MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية

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| **Module Information**  معلومات المادة الدراسية | | | | | | | |
| **Module Title** | Anatomy & Physiology | | | | **Module Delivery** | | |
| **Module Type** | Supportive | | | | **☒ Theory**   * **Lecture**   **☒ Lab**   * **Tutorial** * **Practical**   **☒ Seminar** | | |
| **Module Code** | MIE21205 | | | |
| **ECTS Credits** | 4 | | | |
| **SWL (hr/sem)** | 100 | | | |
| **Module Level** | | UGII | **Semester of Delivery** | | | | 3 |
| **Administering Department** | | MIE | **College** | MUC | | | |
| **Module Leader** | Noor Jabbar | | **e-mail** | noor.jabbar@muc.edu.iq | | | |
| **Module Leader’s Acad. Title** | | Asst. Lect | **Module Leader’s Qualification** | | | | M.Sc. |
| **Module Tutor** |  | | **e-mail** |  | | | |
| **Peer Reviewer Name** | Dr.Noor Kadhim Meftin | | **e-mail** | noor.kadhim@muc.edu.iq | | | |
| **Scientific Committee Approval Date** | 17/6/2023 | | **Version Number** | | | 1.0 | |

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| **Relation with other Modules**  العلاقة مع المواد الدراسية الاخرى | | | |
| **Prerequisite module** | None | **Semester** | None |
| **Co-requisites module** |  | **Semester** |  |

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| **Module Aims, Learning Outcomes and Indicative Contents**  أهداف المادة الدراسية ونتائج التعلم والمحتويات الارشادية | |
| **Module Aims**  أهداف المادة الدراسية | 1. Anatomy and Physiology are important medical discipline to understand structures and functions of human body cells, tissues, organs, organ systems, and as a whole system, how it works and the relationships between body parts. 2. This mode unit consists of main elements of anatomy and physiology, the terminology used, and how our body control itself. 3. Students will be unable to understand how medical device work with the human body and what the benefit from it. 4. To understand the level of organization of the human organism and the homeostatic system. 5. To understand the chemical structure, chemical reactions and their control with acid-base balance in human body. |
| **Module Learning Outcomes**  مخرجات التعلم للمادة الدراسية | 1. Demonstrate correct usage of the terminology used to describe anatomical structures. 2. Describe the organization of cells and tissues. 3. Describe the principles relating to the structure of connective tissues, skeletal muscle, bones, and joints. 4. Describe the principles of excitable tissues. 5. Describe the structure and function of the human eye and ear and the mechanisms of vision and hearing. 6. Describe the principles of sensorimotor control. 7. Describe cardiac mechanics and cardiac biophysics. 8. Develop quantitative descriptions of physiological properties and systems. 9. Describe the application of technologies and techniques for investigating the structure and function of the body. 10. Demonstrate communication skills (oral and written) to describe the structure and function of the human body. 11. Describe basic structural and functional features of the major organ systems within the human body. 12. Define basic biological processes essential for maintenance of   homeostasis. |

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|  | 13. Correlate specific structural features of human cells, tissues, organs and systems of the human body with their normal functions, and identify the changes that occur during human development, ageing and disease. |
| **Indicative Contents**  المحتويات الارشادية | Topics include:   * Anatomical terminology (5 hrs). * The structure and appearance of cells and tissues (5 hrs). * The appearance of bone and cartilage, the organization of dense connective tissues (5 hrs). * Skeletal muscle structure and function. Principles of excitable tissues. [15 hr] * The structure and function of sensory systems, including the eye and vision and the ear and hearing. * Principles of sensory motor control. Cardiac mechanics and cardiac biophysics.[10 hr] * Multiscale modelling of physiological systems (5 hrs). * Technologies, quantitative measurements and experimental techniques used to investigate the structure and function of different tissues, organs and organ systems. [15 hr] |

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| **Learning and Teaching Strategies**  استراتيجيات التعلم والتعليم | |
| **Strategies** | The learning and teaching strategies employed in this module can vary depending on the specific course. However, here are some common strategies that may be used with this course:  **Teaching methods include:**   * lectures * seminars * tutorials * lab experiments * design assignments * industrial visits * professional training * a variety of projects   **Assessment :** methods of assessment include a combination of: |

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|  | * coursework * group project reports * lab reports * written exams. |

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| **Student Workload (SWL)**  الحمل الدراسي للطالب | | | |
| **Structured SWL (h/sem)**  الحمل الدراسي المنتظم للطالب خلال الفصل | 64 | **Structured SWL (h/w)**  الحمل الدراسي المنتظم للطالب أسبوعيا | 4 |
| **Unstructured SWL (h/sem)**  الحمل الدراسي غير المنتظم للطالب خلال الفصل | 36 | **Unstructured SWL (h/w)**  الحمل الدراسي غير المنتظم للطالب أسبوعيا | 5 |
| **Total SWL (h/sem)**  الحمل الدراسي الكلي للطالب خلال الفصل | 100 | | |

