Number of Weeks /and Units Per Semester</b> |                                                            | <b>14</b>       | <b>28</b>     |

### C. Tutorial Aspect (if any):

| No.                                            | Tutorial | Number of Weeks | Contact Hours | Learning Outcomes (CILOs) |
|------------------------------------------------|----------|-----------------|---------------|---------------------------|
| 1                                              | None     |                 |               |                           |
| 2                                              |          |                 |               |                           |
| 3                                              |          |                 |               |                           |
| <b>Number of Weeks /and Units Per Semester</b> |          |                 |               |                           |

### VII. Teaching Strategies:

- Lectures
- Case-Based Learning
- Hands-on Training
- Simulations
- Group Discussions

### VII. Assessment Methods:

- Written Exams

Prepared by:

Reviewed by:

Dr. -----

Head of the Department:

Dr. Awadh Al-Kubati

Quality Unit:

Dr. Mohammed  
Al-shamahi

Dean:

Dr. Abdulsalam  
Dalaq

- Quizzes
- Practical Exams
- Case Study Reports
- Group Presentations
- 

## VII. Assignments:

| No.   | Assignments                                  | Week Due | Mark |
|-------|----------------------------------------------|----------|------|
| 1     | Case report on imaging of shoulder joint     | Week 4   | 3    |
| 2     | Comparative analysis of pelvic MRI and CT    | Week 6   | 2    |
| 3     | Practical report on vascular anatomy imaging | Week 8   | 2    |
| 4     | Group presentation on trauma imaging cases   | Week 11  | 3    |
| Total |                                              |          | 10   |

## VIII. Schedule of Assessment Tasks for Students During the Semester:

| No.   | Assessment Method      | Week Due | Mark | Proportion of Final Assessment |
|-------|------------------------|----------|------|--------------------------------|
| 1     | Final Practical Exam   | 15       | 30   | 30%                            |
| 2     | Midterm Exam           | Week 8   | 10   | 10%                            |
| 3     | Assignments & Quizzes  | Week 3   | 10   | 10%                            |
| 4     | Final Theoretical Exam | Week 16  | 50   | 50%                            |
| Total |                        |          | 100  | 100 %                          |

## IX. Learning Resources:

### 1- Required Textbook(s) (maximum two ):

1. Mark W. Anderson, Michael G Fox, Nicholas C. Nacey, 2024, Sectional Anatomy by MRI and CT, 5th Edition, Elsevier.
2. Lorrie L. Kelley, Connie Petersen, 2018, Sectional Anatomy for Imaging Professionals, 4th Edition, Mosby.

### 2- Essential References:

Prepared by:

Reviewed by:

Dr. -----

Head of the Department:

Dr. Awadh Al-Kubati

Quality Unit:

Dr. Mohammed  
Al-shamahi

Dean:

Dr. Abdulsalam  
Dalaq

1. Adrian Kendal Dixon, David J. Bowden, Bari M. Logan, Harold Ellis, 2017, Human Sectional Anatomy: Pocket atlas of body sections, CT and MRI images, 4th edition, CRC Press.
2. Luciano Alves Favorito, Natasha T. Logsdon, 2022, Atlas of Sectional Anatomy: Understanding the Anatomical Aspects of the Thorax, Abdomen and Pelvis 1st Edition, Springer.
3. Denise L. Lazo, 2014, Fundamentals of Sectional Anatomy: An Imaging Approach, 2nd Edition, Cengage Learning.
4. Edith Applegate, 2009, The Sectional Anatomy Learning System, 3rd Edition, Saunders.
5. Michael E. Madden, 2001, Introduction to Sectional Anatomy, Lippincott William.s & Wilkins.

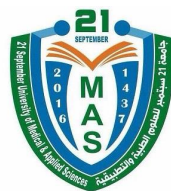
### 3- Electronic Materials and Web Sites etc.:

#### Electronic Materials and Websites

- Anatomy Textbooks and Anatomy Atlases, [Anatomy Atlases: A digital library of human anatomy information - Anatomy | Anatomy Atlas | Human Anatomy | Cross Sectional Anatomy | Anatomic Variation](#)
- Radiopaedia ([www.radiopaedia.org](http://www.radiopaedia.org))
- Anatomy.TV ([www.anatomy.tv](http://www.anatomy.tv))
- PubMed ([www.pubmed.ncbi.nlm.nih.gov](http://www.pubmed.ncbi.nlm.nih.gov))
- Medscape ([www.medscape.com](http://www.medscape.com)).

## X. Course Policies: (Based on the Uniform Students' By law (2007))

|   |                                                                                                                                                                                                                                                                                |
|---|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1 | <b>Class Attendance:</b><br>Class Attendance is mandatory. A student is considered absent and shall be banned from taking the final exam if his/her absence exceeds 25% of total classes.                                                                                      |
| 2 | <b>Tardiness:</b><br>A student will be considered late if he/she is not in class after 10 minutes of the start time of class.                                                                                                                                                  |
| 4 | <b>Assignments &amp; Projects:</b><br>Assignments and projects must be submitted on time. Students who delay their assignments or projects shall lose the mark allocated for the same.                                                                                         |
| 5 | <b>Cheating:</b><br>Cheating is an act of fraud that results in the cancelation of the student's exam or assignment. If it takes place in a final exam, the penalties stipulated for in the Uniform Students' Bylaw (2007) shall apply.                                        |
| 6 | <b>Forgery and Impersonation:</b><br>Forgery/Impersonation is an act of fraud that results in the cancelation of the student's exam, assignment or project. If it takes place in a final exam, the penalties stipulated for in the Uniform Students' Bylaw (2007) shall apply. |
| 7 | <b>Other policies:</b><br>The University official regulations in force will be strictly observed and students shall comply with all rules and regulations of the examination set by the Department, Faculty and University Administration.                                     |



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**Exam Attendance/Punctuality:**

No student shall be allowed to the exam hall after 30 minutes of the start time, and shall not leave the hall before half of the exam time has passed.