

Georg-August-University Göttingen

Master Program „Crop Protection“

Modul M.Agr. 0094 „Basics of Molecular Biology in Crop Protection“

<b>Contents, Objectives</b>  <b>Contents:</b> The use of biochemical and molecular techniques in agricultural research and diagnostics becomes more and more important. The lecture presents the basics necessary for understanding these methods and provides the basis for more advanced practicals and lectures. The following topics will be presented: Structure and function of macromolecules ( proteins, DNA, RNA,carbohydrates) - function of enzymes - DNA- replication - transcription and translation - introduction to PCR - lipids and membranes - structure of cell walls of different groups of organisms and its significance in crop protection  <b>Objectives:</b> Students will understand the basics of the main laboratory tests used in agricultural research like ELISA and PCR and gain basic knowledge of plant breeding and plant pest resistance at the biochemical and molecular level.		<b>C/H PER SW</b>  6 C/4 H PER SW  Workload : 180 h  Contact time: 56 h  Self study time: 124 h		
<b>Type of instruction and examination</b> <table border="1" data-bbox="207 1059 1114 1205"><tr><td>Lecture</td></tr><tr><td>Examination: Written test 45 min.</td></tr></table>		Lecture	Examination: Written test 45 min.	
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Examination: Written test 45 min.				
<b>Type of module</b>  Elective module	<b>Entrance requirements</b>  none			
<b>Frequency</b>  Summer	<b>Duration</b>  One semester			
<b>Language</b>  English	<b>Number of students</b>  20			
<b>Coordinators:</b>  Prof. M. Varrelman, Dr. A. Sirrenberg				