Agricultural Environmental Management Engineering MSc

Subjects of Final Examination

**„A”**

**Environmental management and environmental protection**

Natural resource utilization in agriculture.

Soil as a potentially renewable natural resource.

Soil – plant relationships.

Soil protection and water management.

Water damage protection, water utilization.

Atmospheric resource utilization in agriculture.

The possible agricultural consequences of climate change.

Research methodology for environmental phenomena.

Assessment of environmental conditions and modelling environmental systems.

Classical analytical environmental measurement techniques.

Modern analytical environmental measurement techniques.

Waste management and utilization.

Environmental risk assessment and management.

Methods of precision agriculture.

Describe the main stages and technological elements of wastewater treatment.

Describe the methods of biological (aerobic/anaerobic) wastewater treatment.

Environmental management in the agriculture.

Global environmental problems and alternative solutions

Environmental protection in the EU

Sustainable development in environmental protection.

**„B”**

**Sustainable agricultural systems and environmental technologies**

Soil pollution and its environmental aspects.

Environmental aspects of the water pollutions.

Precision agriculture and its environmental aspects.

Renewable resources in agriculture.

Environmental risk management of animal breeding farms.

Effects of air contaminants on living and non-living environment.

Elimination technologies for dust, aerosols and gaseous contaminants.

Quality parameters of surface water and the water quality classification system.

Biogas production, starting materials and technologies.

Composting, starting materials and technologies.

Sewage sludge and sewage sludge compost utilization in the agriculture and its legal control.

Fate and transport of contaminants in soil and ground water.

Soil remediation technologies, in situ and ex situ methods.

Waste management in agriculture, food production and urban areas.

Hazardous waste treatment in the agriculture.

Environmental risk assessment procedures and methods.

Environmental impacts of noise, law for noise control.

Wind and solar energy utilization in the agriculture, applications, technologies.

Agricultural water utilization technologies, drought, flood and excess water management.

Biomass utilization.

Debrecen, 06.05.2024.

 Péter Tamás Nagy PhD

 Associate Professor, Head of the course