**Course Description Form**

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| 1. Course Name | | | | | | |
| Mechanic engineering I | | | | | | |
| 1. Course Code | | | | | | |
| WBM-21-05 | | | | | | |
| 1. Semester / Year | | | | | | |
| Quarterly | | | | | | |
| 1. Date of preparation of this description | | | | | | |
| 19/4/2024 | | | | | | |
| 1. Available attendance formats | | | | | | |
| Asso'i (Opinion) | | | | | | |
| 1. Number of Credit Hours (Total) / Total Number of Units | | | | | | |
| 60 Hours Theory / 3 Units | | | | | | |
| 1. Course administrator name | | | | | | |
| Name: Eng. Natiq Aziz Omran  Email:  natiqjeez81@gmail.com | | | | | | |
| 1. Course Objectives | | | | | | |
| **Course Objectives:** | | | | The main objectives of the course course are:  1. To understand mechanical engineering and its basics  2. To understand the principles, tools and applications of stillness and equilibrium  3. Perform analysis and calculations with ease. | | |
| 1. Teaching and Learning Strategies | | | | | | |
| A- Knowledge Objectives  A1- Develop an understanding of the basic ideas and concepts of engineering mechanics  A2- Attracting and welcoming undergraduate students to the Bachelor of Science program in Biomedical Engineering, and to graduate from the Bachelor of Science. Students who are innovative in problem solving, who become leaders in their organizations, and who possess the knowledge and skills required for a wide range of careers and career changes.  B - Course skills objectives  B1 - To be able to recognize the power of abstraction and generalization, and to carry out investigative mathematical work by independent judgment.  B2 - To focus on scientific research and its leading role in helping to serve the community and solve its problems through conducting applied research, resource recovery/recycling and transportation. | | | | | | |
| 1. Course Structure | | | | | | |
| Week | Hours | Required Learning Outcomes | Unit or subject name | | Learning method | Evaluation method |

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| 1 | 3 | Principles of statics | Principles of general statics | Came | Interactive questions during lecture, quick exams, exams and attendance |
| 2 | 3 | Resultants of force systems | Resultants | Came | Interactive questions during lecture, quick exams, exams and attendance |
| 3 | 3 | Resultants of force systems | Resultants | Came | Interactive questions during lecture, quick exams, exams and attendance |
| 4 | 3 | Equilibrium of force systems | Equilibrium of force systems | Came | Interactive questions during lecture, quick exams, exams and attendance |
| 5 | 3 | Equilibrium of force systems | Equilibrium of force systems | Came | Interactive questions during lecture, quick exams, exams and attendance |
| 6 | 3 | Friction | Friction | Came | Interactive questions during lecture, quick exams, exams and attendance |
| 7 | 3 | Friction | Friction | Came | Interactive questions during lecture, quick exams, exams and attendance |
| |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | 8 | 3 | Trusses | Analysis of trusses | Came | Interactive questions during lecture, quick exams, exams and attendance | | 9 | 3 | Trusses | Analysis of trusses | Came | Interactive questions during lecture, quick exams, exams and attendance | | 10 | 3 | Forces in space | Forces in space | Came | Interactive questions during lecture, quick exams, exams and attendance | | 11 | 3 | Centroids | Centroids and moment of inertia | Came | Interactive questions during lecture, quick exams, exams and attendance | | 12 | 3 | Centroids | Centroids and moment of inertia | Came | Interactive questions during lecture, quick exams, exams and attendance | | 13 | 3 | Moment of inertia | Moment of inertia | Came | Interactive questions during lecture, quick exams, exams and attendance | | 14 | 3 | Moment of inertia | Moment of inertia | Came | Interactive questions during lecture, quick exams, exams and attendance | | 15 | 3 | Mid Exam |  | Came | Interactive questions during lecture, quick exams, exams and attendance | | | | | | |  |  |  |  |  |

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| 1. Course Evaluation | |
| 1. Daily exams with practical and scientific questions. 2. Participation scores for challenging competition questions among students. 3. Develop grades for environmental duties and reports assigned to them. 4. Semester exams for the curriculum in addition to the mid-year exam and the final exam. | |
| 1. Learning and teaching resources | |
| Required textbooks | Engineering Mechanics Static 5-6edition by Meriam and Keaige  Engineering Mechanics Static 10-12-13edition by Hibbeler  Engineering Mechanics Static 8edition by Singer  Strength of Material by Pytel and Singer |
| Main references | * College library for additional curriculum resources. * View scientific websites to see the latest developments in the subject |
| Recommended books and references | All sober scientific journals  https://www.coursera.org/  Hatps://youtube.com  https://www.sciencedirect.com/book/9780125551601/Static |