

**Ministry of Higher Education and Scientific Research**

**Scientific Supervision and Scientific Evaluation Apparatus**

**Directorate of Quality Assurance and Academic Accreditation**

**Accreditation Department**

**Academic Program and Course Description Guide Academic Program and Course Description Guide**

**Academic Program and Course Description Guide**

**2024**

 **Introduction:**

The educational program is a well-planned set of courses that include procedures and experiences arranged in the form of an academic syllabus. Its main goal is to improve and build graduates' skills so they are ready for the job market. The program is reviewed and evaluated every year through internal or external audit procedures and programs like the External Examiner Program.

 The academic program description is a short summary of the main features of the program and its courses. It shows what skills students are working to develop based on the program's goals. This description is very important because it is the main part of getting the program accredited, and it is written by the teaching staff together under the supervision of scientific committees in the scientific departments.

 This guide, in its second version, includes a description of the academic program after updating the subjects and paragraphs of the previous guide in light of the updates and developments of the educational system in Iraq, which included the description of the academic program in its traditional form (annual, quarterly), as well as the adoption of the academic program description circulated according to the letter of the Department of Studies T 3/2906 on 3/5/2023 regarding the programs that adopt the Bologna Process as the basis for their work.

 In this regard, we can only emphasize the importance of writing an academic programs and course description to ensure the proper functioning of the educational process.

 **Concepts and terminology:**

 **Academic Program Description**: The academic program description provides a brief summary of its vision, mission and objectives, including an accurate description of the targeted learning outcomes according to specific learning strategies.

**Course Description**: Provides a brief summary of the most important characteristics of the course and the learning outcomes expected of the students to achieve, proving whether they have made the most of the available learning opportunities. It is derived from the program description.

**Program Vision:** An ambitious picture for the future of the academic program to be sophisticated, inspiring, stimulating, realistic and applicable.

**Program Mission:** Briefly outlines the objectives and activities necessary to achieve them and defines the program's development paths and directions.

**Program Objectives:** They are statements that describe what the academic program intends to achieve within a specific period of time and are measurable and observable.

**Curriculum Structure:** All courses / subjects included in the academic program according to the approved learning system (quarterly, annual, Bologna Process) whether it is a requirement (ministry, university, college and scientific department) with the number of credit hours.

**Learning Outcomes:** A compatible set of knowledge, skills and values acquired by students after the successful completion of the academic program and must determine the learning outcomes of each course in a way that achieves the objectives of the program.

**Teaching and learning strategies:** They are the strategies used by the faculty members to develop students’ teaching and learning, and they are plans that are followed to reach the learning goals. They describe all classroom and extra-curricular activities to achieve the learning outcomes of the program.

**Academic Program Description Form**

 **University Name: ............................................**

 **Faculty/Institute: Al-Safwa University College**

 **Scientific Department: Department of Anesthesia Techniques**

 **Academic or Professional Program Name: Bachelor**

 **Final Certificate Name: Bachelor of Anesthesia Techniques**

 **Academic System: Semester study system**

 **Description Preparation Date: 10/5/2023**

 **File Completion Date: 16/03/2024**

**Signature:**

**Head of Department Name:**

**Date:**

**Signature:**

**Scientific Associate Name:**

**Date:**

 **The file is checked by:**

 **Department of Quality Assurance and University Performance**

 **Director of the Quality Assurance and University Performance Department:**

 **Date:**

 **Signature:**

 **Approval of the Dean**

|  |
| --- |
| 1. **Program Vision**
 |
| Al Safwa University College seeks to be one of the leading higher education institutions in the field of modern education and scientific research through its scientific, research and administrative activities. It also works to provide an or its students and professors to make them active and creative in integrated path for serving society in all fields. |

|  |
| --- |
| 1. **Program Mission**
 |
| Working to prepare and graduate leading scientific and leadership competencies in knowledge in the field of anesthesia techniques and to develop the balance of scientific research to serve the local, regional and international community, as well as training and refining the minds of students scientifically and cognitively, and requirements of the and responding to emphasizing social and cultural values local market. |

|  |
| --- |
| 1. **Program Objectives**
 |
| 1. Embodying the vision, mission and goals of Al-Safwa University College, and applying the best educational practices with a focus on ensuring and enhancing quality and performance.
2. Preparing specialized cadres capable of serving the community and preparing for the preparation of future specializations.

