



# Course Specifications

|                      |                               |
|----------------------|-------------------------------|
| <b>Course Title:</b> | <b>General Anatomy</b>        |
| <b>Course Code:</b>  | <b>4012041-3</b>              |
| <b>Program:</b>      | <b>BSc Biology</b>            |
| <b>Department:</b>   | <b>Biology Department</b>     |
| <b>College:</b>      | <b>Applied science</b>        |
| <b>Institution:</b>  | <b>Umm Al-Qura university</b> |

## Table of Contents

|   |          |
|---|----------|
| <b>A. Course Identification</b> .....   | <b>3</b> |
| 6. Mode of Instruction (mark all that apply) .....  | 3        |
| <b>B. Course Objectives and Learning Outcomes</b> .....   | <b>4</b> |
| 1. Course Description .....   | 4        |
| 2. Course Main Objective.....   | 4        |
| 3. Course Learning Outcomes .....   | 4        |
| <b>C. Course Content</b> .....  | <b>5</b> |
| <b>D. Teaching and Assessment</b> .....   | <b>5</b> |
| 1. Alignment of Course Learning Outcomes with Teaching Strategies and Assessment<br>Methods ..... | 5        |
| 2. Assessment Tasks for Students .....  | 6        |
| <b>E. Student Academic Counseling and Support</b> .....   | <b>6</b> |
| <b>F. Learning Resources and Facilities</b> .....   | <b>7</b> |
| 1. Learning Resources .....   | 7        |
| 2. Facilities Required.....   | 7        |
| <b>G. Course Quality Evaluation</b> .....   | <b>8</b> |
| <b>H. Specification Approval Data</b> .....   | <b>8</b> |

## A. Course Identification

|  |
|--|
| <b>1. Credit hours:</b>  |
| <b>2. Course type</b>  |
| a. University <input type="checkbox"/> College <input type="checkbox"/> Department <input checked="" type="checkbox"/> Others <input type="checkbox"/> |
| b. Required <input checked="" type="checkbox"/> Elective <input type="checkbox"/>  |
| <b>3. Level/year at which this course is offered:</b><br>3 <sup>rd</sup> Year / Level 2  |
| <b>4. Pre-requisites for this course (if any):</b><br>General Biology (401110-4)   |
| <b>5. Co-requisites for this course (if any):</b>  |

### 6. Mode of Instruction (mark all that apply)

| No | Mode of Instruction   | Contact Hours | Percentage |
|----|-----------------------|---------------|------------|
| 1  | Traditional classroom |               | 70 %       |
| 2  | Blended               |               |            |
| 3  | E-learning            |               | 10 %       |
| 4  | Correspondence        |               | 10 %       |
| 5  | Other                 |               | 10 %       |

### 7. Actual Learning Hours (based on academic semester)

| No                           | Activity                        | Learning Hours |
|------------------------------|---------------------------------|----------------|
| <b>Contact Hours</b>         |                                 |                |
| 1                            | Lecture                         | 28             |
| 2                            | Laboratory/Studio               | 22             |
| 3                            | Tutorial                        | 6              |
| 4                            | Practical/Field work/Internship | 6              |
| 5                            | Others (specify)                | 10             |
|                              | <b>Total</b>                    | <b>72</b>      |
| <b>Other Learning Hours*</b> |                                 |                |
| 1                            | Study                           |                |
| 2                            | Assignments                     |                |
| 3                            | Library                         |                |
| 4                            | Projects/Research Essays/Theses |                |
| 5                            | Others (specify)                |                |
|                              | <b>Total</b>                    |                |

\* The length of time that a learner takes to complete learning activities that lead to achievement of course learning outcomes, such as study time, homework assignments, projects, preparing presentations, library times

## B. Course Objectives and Learning Outcomes

### 1. Course Description

In this course, the students are expected to have a clear idea about: the methods used to anesthetize and kill animals, the general anatomical directions and nomenclature, anatomy of different biological systems including, integumentary, skeletal, muscular, cardiovascular, nervous, digestive, excretory, reproductive (male + female), endocrine, and immune systems. Also, students are expected to have a clear idea about: characters and types of meristematic tissues, simple permanent tissues (parenchyma – collenchyma – sclerenchyma), compound permanent tissues (xylem – phloem), and internal structure of monocot & dicot roots, monocot & dicot stems, monocot & dicot leaves.

