



## Subject card

|   |   |   |          |                                     |   |            |     |
|---|---|---|----------|-------------------------------------|---|------------|-----|
| Subject name and code                       | SCIENTIFIC VALIDATION OF COSMETICS, PG_00064320   |   |          |                                     |   |            |     |
| Field of study                              | Chemical Technology   |   |          |                                     |   |            |     |
| Date of commencement of studies             | February 2025   | Academic year of realisation of subject   |          |                                     | 2024/2025   |            |     |
| Education level                             | second-cycle studies  | Subject group   |          |                                     | Optional subject group<br>Specialty subject group<br>Subject group related to scientific research in the field of study |            |     |
| Mode of study                               | Full-time studies   | Mode of delivery  |          |                                     | at the university   |            |     |
| Year of study                               | 1   | Language of instruction   |          |                                     | Polish<br>Polish  |            |     |
| Semester of study                           | 1   | ECTS credits  |          |                                     | 2.0   |            |     |
| Learning profile                            | general academic profile  | Assessment form   |          |                                     | assessment  |            |     |
| Conducting unit                             | Department of Biotechnology and Microbiology -> Faculty of Chemistry  |   |          |                                     |   |            |     |
| Name and surname of lecturer (lecturers)    | Subject supervisor  | dr hab. inż. Patrycja Szumała   |          |                                     |   |            |     |
|   | Teachers  | dr hab. inż. Patrycja Szumała   |          |                                     |   |            |     |
| Lesson types and methods of instruction     | Lesson type   | Lecture   | Tutorial | Laboratory                          | Project   | Seminar    | SUM |
|   | Number of study hours   | 15.0  | 0.0      | 0.0                                 | 0.0   | 15.0       | 30  |
|   | E-learning hours included: 0.0  |   |          |                                     |   |            |     |
| Learning activity and number of study hours | Learning activity   | Participation in didactic classes included in study plan  |          | Participation in consultation hours |   | Self-study | SUM |
|   | Number of study hours   | 30  |          | 5.0                                 |   | 15.0       | 50  |
| Subject objectives                          | The aim of the course is to introduce students to scientific research that verifies the effect or lack of effect of selected cosmetic ingredients and products, their production and the legal requirements that are imposed on such ingredients and products.  |   |          |                                     |   |            |     |
| Learning outcomes                           | Course outcome  | Subject outcome   |          |                                     | Method of verification  |            |     |
|   | [K7_K01] critically evaluates the content of cognitive and practical problems   | Knows the social and economic perception of the effects of cosmetics and is able to verify this knowledge                           |          |                                     | [SK5] Assessment of ability to solve problems that arise in practice  |            |     |
|   | [K7_U06] applies computer, statistical and specialised database methods to solve scientific and technological problems in technology and related fields   | Is able to find information from scientific databases confirming the effectiveness or lack of effectiveness of cosmetic ingredients |          |                                     | [SU2] Assessment of ability to analyse information  |            |     |
|   | [K7_W04] recognises scientific, technological, organisational and economic opportunities and constraints in technology and related fields   | Can explain the actual way cosmetics work and the methods used to evaluate their effects  |          |                                     | [SW3] Assessment of knowledge contained in written work and projects  |            |     |
| Subject contents                            | Issues related to the structure of the skin, which affects the penetration of cosmetic ingredients into the skin; controversial ingredients (e.g. preservatives, dyes, UV filters, surfactants). Raising awareness and scientific verification of the actual significance of ingredients with the prefix "bio" or "organic", etc., in cosmetics, their actual origin and effect on the human body. Legal regulations inhibiting/limiting the possibilities of using selected ingredients. |   |          |                                     |   |            |     |
| Prerequisites and co-requisites             | Basic knowledge of chemistry and biology.   |   |          |                                     |   |            |     |
| Assessment methods and criteria             | Subject passing criteria  | Passing threshold   |          |                                     | Percentage of the final grade   |            |     |
|   | presentation  | 100.0%  |          |                                     | 40.0%   |            |     |
|   | written test  | 60.0%   |          |                                     | 60.0%   |            |     |

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| Recommended reading  | Basic literature   | <p>Martini C., Kosmetologia i farmakologia skóry, Wydawnictwo Lekarskie PZWL, Warszawa, 2007</p> <p>Barel A., Paye M., Maibach H., Handbook of Cosmetic Science and Technology, wyd. III, Londyn, Informa Health Care, 2009</p> <p>and other cosmetic monographs</p>  |
|  | Supplementary literature   | <p>Meryem Uckaya, Fatih Uckaya, Nazan Demir, Yasar Demir; Evaluation of the efficiency and safety in cosmetic products, International Journal of Pharmaceutics 499 (2016) 295300.</p> <p>Huang, Catherine K, and Timothy A Miller. The truth about over-the-counter topical anti-aging products: a comprehensive review. Aesthetic surgery journal vol. 27,4 (2007): 402-12</p> <p>and other scientific publications about cosmetic ingredients</p> |
|  | eResources addresses   | <p>Adresy na platformie eNauczenie:</p> <p>WERYFIKACJA NAUKOWA DZIAŁANIA KOSMETYKÓW - Moodle ID: 44588</p> <p><a href="https://enauczenie.pg.edu.pl/moodle/course/view.php?id=44588">https://enauczenie.pg.edu.pl/moodle/course/view.php?id=44588</a></p>   |
| Example issues/<br>example questions/<br>tasks being completed | Present scientific data on the degree of collagen penetration into the skin. |   |
| Work placement   | Not applicable   |   |

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