



## E-learning course Definition Document

Course: e-learning Technical

Institute of engineering management and digitization

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Number of Sessions: 12 sessions (2 hours)

### Course Summary:

Course summary: the project management course aims to provide a comprehensive overview of e-learning, focusing on the development of basic skills and knowledge in e-learning. The course deals with the definition of teaching and learning, the concept of e-learning, its goals, patterns, requirements, and challenges facing it, the concept of virtual learning, the mechanism in which virtual education takes place, its characteristics, virtual classes, their components, virtual classroom software, and the pros and cons of virtual learning. The concept of the learning management system and the main components of the learning management system, the types of learning management systems (LMS) and their features, the educational content management system, and the difference between the learning management system and the educational content management system. The course also includes an introduction to educational electronic platforms, their types, characteristics, requirements for their employment in education, criteria for evaluating educational electronic platforms, the importance of SCORM standards and the difference between the website and the electronic platform. The course also seeks to enable students to understand and master the basics of a set



of tools and software necessary for e-learning such as e-mail (Gmail), Video Meeting program (Zoom), electronic test design application (Google Forms) Google Forms, virtual classroom application (Google Classroom), cloud storage application (Google Drive). This is in addition to how to write scientific reports by touching on what the scientific report is, its importance, the types of Scientific Reports, the main elements of the scientific report, the steps of writing the scientific report and the mistakes that should be avoided when writing the scientific report with tips for writing the scientific report. The course also deals with the introduction of the internet and its search skills, and the author does not miss the introduction of students to artificial intelligence and its applications in education, the advantages of learning based on artificial intelligence and the obstacles of employing artificial intelligence applications in education. The assessment includes theoretical exams, practical project evaluations, active participation in group discussions and exercises, with the aim of preparing students to practice e-learning effectively and efficiently to achieve success in diverse and changing e-learning environments.

**Course Code: BMN401**

**Classes: .....**

❖ **Course Chapters:**

| Chapter Number | Chapter Title   | Brief Description   |
|----------------|---|---|
| 1              | E-learning (its concept, goals, patterns, requirements, challenges) | The lecture will address the concept of teaching and learning, the concept of e-learning and its goals. We will identify the types of simultaneous and asynchronous e-learning and discuss the requirements to be met in students, teachers and administrators in addition to the physical requirements required by e-learning. Finally, we will discuss the challenges facing e-learning.  |
| 2              | Virtual learning  | The lecture will address the concept of virtual learning, its characteristics and the mechanism in which virtual education is carried out, it will address virtual classes and their components, we will get acquainted with the most prominent virtual classroom software, and explain the pros and cons of virtual learning.  |
| 3              | Learning management systems   | In this lecture, we will start with an introduction to learning management systems. We will discuss the concept of a learning management system, and then move on to the main components of a learning management system. We will review the types of learning management systems (LMS), explain the features of learning management systems, learn about the educational content management system, and show the difference between a learning management system and an educational content management system. |
| 4              | Educational electronic platforms                                    | In this lecture, we will explain the concept of educational electronic platforms, their types, explain their characteristics and requirements for the use of electronic platforms in education<br>We will discuss the criteria for evaluating educational electronic platforms and the importance of SCORM criteria, and finally we will show the difference between the website and the electronic platform.   |

|   |   |  |
|---|---|--|
| 5 | E-mail address (Electronic Mail)  | <b>In this lecture, we will discuss the features of e-mail. We will also explain how to create an email using Gmail Gmail, and give general tips for creating and using email</b>  |
| 6 | Zoom Video Meeting software   | In this lecture, we will give an overview of the program and its advantages, we will also explain how to use the Zoom program, finally, we present a set of tips for using Zoom professionally.  |
| 7 | Some e-learning software-electronic test design application Google Forms Google Forms | In this lecture, we will start with an overview of the program and its advantages. We will get acquainted with how to make a questionnaire using Google Google Forms forms, and conclude with tips for using Google Google Forms forms professionally  |
| 8 | Some e-learning software-virtual classroom application Google Classroom               | In this lecture, we will initially cover an overview of the program and its advantages, we will also review the way to make a virtual classroom using Google Classroom and finally we will give tips for using Google Classroom classes professionally |
| 9 | Some e-learning software-cloud storage application Google Drive                       | In this lecture, we will start with an overview of the program and its advantages. We will get acquainted with how the Google Drive Google Drive account works, and conclude with tips for using Google Drive Google Drive professionally              |

