

| Molecular Plant and Microbial Sciences - Practical |   |               |   |                                  |                                  |
|--|---|---------------|---|----------------------------------|----------------------------------|
| Identification number                              | Workload  | Credit points | Term of studying                                | Frequency of occurrence          | Duration                         |
| MN-B-P 2   | 180 h   | 6 CP          | 1 <sup>st</sup> term or higher term of studying | Winter term                      | 15 weeks                         |
| 1  | <b>Type of lessons</b><br>Seminar/Project work  |               | <b>Contact times</b><br>60 h                    | <b>Self-study times</b><br>120 h | <b>Intended group size</b><br>20 |
| 2  | <b>Aims of the module and acquired skills</b><br>Students who successfully completed this module ... <ul style="list-style-type: none"> <li>• are able to perform phylogenetic and phylogenomic analysis of plants on desktop computers.</li> <li>• have acquired practical skills in the use of common bioinformatical algorithms, computational sequence analysis tools as well as biological databases to study scientific questions in plant and microbial sciences.</li> <li>• can independently carry out small scientific projects related to the topic of the module.</li> <li>• have learned how to present research results in oral and written form and to critically discuss scientific publications related to the topic of the module on a professional level.</li> </ul> |               |   |                                  |                                  |
| 3  | <b>Contents of the module</b> <ul style="list-style-type: none"> <li>• Phylogenetic analyses of genes and proteins from plants and microbes</li> <li>• Analysis of transcriptome and proteome data sets from plants and microbes</li> <li>• Use of biological databases</li> <li>• Organization of experiments in plant and microbial sciences</li> <li>• Studying, presenting and discussing scientific literature related to the topic of the module</li> <li>• Writing of protocols and/or seminar papers</li> </ul>   |               |   |                                  |                                  |
| 4  | <b>Teaching/Learning methods</b> <ul style="list-style-type: none"> <li>• Project work; Seminar; Computer exercises; Training on presentation techniques in oral and written form</li> </ul>  |               |   |                                  |                                  |
| 5  | <b>Requirements for participation</b><br>Enrollment in the Master´s degree course "Biological Sciences"; Simultaneous participation in the lecture module "Molecular Plant and Microbial Sciences - Lecture".   |               |   |                                  |                                  |
| 6  | <b>Type of module examinations</b><br>Oral presentation (100 % of the total module mark)  |               |   |                                  |                                  |
| 7  | <b>Requisites for the allocation of credits</b><br>Regular and active participation; Passed seminar paper/protocol;<br>Oral presentation at least "sufficient"  |               |   |                                  |                                  |
| 8  | <b>Compatibility with other Curricula*</b><br>None  |               |   |                                  |                                  |
| 9  | <b>Significance of the module mark for the overall grade</b><br>7.5 % of the overall grade  |               |   |                                  |                                  |

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| 10 | <b>Module coordinator</b><br>Prof. Dr. Gunther Döhlemann, phone 470 1647, e-mail: g.doehlemann@uni-koeln.de  |
| 11 | <b>Additional information</b><br><b>Participating faculty:</b> apl. Prof. Dr. B. Becker, Dr. A. Boisson-Dernier, Prof. Dr. M. Bucher, Prof. Dr. J. de Meaux, Prof. Dr. G. Döhlemann, PD Dr. T. Gigolashvili, Prof. Dr. U. Höcker, Prof. Dr. M. Hülskamp, Prof. Dr. S. Kopriva, PD Dr. S. Krueger, PD Dr. A. Linstädter, Dr. M. Stetter, Prof. Dr. B. Thomma, Prof. Dr. A. Zuccaro<br><b>Literature:</b> <ul style="list-style-type: none"><li>• Information about textbooks and other reading material will be given on the ILIAS representation of the course (<a href="https://www.ilias.uni-koeln.de/ilias/goto_uk_crs_3516847.html">https://www.ilias.uni-koeln.de/ilias/goto_uk_crs_3516847.html</a>)</li></ul> <b>General time schedule:</b> Weeks 1-14 (Mon.-Fri.): Seminar/project work and oral presentations (starting at 2:00 p.m. at different dates, more details will be given in the introduction to the module).<br><b>Introduction to the module:</b> November 02, 2020 at 2:00 p.m., online (further information/link will be sent to your Smail-Account); for preparation to the module before this introduction see ILIAS link under literature. |