

<b>Faculty: Pharmacy</b>	
<b>Department:</b> pharmaceutical science	<b>Program: MSc</b>
<b>Semester: 2<sup>nd</sup></b>	<b>Academic year: 2022/2023</b>



## Course Plan

### First: Course Information

<i>Course Number:</i> 1101703	<i>Course Name:</i> Research Methodology	<i>Credit Hours:</i> 1 hr.
<i>Prerequisite:</i>	<i>Section Number:</i> 1	<i>Lecture Time:</i> Sun: 4:30-5:30 pm
<b>Course Nature:</b>	<input type="checkbox"/> <i>University Obligatory Requirements University</i> <input type="checkbox"/> <i>Obligatory Requirements</i> <input checked="" type="checkbox"/> <i>Faculties Obligatory Requirements</i> <input type="checkbox"/> <i>Department Obligatory Requirements</i> <input type="checkbox"/> <i>Department Elective Requirements</i> <input type="checkbox"/> <i>Supporting Specialization Requirements</i>	
<b>Type of Education:</b>	<input type="checkbox"/> <b>Face-to-Face (Fully Direct Education)</b> <input type="checkbox"/> <b>Blended Learning (2 Face-to-Face + 1Asynchronous)</b> <input checked="" type="checkbox"/> <b>Fully Electronic Education (2 Synchronous + 1 Asynchronous)</b>	

### Second: lecturer's Information

<i>Name:</i> Professor Mohammad Abu Assab	<i>Academic Rank:</i> Assistant Prof.
<i>Office Number:</i> 229	<i>Telephone Ext:</i> 1550 <i>Email:</i> <a href="mailto:mabuassab@zu.edu.jo">mabuassab@zu.edu.jo</a>
<i>Office Hours:</i>	Sunday, Tuesday, and Thursday: 11-12 pm, 2-3 pm.

### Third: Brief Description of the Course

This course provides new graduate students with a foundation to begin research in the Department of pharmaceutical sciences. Topics relevant to graduate studies and research will be covered, including an overview of the rules and regulations of graduate studies, course curriculum for a Master's Degree in pharmaceutical sciences, literature search, key software in the area of research, research ethics, advising and monitoring, scientific authorship, data management, data presentation, research misconduct, scientific writing, research proposals, manuscript preparation, thesis writing, human participants and animal subjects in research, and laboratory safety. To introduce graduate students to the various research projects in the Department, the students should interview four faculty members and write a summary of their research interests.

## Fourth: Learning Sources

<b>Textbook:</b>	ORI Introduction to the Responsible Conduct of Research		
<b>Author:</b> Nicholas H. Steneck, PhD Illustrations by David Zinn	<b>Edition:</b> 1	<b>Year:</b> 2007	
<b>References</b>	<ul style="list-style-type: none"> <li>• <a href="https://ori.hhs.gov/ori-introduction-responsible-conduct-research">https://ori.hhs.gov/ori-introduction-responsible-conduct-research</a></li> <li>• On Being a Scientist, A Guide to Responsible Conduct in Research: Third Edition (2009)</li> <li>• <a href="https://www.nap.edu/catalog/12192/on-being-a-scientist-a-guide-to-responsible-conduct-in">https://www.nap.edu/catalog/12192/on-being-a-scientist-a-guide-to-responsible-conduct-in</a></li> <li>• <a href="http://www.sciencedirect.com">www.sciencedirect.com</a></li> </ul>		
<b>Teaching Type:</b>	<input type="checkbox"/> Classroom <input type="checkbox"/> Laboratory <input type="checkbox"/> Workshop <input checked="" type="checkbox"/> MS Teams <input checked="" type="checkbox"/> Moodle		

## Fifth: Learning Outcomes

<i>Course Learning Outcomes</i>		<i>Program Learning Outcome Code</i>
<i>Code</i>	Knowledge	
*K1	The student is expected to know the available database and their uses.	**P.K1
K2	To provide students with the knowledge of research capabilities, complications, goals of research, and writing up the results and thesis.	P.K2
K3	To provide students with the knowledge, research skills, authenticity, copyright, and patency.	P.K3
<b>Skills</b>		
*S1	The student is expected to identify scientific research writing criteria.	**P.S1
S2	Learn how to communicate effectively with other scientists and colleagues.	P.S2
S3	Develop the ability to design a rational research methodology.	P.S3
S4	Enable students to provide information related to the project or subject of research.	P.S4
S5	Enable students to collect and interpret information from medical guidelines & journal databases.	P.S5
<b>Competences</b>		
*C1	The student is expected to Deal with scientific research issues and critical points to dissolve.	**P.C1

C2	Differentiate between major and minor ailments and when to use them in the research subject.	P.C2
C3	Enable students to identify project-related problems and recommend the appropriate method.	P.C3

\*K: knowledge, S: skills, C: competencies.

