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### جامعة الزيتونية

#### Al-Zaytoonah University of Jordan كلية العلوم وتكنولوجيا المعلومات Faculty of Science and Information Technology



" عراقة وجودة" "Tradition and Quality"

QF01/0415-3.0 نموذج مصفوفة ارتباط المواد الدراسية بأساليب التعلم وطرائق التقويم – إجراءات إعداد الخطة الدراسية وتحديثها / قسم الفيزياء

Physics	Major	Physics	Department	Science and information technology	College
32	Number of		Date of	2022-2021	Study Plan No
	courses		Accreditation		

Note: This form is used for major subjects only.

Methods of Measurement and Evaluation	Applied Teaching Methods	Course's Name	Course no
Performance-based evaluation: performance.  - Pen and paper: tests, experiment solution report, and open-ended paragraphs (problem solving).  Note: questions and answers.  Experience work skills  Evaluation Tool: Checklist.	Teaching by experience:  - An introduction to the topic of the experiment.  - Conducting an experiment, taking data and analysing it.	General Physics Lab (1)	0150101
Performance-based evaluation: performance.  - Pen and paper: tests, experiment solution report, and open-ended paragraphs (problem solving).	<ul> <li>Blended Teaching:</li> <li>Live lecture, questions and answers.</li> <li>Workbooks/worksheets, exercises and exercises, reading</li> </ul>	General Physics (2)	0150121



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، إعداد الخطة الدراسية وتحديثها / قسم الفيزياء	وذج مصفوفة ارتباط المواد الدراسية بأساليب التعلم وطرائق التقويم – إجراءات	نم	QF01/0415-3.0
Note: questions and answers.  Experience work skills  - Evaluation Tool: Checklist.  Performance-based evaluation:	activities, problem solving and investigation, videos about the subject (electronically).		
performance.	<ul> <li>Teaching by experience:</li> <li>An introduction to the topic of the experiment.</li> <li>Conducting an experiment, taking data and analysing it.</li> </ul>	General Physics Lab (2)	0150102
Performance-based evaluation: performance.  - Pen and paper: tests, experiment solution report, and open-ended paragraphs (problem solving).  Note: questions and answers.  Experience work skills.  - Evaluation Tool: Checklist.	Direct teaching:  (Lecture, questions and answers, workbooks / worksheets, exercises and exercises, reading activities, problem solving and investigation).	Modern Physics	0150231



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عداد الخطة الدراسية وتحديثها / قسم الفيزياء	نموذج مصفوفة ارتباط المواد الدراسية بأساليب التعلم وطرائق التقويم – إجراءات إعداد الخطة الدراسية وتحديثها / قسم الفيزياء		
Performance-based evaluation:	Blended teaching:  Mathematical Physics (1)	015025	
performance.	– Live lecture, questions and		
<ul> <li>Pen and paper: tests, experiment</li> </ul>	answers.		
solution report, and open-ended	<ul><li>Workbooks/worksheets,</li></ul>		
paragraphs (problem solving).	exercises and exercises, reading		
<ul> <li>Note: questions and answers.</li> </ul>	activities, problem solving and		
Experience work skills	investigation, and videos about		
<ul> <li>Evaluation Tool: Checklist.</li> </ul>	the material (electronic).		
Performance-based evaluation:	Blended teaching:  Mathematical Physics (2)	0150252	
performance.	– Live lecture, questions and		
<ul> <li>Pen and paper: tests, experiment</li> </ul>	answers.		
solution report, and open-ended	<ul><li>Workbooks/worksheets,</li></ul>		
paragraphs (problem solving).	exercises and exercises, reading		
<ul> <li>Note: questions and answers.</li> </ul>	activities, problem solving and		
Experience work skills	investigation, and videos about		
<ul> <li>Evaluation Tool: Checklist.</li> </ul>	the material (electronic).		
Performance-based evaluation:	Blended teaching: Optics	015021	
performance.	– Live lecture, questions and		
<ul> <li>Pen and paper: tests, experiment</li> </ul>	answers.		
solution report, and open-ended	- Workbooks/worksheets,		



