

Ellective courses for PandA in 2024/25

Kod (Code) 0800-	Przedmiot (Subject)	ECTS credits	Liczba godz. w sem. (hour/ sem)	Rodzaj zajęć (form)	Prowadzący (Teacher/lecturer)
	Winter semester				
PA-QUANTINF	Quantum information	3	30	Lect.	Prof. Sarbicki
PA-INASTRO	Introduction to astrophysics (not for astronomy graduate)	3	30	Lect.	Many lecturers
PA-ASCHEMA	Astrochemistry and astrobiology	3	30	Lect.	Prof. A.Bartkiewicz Prof. G. Maciejewski
PA-OPTELA	Optoelectronics laboratory	5	60	Lab.	Prof. D. Piątkowski Dr. K. Wiśniewski
PA-OPASTLA	Optical astrophysics laboratory	3	45	Lab.	Dr. P. Zieliński Dr. M. Gawroński
PA-STAPHY	Statistical physics	5	30	Lect. E	Prof. J. Jurkowski
PA-STAPHY	Statistical physics		30	Clas. G	Prof. J. Jurkowski
	University-wide courses ¹	2/3			
	Summer semester				
PA-QUANTOPT2	Quantum optics 2	5	30	Lect.	Prof. P. Kolenderski
PA-QUANTOPT2	Quantum optics 2		30	Clas.	Dr. M. Lasota
PA-GALAX	Galaxies: formation and evolution	5	30	Lect.	Prof. M. Hanasz
PA-GALAX	Galaxies: formation and evolution		30	Lab.	Dr. D. Wóltański
PA-RADASTRO	Radioastronomy laboratory	3	45	Lab	Dr. P. Wolak Dr. M. Gawroński
PA-BIOPHY	Biophysics	5	30	Lect E	Prof. W. Nowak
PA-BIOPHY	Biophysics		30	Lab G	Prof. W. Nowak
PA-QUANTOL	Quantum optics laboratory	5	60	Lab.	Prof. R. Ciuryło
PA-THEOASTLA2	Theoretical astrophysics laboratory 2	3	45	Lab. G	Prof. K. Gęsicki
PA-THEOASTLA3	Theoretical astrophysics laboratory 3	3	45	Lab. G	Prof. M. Hanasz

¹ From the list on www page: <https://www.umk.pl/studenci/zajecia-ogolnouniwersyteckie/ZO-O-2023-2024.pdf> without courses directly related to the studied program

PA-PLANETSYS	Physics of planetary systems		30	Lect. E	Prof. A. Niedzielski
PA-PLANETSYS	Physics of planetary systems		30	clas E	Prof. G. Maciejewski
	University-wide courses ²	2/3			

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