

Code	Course unit name	Scope (cr)	Teaching period	Form of teaching	Language of instruction	Open to exchange students	Open university studies (open university course fees will be announced later)	Open to other degree programmes
Physics, Basic Studies in Finnish (laboratory courses also in English)								
FYS1001	Vuorovaikutukset ja kappaleet	5 cr	1. period	Contact teaching	Finnish	no	yes, joint implementation	yes
FYS1002	Vuorovaikutukset ja aine	5 cr	2. period	Contact teaching	Finnish	no	yes, joint implementation	yes
FYS1003	Sähkömagnetismi	5 cr	3. period	Contact teaching	Finnish	no	yes, joint implementation	yes
FYS1004	Säteilykentät ja fotonit	5 cr	4. period	Contact teaching	Finnish	no	yes, joint implementation	yes
FYS1016	Fysiikan perusopin kokeelliset laboratoriotyöt I	2 cr	1.-2. period	Contact teaching	Finnish	no	yes, joint implementation	yes
FYS1017	Fysiikan perusopin kokeelliset laboratoriotyöt II	3 cr	3.-4. period	Contact teaching	Finnish	no	yes, joint implementation	yes
FYS1016	Laboratory Exercises in Basic Studies of Physics I	2 cr	1.-2. period	Contact teaching	English	yes	yes, joint implementation	yes
FYS1017	Laboratory Exercises in Basic Studies of Physics II	3 cr	3.-4. period	Contact teaching	English	yes	yes, joint implementation	yes
Physics, Basic Studies in Swedish								
FYS1001	Växelverknningar och krcrpar	5 cr	1. period	Contact teaching	Swedish	no	yes, joint implementation	yes
FYS1002	Växelverknningar och materia	5 cr	2. period	Contact teaching	Swedish	no	yes, joint implementation	yes
FYS1003	Elektromagnetism	5 cr	3. period	Contact teaching	Swedish	no	yes, joint implementation	yes
FYS1004	Strålningsfält och fotoner	5 cr	4. period	Contact teaching	Swedish	no	yes, joint implementation	yes
FYS1016	Fysikens grundstudiers laboratoriearbeten I	2 cr	1.-2. period	Contact teaching	Swedish	no	yes, joint implementation	yes
FYS1017	Fysikens grundstudiers laboratoriearbeten II	3 cr	3.-4. period	Contact teaching	Swedish	no	yes, joint implementation	yes
Mathematical and Computational Methods								
FYS1010	Matemaattiset apuneuvot I	5 cr	1. period	Contact teaching	Finnish (exercise group in Swedish)	no	yes, joint implementation	yes
FYS1011	Matemaattiset apuneuvot II	5 cr	2. period	Contact teaching	Finnish (exercise group in Swedish)	no	yes, joint implementation	yes
FYS1012	Matemaattiset apuneuvot III	5 cr	3. period	Contact teaching	Finnish (exercise group in Swedish)	no	yes, joint implementation	yes
FYS1013	Tieteellinen laskenta I	5 cr	2. period	Contact teaching	Finnish (exercise group in Swedish)	no	no	yes
FYS1014	Havaintojen tilastollinen käsittely	5 cr	4. period	Contact teaching	Finnish (exercise group in Swedish)	no	yes, joint implementation	yes
Physics, Intermediate Studies								
FYS2001	Termofysiikan perusteet	5 cr	1. period	Contact teaching	Finnish	no	no	yes
FYS2002	Termodynaamiset potentiaalit	5 cr	2. period	Contact teaching	Finnish	no	no	yes
FYS2005	Kvanttifysiikan sovelluksia - Atomit ja molekyylit	5 cr	1. period	Contact teaching	Finnish	no	no	yes