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إعداد الخطة الدراسية وتحديثها / قسم الفيزياء	ذج مصفوفة ارتباط المواد الدراسية بأساليب التعلم وطرائق التقويم - إجراءات إ	نمو	QF01/0415-3.0
paragraphs (problem solving).  - Note: questions and answers.  Experience work skills  Evaluation Tool: Checklist.	exercises and exercises, reading activities, problem solving and investigation, and videos about the material (electronic).		
Performance-based evaluation: performance.  Pen and paper: tests, experiment solution report, and open-ended paragraphs (problem solving).  Note: questions and answers. Experience work skills Evaluation Tool: Checklist.	Direct teaching:  (Lecture, questions and answers, workbooks / worksheets, exercises and exercises, reading activities, problem solving and investigation).	Computational Physics	0150253
Performance-based evaluation: performance.  - Pen and paper: tests, experiment solution report, and open-ended paragraphs (problem solving).  - Note: questions and answers. Experience work skills  Evaluation Tool: Checklist.	Blended teaching:  - Live lecture, questions and answers.  - Workbooks/worksheets, exercises and exercises, reading activities, problem solving and investigation, and videos about the material (electronic).	Electronics	0150221

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عداد الخطة الدراسية وتحديثها / قسم الفيزياء	موذج مصفوفة ارتباط المواد الدراسية بأساليب التعلم وطرائق التقويم - إجراءات إ	QF01/0415-3.0
Performance-based evaluation: performance.  Pen and paper: tests, experiment solution report, and open-ended paragraphs (problem solving).  Note: questions and answers. Experience work skills  Evaluation Tool: Checklist.	Teaching by experience:  - An introduction to the topic of the experiment.  - Conducting an experiment, taking data and analysing it.	Electronics lab 0150301
Performance-based evaluation:  performance.  Pen and paper: tests, experiment solution report, and open-ended paragraphs (problem solving).  Note: questions and answers.  Experience work skills  Evaluation Tool: Checklist.	Blended teaching:  - Live lecture, questions and answers.  - Workbooks/worksheets, exercises and exercises, reading activities, problem solving and investigation, and videos about the material (electronic).	Electricity and Magnetism (1) 0150321
Performance-based evaluation: performance.  - Pen and paper: tests, experiment solution report, and open-ended	Blended teaching:  - Live lecture, questions and answers.  - Workbooks/worksheets,	Classical Mechanics (1) 0150311

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# Science &

### Al-Zaytoonah University of Jordan كلية العلوم وتكنولوجيا المعلومات **Faculty of Science and Information Technology**



" عراقة وجودة" "Tradition and Quality"

إعداد الخطة الدراسية وتحديثها / قسم الفيزياء	وذج مصفوفة ارتباط المواد الدراسية بأساليب التعلم وطرائق التقويم - إجراءات	نمر	QF01/0415-3.0
paragraphs (problem solving).  - Note: questions and answers.  Experience work skills  - Evaluation Tool: Checklist.  Performance-based evaluation: performance.  - Pen and paper: tests, experiment solution report, and open-ended paragraphs (problem solving).  - Note: questions and answers.  Experience work skills	exercises and exercises, reading activities, problem solving and investigation, and videos about the material (electronic).  Direct teaching:  (Lecture, questions and answers, workbooks / worksheets, exercises and exercises, reading activities, problem solving and investigation).	Quantum Mechanics (1)	0150331
<ul> <li>Evaluation Tool: Checklist.</li> <li>Performance-based evaluation: performance.</li> <li>Pen and paper: tests, experiment solution report, and open-ended paragraphs (problem solving).</li> <li>Note: questions and answers.</li> <li>Experience work skills</li> <li>Evaluation Tool: Checklist.</li> </ul>	Teaching by experience:  - An introduction to the topic of the experiment.  - Conducting an experiment, taking data and analysing it.	Optometry Lab	0150302



