**BİRUNİ UNIVERSITY**

**“ The Future of Science”**

**FACULTY OF PHARMACY**

**…Department of Professional Sciences**

**COURSE INFORMATION PACKAGE**

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| **Course code** | **Course optic code** | **Theory hours/ week** | **Practice hours/week** | **Credit** | **ECTS** |
| **ECZ221** | …………………. | 2 | - | 2 | 2 |
| **Course name** | Pharmaceutical botany I |
| **Semester** | 2016-2017 Fall |
| **Course type** | Obligatory |
| **Course name** | Pharmacy |
| **Course language** | Turkish |
| **Prequisites** | Pharmaceutical botany |
| **Training methods** | 1: Lecture, 2: Question-answer, 3: Discussion, 4: Demonstration, 5: Individual study, 6: Group study, 7: Project based teaching  |
| **Assesment methods** | A: Written exam B: Oral exam, C: Homework assignment, D: Presentation |
| **Disabled students** | Disabled students they need information about their own status submitted to the faculty may request the provision of necessary convenience. |
| **Instructors** | Prof. Dr. Abdülkerim Alpınar |
| **Course assistant** | None |
| **Definition** & **objective of the Course** | This course aims to present the plants used for scientific purposes and traditionally in the treatment.In addition to the plants here-above mentioned poisonous and edible fungi and wild plants are also examined with their inner and outer morphological features. Along with the medicinal drugs plants from which they are obtained, where they grow, how their identification is performed, their active substances, diseases for which they are used, their classification, rules of nomenclature, systematic order is thaught. Flora and richness from the point of biodiversity of Turkey, trade and conservation of the plants with medical pharmaceutical importance are also within the context of the course.  |
| **Learning outcomes** | 1. Students learn the features of medicinal drugs and plants from pharmaceutical point of view.
2. Student learn poisionous and edible fungi and wild plants with their local names and morphological properties.
3. Students identify the medicinal plants
4. Students learn the importance of Turkey from the point of trading medicinal plants.
5. Students learn the importance of presenting the plants which are traditionally used for medicinal purposes to the academic world with regard to the discovery of new drug raw material.
6. Students learn about the importance of protection of herbal resources.

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| **Weeks****1.****2.****3.****4.****5.** **6.****7.****8.** **9.****10.****11.****12.****13.****14.****15.****16.****17.** | **Course contents and learning activities****The importance of medicinal plants; primary & secondary metabolites** **The preparation of herbal drugs (Harvest, drying, storage)**; **preparing medicines from plants****Macroscopic and microscopic structures of medicinal plants (Cells, tissue, crystals)****Macrocopic and microscopic structure of medicinal plants (Root, bark)** **Macrocopic and microscopic structure of medicinal plants (Leaf)****Macrocopic and microscopic structure of medicinal plants (Trichome)****Macrocopic and microscopic structure of medicinal plants (Flower)****Midterm****Macrocopic and microscopic structure of medicinal plants (Fruit)****Macrocopic and microscopic structure of medicinal plants (Seed)****Medicinally important *Prokaryotae* species****Medicinally important *Protoctista*** (I.) **species****Medicinally important *Protoctista*** (II.) **species****Medicinally important *Mycophyta*** (I.) **species****Medicinally important *Mycophyta*** (II.) **species****Poisonous plants** & **Fungi** **Medicinally important *Lichenes* ve *Bryophyta* species** |

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| **Assesment methods** | **Number** | **Contribution percentage** |
| **Attendance** | 16 | 10 |
| **Laboratory** | 0 | 0 |
| **Practice** | 0 | 0 |
| **Field activity** | 0 | 0 |
| **Specific practical training** | 0 | 0 |
| **Quiz** | 1 | 10 |
| **Presentation** | 1 | 10 |
| **Projects** | 0 | 0 |
| **Seminar** | 0 | 0 |
| **Midterm exam** | 1 | 30 |
| **Final exam** | 1 | 40 |
|  **Total** | **100** |

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| **Text book**  |  **Different texts from various sources** |
| **References** | 1. Tanker N, Koyuncu M, Coşkun M. 2014. Farmasötik Botanik. Ankara Üniversitesi Ecz Fak Yayınları 105, Ankara
2. WHO Monographs on selected medicinal plants. 1999-2009. Volumes : 1.- 4. Geneva
3. European Pharmacopoeia 2013 (8th ed). ISBN 978 -9287175274
4. Wyk BE. 2015. Phytomedicines, herbal drugs, and poisons. Univ Chicago Press ISBN 978-0226204918
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| **CONTRIBUTION OF THE COURSE PROGRAMME**  |
| **No** | **Competence of the Pharmacy programme** | **Contribution** |
| 1 | 2 | 3 | 4 | 5 |
| 1 | Implements skills in all areas of occupations from pharmaceutical basic and professional sciences within the scope and framework of rules of ethics, religion, language, race, gender and socio-economic discriminaion in collaboration with the relevant professional administrators and regulatory authorities. |  |  |  |  | x |
| 2 | Communicates effecively with community members, health care professionals policy makers and administrators to transfer informations of professional pharmacy applications and usage of pharmaceutical products. |  |  |  |  | x |
| 3 | In the frame of pharmaceutical care and clinic applications, evaluates accuracy and cost-effectiveness of medication treatment, solve the problems and give decisions. |  | x |  |  |  |
| 4 | Acquire the current and evidence-based informaion by using relevant information technologies and apply the rational use of natural, synthetic, and biotechnologies drugs and give education, information and concultation to community members, other health-care providers and constitutions. |  |  |  |  | x |
| 5 | Experienced the basic and professional knowledge to manage, apply and make decision of the entire process related to design, handling and consumption of natural, synthetic and biotechnical pharmaceuticals.  |  |  | X |  |  |
| 6 | Possess cultural competency and consciousness to design, implement, and monitor patient-oriented pharmacy practice for the improvement of the qualty of health care by making joint cooperation. |  | x |  |  |  |
| 7 | Raise conciousness and application of modern scientific and technological developments in pharmaceuticalfield by the awareness of lifelong learning. |  |  | X |  |  |
| 8 | Experienced to research and development, quality control, good manufactoring practices and has knowledge to manage and apply the license process of pharmaceutical products. |  | x |  |  |  |
| 9 | As a pharmacists with the universal norms, has foreign language proficiency to follow professional developments, conduct research and developments and competent to communicate pateints and other healthcare professionals. |  |  | X |  |  |
| 10 | Gather patient histories, determine needs and priorities of patients, prevent individual diseases,know, define and apply the planning and management process of treatment. |  | X |  |  |  |

Workload and ECTS calculation

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| **Activities** | **Number** | **Duration** | **Total work load** |
| **Course duration** | 16 | 2 | 32 |
| **Laboratory** | - | - | - |
| **Laboratory practice** | - | - | - |
| **Specific practical training** | - | - | - |
| **Field work** | - | - | - |
| **Presentation / seminar preparation** | 1 | 2 | 2 |
| **Project** | - | - | - |
| **Homeworks** | 1 | 2 | 2 |
| **Quiz** | - | - | - |
| **Midterms (study duration)**  | 1 | 10 | 10 |
| **Final exam (study duration)** | 1 | 10 | 10 |
| **Total workload** | **20** | **29** | **56** |
| **ECTS credit of course (Total workload / 25)**  |  |  | **2.2** |