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| **Module Evaluation**  تقييم المادة الدراسية | | | | | |
|  | | **Time/Nu**  **mber** | **Weight (Marks)** | **Week Due** | **Relevant Learning**  **Outcome** |
| **Formative assessment** | **Quizzes** | 4 | 10% (10) | 5, 10 | LO #1, 2, 10 and 11 |
| **Assignments** | 2 | 10% (10) | 2, 12 | LO # 3, 4, 6 and 7 |
| **Projects / Lab.** | 15 | 10% (10) | Continuous | All |
| **Report** | 15 | 10% (10) | 13 | LO # 5, 8 and 10 |
| **Summative assessment** | **Midterm Exam** | 2 hr | 10% (10) | 7 | LO # 1-7 |
| **Final Exam** | 4 hr | 50 % (50) | 16 | All |
| **Total assessment** | | | 100% (100 Marks) |  |  |

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| **Delivery Plan (Weekly Syllabus)**  المنهاج الاسبوعي النظري | |
|  | **Material Covered** |
| **Week 1** | Introduction to Anatomy and Physiology. |
| **Week 2** | The Chemical level of Organization. |
| **Week 3** | The Cell level of Organization |
| **Week 4** | The Tissue level of organization |
| **Week 5** | The Integumentary system |
| **Week 6** | The Muscular system |
| **Week 7** | Mid Exam |
| **Week 8** | The Skeletal System |
| **Week 9** | The Central Nervous System |
| **Week 10** | The Peripheral Nervous System and Autonomic Nervous System. |
| **Week 11** | The Sense and Sensory System. |
| **Week 12** | The Endocrine System. |
| **Week 13** | The Cardiovascular System: The Heart, Blood Vessels And Blood. |
| **Week 14** | The Respiratory System. |
| **Week 15** | The Urinary System. |
| **Week 16** | Preparatory week before final exam |

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| **Delivery Plan (Weekly Lab. Syllabus)**  المنهاج الاسبوعي للمختبر | |
|  | **Material Covered** |
| **Week 1** | Lab 1 measurement of body temperature |
| **Week 2** | Lab 2 Coagulation |
| **Week 3** | Lab 3 The blood |
| **Week 4** | Lab 4 Membrane transport |
| **Week 5** | Lab 5 Complete blood count |
| **Week 6** | Lab 6 Hemoglobin ( Hb ) Determination |
| **Week 7** | Lab 7 Erythrocyte Sedimentation Rate ESR |
| **Week 8** | Lab 8 Total leucocyte count |
| **Week 9** | Lab 9 Total Red Blood Cell R B C count |

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| **Week 10** | Lab 10 Platelets count |
| **Week 11** | Lab 11 Blood film |
| **Week 12** | Lab 12 Blood group |
| **Week 13** | Lab 13 Blood sugar |
| **Week 14** | Lab 14 Blood urea & Blood pressure |

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| **Learning and Teaching Resources**  مصادر التعلم والتدريس | | |
|  | **Text** | **Available in the**  **Library?** |
| **Required Texts** | Frederic H Martini, Edwin F Bartholomew, William C. Ober, Claire W. Garrison, Kathleen Welch, & Ralf T Hutchings (2007), *Essentials of Anatomy and Physiology*, 14th edn, Pearson Education, San  Francesco, USA. | No |
| **Recommended Texts** | 1. **Human Physiology Study Guide** 2. **Human Anatomy & Physiology: Help and**   **Review** |  |
| **Websites** | Interactive physiology, Copyright © 2005 Pearson Education, Inc. publishing as  Benjamin | |

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| **Grading Scheme**  مخطط الدرجات | | | | |
| **Group** | **Grade** | التقدير | **Marks (%)** | **Definition** |
| **Success Group (50 - 100)** | **A -** Excellent | امتياز | 90 - 100 | Outstanding Performance |
| **B -** Very Good | جيد جدا | 80 - 89 | Above average with some errors |
| **C -** Good | جيد | 70 - 79 | Sound work with notable errors |
| **D -** Satisfactory | متوسط | 60 - 69 | Fair but with major shortcomings |
| **E -** Sufficient | مقبول | 50 - 59 | Work meets minimum criteria |
| **Fail Group (0 – 49)** | **FX –** Fail | راسب (قيد المعالجة) | (45-49) | More work required but credit awarded |
| **F –** Fail | راسب | (0-44) | Considerable amount of work required |
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| **Note:** Marks Decimal places above or below 0.5 will be rounded to the higher or lower full mark (for example a mark of 54.5 will be rounded to 55, whereas a mark of 54.4 will be rounded to 54. The University has a policy NOT to condone "near-pass fails" so the only adjustment to marks awarded by the original marker(s) will be the automatic  rounding outlined above. | | | | |