

Code	AMN 515
Name	Advanced Instrumental Analysis I
Hour per week	5 (3+2)
Credit	4
ECTS	15
Level/Year	Graduate
Semester	Fall, Spring
Type	Elective
Prerequisites	None
Content	<ul style="list-style-type: none"> • Introduction of stimulants used for signal formation and mechanisms used for signal formation and determination, • Necessary terms (e.g. accuracy, precision and sensitivity) for instrumental analysis • Necessary parameters and terms to decide to type of instrumental analysis, signal/noise ratio, types of noise, minimum detectable/quantifiable limits, calibration curves, dynamic range • Introduction of different physicochemical properties used in different instrumental analysis, • Introduction of necessary parts of analysis instruments, • Light, light-matter interaction, absorbance-transmittance (Beer-Lambert Law), infrared (IR) lights and molecular vibrations, • Light scattering, determination of particle size distribution and surface charge via light, • Chromatography, utilization of chromatography for instrumental analysis