

**Laboratory of Agricultural Engineering, School of Chemical and Environmental Engineering,
Technical University of Crete**

The research interests of Agricultural Engineering Lab focus mainly on the following areas:

- **Natural treatment systems and effluent reuse:** constructed wetlands, land treatment systems, effluent recycling
- **Nutrient biogeochemical cycles:** Soil health, soil modeling, N and C cycling, soil microbiomes
- **Irrigation demands:** crop irrigation requirements, deficient irrigation, water use efficiency

Currently, our research is funded by the [BIOME](#) and [RESCHEDULE](#) projects.

Equipment: The Laboratory of Agricultural Engineering at the School of Chemical and Environmental Engineering, TUC possesses all the necessary equipment and facilities to implement the above-mentioned activities. More specifically, it owns simple and quantitative PCR instruments, DNA homogenizer, deep freezers (-80 oC), a desktop H/Y appropriate for bioinformatic analyses and all the necessary micro-equipment (centrifuges, incubators, micropipettes). It also possesses a LICOR 6400 Portable Photosynthesis System equipped with 6400-09 Soil CO₂ Flux Chamber for soil respiration monitoring and a portable Gaset DX4015 analyzer for soil GHGs monitoring. There is also UV-Vis spectrophotometer, incubators and rooms of controlled conditions. In addition, the central facilities of EnvEng include an ICP-MS instrument, a microwave digestion system, an ion chromatography, and a CHN elementary analyzer.