\*\* P.K: Program Learning Outcome Knowledge, P.S: Program Learning Outcome Skill, P.C: Program Learning Outcome Competence.

## Sixth: Course Structure

Lecture Date	Learning Outcome	Topics	Learning *Procedures	Teaching ***Methods	References***
W1	K1-3 S1-5 C1-3	Introduction to Research Methods (Overview)	Synchronous	PowerPoint presentations Discussion	Provided on Moodle
W2	K1-3 S1-5 C1-3	General Anatomy and Physiology of a scientific paper	Synchronous	PowerPoint presentations Discussion	Provided on Moodle
W3	K1-3 S1-5 C1-3	Explanation-for-common-mistakes-while-writing sections	Asynchronous	Reading file	Reading file
W4	K1-3 S1-5 C1-3	Research Types 1	Synchronous	PowerPoint presentations Discussion	Provided on Moodle
W5	K1-3 S1-5 C1-3	Research Types 2	Synchronous	PowerPoint presentations Discussion	Provided on Moodle
W6	K1-3 S1-5 C1-3	Essential guide reading	Asynchronous	Reading file	Reading file
W7	K1-3 S1-5 C1-3	Qualitative Methods in Pharmacy Research	Synchronous	PowerPoint presentations Discussion	Provided on Moodle
W8	K1-3 S1-5 C1-3	Quantitative Methods in Pharmacy Research	Synchronous	PowerPoint presentations Discussion	Provided on Moodle
W9	K1-3 S1-5 C1-3	The Scientific Approach to your project reading	Asynchronous	Reading file	Reading file
W10	K1-3 S1-5 C1-3	Research proposal 1	Synchronous	PowerPoint presentations Discussion	Students
W11	K1-3 S1-5 C1-3	Research proposal 2	Synchronous	PowerPoint presentations Discussion	Students
W12	K1-3 S1-5 C1-3	Research Methods in Pharmacy Practice Reading	Asynchronous	Reading file	Reading file

W13	K1-3 S1-5 C1-3	Validity and Reliability	Synchronous	PowerPoint presentations Discussion	Provided on Moodle
W14	K1-3 S1-5 C1-3	Final Proposal	Synchronous	PowerPoint presentations Discussion	
W15		Final Exam			

Learning procedures: (Direct, synchronous, asynchronous). \*\* Teaching methods: Lecture, video.....). \*\* Reference: Pages of the book, recorded lecture, video....).

## Seventh: Assessment methods

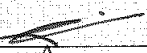
Methods	Fully Electronic Education	Blended Learning	Direct Teaching	The course outcomes that are measured
First Exam	-	-	-	
Second Exam	-	-	-	
Mid-term Exam	30	-	-	K1-3, S1-5, C1-3
Participation/ Assignments	15	-	-	K1-3, S1-5, C1-3
Asynchronous Meetings	15	-	-	K1-3, S1-5, C1-3
Final Exam	40	-	-	K1-3, S1-5, C1-3

## Eighth: Course Policies

Course policies are applied in all types of education (electronic learning, blended learning, & face-to-face learning) as follows:

- Meeting the deadline for the lecture.
- Commitment to interaction and participation.
- University regulations for attendance and absence from lectures and examinations are in force.

- Academic Integrity: Fraud or moral impersonation are unacceptable and are punishable according to university regulations and instructions.
- Interactive lectures will be given through a platform (MS Teams).
- Assignments and Quizzes will be given through a platform (Moodle).
- Commitment to the right appearance in front of the camera with the proper background.
- Exams will be given face-to-face on campus.

Approval	Name	Date	Signature
Head of Department	Dr. Farah Al-Mamoori	1-03-2023	
Faculty Dean	Dr. Ahlam Kilani	1-03-2023	