3. Spreading the culture of human diversity in society, transferring scientific knowledge and skills, writing academic research, and creative scientific achievement through student- and teaching-focused activities.4. The college seeks to conclude scientific and cultural cooperation agreements with corresponding colleges and corresponding departments in different colleges to achieve best practices in the fields of education and learning.5. Focusing on the educational and moral aspects of all its members and spreading the spirit of dedication, tolerance, commitment and work to serve the nation.6. Paying attention to intellectual and cultural construction through openness to the experiences of other countries in all fields of education.7. Focusing on the educational and moral aspects of the student and instilling a spirit of dedication, tolerance and commitment. Aligning practical experiences with available curricula to ensure graduates' continuous progress.Top of Form |

|  |
| --- |
| 1. **Program Accreditation**
 |
| Non  |

|  |
| --- |
| 1. **Other external influences**
 |
| Internal (from the college) and external (from the ministry) determinants |

|  |
| --- |
| 1. **Program Structure**
 |
| **Program Structure**  | **Number of Courses**  | **Credit hours** | **Percentage** | **Reviews\*** |
| **Institution Requirements**  | **92** |  |  |  |
| **College Requirements** | **yes** |  |  |  |
| **Department Requirements**  | **yes** |  |  |  |
| **Summer Training** | **yes** |  |  |  |
| **Other**  |  |  |  |  |

\* This can include notes whether the course is basic or optional.

|  |
| --- |
| 1. **Program Description**
 |
| **Year/Level** | **Course Code** | **Course Name** | **Credit Hours** |
| **2023-2024**  |  | **General Physiology** | **theoretical** | **practical** |
| **First year**  |  |  | **2** | **2** |

|  |
| --- |
| 1. **Expected learning outcomes of the program**
 |
| **Knowledge**  |
| 1. **Anesthesia Principles:** Graduates will demonstrate a deep understanding of the fundamental principles of anesthesia, including pharmacology, physiology, and anesthesia techniques.
2. **Patient Assessment:** Graduates will possess comprehensive knowledge and skills in conducting pre-anesthetic assessments, identifying patient risk factors, and developing appropriate anesthesia plans.
3. **Equipment Proficiency:** Graduates will be proficient in the use and maintenance of anesthesia equipment, including anesthesia machines, monitors, airway devices, and drug delivery systems.
4. **Emergency Response:** Graduates will have the knowledge to recognize and respond effectively to anesthesia-related emergencies, including airway management, cardiovascular emergencies, and medication reactions.
 |
| **Skills**  |
| 1. **Anesthesia Administration:** Graduates will demonstrate proficiency in administering various types of anesthesia (general, regional, local) based on patient needs and surgical requirements.
2. **Patient Monitoring:** Graduates will be skilled in continuous patient monitoring during anesthesia, including vital signs, depth of anesthesia, oxygenation, and ventilation parameters.
3. **Team Collaboration:** Graduates will possess strong interpersonal and communication skills to collaborate effectively with healthcare teams, ensuring safe and coordinated perioperative care.
4. **Critical Thinking and Problem-Solving:** Graduates will apply critical thinking skills to assess anesthesia-related challenges, troubleshoot equipment malfunctions, and make timely decisions to optimize patient outcomes.
 |
| **Ethics**  |
| 1. **Patient Advocacy:** Graduates will uphold ethical principles and advocate for patients' rights, dignity, and safety throughout the perioperative experience.
2. **Confidentiality and Privacy:** Graduates will maintain patient confidentiality and privacy in accordance with legal and ethical standards, respecting sensitive medical information.
 |

|  |
| --- |
| 1. **Teaching and Learning Strategies**
 |
| **Lecture-Based Learning:*** Delivery of structured content by instructors using lectures, presentations, and multimedia materials.
* Incorporation of visuals such as slides, videos, and diagrams to enhance understanding.