FYS2006	Kvanttifysiikan sovelluksia - Tiivis aine ja alkeishiikkaset	5 cr	2. period	Contact teaching	Finnish	no	no	yes
FYS2007	Fysiikan mittausmenetelmät	5 cr	1. period	Contact teaching	Finnish	no	no	yes
FYS2008	Fysiikan aineopintojen laboratoriotyöt I, Physics Intermediate Studies Laboratory Exercises I	5 cr	3. period	Contact teaching	English (exercise groups in Finnish and English)	yes	no	yes
FYS2009	Fysiikan aineopintojen laboratoriotyöt II	5 cr	4. period	Contact teaching	Finnish	no	no	yes
Physics, Intermediate Studies in Swedish								
FYS2001	Termofysikens grunder	5 cr	1. period	Contact teaching	Swedish	no	no	yes
FYS2002	Termodynamiska potentialer	5 cr	2. period	Contact teaching	Swedish	no	no	yes
FYS2003	Kvantfysikens grunder	5 cr	4. period	Blended teaching (Includes scheduled contact and distance teaching)	Swedish	no	yes, joint implementation	yes
FYS2005	Kvantfysikens tillämpningar - Atomer och molekyler	5 cr	1. period	Blended teaching (Includes scheduled contact and distance teaching)	Swedish	no	no	yes
FYS2006	Kvantfysikens tillämpningar - Det fasta tillståndet och ele	5 cr	2. period	Contact teaching	Swedish	no	no	yes
Theoretical Physics, Intermediate Studies								
FYS2003	Kvanttifysiikan perusteet	5 cr	4. period	Contact teaching	Finnish	no	yes, joint implementation	yes
FYS2004	Suhteellisuusteorian perusteet	5 cr	3. period	Contact teaching	Finnish (exercise group in Swedish)	no	yes, joint implementation	yes
FYS2010	Mathematical Methods of Physics Ia	5 cr	1. period	Contact teaching	English	yes	no	yes
FYS2011	Mathematical Methods of Physics Ib	5 cr	2. period	Contact teaching	English	yes	no	yes
FYS2012	Mathematical Methods of Physics IIa	5 cr	3. period	Contact teaching	English	yes	no	yes
FYS2013	Mathematical Methods of Physics IIb	5 cr	4. period	Contact teaching	English	yes	no	yes
FYS2027	Mekaniikka	5 cr	1. period	Contact teaching	Finnish	no	no	yes
FYS2015	Statistinen mekaniikka	5 cr	2. period	Contact teaching	Finnish (exercises and exam also available in English)	yes	no	yes
FYS2016	Elektrodynamics I	5 cr	3. period	Contact teaching	English	yes	no	yes

FYS2017	Elektrodynamics II	5 cr	4. period	Contact teaching	English	yes	no	yes
FYS2061	Quantum mechanics Ia	5 cr	1. period	Contact teaching	English	yes	no	yes
FYS2062	Quantum mechanics Ib	5 cr	2. period	Contact teaching	English	yes	no	yes
FYS2019	Kvanttistatistiikka	5 cr	3. period	Contact teaching	Finnish (exercises and exam also available in English)	yes	no	yes
Meteorology, Intermediate Studies								
FYS2031	Meteorologian ja säähavainnonteon perusteet	5 cr	1. period	Contact teaching	Finnish	no	no	yes
FYS2032	Ilmakehän termodynamiikka	5 cr	2. period	Contact teaching	Finnish	no	no	yes
FYS2033	Ilmakehän virtausdynamiikan perusteet	10 cr	1.-2. period	Contact teaching	Finnish (course materials also available in English)	yes	no	yes
FYS2034	Klimatologian perusteet	2 cr	3. period	Contact teaching	Finnish	no	no	yes
FYS2035	Fysikaalinen klimatologia	3 cr	3. period	Contact teaching	Finnish	no	no	yes
Astronomy, Intermediate Studies								