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| 10 | Writing reports                      | In this lecture, we will deal with what a scientific report is, we will learn about the importance of writing a scientific report, explain the types of Scientific Reports and the main elements of a scientific report. Then we will discuss the main elements of the scientific report and will review the steps for writing it. We explain what mistakes should be avoided when writing a scientific report. Finally, we will give tips for writing a scientific report. |
| 11 | The internet and its search skills   | In this lecture, we will start by getting to know what the internet is. We will discuss the importance of the internet, and then move on to get acquainted with search engines, their components and the most famous engines, and we will review the skills of internet search methods, and provide tips to search effectively and accurately in the internet   |
| 12 | Artificial intelligence in education | In this lecture, we will address what artificial intelligence is, we will learn about the applications of artificial intelligence in education, how to use artificial intelligence applications in education, and explain the advantages of AI-based learning, finally, we show the obstacles of employing artificial intelligence applications in education.   |

### ❖ Learning Outcomes:

| Learning Outcomes | Learning Outcomes  | Assignment (Project) | Synchronous Sessions | exam |
|-------------------|--|----------------------|----------------------|------|
|                   | <ul style="list-style-type: none"> <li>* Identify the concepts of teaching and learning.</li> <li>* Identify the concept of e-learning.</li> <li>* Understand the objectives of e-learning.</li> <li>* Recognizes e-learning patterns.</li> <li>* Understand the e-learning requirements.</li> <li>* Identify the challenges facing e-learning.</li> </ul> |                      | √                    | √    |
| <b>L02</b>        | * Familiarization with the concept of virtual learning   |                      | √                    | √    |

|     |   |   |   |
|-----|---|---|---|
|     | <ul style="list-style-type: none"> <li>* Learn the mechanism by which virtual education takes place</li> <li>* Identify the characteristics of virtual learning</li> <li>* Familiarization with the concept of virtual classes</li> <li>* Statement of the components of virtual classes</li> <li>* Familiarization with virtual classroom software</li> <li>* Demonstration of the pros of virtual learning</li> <li>* Statement of the disadvantages of virtual learning</li> </ul>                                     |   |   |
| L03 | <ul style="list-style-type: none"> <li>* Familiarization with the concept of learning management system</li> <li>* Statement of the main components of the learning management system</li> <li>* Statement of the types of learning management systems (LMS)</li> <li>* Understanding the features of learning management systems</li> <li>* Gain knowledge about the educational content management system</li> <li>* Comparison between learning management system and educational content management system</li> </ul> | ✓ | ✓ |
| L04 | <ul style="list-style-type: none"> <li>* Familiarization with the concept of educational electronic platforms</li> <li>* Statement of the types of educational electronic platforms</li> <li>* Understanding the characteristics of educational electronic platforms</li> <li>* Statement of requirements for the employment of electronic platforms in education</li> </ul>  | ✓ | ✓ |

|     |   |   |   |   |
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|     | <ul style="list-style-type: none"> <li>* Understanding the evaluation criteria of educational electronic platforms</li> <li>* Statement of the importance of SCORM standards (scorm)</li> <li>* Comparison between the website and the electronic platform</li> </ul> |   |   |   |
| L05 | <ul style="list-style-type: none"> <li>* Understanding the features of e-mail</li> <li>* Gain knowledge on how to create an email using Gmail</li> <li>* Learn about general tips for creating and using e-mail</li> </ul>  | √ | √ | √ |
| L06 | <ul style="list-style-type: none"> <li>* Understand the advantages of Zoom software</li> <li>* Gain knowledge on how to use the Zoom program</li> <li>* Learn about the tips for using Zoom professionally</li> </ul>   | √ | √ | √ |
| L07 | <ul style="list-style-type: none"> <li>* Understand the advantages of the Google Forms app</li> <li>* Gain knowledge on how to design a questionnaire using Google Forms</li> <li>* Learn tips for using Google Forms professionally</li> </ul>                       | √ | √ | √ |
| L08 | <ul style="list-style-type: none"> <li>* Understand the advantages of the Google Classroom app</li> <li>* Gain knowledge on how to design a virtual classroom using Google Classroom</li> <li>* Learn tips for using Google Classroom professionally</li> </ul>       | √ | √ | √ |