### 2. Course Main Objective

- After passing the Zoology part the students are expected to have a clear idea about:
- The methods used to anesthetize and kill animals. The general anatomical directions and nomenclature. Anatomy of the integumentary system. Anatomy of the skeletal system. Anatomy of the muscular system. Anatomy of the cardiovascular system. Anatomy of the nervous system. Anatomy of the digestive system. Anatomy of the excretory system. Anatomy of the reproductive system (male + female). Anatomy of the endocrine system. Anatomy of the immune system.
- After passing the Botany part, the students are expected to have a clear idea about: Characters and types of meristematic tissues. Characters and types of simple permanent tissues (parenchyma, collenchyma, sclerenchyma). Characters and types of compound permanent tissues (xylem, phloem). Internal structure of monocot & dicot roots, monocot & dicot stems, monocot & dicot leaves.

### 3. Course Learning Outcomes

| CLOs     |  | Aligned PLOs |
|----------|--|--------------|
| <b>1</b> | <b>Knowledge:</b>  |              |
| 1.1      | Anesthetise and kill animals for anatomical purposes.                |              |
| 1.2      | know the anatomical direction and terms.                             |              |
| 1.3      | Anatomy of the different body systems in animals and human           |              |
| 1.4      | Develop the anatomical drawing of body systems                       |              |
| 1.5      | know the characters and types of meristematic and permanent tissues. |              |
| 1.6      | Develop the internal structure of the different plant organs.        |              |
| <b>2</b> | <b>Skills :</b>  |              |
| 2.1      | To know anatomical characteristics of living organisms.              |              |
| 2.2      | To recognize an overview of the tissues anatomy.                     |              |
| 2.3      | To refer different organs of different systems.                      |              |
| 2.4      | To dissect experimental animals, and identify various systems        |              |
| 2.5      | To know anatomical nomenclature and terms.                           |              |
| 2.6      | To describe the disorders arise after any organ injury.              |              |
| 2.7      | To use computer and internet   |              |
| <b>3</b> | <b>Competence:</b>   |              |
| 3.1      | Developing oral presentations.                                       |              |
| 3.2      | Communicating personal ideas and thoughts.                           |              |
| 3.3      | Work independently and as part of a team to finish some assignments. |              |
| 3.4      | Communicate results of work to others.                               |              |

## C. Course Content

| No           | List of Topics  | Contact Hours |
|--------------|---|---------------|
| 1            | • General anatomical directions and nomenclature<br>Anatomy of the Integumentary system.  | 4             |
| 2            | • Anatomy of the skeletal system<br>Anatomy of the muscular system.                       | 4             |
| 3            | • Anatomy of the cardiovascular system<br>Anatomy of the nervous system.                  | 4             |
| 4            | • Anatomy of the digestive system<br>Anatomy of the excretory system.                     | 2             |
| 5            | • Anatomy of the reproductive system (male + female).<br>Anatomy of the endocrine system. | 2             |
| 6            | Anatomy of the immune system.   | 2             |
| 7            | • Meristematic tissues<br>Simple tissues (parenchyma – collenchyma – sclerenchyma).       | 2             |
| 8            | Compound permanent tissues (xylem – phloem).  | 2             |
| 9            | Internal structure of monocot & dicot roots   | 2             |
| 10           | Internal structure of monocot & dicot stems   | 2             |
| 11           | Internal structure of monocot & dicot leaves  | 2             |
| <b>Total</b> |   | <b>28 hrs</b> |

