MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية

| **Module Information**  **معلومات المادة الدراسية** | | | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Module Title** | Biostatistics | | | | **Module Delivery** | | |
| **Module Type** | Basic | | | | * **☒ Theory** * **☐ Lecture** * **☒ Lab** * **☐ Tutorial** * **☐ Practical** * **☐ Seminar** | | |
| **Module Code** | ITC320150 | | | |
| **ECTS Credits** | 5:00 | | | |
| **SWL (hr/sem)** | 125 | | | |
| **Module Level** | | 2 | **Semester of Delivery** | | | | 4 |
| **Administering Department** | | BID | **College** | BMIC | | | |
| **Module Leader** | Abdulqader Faris | | **e-mail** | [dr.abdulkadir.faris@uoitc.edu.iq](mailto:dr.abdulkadir.faris@uoitc.edu.iq) | | | |
| **Module Leader’s Acad. Title** | | lecturer | **Module Leader’s Qualification** | | | | Ph.D. |
| **Module Tutor** |  | | **e-mail** | E-mail | | | |
| **Peer Reviewer Name** | | omarA.M. | **e-mail** | omara.m@uoitc.edu.iq | | | |
| **Scientific Committee Approval Date** | | 18/06/2023 | **Version Number** | | | 1.0 | |

| **Relation with other Modules**  **العلاقة مع المواد الدراسية الأخرى** | | | |
| --- | --- | --- | --- |
| **Prerequisite module** | Mathematics II / BID121 | **Semester** | 2 |
| **Co-requisites module** | None | **Semester** |  |

| **Module Aims, Learning Outcomes and Indicative Contents**  **أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية** | |
| --- | --- |
| **Module Aims**  **أهداف المادة الدراسية** | * Emphasize the knowledge and skill required to efficiently discharge the duties and responsibilities of the medical information. * This course deals with the concept of basic theory and the application of probability and statistics in the medical field. After completing this course most students able to practice dealing with bioinformation and its application |
| **Module Learning Outcomes**  **مخرجات التعلم للمادة الدراسية** | 1. Recognize how to use probability and statistics in the medical field. 2. Improve probability and statistics Skills. 3. To provide sufficient practice in the statistical methods presented. 4. To promote a deeper learning environment. 5. To emphasize the relevance of statistical methods to the degree programmers. 6. To potentially develop other non-disciplinary skills such as professional, personal and interpersonal skills. |
| **Indicative Contents**  **المحتويات الإرشادية** | Part One.  1) Some Basic concepts Statistics  2) Frequency Distribution for Discrete and continues variable  3) Measure of central Tendency  4 ) Measures of dispersionSampling ,  5) Sampling methods and sampling error  Part two.  1) Basic concepts of probability, and conditional probability  2) Probability Distributions Of Discrete and continuous Variables Basic of  3) Hypothesis Tests and their applications |

| **Learning and Teaching Strategies**  **استراتيجيات التعلم والتعليم** | |
| --- | --- |
| **Strategies** | Basic necessity for the foundations of Technology being mathematics ,the main aim is to teach mathematical methodologies and models develop mathematical skills and enhance thinking power of students |

| **Student Workload (SWL)**  **الحمل الدراسي للطالب** | | | |
| --- | --- | --- | --- |
| **Structured SWL (h/sem)**  **الحمل الدراسي المنتظم للطالب خلال الفصل** | 63 | **Structured SWL (h/w)**  **الحمل الدراسي المنتظم للطالب أسبوعيا** | 4 |
| **Unstructured SWL (h/sem)**  **الحمل الدراسي غير المنتظم للطالب خلال الفصل** | 62 | **Unstructured SWL (h/w)**  **الحمل الدراسي غير المنتظم للطالب أسبوعيا** | 4 |
| **Total SWL (h/sem)**  **الحمل الدراسي الكلي للطالب خلال الفصل** | 125 | | |

| **Module Evaluation**  **تقييم المادة الدراسية** | | | | | |
| --- | --- | --- | --- | --- | --- |
| **As** | | **Time/Number** | **Weight (Marks)** | **Week Due** | **Relevant Learning Outcome** |
| **Formative assessment** | **Quizzes** | 2 | 10% (10) | 3, 9 | LO #1, 2, and 3 |
| **Assignments** | 2 | 10% (10) | 4, 11 | LO # 3, 4, and 5 |
| **Projects / Lab.** | 1 | 10% (10) | Continuous |  |
| **Report** | 1 | 10% (10) | 13 | LO # 5 and 6 |
| **Summative assessment** | **Midterm Exam** | 2 hr | 10% (10) | 7 | LO # 1 to 5 |
| **Final Exam** | 3hr | 50% (50) | 16 | All |
| **Total assessment** | | | 100% (100 Marks) |  |  |

| **Delivery Plan (Weekly Syllabus)**  **المنهاج الاسبوعي النظري** | |
| --- | --- |
| **Week** | **Material Covered** |
| **Week 1** | Introduction Some Basic concepts Statistics |
| **Week 2** | Types of Data |
| **Week 3** | Frequency Distribution for Discrete and continues Random |
| **Week 4** | Measure of central Tendency |
| **Week 5** | Measures of dispersion |
| **Week 6** | Sampling , sampling methods and sampling error |
| **Week 7** | Basic concepts of probability |
| **Week 8** | Conditional probability |
| **Week 9** | Probability Distributions Of Discrete Variables |
| **Week 10** | Binomial And Poisson Distribution |
| **Week 11** | Continuous Probability Distributions |
| **Week 12** | The Normal Distribution |
| **Week 13** | Normal Distribution Applications and T- distribution |
| **Week 14** | Basic of Hypothesis Tests |
| **Week 15** | Application of Hypothesis Tests |

| **Delivery Plan (Weekly Lab. Syllabus)**  **المنهاج الاسبوعي للمختبر** | |
| --- | --- |
| **Week** | **Material Covered** |
| **Week 1-3** | Frequency Distribution for Discrete and continuous Random |
| **Week 4-5** | Measure of central Tendency, application examples |
| **Week 6-8** | probability and Conditional probability , application examples |
| **Week 9** | Sampling , sampling methods and sampling error , application examples |
| **Week 10-11** | Binomial And Poisson Distribution , application examples |
| **Week 12-13** | The Normal Distribution, , application examples |
| **Week 14** | Application of Hypothesis Tests |
| **Week 15** | Presentations and discussions |

| **Learning and Teaching Resources**  **مصادر التعلم والتدريس** | | |
| --- | --- | --- |
|  | **Text** | **Available in the Library?** |
| **Required Texts** | Biostatistics A Foundation For Analysis In The Health Sciences, Tenth Edition  Wayne W. Daniel, And Chad L. Cross, | No |
| **Recommended Texts** | Text book of Matrices .Hari Kishan  Essential Calculus Skills Practice Workbook with Full Solutions Chris McMullen | No |
| **Websites** | <http://www.statisticslectures.com/> | |

| **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 |
|  |  |  |  |  |
| **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. | | | | |