**Active Learning:*** Engage students in active participation through discussions, group activities, and problem-solving tasks.
* Use of case studies, simulations, and role-playing exercises to apply knowledge to real-world scenarios.

**Experiential Learning:*** Provide hands-on experiences such as laboratory experiments, fieldwork, internships, and practical demonstrations.
* Encourage reflection and critical thinking based on real-life experiences and observations.
 |

|  |
| --- |
| 1. **Evaluation methods**
 |
| 1.Quizzes and Discussions2. Reports and Homework Assignments3. Midterm Exam4. Final Exam |

|  |
| --- |
| 1. Faculty
 |
| Faculty Members |
| Academic Rank  | **Specialization**  | **Special Requirements/Skills (if applicable)**  | **Number of the teaching staff**  |
| **General**  | **Special**  |  | **Staff**  | **Lecturer**  |
| Assistant Lecturer | **Biology** | **Physiology** |  |  | **2** | **1** |

|  |
| --- |
| 12. Program Development Plan  |
| **Developing a curriculum** for a Physiology course involves careful planning and consideration of various factors to ensure comprehensive learning outcomes.**Curriculum Design:** Design a curriculum that is structured and organized to cover key topics related to the Physiology. **Use of Technology and Resources:** Utilize modern technology and resources such as virtual labs, interactive simulations, anatomical models, and digital resources (videos, animations, apps) to enhance learning experiences and facilitate understanding of complex neural concepts. |

|  |
| --- |
| **Program Skills Outline** |
|  | **Required program Learning outcomes**  |
| **Year/Level** | **Course Code** | **Course Name** | **Basic or optional**  | **Knowledge**  | **Skills**  | **Ethics**  |
| **A1** | **A2** | **A3** | **A4** | **B1** | **B2** | **B3** | **B4** | **C1** | **C2** | **C3** | **C4** |
| **2023-2024****First year**  |  | **General Physiology 1** | **Basic** | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ |
|  | **General Physiology 2** | **Basic** | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

* **Please tick the boxes corresponding to the individual program learning outcomes under evaluation.**

