

# Course Description: Applied Research in Pharmaceutical and Cosmetic industries (2217011573)

Second Semester of the academic year 2024/2025

COURSE INFORMATION	
<b>Course Name:</b> Applied Research in Industrial & Cosmetic Pharmacy (face-to-face education) <b>Semester:</b> Second <b>Department:</b> Department of Pharmaceutics and Pharmaceutical Technology <b>Faculty:</b> Pharmaceutical Sciences	<b>Credit Hours:</b> 3 <b>Faculty:</b> Prof. Saja Hamed.& Dr. Shoroog Abukhamees

**Course Type:** Practical, Research-Based

## Course Description:

This course is designed to provide final-year pharmacy students (Industrial & Cosmetic Pharmacy bath) with hands-on experience in conducting applied research within the field of Pharmaceutical and Cosmetic industries. Each student group (comprising six students) will be tasked with a distinct research project under the direct supervision of faculty member. Students will explore research topics in Industrial & Cosmetic pharmacy.

The course will emphasize the complete research process, from identifying a research question to presenting findings. Students will spend 4 to 6 hours per week in the laboratory, gaining practical skills and applying theoretical knowledge to conduct the assigned research.

## Learning Objectives:

By the end of this course, students will be able to:

1. Conduct literature search and write a research proposal
2. Design and execute an applied research project in Industrial or Cosmetics Pharmacy.
3. Perform required laboratory techniques relevant to pharmaceutical and cosmetics research.
4. Analyze and interpret experimental data critically.
5. Collaborate effectively within a research team.
6. Communicate scientific findings through written reports/posters and oral presentations.

Date	Course Content	
<b>Week 1-3</b>	<ol style="list-style-type: none"> <li><b>1. Introduction to Scientific Research</b> <ol style="list-style-type: none"> <li>1.1. Rosemary oil for hair loss? How to spot bad science</li> <li>1.2. How to read an academic science paper</li> <li>1.3. Overview of Scientific Research</li> <li>1.4. Definition and purpose of scientific research</li> <li>1.5. Introduction to research proposal</li> </ol> </li> <li><b>2. AI as Emerging Technology in Pharmaceutical research</b> <ol style="list-style-type: none"> <li>2.1. Benefits and challenges of AI in scientific research</li> <li>2.2. Introduction to AI tools for literature review</li> </ol> </li> <li><b>3. Proper citation and referencing</b> <ol style="list-style-type: none"> <li>3.1. Introduction to referencing software</li> </ol> </li> </ol>	
<b>Week 4 (13/03/2024)</b>	<p><b>Applications</b></p> <ol style="list-style-type: none"> <li><b>1. Conducting effective literature searches</b> <ol style="list-style-type: none"> <li>1.1. How to Search For Research Papers</li> <li>1.2. Critical reading and understanding of scientific papers</li> <li>1.3. Utilizing online databases and journals</li> <li>1.4. Abstract Reading and Interpretation               <ol style="list-style-type: none"> <li>1.4.1. Understanding abstracts and their role in research</li> <li>1.4.2. Extracting key information from abstracts</li> </ol> </li> <li>1.5. Avoiding plagiarism in research</li> </ol> </li> <li><b>2. Proposal writing training workshop</b></li> </ol>	
<b>Week 5 (20/03/2024)</b>	- Proposal writing (Students' questions)	
<b>Week 6-13</b>	<ul style="list-style-type: none"> <li>- Experimental work.</li> <li>- Data analysis, project writing, and final presentations.</li> </ul>	
Assessment	Grade	Date
Attendance to meetings/Labs/ and seminars	8	
Quiz/Short Exam	10	
Literature search for 10 articles	8	
Proposal	9	
Assigned Seminar/Research paper appraisal/Video	15	
Final Report/Poster	20	
Research results Presentation	30	