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نموذج مصفوفة ارتباط المواد الدراسية بأساليب التعلم وطرائق التقويم – إجراءات إعداد الخطة الدراسية وتحديثها / قسم الفيزياء		QF01/0415-3.0
Performance-based evaluation:	Blended teaching:	Electricity and Magnetism (2) 015032
performance.	– Live lecture, questions and	
<ul> <li>Pen and paper: tests, experiment</li> </ul>	answers.	
solution report, and open-ended	<ul><li>Workbooks/worksheets,</li></ul>	
paragraphs (problem solving).	exercises and exercises, reading	
<ul> <li>Note: questions and answers.</li> </ul>	activities, problem solving and	
Experience work skills	investigation, and videos about	
<ul> <li>Evaluation Tool: Checklist.</li> </ul>	the material (electronic).	
Performance-based evaluation:	Blended teaching:	Thermodynamics 015034
performance.	– Live lecture, questions and	
<ul> <li>Pen and paper: tests, experiment</li> </ul>	answers.	
solution report, and open-ended	<ul><li>Workbooks/worksheets,</li></ul>	
paragraphs (problem solving).	exercises and exercises, reading	
<ul> <li>Note: questions and answers.</li> </ul>	activities, problem solving and	
Experience work skills	investigation, and videos about	
<ul> <li>Evaluation Tool: Checklist.</li> </ul>	the material (electronic).	
Performance-based evaluation:	Blended teaching:	Classical Mechanics (2) 015031
performance.	– Live lecture, questions and	` '
<ul> <li>Pen and paper: tests, experiment</li> </ul>	answers.	
solution report, and open-ended	<ul><li>Workbooks/worksheets,</li></ul>	



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" عراقة وجودة" "Tradition and Quality"

الخطة الدراسية وتحديثها / قسم الفيزياء	وذج مصفوفة ارتباط المواد الدراسية بأساليب التعلم وطرائق التقويم - إجراءات إعداد	QF01/0415-3.0
paragraphs (problem solving).  – Note: questions and answe Experience work skills	investigation, and videos about	
<ul><li>Evaluation Tool: Checklist.</li><li>Performance-based assessment</li><li>performance.</li></ul>	the material (electronic).	Quantum Mechanics (2) 015033
<ul> <li>Pen and paper: tests, paragraph</li> <li>with a specific answer, paragraph</li> <li>with an open answer (solve problems).</li> <li>Note: Questions and answers.</li> <li>Homework and duties.</li> <li>Communication</li> <li>Students' writings (article).</li> <li>Projects</li> <li>Evaluation Tool: Checklist.</li> </ul>	ns – Live lecture, questions and	
Performance-Based Evaluation Performance.  Pen and paper: Quizzes, selected	– Live lecture, questions and	Methods of Teaching Physics 015038



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إعداد الخطة الدراسية وتحديثها / قسم الفيزياء	نموذج مصفوفة ارتباط المواد الدراسية بأساليب التعلم وطرائق التقويم – إجراءات إ	QF01/0415-3.0
<ul><li>Note: Questions and answers.</li><li>Evaluation Tool: menu list.</li></ul>	exercises and exercises, reading activities, problem solving and	
- Research project	investigation, and videos about the material (electronic).	
Performance-based evaluation: performance.  - Pen and paper: tests, experiment solution report, and open-ended paragraphs (problem solving).  - Note: questions and answers. Experience work skills  - Evaluation Tool: Checklist.	Blended teaching:  - Live lecture, questions and answers.  - Workbooks/worksheets, exercises and exercises, reading activities, problem solving and investigation, and videos about the material (electronic).	015046
Performance-based evaluation: performance.  - Pen and paper: tests, experiment solution report, and open-ended paragraphs (problem solving).  - Note: questions and answers. Experience work skills  - Evaluation Tool: Checklist.	Blended teaching:  - Live lecture, questions and answers.  - Workbooks/worksheets, exercises and exercises, reading activities, problem solving and investigation, and videos about the material (electronic).	015043



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عداد الخطة الدراسية وتحديثها / قسم الفيزياء	نموذج مصفوفة ارتباط المواد الدراسية بأساليب التعلم وطرائق التقويم – إجراءات إ	QF01/0415-3.0
Performance-based evaluation: performance.	Teaching by experience:  - An introduction to the topic of the experiment.  Advanced Practical Physics  Laboratory	015040
	<ul> <li>Conducting an experiment, taking data and analysing it.</li> </ul>	
Pen and paper: tests, experiment solution report, and open-ended paragraphs (problem solving).	Blended teaching:  - Live lecture, questions and answers.  - Workbooks/worksheets, exercises and exercises, reading activities, problem solving and investigation, and videos about the material (electronic).	0150432
Performance-based evaluation: performance.  - Pen and paper: tests, experiment solution report, and open-ended paragraphs (problem solving).  - Note: questions and answers.  Experience work skills	Blended teaching:  - Live lecture, questions and answers.  - Workbooks/worksheets, exercises and exercises, reading activities, problem solving and investigation, and videos about	015044