**Course Description Form**

|  |
| --- |
| 1. Course Name:
 |
| General physiology I and General physiology II |
| 1. Course Code:
 |
|  |
| 1. Semester / Year:
 |
| Two Semesters /First Year  |
| 1. Description Preparation Date:
 |
| 16/ 03/ 2024 |
| 1. Available Attendance Forms:
 |
| Attendance (face-to-face learning) |
| 1. Number of Credit Hours (Total) / Number of Units (Total)
 |
| 4 hours per week 2 hour theoretical, 2 hours practical Number of Units: 6 units is 5 |
| 1. Course administrator's name (mention all, if more than one name)
 |
| Name: Hussein A. Fadhil Email: hussein.fadhil@uokerbala.edu.iq |
| 1. Course Objectives
 |
| 1. **Understand the fundamental principles of human physiology: Explain the basic concepts and principles governing the functioning of human physiological systems, including cell physiology, homeostasis, and organ system interactions.**
2. **Analyze the structure-function relationships in physiological systems: Evaluate how the structure of cells, tissues, and organs relates to their specific functions in maintaining homeostasis and supporting overall human health.**
3. **Explain the mechanisms of regulation and control in physiological processes: Describe the various regulatory mechanisms (neural, hormonal, and local) involved in maintaining physiological balance and responding to internal and external stimuli.**
4. **Apply physiological concepts to health and disease: Illustrate how disruptions in normal physiological processes contribute to the pathogenesis of common diseases and disorders, and explore the physiological basis of therapeutic interventions and treatments.**
5. **Conduct basic physiological experiments and interpret data: Design and conduct simple physiological experiments, collect data accurately, analyze results using appropriate statistical methods, and draw conclusions based on experimental findings.**
6. **Integrate knowledge across physiological systems: Demonstrate an understanding of how different physiological systems (e.g., nervous, cardiovascular, respiratory) interact and coordinate to support overall body function and adapt to various environmental challenges.**
 |
| 1. Teaching and Learning Strategies
 |
| **Strategy** | 1. **Active Learning Techniques:** Incorporate active learning strategies such as group discussions, case studies, problem-solving exercises, and peer teaching sessions. Encourage students to apply physiological concepts to real-life scenarios, analyze data, and collaborate with classmates to deepen their understanding of complex topics.
2. **Hands-On Laboratory Work:** Provide hands-on laboratory experiences where students can perform physiological experiments, collect data, and analyze results. Incorporate modern laboratory techniques and technologies to simulate real-world research environments and reinforce theoretical concepts taught in lectures.
3. **Technology-Enhanced Learning:** Utilize educational technology tools such as virtual labs, multimedia presentations, interactive simulations, and online resources to supplement traditional lectures and readings. Incorporate learning management systems (LMS) for course materials, quizzes, and discussion forums to facilitate blended learning approaches.
4. **Flipped Classroom Model:** Implement a flipped classroom model where students review lecture materials or instructional videos independently before class and engage in active learning activities, discussions, and problem-solving sessions during class time. This approach promotes student-centered learning, fosters deeper understanding, and allows for more personalized interactions with the instructor.
5. **Formative Assessment and Feedback:** Use formative assessment strategies such as quizzes, concept maps, exit tickets, and peer evaluations to monitor student progress, identify misconceptions, and provide timely feedback. Encourage self-assessment and reflection to help students track their learning goals and make necessary adjustments to their study strategies.
 |
| 1. Course Structure
 |
| **Week**  | **Hours**  | **Required Learning Outcomes**  | **Unit or subject name**  | **Learning method**  | **Evaluation method**  |
| 1 | 2 | the levels of organization in the human body from cells to organ systems. | Introduction to physiology | lecture | Quiz and home work |
| 2 | 2 | the structure and function of cell membranes and their role in cell physiology. | Cell structure and function | lecture | Quiz and home work |
| 3 | 2 | the components of the nervous system and their respective functions. | Neurons and nervous tissue | lecture | Quiz and home work |
| 4 | 2 | the mechanisms of neuronal communication, including action potentials and neurotransmission. | Nervous system organization | lecture | Quiz and home work |
| 5 | 2 | Differentiate between skeletal, smooth, and cardiac muscle tissues in terms of structure and function. | Muscle tissue types, muscle contraction mechanisms | lecture | Quiz and home work |
| 6 | 2 | the process of muscle contraction and the role of calcium ions and ATP. | Skeletal muscle physiology, neuromuscular junction | lecture | Quiz and home work |
| 7 | 2 | the anatomy and physiology of the heart, including cardiac cycle events. | Heart anatomy and physiology, cardiac cycle | lecture | Quiz and home work |
