MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية

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| **Module Information**  **معلومات المادة الدراسية** | | | | | | | |
| **Module Title** | General Geology | | | | **Module Delivery** | | |
| **Module Type** | Core | | | | * **☒ Theory** * **☒ Lecture** * **☒ Lab** * **☐ Tutorial** * **☐ Practical** * **☐ Seminar** | | |
| **Module Code** | GEO1101 | | | |
| **ECTS Credits** | 6 | | | |
| **SWL (hr/sem)** | 150 | | | |
| **Module Level** | | 1st | **Semester of Delivery** | | | | 1st |
| **Administering Department** | | Geophysics | **College** | College of Geophysics and Remote Sensing | | | |
| **Module Leader** | Dr. Linaz Anis Fadhil | | **e-mail** |  | | | |
| **Module Leader’s Acad. Title** | | Instructor | **Module Leader’s Qualification** | | | | Petroleum geology |
| **Module Tutor** | Dr. Rami M. Idan | | **e-mail** | Ramisc3@kus.edu.iq | | | |
| **Peer Reviewer Name** | | Dr. Linaz Anis Fadhil | **e-mail** |  | | | |
| **Scientific Committee Approval Date** | | 16 / 6 / 2023 | **Version Number** | | | 1 | |

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| **Relation with other Modules**  **العلاقة مع المواد الدراسية الأخرى** | | | |
| **Prerequisite module** | Null | **Semester** |  |
| **Co-requisites module** | Null | **Semester** | - |

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| **Module Aims, Learning Outcomes and Indicative Contents**  **أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية** | |
| **Module Aims**  **أهداف المادة الدراسية** | The general geology module aims to provide students with a comprehensive understanding of the Earth's structure, composition, and geological processes. Students will learn about the formation and evolution of the Earth, as well as the principles of plate tectonics, rock formation, and geological time scales. The module will also cover the identification and classification of rocks and minerals, as well as the interpretation of geological maps and cross-sections. Additionally, students will gain practical skills in fieldwork and laboratory analysis, as well as an understanding of the economic and environmental significance of geological resources. Overall, the module aims to equip students with a solid foundation in general geology that can be applied to further studies or professional practice in the field. |
| **Module Learning Outcomes**  **مخرجات التعلم للمادة الدراسية** | 1. Understand the fundamental principles of geology and the Earth's structure and composition. 2. Explain the processes involved in the formation and evolution of the Earth. 3. Identify and classify different types of rocks and minerals. 4. Interpret geological maps and cross-sections. 5. Apply practical skills in fieldwork and laboratory analysis. 6. Recognize the economic and environmental significance of geological resources. 7. Apply knowledge of general geology to further studies or professional practice in the field. |
| **Indicative Contents**  **المحتويات الإرشادية** | - Introduction to geology and the Earth's structure  - Plate tectonics and the rock cycle  - Earth's internal processes and geological time  - Types of rocks and minerals  - Geological mapping and cross-section interpretation  - Fieldwork techniques and laboratory analysis  - Geological resources and their economic and environmental importance  - Professional practice in geology and further studies in the field |

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| **Learning and Teaching Strategies**  **استراتيجيات التعلم والتعليم** | |
| **Strategies** | 1. Develop a solid understanding of the Earth's structure and the processes that shape it, such as plate tectonics and the rock cycle.  2. Familiarize yourself with the types of rocks and minerals, as well as their properties and formation processes.  3. Learn how to interpret geological maps and cross-sections, and understand the significance of different geological features.  4. Gain practical experience through fieldwork techniques and laboratory analysis, which are essential skills for a career in geology.  5. Understand the economic and environmental importance of geological resources, and the ethical considerations related to their extraction and use.  6. Explore the various career paths available in the field of geology, and consider further studies or professional certifications to advance your career.  7. Stay updated with the latest developments in geology through continuous learning and professional development.  8. Network with professionals in the field and seek mentorship opportunities to gain valuable insights and guidance. |

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| **Student Workload (SWL)**  **الحمل الدراسي للطالب** | | | |
| **Structured SWL (h/sem)**  **الحمل الدراسي المنتظم للطالب خلال الفصل** | 94 |  |  |
| **Unstructured SWL (h/sem)**  **الحمل الدراسي غير المنتظم للطالب خلال الفصل** | 56 |  |  |
| **Total SWL (h/sem)**  **الحمل الدراسي الكلي للطالب خلال الفصل** | 150 | | |

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| **Module Evaluation**  **تقييم المادة الدراسية** | | | | | |
| **As** | | **Time/Number** | **Weight (Marks)** | **Week Due** | **Relevant Learning Outcome** |
| **Formative assessment** | **Quizzes** | 3 | 5% | Within the course | All of the previous Lectures |
| **Assignments** | 10 | 15% | Within the course | All of the previous Lectures |
| **Projects / Lab.** | 7 | 10 |  |  |
| **Report** | 5 | 10% | Within the course | All of the previous Lectures |
| **Summative assessment** | **Midterm Exam** | 2 hr | 10% (10) | Within the course | All of the previous Lectures |
| **Final Exam** | 2hr | 50% (50) | After the course | All |
| **Total assessment** | | | 100% (100 Marks) |  |  |

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| **Delivery Plan (Weekly Syllabus)**  **المنهاج الاسبوعي النظري** | |
| **Week** | **Material Covered** |
|  | Introduction Geology, How to think. |
|  | Plate Tectonic Theory. |
|  | Earth Materials |
|  | Minerals |
|  | Physical Properties of Minerals |
|  | Rocks, Igneous Rocks. |
|  | Intrusive Activity |
|  | Volcanoes and Volcanism |
|  | Sedimentation. |
|  | Rocks, Sedimentary Rocks. |
|  | Sedimentary Structures |
|  | Rocks, Metamorphism |
|  | Metamorphic Rocks |
|  | Earth processes |
|  | Stratigraphy and Geologic Time. |
|  | Introduction Structural Geology |
|  | Weathering. |
|  | **Preparatory week before the final Exam** |

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| **Delivery Plan (Weekly Lab. Syllabus)**  **المنهاج الاسبوعي للمختبر** | |
| **Week** | **Material Covered** |
|  | Crystals and Crystallography |
|  | Physical Properties of Minerals |
|  | Igneous Rocks. |
|  | metamorphic Rocks |
|  | Sedimentary Rocks. |
|  | Topographic Maps |
|  | Geological Maps |

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| **Learning and Teaching Resources**  **مصادر التعلم والتدريس** | | |
|  | **Text** | **Available in the Library?** |
| **Required Texts** | * Lutgens, F.K., Edward, J. T., 2015, Essentials of g e o l o g y, Illustrated by Dennis Tasa. 12nd Edition | Y |
| **Recommended Texts** | McConnell, D., 2007. The Good Earth, Introduction to Earth Science-McGraw-Hill. Utah State Office of Education, 2013. Earth Science. Library of Congress Cataloging-in-Publication Data, 573 p.  Wicander, R., and Monroe, J. S. 2010. Historical geology-Books-Cole. | y |
| **Websites** | <https://ocw.mit.edu/courses/find-by-topic/#cat=science&subcat=earthscience&spec=geophysics> | |

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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. | | | | |