FYS2041	Tähtitieteen perusteet I	5 cr	3. period	Contact teaching	Finnish	no	no	yes
FYS2042	Tähtitieteen perusteet II	5 cr	4. period	Contact teaching	Finnish	no	no	yes
FYS2043	Johdatus avaruusplasmafysiikkaan	5 cr	1. period	Contact teaching	Finnish	no	no	yes
FYS2044	Havaitsevan tähtitieteen peruskurssi I	5 cr	1.-2. period	Contact teaching	Finnish	no	no	yes
	Havaitsevan tähtitieteen peruskurssi II, Basics of Observational Astronomy II	5 cr	3.-4. period	Contact teaching	Finnish, English	yes	no	yes
FYS2046	Astrofysiikan peruskurssi I	5 cr	3. period	Contact teaching	Finnish	no	no	yes
FYS2047	Astrofysiikan peruskurssi II	5 cr	4. period	Contact teaching	Finnish	no	no	yes
FYS2051	Aurinkokunnan fysiikka	5 cr	3.-4. period	Contact teaching	Finnish	no	no	yes
FYS2052	Galaksit ja kosmologia	5 cr	1.-2. period	Contact teaching	Finnish	no	no	yes
FYS2053	Linnunradan rakenne	5 cr	Not lectured in academic year 2025-2026		-	-	-	-
FYS2054	Tähtien rakenne ja kehitys	5 cr	Not lectured in academic year 2025-2026		-	-	-	-
FYS2055	Taivaanmekaniikka	5 cr	Not lectured in academic year 2025-2026		-	-	-	-
Optional courses, Intermediate Studies								
FYS2071	Aerosol physics I	5 cr	1. period	Contact teaching	English	yes	no	yes
FYS2072	Ympäristöfysiikka	5 cr	2. period	Contact teaching	Finnish	no	no	yes
FYS2073	Fluid Phenomena	5 cr	1. period	Contact teaching	English	yes	no	yes
FYS2074	Kasvihuoneilmiö, ilmastomuutos ja vaikutukset	5 cr	4. period	Contact teaching	Finnish	no	no	yes
				Blended teaching (Includes scheduled contact and distance teaching)				
FYS2086	Atmosfärvetenskap nu	5 cr	2. period		Swedish	no	no	yes
FYS2087	Air Quality in a Changing World	5 cr	Not lectured in academic year 2025-2026		-	-	-	-
FYS2075	Meritieteen peruskurssi	5 cr	1. period	Contact teaching	Finnish	no	no	yes
					English (course book, exercises and exam also available in Finnish)	yes	no	yes
FYS2076	Basic course in hydrology	5 cr	4. period	Contact teaching		yes	no	yes
FYS2078	Environmental Problems, Physics and Chemistry	5 cr	3. period	Contact teaching	English	yes	no	yes
FYS2081	Cosmology I	5 cr	1. period	Contact teaching	English	yes	no	yes
FYS2028	Mekanikan jatkokurssi	5 cr	Not lectured in academic year 2025-2026		-	-	-	-
FYS2029	Quantum Computing	5 cr	4. period	Contact teaching	English	yes	no	yes
FYS2082	Elektroniikka I	5 cr	2. period	Contact teaching	Finnish	no	no	yes
FYS2083	Introduction to nanoscience	5 cr	1. period	Contact teaching	English	yes	no	yes
FYS2084	Fundamentals of Materials Science	5 cr	2. period	Contact teaching	English	yes	no	yes
FYS2085	Scientific computing II	5 cr	2. period	Contact teaching	English	yes	no	yes
FYS2088	Introduction to molecular dynamics simulations	5 cr	1. period	Contact teaching	English	yes	no	yes
Compulsory studies in degree programme								
FYS4001	Fysikaalisiin tietosiin perehtyminen	3 cr	1.-2. period	Contact teaching	Finnish	no	no	yes
FYS4001	Presentation av de fysikaliska vetenskaperna	3 cr	1.-2. period	Contact teaching	Swedish	no	no	yes
FYS4002	Työelämätaidot I - Ongelmanratkaisu ryhmässä	1 cr	1.-4. period	Contact teaching	Finnish, Swedish, English	no	no	yes
