

Mathematical Statistics

| Course Code | Credits | Cycle | Programme | Language | | Course Name | Footnote | Links | | | | |
|------------------------|---------|-------|----------------------------------|-------------|----|------------------------------------------------------------|----------|---------------------------------------------------------------------------|-----------|-----------|-----------|--|
| | | | | S.Ex. stud. | | | | 08/09 sp1 | 08/09 sp2 | 08/09 sp3 | 08/09 sp4 | |
| EMSN05 | 3 | A | E, Pi | X | E | International Project Course-Mathematical Modelling | X | KS KE U W | 1 | | | |
| EMS086 | 7.5 | G2 | B, K | - | S | Mathematical Statistics | | KS KE U W | 1 | | | |
| EMS601 | 4.5 | G1 | IBYA, IBYI, IBYV | - | S | Mathematical Statistics | | KS KE U W | 1 | | | |
| EMS035 | 7.5 | G2 | M, MD | - | S | Mathematical Statistics, Basic Course | | KS KE U W | 1 | | | |
| EMS140 | 7.5 | G2 | W | - | S | Mathematical Statistics, Basic Course | | KS KE U W | 1 | | | |
| EMS091 | 7.5 | A | D, E, F, I, Pi | X | E2 | Monte Carlo and Empirical Methods for Stochastic Inference | | KS KE U W | 1 | | | |
| EMS012 | 9 | G2 | I | - | S | Mathematical Statistics, Basic Course | | KS KE U W | 1 | 2 | | |

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| | | | | S.Ex. stud. | | | | 08/09 sp1 | 08/09 sp2 | 08/09 sp3 | 08/09 sp4 | |
| EMS012 | | | Pi | | | | | | 2 | 3 | | |
| EMS110 | 7.5 | A | D , E , F , I , Pi | X | E1 | Non-Linear Time Series Analysis | KS KE U W | 1 | 2 | | | |
| EMSF01 | 3 | G2 | M , Y | - | S | Mathematical Statistics | X KS KE U W | | 2 | | | |
| EMS032 | 7.5 | G2 | Y | - | S | <i>Mathematical Statistics, Basic Course</i> | KS KE U W | Examinations only | | | | |
| EMS032 | | | L | | | | | | 2 | | | |
| EMSN01 | 7.5 | A | Pi | X | E1 | Statistical Genetics | KS KE U W | | 2 | | | |
| EMS150 | 7.5 | A | C , D , E , F , L , Pi | X | E2 | Statistical Image Analysis | KS KE U W | | 2 | | | |
| EMS155 | 7.5 | A | D , E , I , Pi , RH | X | E2 | Statistical Modelling of Extreme Values | KS KE U W | | 2 | | | |

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|------------------------|---------|-------|------------------------------------------------------------|-------------|----------|-----------------------------------------------|----------|--------------------|--------------------|-------------------|-------------------|---|---|
| | | | | | | | | 08/09 sp1 | 08/09 sp2 | 08/09 sp3 | 08/09 sp4 | | |
| EMS072 | 7.5 | G2 | D, E, F, M, MWIR, N, Pi, V | X | E2 | Design of Experiments | | KS | KE | U | W | 3 | |
| EMSF05 | 7.5 | G2 | I, Pi | - | E2 | Probability Theory | | KS | KE | U | W | 3 | |
| EMS170 | 9 | A | B, C, D, E, F, I, K, L, M, N, Pi, RH, V, W | X | E1 | Valuation of Derivative Assets | X | KS | KE | U | W | 3 | 4 |
| EMS161 | 7.5 | A | B, C, D, E, F, I, K, L, M, N, Pi, RH, V, W | X | E1 | Financial Statistics | X | KS | KE | U | W | | 4 |
| EMS180 | 6 | G2 | C, D, E, F, I, L, M, Pi | - | S | Markov Processes | | KS | KE | U | W | | 4 |
| EMS051 | 7.5 | A | C, D, E, F, I, L, Pi | X | E2 | Mathematical Statistics, Time Series Analysis | | KS | KE | U | W | | 4 |
| EMS045 | 6 | G2 | C, D, E, F, I, L, M, MWIR | X | S | Stationary Stochastic Processes | X | KS | KE | U | W | 3 | |

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| | | | | S.Ex. stud. | | | | 08/09 sp1 | 08/09 sp2 | 08/09 sp3 | 08/09 sp4 | |
| FMS045 | | | C, D, E, E, I, L, M, MWIR, Pi | | | | X | | | | | 4 |
| FMS047 | 3 | A | D, E, I, Pi | - | S | Stationary Stochastic Processes, Project Work | | KS KE U W | | | | 4 |
| FMS065 | 7.5 | G2 | C, M, N, Pi, RH, V | - | E2 | Statistical Methods for Safety Analysis | | KS KE U W | | | | 4 |

[FMSN05](#) ([E, Pi](#)) International Project Course-Mathematical Modelling: *Begränsat deltagarantal. Spec. ansökningsförfarande.*

[FMSF01](#) ([M](#)) Mathematical Statistics: *Kursen kan endast ingå i avkortad CIM.*

