

Course code	Course name	Study credits	Study period	Language of instruction	Mode of teaching	Open university tuition	Open to exchange students / students of other degree programmes
PAP301	Seminar in Particle Physics and Astrophysical Science	5 cr	1.-4. period	English	contact teaching	no	no
PAP302	Open problems in modern astrophysics	5 cr	1.-2. period	English	contact teaching	no	yes
PAP303	Statistical Inverse Methods	5 cr	3.-4. period	English, Finnish	contact teaching	no	yes
PAP304	Plasma Physics	5 cr	1. period	English	contact teaching	no	yes
PAP305	Space Applications of Plasma Physics	5 cr	2. period	English	contact teaching	no	yes
PAP306	Advanced Course in Observational Astronomy I	5 cr	1.-2. period	English	contact teaching	no	yes
PAP307	Advanced Course in Observational Astronomy II	5 cr	4. period	English	contact teaching	no	yes
PAP308	Special Course in Observational Astronomy	5 cr	1.-2. period	English	contact teaching	no	yes
PAP311	Small Bodies in the Solar System	5 cr	1.-2. period	English	contact teaching	no	yes
PAP312	Time Series Analysis in Astronomy	5 cr	1.-2. period	English	contact teaching	no	yes
PAP314	Introduction to light scattering	5 cr	4. period	English, Finnish	contact teaching	no	yes
PAP320	Radiative Transfer	5 cr	1. period	English, Finnish	contact teaching	no	yes
PAP323	Advanced Space Plasma Physics	10 cr	3.-4. period	English	contact teaching	no	yes
PAP351	Stellar magnetic activity	5 cr	3.-4. period	English	contact teaching	no	yes
PAP325	Introduction to Particle Physics II	5 cr	2. period	English	contact teaching	no	yes
PAP326	Cosmology II	5 cr	2. period	English	contact teaching	no	yes
PAP327	Particle Physics Phenomenology	5 cr	3.-4. period	English	contact teaching	no	yes
PAP328	Laboratory course on instrumentation	5 cr	1.-2. period	English	contact teaching	no	yes
PAP331	Computing Methods in High Energy Physics	5 cr	3.-4. period	English	contact teaching	no	yes
PAP332	Introduction to Particle Physics I	5 cr	1. period	English	contact teaching	no	yes
PAP334	Statistical Methods	5 cr	1.-2. period	English	contact teaching	no	yes
PAP338	Gaseous radiation detectors and scintillators	5 cr	1.-2. period	English	contact teaching	no	yes
PAP339	Semiconductor radiation detectors	5 cr	3.-4. period	English	includes both contact and distance teaching	no	yes
PAP344	Introduction to the Physics of Neutrinos	5 cr	4. period	English	contact teaching	no	yes
PAP347	Theories beyond the standard model	5 cr	1.-2. period	English	contact teaching	no	yes
PAP348	General relativity I	5 cr	3. period	English	contact teaching	no	yes
PAP349	General relativity II	5 cr	4. period	English	contact teaching	no	yes

## Courses that are not taught during the academic year 2025-2026:

PAP313	Variable Stars	5 cr	not offered 25-26	English	contact teaching
PAP309	Interstellar Matter	5 cr	not offered 25-26	English	contact teaching
PAP315	Computational light scattering	5 cr	not offered 25-26	English	contact teaching
PAP316	Astrophysical light scattering problems	5 cr	not offered 25-26	English	contact teaching
PAP317	Galactic dynamics	5 cr	not offered 25-26	English	contact teaching
PAP318	Galaxy formation and evolution	5 cr	not offered 25-26	English	contact teaching
PAP319	High Energy Astrophysics	5 cr	not offered 25-26	English	contact teaching
PAP321	Solar Physics	5 cr	not offered 25-26	English	contact teaching
PAP324	Numerical Space Physics	5 cr	not offered 25-26	English	contact teaching
PAP354	Space and Astrophysical Plasma Turbulence	5 cr	not offered 25-26	English	contact teaching
PAP329	Particle Physics Experiments	5 cr	not offered 25-26	English	contact teaching
PAP340	Physics of semiconductor devices	5 cr	not offered 25-26	English	includes both contact and distance teaching
PAP346	Path Integral Quantization of Gauge Field Theories	5 cr	not offered 25-26	English	contact teaching
PAP352	Galaxy Survey Cosmology	5 cr	not offered 25-26	English	contact teaching
PAP353	Gravitational Lensing	5 cr	not offered 25-26	English	contact teaching