**DISCIPLINE SHEET**

***PRODUCTS OF PLANT ORIGIN IN COSMETICS***

**ACADEMIC YEAR**

**2026–2027**

## 1. STUDY PROGRAM INFORMATION

| | |
|---|---|
| 1.1. Higher education institution | UNIVERSITY OF MEDICINE AND PHARMACY OF CRAIOVA |
| 1.2. Faculty | **PHARMACY** |
| 1.3. Department | PHARMACY II |
| 1.4. Field of study | HEALTH |
| 1.5. Study cycle | LICENSE |
| 1.6. Study program/Qualification | MEDICAL COSMETICS AND COSMETIC PRODUCT TECHNOLOGY/Bachelor of Cosmetology |

## 2. INFORMATION ABOUT THE DISCIPLINE

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|---|---|---|---|---|---|---|---|
| 2.1. Name of the discipline | **PRODUCTS OF PLANT ORIGIN IN COSMETICS** | | | | | | |
| 2.2. Discipline code | CM1208 | | | | | | |
| 2.3. The holder of course activities | Ludovic Everard BEJENARU | | | | | | |
| 2.4. Academic degree – course activities | Associate Professor, PhD | | | | | | |
| 2.5. Employment (base norm/associate) | Base norm | | | | | | |
| 2.6. The holder of seminar activities | Ludovic Everard BEJENARU | | | | | | |
| 2.7. Academic degree – seminar activities | Associate Professor, PhD | | | | | | |
| 2.8. Employment (base norm/associate) | Base norm | | | | | | |
| 2.9. Year of study | **I** | 2.10. Semester | **II** | 2.11. Type of discipline (content) | **DS** | 2.12. Student attendance policy | **DOB** |

## 3. TOTAL ESTIMATED TIME

| | | | | | | |
|---|---|---|---|---|---|---|
| 3.1. Number of credits | | | | | | **4** |
| 3.2. Number of hours per week | course | 2 | seminar/practical work | 3 | total | **5** |
| 3.3. Total hours in the curriculum | course | 28 | seminar/practical work | 42 | total | **70** |
| 3.4. Examinations | | | | | | **3** |
| 3.5. Total hours of individual study | | | | | | **47** |
| 3.5.1. Study using textbooks, course materials, bibliographies, and notes | | | | | | **20** |
| 3.5.2. Additional documentation in the library, on specialized electronic platforms, and in the field | | | | | | **14** |
| 3.5.3. Preparation of seminars/practical works, assignments, reports, portfolios, and essays | | | | | | **10** |
| 3.5.4. Tutoring | | | | | | **–** |
| 3.5.5. Other activities (consultations) | | | | | | **3** |
| 3.6. Total hours per semester (1 credit = 30 hours) | | | | | | **120** |

## 4. PREREQUISITES

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| 4.1. *Curriculum* | Students must have knowledge of botany, cell biology, anatomy, physiology, organic chemistry. |
| 4.2. Competences | – |

## 5. CONDITIONS

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| 5.1. For conducting the course | Classroom with audio/video equipment.<br>Preparation of the topic in accordance with the teacher's requirements. |
| 5.2. For conducting the seminary/practical work | Practical work room/online environment. |

## 6. SPECIFIC COMPETENCES ACQUIRED

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| **PROFESSIONAL COMPETENCES** | **PC1**. Knowledge of herbal raw materials from the point of view of origin, distribution, method of production, chemical composition, pharmacological action, transformation into preparations with dermatocosmetological uses.<br><br>**PC2**. Consultancy and expertise in the field of plant products with dermatocosmetic applications.<br><br>**PC3**. Ability to synthesize and apply the knowledge acquired in order to carry out a competent activity in specialized units, including in the field of the cosmetics industry. |

