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| | Ministry of Higher Education and Scientific Research - Iraq<br>Al-Nahrain University<br>College of Science<br>Computer Science Department | |

# MODULE DESCRIPTION FORM
# نموذج وصف المادة الدراسية

| Module Information<br>معلومات المادة الدراسية | | | | | |
|---|---|---|---|---|---|
| **Module Title** | Mobile Application Developement | | | **Module Delivery** | |
| **Module Type** | C | | | ☐ **Theory**<br>☐ **Lecture**<br>☒ **Lab**<br>☒ **Tutorial**<br>☒ **Practical**<br>☒ **Seminar** | |
| **Module Code** | COMP3220 | | | | |
| **ECTS Credits** | 4 | | | | |
| **SWL (hr/sem)** | 100 | | | | |
| **Module Level** | | 3 | **Semester of Delivery** | | 2 |
| **Administering Department** | | Computer science | **College** | Science | |
| **Module Leader** | Ruaa Abdullah Jaber | | **e-mail** | Ruaa.abdullah@nahrainuniv.edu.iq | |
| **Module Leader's Acad. Title** | | Lecturer Assistant | **Module Leader's Qualification** | | M.Sc. |
| **Module Tutor** | Ruaa Abdullah Jaber | | **e-mail** | ruaa.abdullah@nahrainuniv.edu.iq | |
| **Peer Reviewer Name** | | Dr. Tiba Zaki | **e-mail** | tiba.zaki@nahrainuniv.edu.iq | |
| **Scientific Committee Approval Date** | | 16/9/2024 | **Version Number** | | 1.0 |

| Relation with other Modules<br>العلاقة مع المواد الدراسية الأخرى | | | |
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| **Prerequisite module** | OOP | **Semester** | Level 2<br>Sem 1 |
| **Co-requisites module** | None | **Semester** | |

| Module Aims, Learning Outcomes and Indicative Contents<br>أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية | |
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| **Module Aims**<br>أهداف المادة الدراسية | • **Preparing graduates with the experience in the basis of mobile applications programming.**<br>• **Preparing graduates designing and manipulation of mobile applications.**<br>• **Provides students high programming skills.**<br>• **Enable students to create applications for both android an iOS.**<br>• **Preparing the ability to analyze the needs to create the application and prepare the tools which match those needs.** |
| **Module Learning Outcomes**<br><br>مخرجات التعلم للمادة الدراسية | • **Understand Key Mobile Application: Define, explain, and apply fundamental mobile application such as UI/UX, flutter, dart, yaml.**<br>• **Implement mobile application: Write efficient code to implement and manipulate mobile applications using programming languages like dart.**<br>• **Select Appropriate ways: Choose the most appropriate ways to create an application matches what the problems' needs to be solved.** |
| **Indicative Contents**<br>المحتويات الإرشادية | • **High Knowledge about OOP.**<br>• **High programming following and tracing.**<br>• **The ability of implementing different applications based on dart.** |

| Learning and Teaching Strategies<br>استراتيجيات التعلم والتعليم | |
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| **Strategies** | • **Learn designing.**<br>• **Deliver detailed explanations of mobile application.**<br>• **Collaborative Learning.**<br>• **Implementation of applications showing step-by-step how to build and manipulate them in code.**<br>• **Providing the HW solution for all.** |

| Student Workload (SWL)<br>الحمل الدراسي للطالب محسوب لـ ١٥ اسبوعا | | | |
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| **Structured SWL (h/sem)**<br>الحمل الدراسي المنتظم للطالب خلال الفصل | 48 | **Structured SWL (h/w)**<br>الحمل الدراسي المنتظم للطالب أسبوعيا | 3.2 |
| **Unstructured SWL (h/sem)**<br>الحمل الدراسي غير المنتظم للطالب خلال الفصل | 52 | **Unstructured SWL (h/w)**<br>الحمل الدراسي غير المنتظم للطالب أسبوعيا | 3.5 |
| **Total SWL (h/sem)**<br>الحمل الدراسي الكلي للطالب خلال الفصل | 100 | | |

| Module Evaluation<br>تقييم المادة الدراسية | | | | | |
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| | | **Time/Number** | **Weight (Marks)** | **Week Due** | **Relevant Learning Outcome** |
| **Formative assessment** | **Quizzes** | 1 | 10% (10) | 10 | All |
| | **Assignments** | 1 | 10% (10) | 12 | All |
| | **Projects / Lab.** | 1 | 10% (10) | Continuous | All |
| | **Report** | 1 | 10% (10) | 13 | All |
| **Summative assessment** | **Midterm Exam** | 2 hr | 10% (10) | | All |
| | **Final Exam** | 3 hr | 50% (50) | | All |
| **Total assessment** | | | 100% (100 Marks) | | |

| Delivery Plan (Weekly Lab. Syllabus)<br>المنهاج الاسبوعي للمختبر | |
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| | **Material Covered** |
| **Week 1** | Introduction to mobile application.<br>Give some examples as homework as well. |
| **Week 2** | Review OOP.<br>OOP assignments. |
| **Week 3** | Dart Language.<br>Assignments about dart. |
| **Week 4** | Assignments in dart. |
| **Week 5** | OOP Assignments. |
| **Week 6** | OOP Assignments. |
| **Week 7** | Default flutter application Assignments. |
| **Week 8** | Rearrange the default flutter application Assignments. |
| **Week 9** | First mid exam . |
| **Week 10** | BMI application 1st widget Assignments. |
| **Week 11** | BMI calculator 2nd widget Assignments. |
| **Week 12** | BMI calculator 3rd widget Assignments. |
| **Week 13** | BMI calculator programming Assignments. |
| **Week 14** | Students applications reports discussion. |
| **Week 15** | Second mid exam. |

| Learning and Teaching Resources<br>مصادر التعلم والتدريس | | |
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| | **Text** | **Available in the Library?** |
| **Required Texts** | Providing high-quality printed paper lectures that cover the entire subject with exercises | available |
| **Recommended Texts** | **Textbook:**<br>Dart & Flutter book | No |
| **Websites** | 1-**Flutter website**<br>2-**Android Studio website**<br>**3-Dart website**<br>**4-Many youtube channels to teach mobile application.** | |

| Grading Scheme<br>مخطط الدرجات | | | | |
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| **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.