Title:	Nuclear magnetic resonance spectroscopy
Lecture hours:	30
Study period: (summer/winter)	summer
Number of credits:	2
Assessment methods:	The condition for passing the course is obtaining at least 50% of points during the final exam. Assessment criteria: 0-49% unsatisfactory (2) 50-59% satisfactory (3) 60-69% satisfactory+ (3+) 70-79% good (4) 80-89% good+ (4+) 90-100% very good (5)
Language of instruction:	English
Prerequisites:	Knowledge of the basics of general physics, general chemistry and quantum physics.
Course content:	1. Basics of spectroscopy. 2. The interaction of the magnetic field with matter. Magnetic resonance. 3. Nuclear magnetic resonance. 4. Chemical shift. Spin-spin coupling. 5. Methodology of NMR spectra research. 6. Influence of dynamic effects on the NMR spectrum. 7. ^{13}C NMR spectroscopy. 8. Magnetic resonance of other nuclei. 9. 2D NMR correlation spectroscopy. 10. Analysis of sample NMR spectra. 11. Applications of NMR in medicine.
Learning outcomes:	P_W01 - Student has knowledge of the physical fundamentals of nuclear magnetic resonance (K_W01) P_U01 - Student is able to interpret NMR spectra of chemical compounds (K_U01) P_K01 - Student understands social aspects of practical application of acquired knowledge (K_K07)
Name of lecturer:	dr Hubert Cybulski, associate professor
Email address:	hubert@ukw.edu.pl