

School of Pharmacy / School of Pharmacy (English)

2024 - 2025 Academic Year

PHARMACEUTICAL CHEMISTRY LAB. IV

Syllabus

| Course Description | | | | | |
|---|--|--------------------------------|-------------------------|---------------------------|-------------|
| Name | Code | Semester | T+A Hour | Credit | ECTS |
| PHARMACEUTICAL CHEMISTRY LAB. IV | PHA4214874 | Spring Semester | 0+3 | 1,5 | 3 |
| Prerequisites Courses | | | | | |
| Recommended Elective Courses | | | | | |
| Language of Instruction | English | | | | |
| Course Level | First Cycle (Bachelor's Degree) | | | | |
| Course Type | Required | | | | |
| Course Coordinator | Prof.Dr. Mine YARIM YÜKSEL | | | | |
| Name of Lecturer(s) | Prof.Dr. Mine YARIM YÜKSEL | | | | |
| Assistant(s) | | | | | |
| Aim | The aims of this course to give information on qualitative analysis of pharmaceutical active compounds and to make the applications | | | | |
| Course Content | This course contains; Qualitative analysis of active compound(general concepts),Determination of the physical properties and the elements, Determination of the functional group,Specific reactions,Analysis of unknown samples,Analysis of unknown samples,Analysis of unknown samples,NMR spectroscopic methods,NMR spectroscopic methods,MS Spectroscopic Methods ,UV. Vis., IR, NMR and MS spectral data solution,UV. Vis., IR, NMR and MS spectral data solution. | | | | |
| Course Learning Outcomes | | | Teaching Methods | Assessment Methods | |
| At the end of this course the students will be able to;1. adapt the analysis methods of pharmaceutical active substances. 1.1. determine the physical properties of the drugs. 1.2. determine the elemental analysis of the drugs. 1.3. determine of functionalgroups of the drugs. 1.4. arrange specific reactions of the drugs. 2. will be able to analyse the NMR spectra. 2.1. interpret the chemical schift in NMR. 2.2. use the NMR data in druganalysis. 2.3. evaluate the NMR spectra of synthesized compounds. 3. will be able to analyse the MS spectra. 3.1. interpret the MS fragmentation patterns. 3.2. use the MS data in drug analysis. 3.3. evaluate the MS spectra of synthesized compounds. 4. relate the UV. - Vis., IR, NMR and MS spektral techniques. 4.1. interpret UV. Vis., IR, NMR and MS spectral data. 4.2. interpret the UV. Vis., IR, NMR and MS spectral data of the drugs. | | | 12, 14, 17, 9 | A, D | |
| Teaching Methods | 12: Problem Solving Method, 14: Self Study Method, 17: Experimental Technique, 9: Lecture Method | | | | |
| Assessment Methods | A: Traditional Written Exam, D: Oral Exam | | | | |
| Lecture Schedule | | | | | |
| Sequenc e | Topics | Preliminary Preparation | | | |
| 1 | Qualitative analysis of active compound(general concepts) | Reading the references | | | |
| 2 | Determination of the physical properties and the elements | Reading the references | | | |
| 3 | Determination of the functional group. | Reading the references | | | |
| 4 | Specific reactions | Reading the references | | | |
| 5 | Specific reactions | Reading the references | | | |
| 6 | Analysis of unknown samples. | Reading the references | | | |
| 7 | Analysis of unknown samples | Reading the references | | | |
| 8 | Analysis of unknown samples | Reading the references | | | |
| 9 | Analysis of unknown samples | Reading the references | | | |
| 10 | NMR spectroscopic methods | Reading the references | | | |
| 11 | NMR spectroscopic methods | Reading the references | | | |
| 12 | MS Spectroscopic Methods | Reading the references | | | |
| 13 | UV. Vis., IR, NMR and MS spectral data solution | Reading the references | | | |
| 14 | UV. Vis., IR, NMR and MS spectral data solution | Reading the references | | | |
| Evaluation Methods | | Weight(%) | | | |
| Midterm Exam | | 60 | | | |
| General Exam | | 40 | | | |

| Resources |
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| The laboratory notes will be given to the students |