

**Syllabus: Applied Research in Pharmacy Management****(131702588)****1st Semester 202.. /202..**

COURSE INFORMATION	
Course Name: Applied Research in Pharmacy Management Learning Method: Hybrid (Face-to-face and Electronic Methods) Semester: 1st Department: Clinical Pharmacy and Pharmacy Practice Faculty: Pharmaceutical Sciences	Course Code Section: Core Curriculum: 2019 Study plan JNQF: 7
Day(s) and Time(s): Sunday – Tuesday: Classroom: As per semester Date prepared: January 2020 Date updated: February 2023	Credit Hours: 3 Prerequisites: 131702473 Pharmaceutical Management and Marketing
COURSE DESCRIPTION	
<p>It is an advanced course in research. This course will review research types and study designs. Moreover, indicators of critical appraisal will be reviewed and statistical models accompanying each type of research. Students will be familiar with the process of ethical approvals and the Institutional Board Review (IRB) requirements. In this course a detailed review of sampling and data collection methods will be carried out with the students. During this course, students will practice academic writing with citations and references, skills to avoid plagiarism. Finally, students will know the pathway to public research at an international journal.</p> <p>This course deals with several research topics in pharmaceutical and administrative practice, such as: adherence to medication, measures of health-related quality of life, tools for the economic evaluation of treatment plans, types of patients' beliefs, types of patients' behaviors and methods to change it, indicators to assess the success of</p>	

therapeutic care programs, methods in medication optimization and medicines review. This course will also have topics for research in types of pharmaceutical marketing and selling models, patterns of promotion and health awareness. Finally, the course will be updated based on demands from the labor market or literature recommendations.

DELIVERY METHODS

The course will be delivered through a combination of active learning strategies. These will include:

- Lecture notes
- PowerPoint lectures and active classroom based discussion.
- Collaborative learning through small groups acting in an interdisciplinary context.
- Relevant films and documentaries
- Video lectures
- E-learning resources: e-reading assignments and practice quizzes through Moodle and Microsoft Team
- Reference Books
- Expert external visitors

FACULTY INFORMATION

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REFERENCES AND LEARNING RESOURCES

1	The Practical Guide to Clinical Research and Publication, 1st Edition - August 3, 2021. Uzung Yoon, Paperback ISBN: 9780128245170 eBook ISBN: 9780128245187
2	Introduction to Health Research Methods: A Practical Guide 3rd Edition - February 20, 2020, Kathryn H. Jacobsen, ISBN-10 : 1284197565 ISBN-13 : 978-1284197563
3	IBM SPSS Advanced Statistics 20 Guidance. (Web site (http://www.ibm.com/support))
4	International Pharmaceutical Federation (FIP). The FIP Global Roadmap 2030: Sustainable advancement for pharmacy worldwide. The Hague: International Pharmaceutical Federation; 2022

COURSE OBJECTIVES

The following are the objectives of the present course:

1. Understanding the concept of research methods.
2. Differentiate between study types and different study designs.
3. Identify the Theoretical Framework Hypothesis Development
4. Measurement of Variables and Scales
5. Statistical analysis for research purposes
6. Determine the appropriate sample size and method of data collection
7. Manage the skills for citation and academic references
8. Write up research without plagiarism
9. Explore options for getting the research published

COURSE INTENDED LEARNING OUTCOMES (CILOs)

A. Foundational Knowledge

“Learner (Learner) - Develop, integrate, and apply knowledge. ”

A.1) Understand basic concepts of study design and research methods

B. Essentials for Practice and Care

“Patient-Customer centered care (Caregiver), Medication use systems management (Manager), Health and wellness (Promoter), Population-based care (Provider)”

B.1) Assess the purpose of sampling and data collection methods.

B.2) Understand the elements of the hypothesis in research.

B.3) Understand critical appraisal skills.

B.4) Determine how to understand success by choosing the appropriate design and statistical analysis.

B.5) Discuss the strengths and weaknesses of each study design.

B.6) Explain the phases and steps for publication.

C. Approach to Practice and Care

“Being trained to be able to act as Educator, Advocate, Collaborator, Includer and Communicator”.

C.1) Understand how to apply for IRB (Institutional Board Review) to get the ethical and other approvals

C.2) Assess the methods for univariate and multivariate statistical analysis

C.3) Describe the evaluation process to critically review the research papers.

C.4) Get additional knowledge regards to publication journey.

C.5) Evaluate the overall research work and impact on literature.

D. Personal and Professional Development

“ Transfer skills to enhance self-awareness, Leadership skills, Innovation, Professionalism”

- D.1) Diagnosis of the readiness for starting good research
- D.2) Practice the fulfillment of the research steps and stages.
- D.3) Lead and design practical research for a selected topic.
- D.4) Get familiar with the most recent updates in relative research fields (Innovation).

ACADEMIC SUPPORT

It is The Hashemite University policy to provide educational opportunities that ensure fair, appropriate and reasonable accommodation to students who have disabilities that may affect their ability to participate in course activities or meet course requirements. Students with disabilities are encouraged to contact their Instructor to ensure that their individual needs are met. The University through its Special Need section will exert all efforts to accommodate for individual's needs.

