

### Ministry of Higher Education and Scientific Research - Iraq University of Baghdad College of Engineering Department of Electrical Engineering



# MODULE DESCRIPTOR FORM نموذج وصف المادة الدراسية

| Module Information<br>معلومات المادة الدراسية |                             |                 |                                     |  |                 |   |  |  |
|---|-----------------------------|-----------------|-------------------------------------|--|-----------------|---|--|--|
| Module Title                                  | PRINCIPLES OF DIGITAL MEDIA |                 |                                     | Modu   | Module Delivery |   |  |  |
| Module Type                                   | Core                        |                 |                                     |  |                 | Theory  |  |  |
| Module Code                                   | PRDM125                     |                 |                                     |  |                 | Lab.<br>Tutorial<br>Lecture<br>Practical<br>Seminar |  |  |
| ECTS Credits                                  | 5                           |                 |                                     |  |                 |   |  |  |
| SWL (hr/sem)                                  | 125                         |                 |                                     |  |                 |   |  |  |
| Module Level                                  |                             | 1               | Semester                            | Semester of Delivery 2   |                 | 2   |  |  |
| Administering Department                      |                             | Type Dept. Code | College                             | lege Type College Code   |                 |   |  |  |
| Module Leader  Dr. Matheel E Teaba wala al    |                             |                 | e-mail                              | Matheel.e. abdulmunim@uotechnology.edu.iq teaba.w.khairi@uotechnology.edu.iq |                 |   |  |  |
| Module Leader's Acad. Title                   |                             | Professor       | Module Leader's Qualification Ph.D. |  | Ph.D.           |   |  |  |
| Module Tutor None                             |                             |                 | e-mail None                         |  |                 |   |  |  |
| Peer Reviewer Name                            |                             |                 | e-mail                              |  |                 |   |  |  |
| Review Committee Approval                     |                             | 01/06/2023      | Version Number 1.0                  |  |                 |   |  |  |

| Relation With Other Modules<br>العلاقة مع المواد الدراسية الأخرى   |   |           |  |  |  |  |
|--|---|-----------|--|--|--|--|
| Prerequisite module  | None Semester   |           |  |  |  |  |
| Co-requisites module   | None Semester   |           |  |  |  |  |
| Module Aims, Learning Outcomes and Indicative Contents  أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية |   |           |  |  |  |  |
| Module Aims<br>أهداف المادة الدر اسية  | <ol> <li>Student learns principles of digital media concepts and multimedia tools.</li> <li>Student learns basic concept of handling digital media in practical by dealing with lab works simple projects.</li> <li>Student learns the right way to use media and avoid wrong effects.</li> </ol>   |           |  |  |  |  |
| Module Learning<br>Outcomes<br>مخرجات التعلم للمادة الدراسية   | <ol> <li>Recognize Digital media concepts.</li> <li>List the various content of digital media.</li> <li>Summarize what is meant by media concepts and how does it implemented in digital form.</li> <li>Define Hypermedia and hypertext.</li> <li>Define graphics ,video , text and image in digital form.</li> <li>Discuss the positive and negative effects of digital media.</li> </ol>  |           |  |  |  |  |
| Indicative Contents<br>المحتويات الإرشادية   | <ul> <li>6. Discuss the positive and negative effects of digital media.</li> <li>Indicative content includes the following.</li> <li>▶ Introduction to multimedia.</li> <li>▶ Multimedia and Hypermedia.</li> <li>▶ Multimedia Authoring and Tools.</li> <li>▶ Introduction to Text.</li> <li>▶ Basics of Computer Graphics.</li> <li>▶ Introduction to Digital Image.</li> <li>▶ Basics of Digital audio.</li> <li>▶ Fundamental concepts in Digital video.</li> <li>▶ Multimedia Compression techniques.</li> </ul> |           |  |  |  |  |
|  | Learning and Teaching S   | trategies |  |  |  |  |

## استراتيجيات التعلم والتعليم

#### **Strategies**

The main strategy that will be adopted in delivering this module is to encourage students' participation in the exercises, while at the same time refining and expanding their critical thinking skills. This will be achieved through classes, interactive tutorials and by considering type of simple experiments involving some sampling activities that are interesting to the students. التقنيات التي تستخدم

| Student Workload (SWL)   |   |   |   |  |  |
|--|---|---|---|--|--|
| الحمل الدر اسي للطالب  |   |   |   |  |  |
| Structured SWL (h/sem)         80         Structured SWL (h/w)         5.3 |   |   |   |  |  |
| Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل       | 45                                      | Unstructured SWL (h/w) الحمل الدراسي غير المنتظم للطالب أسبوعيا | 3 |  |  |
| Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل                    | , |   |   |  |  |

