

Code	Course unit name	Score (cr)	Teaching period	Language of instruction	Form of teaching	Open university studies (open university course fees will be announced later)	Open to exchange students	Open to other degree programmes
Physics, Basic Studies in Finnish (laboratory courses also in English)								
FYS1001	Vuorovaikutukset ja kappaleet	5 cr	1. period	Finnish	Contact teaching	yes, joint implementation	no	yes
FYS1002	Vuorovaikutukset ja aine	5 cr	2. period	Finnish	Contact teaching	yes, joint implementation	no	yes
FYS1003	Sähkömagnetismi	5 cr	3. period	Finnish	Contact teaching	yes, joint implementation	no	yes
FYS1004	Säteilykentät ja fotonit	5 cr	4. period	Finnish	Contact teaching	yes, joint implementation	no	yes
FYS1016	Fysiikan perusopinlaboratoriotyöt I	2 cr	1.-2. period	Finnish	Contact teaching	yes, joint implementation	no	yes
FYS1017	Fysiikan perusopinlaboratoriotyöt II	3 cr	3.-4. period	Finnish	Contact teaching	yes, joint implementation	no	yes
FYS1016	Laboratory Exercises in Basic Studies of Physics I	2 cr	1.-2. period	English	Contact teaching	yes, joint implementation	yes	yes
FYS1017	Laboratory Exercises in Basic Studies of Physics II	3 cr	3.-4. period	English	Contact teaching	yes, joint implementation	yes	yes
Physics, Basic Studies in Swedish								
FYS1001	Växelverknningar och kroppar	5 cr	1. period	Swedish	Contact teaching	yes, joint implementation	no	yes
FYS1002	Växelverknningar och materia	5 cr	2. period	Swedish	Contact teaching	yes, joint implementation	no	yes
FYS1003	Elektromagnetism	5 cr	3. period	Swedish	Contact teaching	yes, joint implementation	no	yes
FYS1004	Strålningsfält och fotoner	5 cr	4. period	Swedish	Contact teaching	yes, joint implementation	no	yes
FYS1016	Fysikens grundstudiers laboratoriearbeten I	2 cr	1.-2. period	Swedish	Contact teaching	yes, joint implementation	no	yes
FYS1017	Fysikens grundstudiers laboratoriearbeten II	3 cr	3.-4. period	Swedish	Contact teaching	yes, joint implementation	no	yes
Mathematical, Computational and Experimental Methods								
FYS1010	Matemaattiset apuneuvot I	5 cr	1. period	Finnish (exercise group in Swedish)	Contact teaching	yes, joint implementation	no	yes
FYS1011	Matemaattiset apuneuvot II	5 cr	2. period	Finnish (exercise group in Swedish)	Contact teaching	yes, joint implementation	no	yes
FYS1012	Matemaattiset apuneuvot III	5 cr	3. period	Finnish (exercise group in Swedish)	Contact teaching	yes, joint implementation	no	yes
FYS1013	Tieteellinen laskenta I	5 cr	1.-2. period	Finnish (exercise group in Swedish)	Contact teaching	no	no	yes
FYS1014	Havaintojen tilastollinen käsittely	5 cr	4. period	Finnish (exercise group in Swedish, lecture notes and exercise problems are also available in English)	Contact teaching	yes, joint implementation	no	yes
FYS1018	Kokeellinen fysiikka I	3 cr	1.-2. period	Finnish	Contact teaching	no	no	yes
Physics, Intermediate Studies								
FYS2001	Termofysiikan perusteet	5 cr	1. period	Finnish	Contact teaching	no	no	yes
FYS2002	Termodynaamiset potentiaalit	5 cr	2. period	Finnish	Contact teaching	no	no	yes
FYS2005	Kvanttifysiikan sovelluksia - Atomit ja molekyylit	5 cr	1. period	Finnish	Contact teaching	no	no	yes
FYS2006	Kvanttifysiikan sovelluksia - Tiivis aine ja alkeishiukkaset	5 cr	2. period	Finnish	Contact teaching	no	no	yes
FYS2038	Kokeellinen fysiikka II	2 cr	3.-4. period	Finnish	Contact teaching	no	no	yes
