



Course Specifications

| | |
|----------------------|-------------------------------|
| Course Title: | General Biology |
| Course Code: | PBIO 126 |
| Program: | Deanship of Common First Year |
| Department: | Basic science |
| College: | Medical college |
| Institution: | Majmmah University |

Table of Contents

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

A. Course Identification

| | | | |
|---|--|-----------------------------------|--|
| 1. Credit hours: | | | |
| 2. Course type | | | |
| a. | University <input checked="" 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"/> | |
| 3. Level/year at which this course is offered: Level 1/ year 1 | | | |
| 4. Pre-requisites for this course (if any): Nil | | | |
| 5. Co-requisites for this course (if any): Nil | | | |

6. Mode of Instruction (mark all that apply)

| No | Mode of Instruction | Contact Hours | Percentage |
|----|-----------------------|---------------|------------|
| 1 | Traditional classroom | | |
| 2 | Blended | | |
| 3 | E-learning | 60 | 100% |
| 4 | Distance learning | | |
| 5 | Other | | |

7. Contact Hours (based on academic semester)

| No | Activity | Contact Hours |
|------------------------------|---------------------------------|------------------|
| Contact Hours | | |
| 1 | Lecture | 60(15 weeks x 4) |
| 2 | Laboratory/Studio | |
| 3 | Tutorial | |
| 4 | Others (specify) | |
| | Total | |
| Other Learning Hours* | | |
| 1 | Study | 10 |
| 2 | Assignments | 5 |
| 3 | Library | 5 |
| 4 | Projects/Research Essays/Theses | 5 |
| 5 | Others (specify) | |
| | Total | 45 |

B. Course Objectives and Learning Outcomes

1. Course Description

Fundamental concepts of biochemistry, cell biology, genetics. Concepts include important organic molecules, cell structure and function, metabolism and enzyme activity, cellular respiration and photosynthesis, DNA structure, animal structure and function, Nutrition and digestion, Gas Exchange and Circulatory System, Reproduction and Embryonic Development. Intended for pre-medical, pre-dental and Applied Medical Sciences students

2. Course Main Objective

- To provide a formation in basic biological principles.
- Develop an understanding of the interrelationships among living organisms.
- Explain how a cell can make a variety of large molecules from a small set of molecules.
- Define the macromolecules and explain their function.
- Describe the structure and function of the cell, and compare between plants and animal cells.
- Explain how the molecules transport through the cell membrane.
- Describe how the cell can produce energy and the difference between photosynthesis and cellular respiration.
- Compare the structure of DNA and RNA.
- Define a tissue; describe the four main types of animal's tissue and their structure and function.
- Describe the four stages of food processing.
- Describe the main components of the human alimentary canal and the associated digestive glands.
- Describe the general structure and function of circulatory system
- Explain the main difference between asexual and sexual reproduction.

Describe the structure and function of humane reproductive systems.

3. Course Learning Outcomes

| CLOs | | Aligned PLOs |
|----------|---|--------------|
| 1 | Knowledge and Understanding | |
| 1.1 | To describe and explain biological concepts | K1 |
| 1.2 | To explain biological phenomena. | K2 |
| 1.3 | To use the proper method for thinking and solving simple and complicated problems | K3 |
| 1... | | |
| 2 | Skills : | |
| 2.1 | Develop certain team work activities | S1 |
| 2.2 | | |
| 2.3 | | |
| 2... | | |
| 3 | Competence: | |
| 3.1 | Use internet for searching certain electronic journals regarding topics of the course | C1 |
| 3.2 | | |
| 3.3 | | |
| 3... | | |

C. Course Content

| No | List of Topics | Contact Hours |
|----|---------------------------------|---------------|
| 1 | Explorins Life | 4 |
| 2 | The Molecules of Cell | 4 |
| 3 | Tour of the Cell | 6 |
| 4 | Membrane Structure and Function | 4 |
| 5 | Photosynthesis | 4 |

| | | |
|--------------|--|-----------|
| 6 | How cells harvest energy | 4 |
| 7 | Molecular Biology of the Gene | 3 |
| 8 | animal structure and function | 4 |
| 9 | Nutrition and disestion | 4 |
| | Gas Exchange and Circulation | 4 |
| | Reproduction and Embryonic Development | 4 |
| Total | | 45 |

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 | Knowledge and Understanding | | |
| 1.1 | To describe and explain biological concepts | Lectures, individual and group discussion, and project works | MCQs, long and short essays, Diagram |
| 1.2 | To explain biological phenomena. | Lectures, individual and group discussion, and project works | MCQs, long and short essays, Diagram |
| 1.3 | To use the proper method for thinking and solving simple and complicated problems | Lectures, individual and group discussion, and project works | MCQs, long and short essays, Diagram |
| 2.0 | Skills | | |
| 2.1 | Develop certain team work activities | Lecture, homework and assignments | MCQs, long and short essays, Diagram |
| 2.2 | | | |
| ... | | | |
| 3.0 | Values | | |
| 3.1 | Use internet for searching certain electronic journals regarding topics of the course | Lecture, homework and assignments | MCQs, long and short essays, Diagram |
| 3.2 | | | |
| ... | | | |

2. Assessment Tasks for Students

| # | Assessment task* | Week Due | Percentage of Total Assessment Score |
|---|-------------------------------|-----------------------|--------------------------------------|
| 1 | 1 st Mid-term exam | 8 th week | 20% |
| 2 | Homework and assignment | 11 th week | 20% |
| 3 | Assignment | 13 th week | 10% |
| 4 | Home works | Week 10 | 5% |
| 5 | Participated | 16 th week | 5% |
| 6 | Final exam | 17 th week | 40% |
| 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 :

Students' can meet the teaching staff for consultation and academic advice within the appointed office hours by staff members.

Each staff member has 10 office hours per week

F. Learning Resources and Facilities

1. Learning Resources

| | |
|---------------------------------------|--|
| Required Textbooks | Introduction to biology, first edition, Medhat M. Elbadry, Wael S. ElSayed, Abdellah H. Akhkha, Taher Y. Boutraa, MohammadK. Abhari and Rafat M.Afif Introduction to biology, first edition, Medhat M. Elbadry, Wael S. ElSayed, Abdellah H. Akhkha, Taher Y. Boutraa, and Rafat M.Afif |
| Essential References Materials | |
| Electronic Materials | Internet, YouTube and journals website |
| Other Learning Materials | Electronic materials of Lecture notes and PowerPoints available in 'Black board' database |

2. Facilities Required

| Item | Resources |
|--|---|
| Accommodation (Classrooms, laboratories, demonstration rooms/labs, etc.) | Classroom |
| Technology Resources (AV, data show, Smart Board, software, etc.) | Smart board and e podium available |
| Other Resources (Specify, e.g. if specific laboratory equipment is required, list requirements or attach a list) | Library and seminar room Wifi internet connections |

G. Course Quality Evaluation

| Evaluation Areas/Issues | Evaluators | Evaluation Methods |
|--|--|-------------------------|
| Achievement of CLOs | Faculty of the course | Direct assessment |
| Quality Learning resources | Faculty of the course, Course coordinator | Verifying the documents |
| Effectiveness of teaching and assessment | Program Leader | Verifying the document |
| | | |

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 | |