|                    |   |  |          |          |
|--------------------|---|--|----------|----------|
| <p><b>L 09</b></p> | <ul style="list-style-type: none"> <li>* Understand the advantages of the Google Drive app</li> <li>* Gain knowledge on how to create a Google Drive Google Drive account</li> <li>* Learn tips for using Google Drive Google Drive professionally</li> </ul>   |  | <p>✓</p> | <p>✓</p> |
| <p><b>L 10</b></p> | <ul style="list-style-type: none"> <li>* Understanding what a scientific report is</li> <li>* Statement of the importance of writing a scientific report</li> <li>* Indication of the types of Scientific Reports</li> <li>* Statement of the main elements of the scientific report</li> <li>* Understand how to write a scientific report</li> <li>* Identify mistakes to avoid when writing a scientific report</li> <li>* Learn about tips for writing a scientific report</li> </ul> |  | <p>✓</p> | <p>✓</p> |
| <p><b>L 11</b></p> | <ul style="list-style-type: none"> <li>* Understanding what the internet is</li> <li>* The importance of the internet</li> <li>* Recognition of search engines</li> <li>* Statement of components of search engines</li> </ul>  |  | <p>✓</p> | <p>✓</p> |

|      |   |  |   |   |
|------|---|--|---|---|
|      | <ul style="list-style-type: none"> <li>* Identify the most popular search engines</li> <li>* Acquire the skills of internet search methods</li> <li>* Identify tips to search effectively and accurately in the internet</li> </ul>   |  |   |   |
| L 12 | <ul style="list-style-type: none"> <li>* Understanding what artificial intelligence is</li> <li>* Statement of artificial intelligence applications in education</li> <li>* Learn the mechanisms of employing artificial intelligence applications in education</li> <li>* Statement of the advantages of artificial intelligence-based learning</li> <li>* Statement of the obstacles to the use of artificial intelligence applications in education</li> </ul> |  | √ | √ |

❖ **Evaluation Criteria:**

| Learning Outcomes | To achieve the learning outcomes, the student must demonstrate competence in:  |
|-------------------|--|
| L01               | <ul style="list-style-type: none"> <li>* Distinguish between the concepts of teaching and learning.</li> <li>* Demonstrates the concept of e-learning.</li> <li>* Shows the objectives of e-learning.</li> <li>* Distinguishes e-learning styles.</li> <li>* Clarifies e-learning requirements.</li> <li>* Explains the challenges facing e-learning.</li> </ul> |

