

Preliminary teaching programme for academic year 2024-25

Code	Course unit name	Scope (cr)	Period	Languages	Mode of teaching / Method of completion	Open university studies	Open to exchange students	Open to other degree programmes
MATR301	Introductory Course to Materials Research	5 cr	1. period	English - Completely in English (or multilingual)	contact teaching	Teaching is only for degree students.	yes	yes
MATR302	Materials Characterization	5 cr	2. period	English - Completely in English (or multilingual)	contact teaching	Teaching is only for degree students.	yes	yes
MATR3031	Solid state physics: crystal structure and atomic dynamics	5 cr	3. period	English - Completely in English (or multilingual)	contact teaching	Teaching is only for degree students.	yes	yes
MATR3032	Solid state physics: electronic structure and properties	5 cr	4. period	English - Completely in English (or multilingual)	contact teaching	Teaching is only for degree students.	yes	yes
MATR305	Nanophysics and Nanochemistry	5 cr	2. period	English - Completely in English (or multilingual)	contact teaching	Teaching is only for degree students.	yes	yes
MATR306	Materials Physics	5 cr	4. period	English - Completely in English (or multilingual)	contact teaching	Teaching is only for degree students.	yes	yes
MATR307	Solid State Continuum Mechanics I	5 cr	3. period	English - Completely in English (or multilingual)	contact teaching	Teaching is only for degree students.	yes	yes
MATR308	Surface Physics I	5 cr	2. period	English - Completely in English (or multilingual)	including both contact and distance teaching	Teaching is only for degree students.	yes	yes
MATR3082	Surface Physics II	5 op	3. period	English - Completely in English (or multilingual)	contact teaching	Teaching is only for degree students.	yes	yes
MATR309	Radiation Protection	5 cr	4. period	Finnish	contact teaching	Teaching is only for degree students.	no	yes
MATR310	Laboratory Exercises	10 cr	1.-4. period	Finnish, Swedish, English - Completely in English (or multilingual)	contact teaching	Teaching is only for degree students.	yes	yes
MATR311	Synchrotron light in materials science	5 cr	3. period	English - Completely in English (or multilingual)	contact teaching	Teaching is only for degree students.	yes	yes
MATR318	Solid State Continuum Mechanics II	5 cr	4. period	English - Completely in English (or multilingual)	contact teaching	Teaching is only for degree students.	yes	yes
MATR322	Numerical Methods in Scientific Computing	10 cr	3.-4. period	English - Completely in English (or multilingual)	contact teaching	Teaching is only for degree students.	yes	yes
MATR323	Basics of Monte Carlo Simulations	5 cr	3. period	English - Completely in English (or multilingual)	contact teaching	Teaching is only for degree students.	yes	yes
MATR331	Introduction to Biological Physics	5 cr	1. period	English - Completely in English (or multilingual)	contact teaching	Teaching is only for degree students.	yes	yes
MATR332	Physics of Biological Systems	5 cr	3. period	English - Completely in English (or multilingual)	contact teaching	Teaching is only for degree students.	yes	yes
MATR338	Ultrasonics	10 cr	3.-4. period	English - Completely in English (or multilingual)	contact teaching	Teaching is only for degree students.	yes	yes
MATR342	Determination of Crystal and Molecular Structures	5 cr	3. period	English - Completely in English (or multilingual)	contact teaching	Teaching is only for degree students.	yes	yes
MATR343	Microscope techniques in materials characterization	5 cr	4. period	English - Completely in English (or multilingual)	contact teaching	Teaching is only for degree students.	yes	yes
MATR344	Vacuum technology	5 cr	1. period	English - Completely in English (or multilingual)	contact teaching	Teaching is only for degree students.	yes	yes
MATR345	Basics in Polymer Chemistry	5 cr	1. period	English - Completely in English (or multilingual)	contact teaching	Teaching is only for degree students.	yes	yes
MATR346	Polymer Physics	5 cr	3. period	English - Completely in English (or multilingual)	contact teaching	Teaching is only for degree students.	yes	yes
MATR347	Synthesis of Polymers; Polymer Materials	5 cr	4. period	English - Completely in English (or multilingual)	contact teaching	Teaching is only for degree students.	yes	yes
MATR348	Laboratory Practicum, p 2	5 cr	2. period	English - Completely in English (or multilingual)	contact teaching	Teaching is only for degree students.	yes	yes
MATR348	Laboratory Practicum, p 4	5 cr	4. period	English - Completely in English (or multilingual)	contact teaching	Teaching is only for degree students.	yes	yes
MATR352	Light Scattering	5 cr	2. period	English - Completely in English (or multilingual)	contact teaching	Teaching is only for degree students.	yes	yes
MATR353	Polymer characterization: Spectroscopy and thermal methods	5 cr	4. period	English - Completely in English (or multilingual)	contact teaching	Teaching is only for degree students.	yes	yes
MATR356	Polymers in Medicine	5 cr	3. period	English - Completely in English (or multilingual)	contact teaching	Teaching is only for degree students.	yes	yes
MATR358	Inorganic Materials Chemistry	5 cr	2. period	English - Completely in English (or multilingual)	contact teaching	Teaching is only for degree students.	yes	yes
MATR364	Seminar in Materials Research	5 cr	1.-4. period	English - Completely in English (or multilingual)	contact teaching	Teaching is only for degree students.	no	yes
MATR365	Radiation damage in materials	5 cr	1.-4. period	English - Completely in English (or multilingual)	online teaching (not time-bound)	Teaching is only for degree students.	yes	yes
MATR369	Industrial Physics	5 cr	4. period	English - Completely in English (or multilingual)	distance teaching (time-bound)	Teaching is only for degree students.	yes	yes
MATR372	Nanocatalysis	5 cr	3. period	English - Completely in English (or multilingual)	contact teaching	Teaching is only for degree students.	yes	yes
MATR377	Photonics	10 cr	3.-4. period	English - Completely in English (or multilingual)	contact teaching	Teaching is only for degree students.	yes	yes
MATR378	Finite element modelling for physicists I	5 cr	1. period	English - Completely in English (or multilingual)	contact teaching	Teaching is only for degree students.	yes	yes
MATR379	Finite element modelling for physicists II	5 cr	2. period	English - Completely in English (or multilingual)	contact teaching	Teaching is only for degree students.	yes	yes
MATR382	Methods in Molecular Biophysics	5 - 10 cr	3.-4. period	English - Completely in English (or multilingual)	distance teaching	Teaching is only for degree students.	yes	yes
MATR384	Polyelectrolytes and Colloids	5 cr	3. period	English - Completely in English (or multilingual)	contact teaching	Teaching is only for degree students.	yes	yes
MATR385	Ion beam methods for materials characterization	5 cr	3.-4. period	English - Completely in English (or multilingual)	contact teaching	Teaching is only for degree students.	yes	yes