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| **TRANSVERSAL COMPETENCES** | **TC1**. Autonomy and responsibility:<br>• the acquisition of moral marks, the formation of professional and civic attitudes, allowing students to be correct, honest, non-conflict, cooperative, available to help people, interested in community development;<br>• to know and apply the ethical principles related to specifics of professional qualification;<br>• to recognize a problem when it comes out and to provide solutions responsible for solving it.<br>**TC2**. Social interaction:<br>• to have respect for diversity and multiculturalism;<br>• to develop teamwork skills;<br>• to communicate orally and in writing the requirements, the way of work, the results obtained;<br>• to engage in volunteering, to know the essential issues of the community.<br>**TC3**. Personal and professional development:<br>• to have openness to lifelong learning;<br>• to become aware of the need for individual study as a basis for personal autonomy and professional development;<br>• to capitalize optimally and creatively their own potential in the collective activities;<br>• to use the information and communication technology. |

## 7.1. DISCIPLINE OBJECTIVES

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| **GENERAL OBJECTIVE OF THE DISCIPLINE** |
| ▪ Providing informational support to Ist Year students to acquire the concepts and knowledge about plant raw materials of dermatocosmetic interest, in terms of origin, distribution, method of production, chemical composition (active principles), pharmacological action, transformation into preparations with specific uses. |
| **SPECIFIC OBJECTIVES** |
| ▪ Acquiring knowledge about herbal raw materials of dermatocosmetic interest;<br>▪ Acquiring knowledge regarding the use of plants in products with dermatocosmetic applications;<br>▪ Acquiring skills, abilities and values useful for practice in the field of dermatocosmetology. |

## 7.2. LEARNING OUTCOMES

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| **KNOWLEDGE** |
| ▪ The student/graduate identifies, describes, explains and understands medicinal plant products, bioactive substances from plants and phytopreparations with uses in dermatocosmetology. |
| **SKILLS** |
| ▪ The student/graduate describes, defines and discusses aspects regarding medicinal plant products and phytopreparations, from the point of view of dermatocosmetic indications. |
| **RESPONSIBILITY AND AUTONOMY** |
| ▪ The student/graduate recognizes medicinal plants and bioactive substances from plants, justifying their use in dermatocosmetology. |

## 8. CONTENTS

| **8.1. Course (content units)** | **No. of hours** |
|---|---|
| 1. Carbohydrates. Simple sugars, polyols, sugar acids. Homogeneous polyholosides. Mixed polyholosides (polyuronides). | 2 |
| 2. Lipids. Lipid raw materials that are used in dermatocosmetology. | 2 |
| 3. Compounds plant-based nitrates with applications in dermatocosmetology. Piperidine alkaloids. Isoquinoline alkaloids. Quinoline alkaloids. Quinolizidine alkaloids. Imidazole alkaloids. Purine alkaloids. Protoalkaloids. Lectins. | 2 |
| 4. Aromatic compounds [I]. Phenyl derivatives. Phenylmethane derivatives. Phenylpropane derivatives. Stilbenoids. Coumarins. Flavonoids. | 4 |
| 5. Aromatic compounds [II]. Lignans. Tannins. Phloroglucinols. Anthracene derivatives. | 4 |
| 6. Isoprenoids [I]. Essential oils (acyclic monoterpenoids, monocyclic monoterpenoids, bicyclic monoterpenoids, sesquiterpenoids, aromatic derivatives). | 6 |
| 7. Isoprenoids [II]. Atypical monoterpenoids. Sterols. Steroidal saponins. Triterpene saponins. Carotenoids. | 6 |
| 8. Resins and balms. Tars. *Varia*. | 2 |
| **Total** | **28** |

## REFERENCES


1. Bejenaru L.E., Mogoşanu G.D., Biţă A., Bejenaru Cornelia, Popescu H. (2026) *Farmacognozie generală. Farmacognozie specială: Materii prime naturale cu glucide, lipide, compuşi azotaţi, heterozide, compuşi aromatici*. Ed. Medicală Universitară, Craiova.
2. Bojor O., Popescu O. (2009) *Fitoterapie tradiţională şi modernă*, ediţia a V-a revizuită şi adăugită. Ed. Fiat Lux, Bucureşti.
3. Bruneton J. (2016) *Pharmacognosie. Phytochimie. Plantes médicinales*, 5e édition, revue et augmentée. Lavoisier TEC & DOC, Paris.

