## A COURSE MODULE DESCRIPTOR FORM

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| Module Information |
| **Course Module Title** | Multimedia Processing |
| **ناوى کۆرس مۆدیول** | پرۆسێسینگکردنی مالتیمیدیا |
| **عنوان الوحدة** | معالجة الوسائط المتعددة |
| **Course Module Type** | Core | **Module Code** | **IT403** |
|  **ECTSs**  | 4 |
| **Department** | Department of Information Technology (IT) |
| **Department Code** | IT |
| **Module Website (CMW)** | https://noble.edu.krd/lms/login.php |
| **Module Leader (ML)** | Murthad Hussein Sabri |
| **NTI - E - mail** | murthad.sabri@noble.edu.krd |
| **ML Acad. Title** | Asst. Lect. |
| **ML ORCID** | 0000-0003-3705-7062 |
| **ML Google Scholar Acc** | https://scholar.google.com/citations?user=2OKNS34AAAAJ&hl=en |

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| Relation with Other Modules |
| **Pre-requisites** | **Information technology, Mathematics**  |
| Module Aims, Learning Outcomes and Indicative Contents |
| Module Introductory Description | Multimedia processing is a technical field that covers the design graphic, editing, and video processing of multimedia systems using appropriate solutions that meet user requirements. This includes learning the technology used to perform a wide variety of tasks on portable devices e. personal computer, Laptops, and mobile.Upon completion of this specialization, students should be able for graphic design, editing image, logo design and video processing. |
| Module Aims | 1. Introduce the basic principles of image processing.
2. Practical application of Photoshop.
3. Experience of using a development environment for image editing.
4. Provide insights in more advanced video editing.
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| Module Learning Outcome | On successful completion of this course, each student is able to:1. Understand the fundamental of image processing
2. Design and edit graphic.
3. Utilize the advanced features of Photoshop environment for editing.
4. context-aware solutions for mobile devices.
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| Learning and Teaching Strategies |
| **Strategies** | Small groups, video learning, working on projects, student center (presenting seminars by students), scientific trips to telecommunication companies, letting students become an assistant at lab. Class activities like; problem-based learning, Gap fill, Jigsaw method, Teach back teaching method.The mentioned learning and strategies have been implemented as a strategy of learning and teaching in order to motivate the students to participate and engage to the class more effectively. |

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| **Required texts and References** |
| Adobe Photoshop Classroom in a Book |

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| Module Delivery |
| **Total workload** |
| **Contact Theoretical Hours – Per semester** | 15 |
| **Contact Practical Hours – Per Semester** | 30 |

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| Module Assessment |
| **Module Activities** | **Time /Number** | **Weight (Marks)** | **Week Due** |
| Contact hours – Participation | Daily bases | 5% | Weekly  |
| (Science / Lab)(Social science / Critical thinking) | Daily bases | 5% | To do some activity in class. |
| Presentation / Seminar | Week(7)/1 | 5% | To assess students' computer skills in the lab. |
| Tutorial | Week(8)/1 | 5% | To assess how students write and research from the internet. |
| Quiz | Week(5)/1 | 5% | To assess students' skills in explanation. |
| Self-study | Week(4)/1 | 5% | To assess students’ information |
| Projects | Week(6)/1 | 5% | To assess how students write and research from the internet. |
| Oral assessment | Week(11)/1 | 5% | To assess students' computer skills in the lab. |
| Midterm Exam  | Week(10)/1 | 20% | To assess the students learning level. |
| Final Exam | Week(15)/1 | 40% | To assess the students learning level in both theory and practical |
| **Total** |  | 100% |  |

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| Delivery Plan theory (Designed Syllabus) |
|  | **Course Module Content** |
| Week 1 | Introduction  |
| Week 2 | What is multimedia, Enabling technology and digitization |
| Week 3 | Overview, Computer imaging system |
| Week 4 | Image types |
| Week 5 | Image processing application |
| Week 6 | Image analysis, preprocessing |
| Week 7 | Digitization Graphics and Image representation |
| Week 8 | Mid-term exam. |
| Week 9 | Multimedia and Deep learning |
| Week 10 | **Color** |
| Week 11 | Video |
| Week 12 | Digital audio/ Compression |
| Week 13 | Video compression |
| Week 14 | Review  |
| Week 15 | ***Final exam*** |
| Delivery Plan practical (Designed Syllabus) |
|  | **Course Module Content** |
| Week 1 | Introduction in lab |
| Week 2 | What is Photoshop? |
| Week 3 | [Getting to Know the Photoshop Interface](https://edu.gcfglobal.org/en/photoshopbasics/getting-to-know-the-photoshop-interface/1/) |
| Week 4 | [Basic Tasks in Photoshop](https://edu.gcfglobal.org/en/photoshopbasics/basic-tasks-in-photoshop/1/) |
| Week 5 | Saving Images |
| Week 6 | Understanding Layers |
| Week 7 | Levels, Curves, and Color |
| Week 8 | Midterm Exam |
| Week 9 | Sharpening and Noise Reduction |
| Week 10 | [Doing More with Layers](https://edu.gcfglobal.org/en/photoshopbasics/doing-more-with-layers/1/) |
| Week 11 | Working with Brushes |
| Week 12 | Working with Text |
| Week 13 | Reading a Histogram |
| Week 14 | Review  |
| Week 15 | ***Final exam*** |

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| Course Keywords |
| Multimedia, Image processing |