FYS4003	Työelämätaidot II - Akateeminen kirjoittaminen	1 cr	2. period	Contact teaching	Finnish, Swedish, English	no	no	yes
FYS4011	Kerro tähtitieteestä (Työelämätaidot II)	1 cr	4. period	Contact teaching	Finnish	no	no	yes

FYS4004	Opiskelutaidot I	1 cr	1.-4. period	Blended teaching (Includes scheduled contact and distance teaching)	Finnish	no	no	no
FYS4005	Opiskelutaidot II	1 cr	1.-4. period	Blended teaching (Includes scheduled contact and distance teaching)	Finnish	no	no	no
FYS4006	Äidinkieli (tutkielmaseminaari), syksy	3 cr	1.-2. period	Contact teaching	Finnish	no	no	no
FYS4006	Äidinkieli (tutkielmaseminaari), syksy, kaksikielinen	3 cr	1.-2. period	Contact teaching	Finnish, Swedish	no	no	no
FYS4006	Äidinkieli (tutkielmaseminaari), kevät	3 cr	3.-4. period	Contact teaching	Finnish	no	no	no
FYS4006	Äidinkieli (tutkielmaseminaari), kevät	3 cr	3.-4. period	Contact teaching	Finnish	no	no	no
Optional courses								
FYS4023	Urasuunnittelu	2 cr	2. period	Contact teaching	Finnish	no	no	no
FYS4029	Introduction to emergency preparedness and response	5 cr	3.-4. period	Contact teaching	English	yes	no	yes
FYS4013	Universum nu	3 cr	3.-4. period	Contact teaching	Swedish	no	yes, joint implementation	yes
FYS4018	Universe Now	3 cr	3. period	Contact teaching	English	yes	no	yes
FYS4016	Nutida fysikens grunder	5 cr	1. period	Contact teaching	Swedish	no	yes, joint implementation	yes
FYS4015	Naturvetenskaper nu I (Prova på-kurs)	2 cr	Not lectured in academic year 2025-2026			–	–	–
FYS4020	Naturvetenskaper nu II (Prova på-kurs)	2 cr	4. period	Blended teaching (Includes scheduled contact and distance teaching)	Swedish	no	yes, joint implementation	yes
Courses for students from other degree programmes								
FYS1015	Fysiikkaa luonnontieteilijöille	5 cr	3. period	Blended teaching (Includes scheduled contact and distance teaching)	Finnish	no	yes, joint implementation	yes
Open university courses								
FYS4027	Ilmasto.nyt tutustumiskurssi	2 cr	4. May, summer 2026	Distance teaching	Finnish	no	yes, open university implementation	yes
FYS1015	Fysiikkaa luonnontieteilijöille	5 cr	summer teaching (June-August 2026)	Blended teaching (Includes scheduled contact and distance teaching)	Finnish	no	yes, open university implementation	yes
FYS4012	Maailmankaikkeus nyt	3 cr	summer teaching (June-August 2026)	Blended teaching (Includes scheduled contact and distance teaching)	Finnish	no	yes, open university implementation	yes
FYS4014	Johdatus astrobiologiaan	3 cr	summer teaching (June-August 2026)	Blended teaching (Includes scheduled contact and distance teaching)	Finnish (the course can also be completed in Swedish or English)	no	yes, open university implementation	yes
FYS4012	Maailmankaikkeus nyt	3 cr	3.-4. period	Blended teaching (Includes scheduled contact and distance teaching)	Finnish	no	yes, Education Centre implementation	yes
FYS4014	Johdatus astrobiologiaan	3 cr	1.-2. period	Blended teaching (Includes scheduled contact and distance teaching)	Finnish	no	yes, Education Centre implementation	yes