## D. Teaching and Assessment

### 1. Alignment of Course Learning Outcomes with Teaching Strategies and Assessment Methods

| Code | Course Learning Outcomes   | Teaching Strategies   | Assessment Methods   |
|------|--|---|--|
| 1.0  | <b>Knowledge</b>   |   |  |
| 1.1  | Anesthetise and kill animals for anatomical purposes.                | Teaching strategies to be used to develop that knowledge<br><br>- Lectures<br><br>- Take home assignment<br><br>- Internet activities<br><br>- Laboratory work. | -Course work reports<br><br>-Evaluation of the topics prepared by students according to the content, arrangement, and covering of the topic.<br><br>-Midterm and final exams<br><br>-Checking the homework |
| 1.2  | know the anatomical direction and terms.                             |   |  |
| 1.3  | Anatomy of the different body systems in animals and human           |   |  |
| 1.4  | Develop the anatomical drawing of body systems                       |   |  |
| 1.5  | know the characters and types of meristematic and permanent tissues. |   |  |
| 1.6  | Develop the internal structure of the different plant organs.        |   |  |
| 2.0  | <b>Skills</b>  |   |  |
| 2.1  | To know anatomical characteristics of living organisms.              | - Lectures.<br>- Brain storming.  | Course work reports  |
| 2.2  | To recognize an overview of the tissues anatomy.                     | - Discussion.   |  |

| Code       | Course Learning Outcomes   | Teaching Strategies   | Assessment Methods  |
|------------|--|---|---|
| 2.3        | To refer different organs of different systems.                      | <ul style="list-style-type: none"> <li>- Seminars.</li> <li>- Self assessment.</li> <li>- Examination of selected micrographs and hand drawings</li> </ul>  | <ul style="list-style-type: none"> <li>-Evaluation of the topics prepared by students according to the content, arrangement, and covering of the topic.</li> <li>-Midterm and final exams</li> <li>-Checking the homework assignments</li> </ul>  |
| 2.4        | To dissect experimental animals, and identify various systems        |   |   |
| 2.5        | To know anatomical nomenclature and terms.                           |   |   |
| 2.6        | To describe the disorders arise after any organ injury.              |   |   |
| 2.7        | To use computer and internet   |   |   |
| <b>3.0</b> | <b>Competence</b>  |   |   |
| 3.1        | Developing oral presentations.                                       | <ul style="list-style-type: none"> <li>Oral presentations.</li> <li><input type="checkbox"/> Internet search assignments and essays.</li> <li><input type="checkbox"/> Incorporating the use and utilization of computer in the course requirements.</li> <li><input type="checkbox"/> Students will be asked for delivering a summary regarding certain topics related to the course.</li> </ul> | <ul style="list-style-type: none"> <li>Evaluation of student essays and assignments.</li> <li><input type="checkbox"/> Evaluating the laboratory written reports.</li> <li><input type="checkbox"/> Marks given to for good reports and presentations</li> <li><input type="checkbox"/> Evaluating during the discussion in lecture and reports. Part of the grad is put for student's written participation</li> </ul> |
| 3.2        | Communicating personal ideas and thoughts.                           |   |   |
| 3.3        | Work independently and as part of a team to finish some assignments. |   |   |
| 3.4        | Communicate results of work to others.                               |   |   |

## 2. Assessment Tasks for Students

| # | Assessment task*                   | Week Due          | Percentage of Total Assessment Score |
|---|------------------------------------|-------------------|--------------------------------------|
| 1 | Home works, search or presentation | 4th and 8th weeks | 10 %                                 |
| 2 | Midterm "Written Test (1)"         | 8th week          | 20%                                  |
| 3 | Final Exam "Practical Test"        | 15th week         | 30%                                  |
| 4 | Final Exam Written Test            |                   | 40%                                  |
| 5 |                                    |                   |                                      |
| 6 |                                    |                   |                                      |
| 7 |                                    |                   |                                      |
| 8 |                                    |                   |                                      |

\*Assessment task (i.e., written test, oral test, oral presentation, group project, essay, etc.)