## **Module Evaluation**

تقييم المادة الدراسية

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

| Delivery Plan (Weekly Syllabus)<br>المنهاج الاسبوعي النظري |                             |  |  |
|--|-----------------------------|--|--|
|  | Material Covered            |  |  |
| Week 1   | Introduction to multimedia. |  |  |
| Week 2   | Multimedia and Hypermedia.  |  |  |

| Week 3  | Multimedia Authoring and Tools.          |
|---------|--|
| Week 4  | Introduction to Text.                    |
| Week 5  | Basics of Computer Graphics.             |
| Week 6  | Introduction to Digital Image.           |
| Week 7  | Digital Image Operations                 |
| Week 8  | Multimedia Applications                  |
| Week 9  | Basics of Digital audio.                 |
| Week 10 | Fundamental concepts in Digital audio.   |
| Week 11 | Fundamental concepts in Digital video 1. |
| Week 12 | Fundamental concepts in Digital video 2. |
| Week 13 | Multimedia Compression techniques.       |
| Week 14 | Multimedia Networks Communications.      |
| Week 15 | Network Types                            |
| Week 16 | Final Exam                               |

|         | Delivery Plan (Weekly Lab. Syllabus)<br>المنهاج الاسبوعي للمختبر |  |  |  |  |
|---------|--|--|--|--|--|
|         | Material Covered   |  |  |  |  |
| Week 1  | Lab 1: Introduction to Multimedia technologies and tools         |  |  |  |  |
| Week 2  | Lab 2: Introduction to Matlab                                    |  |  |  |  |
| Week 3  | Lab 3: Reading text file and introduction to hyperlink           |  |  |  |  |
| Week 4  | Lab 4: Reading image and image types processing 1                |  |  |  |  |
| Week 5  | Lab 5: Reading image and image types processing 2                |  |  |  |  |
| Week 6  | Lab 6: Reading image and image types processing 3                |  |  |  |  |
| Week 7  | Lab 7: RGB handling ,Gray scale Image , Binary image             |  |  |  |  |
| Week 8  | Lab8 : Reading video and displaying video frames                 |  |  |  |  |
| Week 9  | Lab9 : Introduction to video frame processing                    |  |  |  |  |
| Week 10 | Lab10 : Read Audio file ,mono and stereo                         |  |  |  |  |
| Week 11 | Lab11 : Audio file processing , Audio file signal                |  |  |  |  |
| Week 12 | Lab12 : Introduction to HTML                                     |  |  |  |  |
| Week 13 | Lab13: Text and image simple compression                         |  |  |  |  |

| Week 14 | Lab14 : Project for evaluation |
|---------|--------------------------------|
| Week 15 | Lab15 : Project for evaluation |

| Learning and Teaching Resources<br>مصادر التعلم والتدريس |   |                              |  |  |  |
|--|---|------------------------------|--|--|--|
|  | Text  | Available in the<br>Library? |  |  |  |
| Required Texts   | Ze-Nian Li and Mark S Drew," Fundamentals of Multimedia", Prentice Hall,2004.             | Yes                          |  |  |  |
| Recommended<br>Texts                                     | Tay Vaughan" Multimedia: Making it work", Eighth Edition, The McGraw-Hill companies,2010. | No                           |  |  |  |
| Websites   |   |                              |  |  |  |

#### **APPENDIX:**

| GRADING SCHEME<br>مخطط الدرجات |                         |                        |           |                                       |  |  |
|--------------------------------|-------------------------|------------------------|-----------|---------------------------------------|--|--|
| Group                          | Grade                   | التقدير                | Marks (%) | Definition                            |  |  |
|                                | A - Excellent           | امتياز                 | 90 - 100  | Outstanding Performance               |  |  |
|                                | <b>B</b> - Very Good    | B - Very Good اجيد جدا |           | Above average with some errors        |  |  |
| Success Group<br>(50 - 100)    | C - Good                | جيد                    | 70 - 79   | Sound work with notable errors        |  |  |
| (30 - 100)                     | <b>D</b> - Satisfactory | متوسط                  | 60 - 69   | Fair but with major shortcomings      |  |  |
|                                | E - Sufficient          | مقبول                  | 50 - 59   | Work meets minimum criteria           |  |  |
| Fail Group                     | FX – Fail               | مقبول بقرار            | (45-49)   | More work required but credit awarded |  |  |
| $(0-49)^{-1}$                  | F – Fail                | راسب                   | (0-44)    | Considerable amount of work required  |  |  |
|                                |                         |                        |           |                                       |  |  |
| Note:                          |                         |                        |           | <u> </u>                              |  |  |

NB 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.