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| <p><b>L02</b></p> | <ul style="list-style-type: none"> <li>* Demonstrates the concept of virtual learning</li> <li>* Shows the mechanism by which virtual education takes place</li> <li>* Enumerates the characteristics of virtual learning</li> <li>* Explains the concept of virtual classes</li> <li>* Shows the components of virtual classes</li> <li>* Shows the default classroom code</li> <li>* Shows the pros of virtual learning</li> <li>* Shows the disadvantages of virtual learning</li> </ul>   |
| <p><b>L03</b></p> | <ul style="list-style-type: none"> <li>* Demonstrates the concept of a learning management system</li> <li>* Lists the main components of the learning management system</li> <li>* Shows the types of learning management systems (LMS)</li> <li>* Explains the features of learning management systems</li> <li>* Demonstrates the educational content management system</li> <li>* Differentiates between learning management system and educational content management system</li> </ul>  |
| <p><b>L04</b></p> | <ul style="list-style-type: none"> <li>* Clarifies the concept of educational electronic platforms</li> <li>* Shows the types of educational electronic platforms</li> <li>* Explains the characteristics of educational electronic platforms</li> <li>* Shows the requirements for the use of electronic platforms in education</li> <li>* Evaluation criteria for educational electronic platforms</li> <li>* Demonstrates the importance of SCORM standards (scorm )</li> <li>* Distinguish between the website and the electronic platform</li> </ul> |
| <p><b>L05</b></p> | <ul style="list-style-type: none"> <li>* Explains the features of e-mail</li> <li>* Creates an email using Gmail Gmail</li> <li>* Mentions general tips for creating and using email</li> </ul>   |
| <p><b>L06</b></p> | <ul style="list-style-type: none"> <li>* Shows the advantages of the Zoom program</li> <li>* Uses the Zoom program</li> <li>* Mentions tips for using Zoom professionally</li> </ul>  |
| <p><b>L07</b></p> | <ul style="list-style-type: none"> <li>* Shows the advantages of the Google Forms application</li> <li>* A questionnaire is designed using Google Forms Google Forms</li> <li>* Mentions tips for using Google Forms Google Forms professionally</li> </ul>   |
| <p><b>L08</b></p> | <ul style="list-style-type: none"> <li>* Demonstrates the advantages of the Google Classroom application</li> <li>* Creates a virtual classroom using Google Classroom</li> <li>* Mentions tips for using Google Classroom Google Classroom classes professionally</li> </ul>   |

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| <p><b>LO9</b></p>   | <ul style="list-style-type: none"> <li>* Shows the advantages of the Google Drive application</li> <li>• Creates a Google Drive Google Drive account</li> <li>* Mentions tips for using Google Drive Google Drive professionally</li> </ul>   |
| <p><b>LO10</b></p>  | <ul style="list-style-type: none"> <li>* Explains what the scientific report is</li> <li>* Shows the importance of writing a scientific report</li> <li>* Lists the types of Scientific Reports</li> <li>* Enumerates the main elements of the scientific report</li> <li>* Shows the steps of writing the scientific report</li> <li>* Recognizes mistakes to avoid when writing a scientific report</li> <li>* Mentions tips for writing a scientific report</li> </ul> |
| <p><b>LO 11</b></p> | <ul style="list-style-type: none"> <li>* Explains what the internet is</li> <li>* Shows the importance of the internet</li> <li>* Knows the search engines</li> <li>* Enumerates the components of search engines</li> <li>* Lists the most popular search engines</li> <li>* Demonstrates the skills of internet search methods</li> <li>* Mentions tips to search effectively and accurately in the internet</li> </ul>   |
| <p><b>LO 12</b></p> | <ul style="list-style-type: none"> <li>* Shows what artificial intelligence is</li> <li>* Demonstrates the applications of artificial intelligence in education</li> <li>* Explains the mechanisms of employing artificial intelligence applications in education</li> <li>* Shows the advantages of artificial intelligence-based learning</li> <li>* Enumerates the obstacles to the use of artificial intelligence applications in education</li> </ul>                |

### **Guidelines**

**Generating Evidence:** The student must individually prepare a brief report demonstrating their understanding of the previous learning outcomes before taking the exam.

The report should cover:

One of the topics suggested by the course instructor related to one of the concepts explained in the syllabus.

### **References:**

### **Arabic References:**

1. الجعواني، عفاف، الكعبي، سليمان. (2024). أثر تطبيقات الذكاء الاصطناعي في تطوير العملية التعليمية. المجلة الدولية للدراسات التربوية والنفسية، المجلد (13)، العدد4، ص ص 787-796.
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### **English References:**

1. Abriox. D. (2004), "Critique of Acanadion Virtual, University Models for an Online National Learning Network", [online] [Accessed 13 August 2024] Available from: <http://www.schoolnet.ca/campus/virtual/comnentsol-e.htm>
2. Border et al (2006) E-learning tools, in: e- learning concepts and techniques, institute for interactive technologies, Bloomsburg University of Pennsylvania. USA.
3. Makridakis, S., & Polemitis, A. (2023). Human Intelligence (HI) Versus Artificial Intelligence (AI) and Intelligence Augmentation (IA) (pp. 3–29). [https://doi.org/10.1007/978-3-031-35879-1\\_1](https://doi.org/10.1007/978-3-031-35879-1_1)