FYS2007	Kokeellinen fysiikka III	5 cr	1. period	Finnish	Contact teaching	no	no	yes
FYS2008	Fysiikan aineopinlaboratoriotyöt I / Intermediate Studies Laboratory Exercises I	5 cr	3. period	English (exercise group in Finnish and English)	Contact teaching	no	yes	yes
FYS2009	Fysiikan aineopinlaboratoriotyöt II	5 cr	4. period	Finnish	Contact teaching	no	no	yes
Physics, Intermediate Studies in Swedish								
FYS2001	Termofysikens grunder	5 cr	1. period	Swedish	Contact teaching	no	no	yes
FYS2002	Termodynamiska potentialer	5 cr	2. period	Swedish	Contact teaching	no	no	yes
FYS2003	Kvantfysikens grunder	5 cr	4. period	Swedish	Blended teaching (Includes scheduled contact and distance teaching)	yes, joint implementation	no	yes
FYS2005	Kvantfysikens tillämpningar - Atomer och molekyler	5 cr	1. period	Swedish	Blended teaching (Includes scheduled contact and distance teaching)	no	no	yes
FYS2006	Kvantfysikens tillämpningar - Det fasta tillståndet och elementarpartiklar	5 cr	2. period	Swedish	Contact teaching	no	no	yes
Theoretical Physics, Intermediate Studies								
FYS2003	Kvanttifysiikan perusteet	5 cr	4. period	Finnish	Contact teaching	yes, joint implementation	no	yes
FYS2004	Suhteellisuusteorian perusteet	5 cr	3. period	Finnish (exercise group in Swedish)	Contact teaching	yes, joint implementation	no	yes
FYS2010	Mathematical Methods of Physics Ia	5 cr	1. period	English	Contact teaching	no	yes	yes

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FYS2011	Mathematical Methods of Physics Ib	5 cr	2. period	English	Contact teaching	no	yes	yes
FYS2012	Mathematical Methods of Physics IIa	5 cr	3. period	English	Contact teaching	no	yes	yes
FYS2013	Mathematical Methods of Physics IIb	5 cr	4. period	English	Contact teaching	no	yes	yes
FYS2027	Mekaniikka	5 cr	1. period	Finnish	Contact teaching	no	no	yes
FYS2015	Statistinen mekaniikka	5 cr	2. period	Finnish	Contact teaching	no	yes	yes
FYS2016	Electrodynamics I	5 cr	3. period	English	Contact teaching	no	yes	yes
FYS2017	Electrodynamics II	5 cr	4. period	English	Contact teaching	no	yes	yes
FYS2061	Quantum Mechanics Ia	5 cr	1. period	English	Contact teaching	no	yes	yes
FYS2062	Quantum Mechanics Ib	5 cr	2. period	English	Contact teaching	no	yes	yes
FYS2019	Kvanttistatistiikka	5 cr	3. period	Finnish (exercises and exam also available in English)	Contact teaching	no	yes	yes
Meteorology, Intermediate Studies								
FYS2031	Meteorologian ja säähavainnonteen perusteet	5 cr	1. period	Finnish	Contact teaching	no	no	yes
FYS2032	Ilmakehän termodynamiikka	5 cr	2. period	Finnish	Contact teaching	no	no	yes
FYS2033	Ilmakehän virtausdynamiikan perusteet	10 cr	1.-2. period	Finnish (course materials also available in English)	Contact teaching	no	yes	yes
FYS2034	Klimatologian perusteet	2 cr	3. period	Finnish	Contact teaching	no	no	yes
FYS2035	Fysikaalinen klimatologia	3 cr	3. period	Finnish	Contact teaching	no	no	yes
Astronomy, Intermediate Studies								
FYS2041	Tähtitieteen perusteet I	5 cr	3. period	Finnish	Contact teaching	no	no	yes
FYS2042	Tähtitieteen perusteet II	5 cr	4. period	Finnish	Contact teaching	no	no	yes
FYS2044	Havaitsevan tähtitieteen peruskurssi I	5 cr	2. period	Finnish	Contact teaching	no	no	yes
FYS2045	Havaitsevan tähtitieteen peruskurssi II / Basics of Observational Astronomy II	5 cr	3.-4. period	Finnish, English	Contact teaching	no	yes	yes