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إعداد الخطة الدراسية وتحديثها / قسم الفيزياء	نموذج مصفوفة ارتباط المواد الدراسية بأساليب التعلم وطرائق التقويم - إجراءات	QF01/0415-3.0
<ul> <li>Evaluation Tool: Checklist.</li> <li>Performance-based assessment: performance.</li> <li>Pen and paper: writing a research paper</li> <li>Note: Questions and answers.</li> <li>Homework and duties.</li> <li>Communication</li> <li>Students' writings (article).</li> <li>Projects.</li> <li>Evaluation Tool: Checklist.</li> </ul>		desearch Symposium in 0150471 Physics
Performance-based evaluation: performance.  - Pen and paper: tests, experiment solution report, and open-ended paragraphs (problem solving).	Blended teaching:  - Live lecture, questions and answers.  - Workbooks/worksheets, exercises and exercises, reading	Vave And Vibration Physics 0150313



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اد الخطة الدراسية وتحديثها / قسم الفيزياء	QF01/0415-3.0	
<ul> <li>Note: questions and answers</li> <li>Experience work skills</li> <li>Evaluation Tool: Checklist.</li> </ul>	activities, problem solving and investigation, and videos about the material (electronic).	
Performance-based evaluation performance.  - Pen and paper: tests, experiment solution report, and open-ended paragraphs (problem solving).  - Note: questions and answers Experience work skills  - Evaluation Tool: Checklist.	<ul> <li>Live lecture, questions and answers.</li> <li>Workbooks/worksheets, exercises and exercises, reading</li> </ul>	0150314
Performance-based evaluation performance.  - Pen and paper: tests, experiment solution report, and open-ended paragraphs (problem solving).  - Note: questions and answers Experience work skills  - Evaluation Tool: Checklist.	Blended teaching:  - Live lecture, questions and answers.  - Workbooks/worksheets, exercises and exercises, reading	015033



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" عراقة وجودة" "Tradition and Quality"

د الخطة الدراسية وتحديثها / قسم الفيزياء	QF01/0415-3.0	
Performance-based evaluation	: Blended teaching:	Environmental Physics 0150342
performance.	– Live lecture, questions and	
<ul> <li>Pen and paper: tests, experimer</li> </ul>	t answers.	
solution report, and open-ende	d – Workbooks/worksheets,	
paragraphs (problem solving).	exercises and exercises, reading	
<ul> <li>Note: questions and answers</li> </ul>	. activities, problem solving and	
Experience work skills	investigation, and videos about	
Evaluation Tool: Checklist.	the material (electronic).	
Performance-based evaluation	: Blended teaching:	Atomic and Molecular Physics 015043
performance.	– Live lecture, questions and	
- Pen and paper: tests, experimer	t answers.	
solution report, and open-ende	d – Workbooks/worksheets,	
paragraphs (problem solving).	exercises and exercises, reading	
<ul> <li>Note: questions and answers</li> </ul>	. activities, problem solving and	
Experience work skills	investigation, and videos about	
Evaluation Tool: Checklist.	the material (electronic).	
Performance-based evaluation	: Blended teaching:	Laser physics 015041
performance.	– Live lecture, questions and	. ,
<ul> <li>Pen and paper: tests, experimer</li> </ul>	t answers.	

- Workbooks/worksheets,

solution

and

open-ended

report,



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إعداد الخطة الدراسية وتحديثها / قسم الفيزياء	تعلم وطرائق التقويم - إجراءات	ارتباط المواد الدراسية بأساليب ال	وذج مصفوفة	نم		QF01/0415-3.0
paragraphs (problem solving).  - Note: questions and answers.  Experience work skills  - Evaluation Tool: Checklist.	exercises activities, investigation, the material		reading and about			
Performance-based evaluation: performance.  - Pen and paper: tests, experiment solution report, and open-ended paragraphs (problem solving).  - Note: questions and answers. Experience work skills  - Evaluation Tool: Checklist.	answers. – Workbooks/w	and exercises, problem solving and videos	and reading and about	Semiconductor	Physics	0150421
	At Committee meeting no Date of the Meeting Signature of the Dean of College				committee	the study plan ection Council no he Head of