**4.** Istudor Viorica. (1998) *Farmacognozie, Fitochimie, Fitoterapie*. Vol. I, Ed. Medicală, Bucureşti.
**5.** Istudor Viorica. (2001) *Farmacognozie, Fitochimie, Fitoterapie*. Vol. II, Ed. Medicală, Bucureşti.
**6.** Istudor Viorica. (2005) *Farmacognozie, Fitochimie, Fitoterapie*. Vol. III, Ed. Medicală, Bucureşti.
**7.** Locatelli M., Tomczyk M., Dugo Laura, Russo Marina. (2025) *Phytochemicals for health*. 1st edition, Elsevier, London, UK.
**8.** Mencinicopschi Gh., Bojor O., Ionescu-Călineşti Larisa. (2009) *Compendiu de terapie naturală. Nutriţie, Fitoterapie, Cosmetică*. Ed. Medicală, Bucureşti.
**9.** Mogoşanu G.D., Bejenaru L.E., Biţă A., Bejenaru Cornelia, Popescu H. (2026) *Farmacognozie specială: Materii prime naturale cu compuşi aromatici, izoprenoide, răşini, balsamuri, gudroane, varia*. Ed. Medicală Universitară, Craiova.
**10.** Stănescu Ursula (ed), Hăncianu Monica, Cioancă Oana, Aprotosoaie Ana Clara, Miron Anca. (2021) *Plante medicinale de la A la Z*, ediţia a IV-a, revăzută şi adăugită. Ed. Polirom, Iaşi.


| **8.2. Practical works (topics/themes)** | **No. of hours** |
|---|---|
| Macroscopic characters, microscopic analysis, physicochemical properties, extraction, identification, quantitative determination: | |
| 1. Carbohydrates. Simple sugars, polyols, sugar acids. Homogeneous polyholosides. Mixed polyholosides. | 3 |
| 2. Lipid raw materials that are used in dermatocosmetology. | 3 |
| 3. Compounds plant-based nitrogen. | 3 |
| 4. Phenyl derivatives. Phenylmethane derivatives. Phenylpropane derivatives. Coumarins. | 3 |
| 5. Flavonoids. | 3 |
| 6. Tannins. | 3 |
| 7. Anthracene derivatives. | 3 |
| 8. Essential oils with monoterpenoids. | 3 |
| 9. Essential oils with sesquiterpenoids. | 3 |
| 10. Essential oils with aromatic derivatives. | 3 |
| 11. Triterpene saponins. | 3 |
| 12. Carotenoids. | 3 |
| 13. Global chemical analysis of the active principles studied: extraction, separation, identification. | 3 |
| 14. Practical test of macroscopic, microscopic and phytochemical. | 3 |
| **Total** | **42** |

**REFERENCES**


**1.** Biţă A., Mogoşanu G.D., Bejenaru L.E., Bejenaru Cornelia. (2020) *Analiza fizico-chimică a produselor naturale medicinale*. Ed. Medicală Universitară, Craiova.
**2.** Gîrd Cerasela Elena, Duţu Ligia Elena, Popescu Maria Lidia, Pavel Mariana, Iordache Alina Titina, Tudor Ioana. (2008) *Bazele teoretice şi practice ale analizei farmacognostice*. Vol. I, Ed. „Curtea Veche", Bucureşti.
**3.** Gîrd Cerasela Elena, Duţu Ligia Elena, Popescu Maria Lidia, Pavel Mariana, Iordache Alina Titina, Tudor Ioana. (2009) *Bazele teoretice şi practice ale analizei farmacognostice*. Vol. II, Ed. „Curtea Veche", Bucureşti.
**4.** Locatelli M., Tomczyk M., Dugo Laura, Russo Marina. (2025) *Phytochemicals for health*. 1st edition, Elsevier, London, UK.
**5.** Miron Anca, Aprotosoaie Ana Clara, Cioancă Oana, Trifan Adriana, Hăncianu Monica. (2020) *Fitopreparate în dermato-cosmetologie*. Ed. „Grigore T. Popa", Iaşi.
**6.** Mencinicopschi Gh., Bojor O., Ionescu-Călineşti Larisa. (2009) *Compendiu de terapie naturală. Nutriţie, Fitoterapie, Cosmetică*. Ed. Medicală, Bucureşti.
**7.** Oniga Ilioara, Benedec Daniela, Hanganu Daniela. (2003) *Analiza produselor naturale medicinale*. Ed. Medicală Universitară „Iuliu Haţieganu", Cluj-Napoca.
**8.** Popescu Antoanela, Roncea Florentina, Pavalache Georgeta. (2015) *Principii active şi produse vegetale. Aplicaţii în cosmetologie*. Ed. Ex Ponto, Constanţa.
**9.** Stănescu Ursula Helena (ed), Hăncianu Monica, Gîrd Cerasela Elena. (2020) *Farmacognozie: produse vegetale cu substanţe bioactive*. Ed. Polirom, Iaşi.
**10.** Wagner H., Bladt Sabine. (1996) *Plant drug analyis. A thin layer chromatography atlas*. Springer Verlag, Berlin–Heidelberg.