Tel: 00962-5-3903333 Extension: 4209

Location: Students Affairs Deanship/ Department of Student Welfare Services

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COURSE REGULATIONS

Participation

Class participation and attendance are important elements of every student's learning experience at The Hashemite University, and the student is expected to attend all classes. A student should not miss more than 15% of the classes during a semester. *Those exceeding this limit of 15% will receive a failing grade regardless of their performance.* It is a student's responsibility to monitor the frequency of their own absences. **Attendance record begins on the first day of class irrespective of the period allotted to drop/add and late registration. It is a student's responsibility to sign-in; failure to do so will result in a non-attendance being recorded.**

In exceptional cases, the student, with the instructor's prior permission, could be exempted from attending a class provided that the number of such occasions does not exceed the limit allowed by the University. The instructor will determine the acceptability of an absence for being absent. A student who misses more than 25% of classes and has a valid excuse for being absent will be allowed to withdraw from the course.

Plagiarism

Plagiarism is considered a serious academic offence and can result in your work losing marks or being failed. HU expects its students to adopt and abide by the highest standards of conduct in their interaction with their professors, peers, and the wider University community. As such, a

student is expected not to engage in behaviours that compromise his/her own integrity as well as that of the Hashemite University.

Plagiarism includes the following examples and it applies to all student assignments or submitted work:

- **Use of the work, ideas, images or words of someone else without his/her permission or reference to them.**
- **Use of someone else's wording, name, phrase, sentence, paragraph or essay without using quotation marks.**
- **Misrepresentation of the sources that were used.**

The instructor has the right to fail the coursework or deduct marks where plagiarism is detected

Late or Missed Assignments

In all cases of assessment, students who fails to attend an exam, class project or deliver a presentation on the scheduled date without prior permission, and/or are unable to provide a medical note, will automatically receive a fail grade for this part of the assessment.

- Submitting a term paper on time is a key part of the assessment process. Students who fail to submit their work by the deadline specified will automatically receive a 10% penalty. Assignments handed in more than 24 hours late will receive a further 10% penalty. Each subsequent 24 hours will result in a further 10% penalty.
- In cases where a student misses an assessment on account of a medical reason or with prior permission; in line with University regulations an incomplete grade for the specific assessment will be awarded and an alternative assessment or extension can be arranged.

Cheating

Cheating, academic misconduct, fabrication and plagiarism will not be tolerated, and the university policy will be applied. Cheating policy: The participation, the commitment of cheating will lead to applying all following penalties together:

- Failing the subject, he/she cheated at
- Failing the other subjects taken in the same course
- Not allowed to register for the next semester
- The summer semester is not considered as a semester

Student Complaints Policy

Students at The Hashemite University have the right to pursue complaints related to faculty, staff, and other students. The nature of the complaints may be either academic or non-academic. For more information about the policy and processes related to this policy, you may refer to the students' handbook.

COURSE ASSESSMENT

Course Calendar and Assessment

Students will be graded through the following means of assessment and their final grade will be calculated from the forms of assessment as listed below with their grade weighting taken into account. The criteria for grading are listed at the end of the syllabus

Assessment	Grade Weighting	Deadline Assessment	CILOS
Exam 1	20%	1 st exams period	A, B
Prepare proposal	20%	2 nd Exams	C, D
Homework–project	20%	Before Final exam	C,D
Final Exam (2)	40%	Add date/time	A,B,C,D

Description of Exams

Each exam is followed by two types of analysis: **Difficulty** and **Discrimination** coefficients.

Distribution of questions would be managed to target different levels of students: Basic, Acceptance, Good, Very good and Excellent.

Test questions will predominately come from material presented in the lectures.

Semester exams will be conducted during the regularly scheduled lecture period.

Exam will consist of a combination of multiple choice, short answer, match, true and false and/or descriptive questions.

Homework – Projects

Will be given when it is applicable. Factor as level of class interactions and number of students for each class will be considered.

Students are expected to work on chapter examples, self-tests and chapter problems. When possible group based project may be requested from students.

Quizzes: Will be given when it is applicable. Factor as level of class interactions and number of students for each class will be considered.

Unannounced quizzes will be given during or/and at the end of each chapter based upon the previous lectures. It will enforce students to be prepared to the class.

No make-up exams, homework or quizzes will be given. Only documented absences will be considered as per HU guidelines.

Grades are not negotiable and are awarded according to the following criteria*:

Letter Grade	Description	Grade Points
A+	Excellent	4.00
A		3.75
A-		3.50
B+	Very Good	3.25
B		3.00
B-		2.75
C+	Good	2.50
C		2.25
C-		2.00
D+	Pass	1.75
D	Pass	1.50
F	Fail	0.00
I	Incomplete	-

WEEKLY LECTURE SCHEDULE AND CONTENT DISTRIBUTION

"Lecture hours and weeks are approximate and may change as needed"

Topics	Topic Details	Reference No.	Chapter	Estimated no. of hours
A1	Planning a research study	1	5	1
A1 D1-4	The study designs overview	1	6	2
B5	The study designs in detail	2	7-13	1
B2	Define the aim and set the hypothesis	2	4	1
B1	Sampling and Data Collection Method	1	9	1
B5, C3	The Critical appraisal	1	14	1
	Explore Sterngh and weakness	2	37	
C1	Ethical Consideration and IRB	2	18	1
C2	The analysis and statistical work	1	10 &11	1

C4, C5 & D2	Writing up and Publication Journey	1 2	13 39 - 41	1
D1 – D4	Choose a topic to apply the knowledge and run the project research			
	Adherence to medication, Measures of health-related quality of life, Tools for the economic evaluation of treatment plans, Types of patients' beliefs, Types of patients' behaviors and methods to change it, Indicators to assess the success of therapeutic care programs, Methods in medication optimization and medicines review, Types of pharmaceutical marketing and selling models, Patterns of promotion and health awareness, Updates based on demands from the labor market or literature recommendations.			