FYS2056	Johdatus matemaattisiin menetelmiin	5 cr	1. period	Finnish	Contact teaching	no	no	yes
FYS2053	Linnunradan rakenne	5 cr	1.-2. period	Finnish	Contact teaching	no	no	yes
FYS2054	Tähtien rakenne ja kehitys	5 cr	3.-4. period	Finnish	Contact teaching	no	no	yes
FYS2055	Taivaanmekaniikka	5 cr	2. period	teaching in Finnish and English (guidance is also available in Swedish)	Contact teaching	no	yes	yes
FYS2046	Astrofysiikan peruskurssi I	5 cr	Not lectured in academic year 2026-2027	–	–	–	–	–
FYS2047	Astrofysiikan peruskurssi II	5 cr	Not lectured in academic year 2026-2027	–	–	–	–	–
FYS2051	Aurinkokunnan fysiikka	5 cr	Not lectured in academic year 2026-2027	–	–	–	–	–
FYS2052	Galaksit ja kosmologia	5 cr	Not lectured in academic year 2026-2027	–	–	–	–	–
Optional courses, Intermediate Studies								
FYS2043	Johdatus avaruusplasmafysiikkaan	5 cr	1. period	Finnish	Contact teaching	no	no	yes
FYS2071	Aerosol Physics I	5 cr	1. period	English	Contact teaching	no	yes	yes
FYS2072	Ympäristöfysiikka	5 cr	Not lectured in academic year 2026-2027	–	–	–	–	–
FYS2073	Fluid Phenomena	5 cr	Not lectured in academic year 2026-2027	–	–	–	–	–
FYS2074	Kasviuoneilmiö, ilmastonmuutos ja vaikutukset	5 cr	Not lectured in academic year 2026-2027	–	–	–	–	–
FYS2086	Atmosfärvetenskap nu	5 cr	Not lectured in academic year 2026-2027	–	–	–	–	–
FYS2075	Meritieteen peruskurssi	5 cr	1. period	Finnish	Contact teaching	no	no	yes
FYS2076	Basic Course in Hydrology	5 cr	4. period	English (course materials, exercises and exam also available in Finnish)	Contact teaching	no	yes	yes
FYS2078	Environmental Problems, Physics and Chemistry	5 cr	Not lectured in academic year 2026-2027	–	–	–	–	–
FYS2082	Elektroniikka I	5 cr	2. period	Finnish	Contact teaching	no	no	yes
FYS2083	Basics of Nanoscience	5 cr	1. period	English	Contact teaching	no	yes	yes
FYS2084	Fundamentals of Materials Science	5 cr	2. period	English	Contact teaching	no	yes	yes
FYS2085	Scientific Computing II	5 cr	2. period	English	Contact teaching	no	yes	yes
FYS2088	Introduction to molecular dynamics simulations	5 cr	1. period	English	Contact teaching	no	yes	yes

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FYS2081	Cosmology I	5 cr	1. period	English	Contact teaching	no	yes	yes
FYS2028	Mekaniikan jatkokurssi	5 cr	2. period	Finnish	Blended teaching (Includes scheduled contact and distance teaching)	no	no	yes
FYS2029	Quantum Computing	5 cr	4. period	English	Contact teaching	no	yes	yes
Compulsory studies in degree programme								
FYS4001	Fysikaalisiin tieteisiin perehtyminen	3 cr	1.-2. period	Finnish	Contact teaching	no	no	yes
FYS4001	Presentation av de fysikaliska vetenskaperna	3 cr	1.-2. period	Swedish	Contact teaching	no	no	yes
FYS4002	Työelämätaidot I - Ongelmanratkaisu ryhmässä	1 cr	1.-4. period	Finnish, Swedish, English	Contact teaching	no	no	yes
FYS4003	Työelämätaidot II - Akateeminen kirjoittaminen	1 cr	2. period	Finnish	Contact teaching	no	no	yes
FYS4003	Arbetslivskunskaper II - Akademisk skrivning	1 cr	2. period	Swedish	Contact teaching	no	no	yes
FYS4003	Working Life Skills II - Academic Writing	1 cr	4. period	English	Contact teaching	no	no	yes
FYS4011	Kerro tähtitieteestä (Työelämätaidot II)	1 cr	4. period	Finnish	Contact teaching	no	no	yes
FYS4004	Opiskelutaidot I, Pienryhmäopetus (uusille opiskelijoille)	1 cr	1.-4. period	Finnish	Blended teaching (Includes scheduled contact and distance teaching)	no	no	no
