

Compulsory Courses	Lectures	Practice	ECTS credits
Plant Hormonal Regulation	45	45	6
Mineral Nutrition in Plants	45	45	7
Main Types <i>in vitro</i> Cultures	45	45	7
Biotechnological Aspects in Modeling of Photosynthesis	45	45	6
Plant Stress and Adaptation	45	45	10
Phytopathology	45	45	8
Recombinant Plant DNA Technologies	45	30	8
Pre-Graduate Study and Practice		90	15

Elective Courses	Lectures	Practice	ECTS credits
Plant Metabolomics	30	30	4
Transgenic Plants	30	30	4
Molecular Markers and Basis of Population Genetics	30	10+20	4
Application of Plant Metabolites in Cosmetics and Perfumery	30	30	4
Biotechnology of Microalgae	30	30	4
Phytoeffectors	30	30	4
Mechanisms of Programmed Cell Death in Plants	30	30	4




FACULTY OF BIOLOGY
SOFIA UNIVERSITY

DEPARTMENT
OF PLANT
PHYSIOLOGY



MASTER'S DEGREE PROGRAMME

„PLANT PHYSIOLOGY“
REGULAR FORM OF EDUCATION



Contacts:

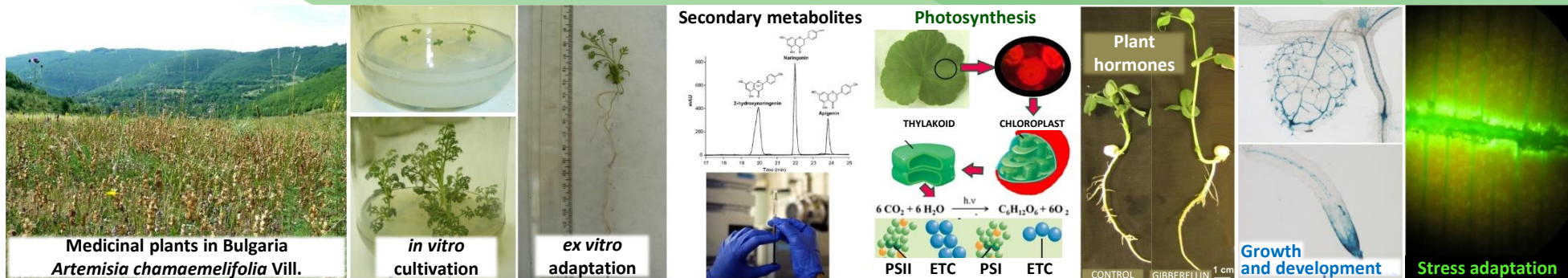
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MPD “Plant Physiology” provides opportunities to acquire fundamental knowledge in phytophysiology and its applied fields, in the modern plant biochemistry and molecular biology.

Candidates can be students holding Educational and Qualification Degree Bachelor of Science in the professional fields Biological Sciences, Biotechnology, Pedagogy of Teaching in ..., Agrarian Sciences.

The competition ball is formed by:

For State-funded study

- interview evaluation;
- the mean grade from the Higher Education Diploma (mean grade from the semester exams and mean grade of the state exams) which is at least a Good 4.00;
- the grade from the BSc course Plant Physiology or Biochemistry.

For paid study – the grade from the Higher Education Diploma which is at least a Good 4.00.

The students will acquire the following competencies:

- skills for developing experimental tasks, designing and implementing scientific projects in the fields of photosynthesis, hormonal balance, water exchange, mineral nutrition, plant-soil interactions, stress and adaptation, phytopathology, etc.;
- specialized skills for working with tissue and cell cultures; micropropagation; plant DNA technologies; hydroponic cultures; microalgae cultivation; study of the response to stress factors; regulation of growth and development;
- application of basic approaches in plant molecular biology and biochemistry;
- skills for teamwork, decision-making and encouragement of an initiative attitude.



The programme is conducted in a regular form (State-funded and paid) for 3 semesters. **The thesis work** could be accomplished at the Department or jointly with other Bulgarian and foreign institutions (Erasmus+ programme, etc.).

The graduate students receive the **Professional Qualification: Molecular Biologist – Master in Plant Physiology**, and can continue their **professional realization** as experts, consultants, lecturers or specialists in:

- ✓ Companies and organizations with relation to the exploitation of plant resources, eco-physiology, etc.;
- ✓ Biotechnological, pharmaceutical and cosmetics companies;
- ✓ Governmental institutions;
- ✓ Research institutes, higher education institutions;
- ✓ Education for awarding a PhD degree in Biological Sciences in the Faculty of Biology or in other academic structures in Bulgaria and abroad.