## 9. CORROBORATING THE DISCIPLINE CONTENT WITH THE EXPECTATIONS OF EPISTEMIC COMMUNITY REPRESENTATIVES, PROFESSIONAL ASSOCIATIONS AND EMPLOYEE REPRESENTATIVES RELATING TO THIS PROGRAM

The content of the syllabus is the result of an evaluation process based on information from graduates and employers. The theoretical and practical knowledge regarding herbal raw materials of dermatocosmetic interest (origin, distribution, method of obtaining, chemical composition, pharmacological action, transformation into preparations with specific uses), acquired through participation in classes and practical work, will allow the graduate to carry out his professional activity both in dermatocosmetic units and in the cosmetic industry.

## 10. METHODOLOGICAL GUIDELINES

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| **Types of activity** | Teaching/learning techniques, materials, resources: lectures, interactive courses, group work, problem-based/project-based learning, etc. Learning, teaching, research, and practical application activities within the discipline are conducted in a blended format. |
| **Course** | The following methods are used in combination: lectures, debates, problem-solving. |
| **Practical works** | The following methods are used in combination: practical applications, case studies, projects. |
| **Individual study** | Before each course and each practical assignment. |

## 11. EVALUATION

| Type of activity | Evaluation forms | Evaluation methods | Weight of final grade |
|---|---|---|---|
| **Lecture** | Formative assessment through tests during the semester<br>Summative assessment during the exam | Oral exam.<br>Grades are given on a scale of 1–10.<br>The minimum passing grade is 5. | 60% |
| **Practical work** | Formative assessment through tests during the semester<br>Summative assessment in the last week of the semester | Oral exam.<br>Grades are given on a scale of 1–10.<br>The minimum passing grade is 5. | 20% |
| **Assessment of stage knowledge** | Tests during the semester | Test (written).<br>Grades are given on a scale of 1–10.<br>The minimum passing grade is 5. | 10% |
| **Individual performance evaluation** | Formative assessment through essays, projects, worksheets, applied discussion | Applied discussion | 10% |
| **Minimum performance standard** | Identification of the main medicinal herbal products and classes of natural compounds with uses in dermatocosmetology. | | |
| **Appeals** | According to the Student Examination Methodology. | | |

## 12. RECOVERY PROGRAM AND CONSULTATIONS

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|---|---|---|---|---|---|
| **Absence recovery** | **No. absences that can recover** | **Place of deployment** | **Period** | **In charge** | **Scheduling of topics** |
| | 3 | Official Discipline location | Weekly | All teaching staff | According to the course schedule |
| **Consultation schedule** | **No. of hours** | **Place of deployment** | **Period** | **In charge** | **Scheduling of topics** |
| | 2 hours/week | Headquarters of the Discipline | Weekly | Course instructors | Theme of the week |

**Date of approval**: 18th September 2026

| **Dean,** | **Department Director,** | **Discipline Holder,** |
|---|---|---|
| Prof. univ. dr. Octavian Croitoru | Prof. univ. dr. Cătălina Gabriela Pisoschi | Conf. univ. dr. Ludovic Everard Bejenaru |