## E. Student Academic Counseling and Support

Arrangements for availability of faculty and teaching staff for individual student consultations and academic advice :

Office hours 6 hours per week distributed over the week days

## F. Learning Resources and Facilities

### 1. Learning Resources

|                                       |   |
|---------------------------------------|---|
| <b>Required Textbooks</b>             | Recommended Books and Reference Material (Journals, Reports, etc) (Attach List). Gray's Anatomy for Students: by <u>Richard L. Drake</u> , <u>A. Wayne Vogl</u> , <u>Adam W.M. Mitchell</u> . Harold Charles Bold . 1967. Morphology of plants. Minnesota University Press. USA<br>مبادئ في علم : صلاح الدين محمد أبو الرب، هيثم عزمي مرار، وأمين إبراهيم أبو ليل<br>التشريح<br>محمد عبد العودات. مورفولوجيا النبات ونشره جامعة الإمام محمد بن سعود الإسلامية |
| <b>Essential References Materials</b> | <a href="#">Gray's Anatomy for Students: by Richard L. Drake, A. Wayne Vogl, Adam W.M. Mitchell.</a><br><a href="#">Harold Charles Bold. 1967. Morphology of plants. Minnesota University Press. USA.</a>   |
| <b>Electronic Materials</b>           | Anatomy Atlases: <a href="http://www.anatomyatlases.org/atlasofanatomy/">http://www.anatomyatlases.org/atlasofanatomy/</a>  |
| <b>Other Learning Materials</b>       |   |

### 2. Facilities Required

| Item   | Resources   |
|--|---|
| <b>Accommodation</b><br>(Classrooms, laboratories, demonstration rooms/labs, etc.)   | <ul style="list-style-type: none"> <li>• Class rooms are already provided with data show</li> <li>• Laboratory necessity</li> <li>• Reduce the number of students in class rooms</li> <li>• Find a solution for the air conditioning problem</li> </ul> Necessity of a library  |
| <b>Technology Resources</b><br>(AV, data show, Smart Board, software, etc.)  | data show, Smart Board  |
| <b>Other Resources</b><br>(Specify, e.g. if specific laboratory equipment is required, list requirements or attach a list) | <ul style="list-style-type: none"> <li>- Microscopes</li> <li>- Animal dissection tools</li> <li>- Animal dissection board</li> <li>- Microscope slides and strips</li> <li>- Alcohol, formaldehyde and cotton</li> <li>- Animal and human anatomical samples</li> <li>- Plant anatomical samples and ready slides</li> </ul> |

## G. Course Quality Evaluation

| Evaluation Areas/Issues  | Evaluators                          | Evaluation Methods  |
|--|-------------------------------------|---|
| Strategies for Obtaining Student Feedback on Effectiveness of Teaching | the Instructor or by the Department | <ul style="list-style-type: none"> <li>• Questionnaires</li> <li>• Discuss students</li> <li>• Midterm and final tests.</li> </ul> Former review.                               |
| Other Strategies for Evaluation of Teaching                            | the Instructor or by the Department | <ul style="list-style-type: none"> <li>• Peer consultation by departmental specialized committee.</li> </ul> Self-evaluation of the program by the departmental plan committee. |

**Evaluation areas** (e.g., Effectiveness of teaching and assessment, Extent of achievement of course learning outcomes, Quality of learning resources, etc.)

**Evaluators** (Students, Faculty, Program Leaders, Peer Reviewer, Others (specify))

**Assessment Methods** (Direct, Indirect)

## H. Specification Approval Data

|                     |  |
|---------------------|--|
| Council / Committee |  |
| Reference No.       |  |
| Date                |  |