FYS4004	Opiskelutaidot I, Itsenäinen suoritus (täydentäjät)	1 cr	1.-4. period	Finnish	Independent project	no	no	no
FYS4005	Opiskelutaidot II	1 cr	1.-4. period	Finnish	Blended teaching (Includes scheduled contact and distance teaching)	no	no	no
FYS2099	Tutkielmaseminaari, Ryhmä 1 (syksy)	2 cr	1.-2. period	Finnish	Contact teaching	no	no	no
FYS2099	Avhandlingseminarier, tvåspråkig/kaksikielinen, Grupp 2 (höst)	2 cr	1.-2. period	Swedish, Finnish	Contact teaching	no	no	no
FYS2099	Tutkielmaseminaari, Ryhmä 1 (kevät)	2 cr	3.-4. period	Finnish	Contact teaching	no	no	no
FYS2099	Tutkielmaseminaari, Ryhmä 2 (kevät)	2 cr	3.-4. period	Finnish	Contact teaching	no	no	no
FYS4030	Akateeminen vuorovaikutusosaaminen	1 cr	1.-4. period	Finnish	Contact teaching	no	no	no
FYS4030	Akademisk kommunikation	1 cr	1.-4. period	Swedish	Contact teaching	no	no	no
Optional courses								
FYS4023	Urasuunnittelu	2 cr	2. period	Finnish	Contact teaching	no	no	no
FYS4008	Harjoittelu (LuK-tutkinto)	5 cr	1.-4. period	Finnish, Swedish	Independent project	no	no	no
FYS4013	Universum nu	3 cr	3.-4. period	Swedish	Contact teaching	yes, joint implementation	no	yes
FYS4018	Universe Now	3 cr	3. period	English	Contact teaching	no	yes	yes
FYS4015	Naturvetenskaper nu I (Prova på-kurs)	2 cr	4. period	Swedish	Blended teaching (Includes scheduled contact and distance teaching)	yes, joint implementation	no	yes
FYS4020	Naturvetenskaper nu II (Prova på-kurs)	2 cr	Not lectured in academic year 2026-2027	–	–	–	–	–
FYS4016	Nutida fysikens grunder	5 cr	1. period	Swedish	Contact teaching	yes, joint implementation	no	yes
FYS4029	Introduction to emergency preparedness and response	5 cr	Not lectured in academic year 2026-2027	–	–	–	–	–
Courses for students from other degree programmes								
FYS1015	Fysiikkaa luonnontieteilijöille	5 cr	3. period	Finnish	Blended teaching (Includes scheduled contact and distance teaching)	yes, joint implementation	no	yes
Open university courses								
FYS4027	Ilmasto.ny.tutustumiskurssi	2 cr	May, summer 2027	Finnish	Distance teaching	yes, open university implementation	no	yes
FYS1015	Fysiikkaa luonnontieteilijöille	5 cr	summer teaching (June-August 2027)	Finnish	Blended teaching (Includes scheduled contact and distance teaching)	yes, open university implementation	no	yes

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FYS4012	Maailmankaikkeus nyt	3 cr	summer teaching (June-August 2027)	Finnish	Blended teaching (Includes scheduled contact and distance teaching)	yes, open university implementation	no	yes
FYS4014	Johdatus astrobiologiaan	3 cr	summer teaching (June-August 2027)	Finnish (the course can also be completed in Swedish or English)	Blended teaching (Includes scheduled contact and distance teaching)	yes, open university implementation	no	yes
FYS4012	Maailmankaikkeus nyt	3 cr	Adult Education Centre implementation, 3.-4. period	Finnish	Blended teaching (Includes scheduled contact and distance teaching)	yes, Espoo Adult Education Centre implementation	no	yes
FYS4014	Johdatus astrobiologiaan	3 cr	Adult Education Centre implementation, 1.-2. period	Finnish	Blended teaching (Includes scheduled contact and distance teaching)	yes, Espoo Adult Education Centre implementation	no	yes
Open university modules								
FYS1100	Fysiikka, perusopinnot	25 cr	1.-4. periods	Finnish, Swedish	Contact teaching	yes, joint implementation	no	yes