| 8 | 2 | blood vessel structure and function, as well as mechanisms of blood pressure regulation. | Blood vessels, blood pressure regulation, circulation | lecture | Quiz and home work |
| 9 | 2 | the anatomy of the respiratory system and its role in ventilation and gas exchange. | Respiratory system anatomy, ventilation | lecture | Quiz and home work |
| 10 | 2 | respiratory regulation mechanisms, including neural and chemical control. | Gas exchange, respiratory regulation, respiratory disorders | lecture | Quiz and home work |
| 11 | 2 | the organs of the digestive system and their functions in digestion and absorption. | Digestive system anatomy, mechanical digestion | lecture | Quiz and home work |
| 12 | 2 | the processes of mechanical and chemical digestion and nutrient absorption in different parts of the digestive tract. | Chemical digestion, nutrient absorption, digestive disorders | lecture | Quiz and home work |
| 13 | 2 | the major endocrine glands, their hormones, and their physiological roles. | Endocrine system overview, hormone types, glands | lecture | Quiz and home work |
| 14 | 2 | the regulation of blood glucose levels, thyroid function, and reproductive hormone cycles. | Hormone mechanisms of action, endocrine regulation | lecture | Quiz and home work |
| 15 | 2 | the anatomy and functions of the kidney and nephron. | Kidney anatomy, nephron structure, renal filtration | lecture | Quiz and home work |
|  **First semester Final Exam**  |
| 1 | 2 | Renal reabsorption, secretion, urine formation, kidney function regulation | renal processes involved in water and electrolyte balance, as well as acid-base regulation. | lecture | Quiz and home work |
| 2 | 2 | Male reproductive system anatomy and physiology | Describe the anatomy and physiology of the male and female reproductive systems. | lecture | Quiz and home work |
| 3 | 2 | Female reproductive system anatomy and physiology, menstrual cycle | Explain the hormonal regulation of reproductive processes, including gametogenesis and menstrual cycles. | lecture  | Quiz and home work |
| 4 | 2 | Innate immune system, physical barriers, cells | the components and functions of the innate and adaptive immune systems. | lecture | Quiz and home work |
| 5 | 2 | Adaptive immune system, immune response, disorders | Analyze immune system disorders and the role of vaccination in immunization. | lecture | Quiz and home work |
| 6 | 2 | Metabolism basics, energy balance | Explain the principles of thermoregulation, metabolism, and energy balance. | lecture | Quiz and home work |
| 7 | 2 | Temperature regulation, fluid balance, acid-base balance | Evaluate the impact of physiological changes on overall health and disease prevention. | lecture | Quiz and home work |
| 8 | 2 | Hypothalamus-pituitary axis, hormone interactions | Describe the role of the hypothalamus and pituitary gland in neuroendocrine regulation. | lecture | Quiz and home work |
| 9 | 2 | Stress response, circadian rhythms, feedback mechanisms | the physiological responses to stress and the regulation of circadian rhythms. | lecture | Quiz and home work |
| 10 | 2 | Altitude physiology, oxygen transport | Explain physiological adaptations to environmental stressors such as altitude, heat, and cold. | lecture | Quiz and home work |
| 11 | 2 | Thermoregulation, water balance, environmental adaptations | Evaluate the impact of environmental factors on physiological processes and human health. | lecture | Quiz and home work |
| 12 | 2 | Physiological changes with aging, geriatrics | Describe the physiological changes associated with aging in different organ systems. | lecture | Quiz and home work |
| 13 | 2 | Age-related diseases, maintaining health in elderly populations | Explain age-related diseases and their impact on physiological function. | lecture | Quiz and home work |
| 14 | 2 | Review of key concepts, case studies 1 | Demonstrate comprehensive understanding of key physiological concepts through review activities and assessments. | lecture | Quiz and home work |
| 15 | 2 | Review of key concepts, case studies 2 | Apply physiological knowledge to analyze case studies and solve problems related to real-world scenarios. | lecture | Quiz and home work |
| **Second Semester Final Exam** |
| 1. Course Evaluation
 |
| The distribution is as follows: semester pursuit 40% (25 degrees theoretical and 15% practical) 60% for the final exam. For each semester  |
| 1. Learning and Teaching Resources
 |
| Required textbooks (curricular books, if any) | 1. Human anatomy and physiology2.. Textbook of General Anatomy-snell clinical anatomy 20193.Gyton textbook of physiology |
| Main references (sources) | 1.HUMAN ANATOMY - Color Atlas and Textbook- J.A.G., P.F.H., J.R.H., I.W., P.L.T.W. Sixth edition 2017.2.Text book of Anatomy – Inderbir Singh – 5th. Edition - Published byJaypee Brothers Medical Publishers (P) Ltd, 2011. |
| Recommended books and references (scientific journals, reports...) | All reputable scientific journals related to the comprehensive anatomy of the human body |
| Electronic References, Websites | https://pubmed.ncbi.nlm.nih.gov/?cmd=HistorySearch&querykey=3 |