[FMSF01](#) ([V](#)) Mathematical Statistics: *Kursen ingår endast i TVOLY.*

[FMS170](#) ([B, C, D, E, E, I, K, L, M, N, Pi, V, W](#)) Valuation of Derivative Assets: *Obligatorisk inom INEK i fördjupningskedjan Finansiering och risk.*

[FMS161](#) ([B, C, D, E, E, I, K, L, M, N, Pi, V, W](#)) Financial Statistics: *Obligatorisk inom INEK i fördjupningskedjan Finansiering och risk.*

[FMS045](#) ([C, D, E, E, I, L, M, MWIR](#)) Stationary Stochastic Processes: *Kursen ges två gånger under läsåret 08/09.*

Mathematics

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|------------------------|---------|-------|-----------------------------------|-------------|----|---------------------------------------------|---------------------------|--------------|--------------|--------------|--------------|
| | | | | S.Ex. stud. | | | | 08/09 sp1 | 08/09 sp2 | 08/09 sp3 | 08/09 sp4 |
| EMA430 | 6 | G1 | B, BI, K, L, N, V | - | S | Calculus in Several Variables | KS KE U W | 1 | | | |
| EMA430 | | | C, D | | | | | | 2 | | |
| EMA430 | | | E, I | | | | | | | 3 | |
| EMA430 | | | E, M, MD, W | | | | | | | | 4 |
| EMA170 | 6 | A | C, D, E, F, L, Pi | X | E2 | Image Analysis | KS KE U W | 1 | | | |
| EMA051 | 6 | A | D, E, F, I, Pi | X | E1 | Optimization | KS KE U W | 1 | | | |
| EMA661 | 7.5 | G2 | IDA | - | S | Probability Theory and Discrete Mathematics | KS KE U W | 1 | | | |

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| | | | | S.Ex. stud. | | | | 08/09 sp1 | 08/09 sp2 | 08/09 sp3 | 08/09 sp4 |
| EMA415 | 16.5 | G1 | BI | - | S | Calculus in One Variable | KS KE U W | 1 | 2 | | |
| EMAA05 | 15 | G1 | MD | - | S | <i>Calculus in One Variable</i> | KS KE U W | Examinations only | | | |
| EMAA05 | | | E, E, I, L, Pi, V, W | | | | | 1 | 2 | | |
| EMA260 | 7.5 | A | D, E, E, Pi | X | E2 | Functional Analysis and Harmonic Analysis | KS KE U W | 1 | 2 | | |
| EMA140 | 6 | A | D, E, E, I, Pi | X | E2 | Non-Linear Dynamical Systems | KS KE U W | 1 | 2 | | |
| EMA645 | 13.5 | G1 | IBYA, IBYI, IBYV, IDA, IDL | - | S | Calculus | KS KE U W | 1 | 2 | 3 | |
| EMAA01 | 15 | G1 | C, D, M, MD | - | S | Calculus in One Variable | KS KE U W | 1 | 2 | 3 | |
| EMAA01 | | | B, K, N | | | | | 1 | - | 3 | 4 |

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|------------------------|---------|-------|----------------------------------------------------------------------------------------------------|-------------|----|----------------------------|---------------------------------------------------------------------------|-----------|-----------|-----------|-----------|
| | | | | S.Ex. stud. | | | | 08/09 sp1 | 08/09 sp2 | 08/09 sp3 | 08/09 sp4 |
| EMA085 | 4.5 | G1 | N , Pi | - | S | Mathematical Communication | KS KE U W | 1 | - | 3 | 4 |
| EMA175 | 3 | A | C , D , E , F , Pi | X | E1 | Image Analysis, Project | KS KE U W | | 2 | | |
| EMA420 | 6 | G1 | C , Pi , W | - | S | Linear Algebra | KS KE U W | 1 | | | |
| EMA420 | | | B , E , I , K , N | | | | | | 2 | | |
| EMA420 | | | B , I , E , L , Y | | | | | | | 3 | |
| EMA420 | | | D | | | | | | | | 4 |
| EMA045 | 4.5 | G1 | Pi | - | S | Mathematical Modelling | KS KE U W | | 2 | | |

| Course Code | Credits | Cycle | Programme | S.Ex. stud. | Language | Course Name | Footnote | Links | 08/09 | 08/09 | 08/09 | 08/09 |
|------------------------|---------|-------|--------------------------------|-------------|----------|---------------------------------------------------------|----------|---------------------------|-------|-------|-------|-------|
| | | | | | | | | | sp1 | sp2 | sp3 | sp4 |
| EMA145 | 3 | A | D, E, E, I, Pi | X | E1 | Non-linear Dynamical Systems, Project | | KS KE U W | | 2 | | |
| EMA135 | 6 | G1 | C, D, E, F, Pi | X | E2 | Geometry | | KS KE U W | | 2 | 3 | |
| EMA421 | 9 | G1 | M, MD | - | S | Linear Algebra with Scientific Computation | | KS KE U W | | 2 | 3 | |
| EMA250 | 7.5 | A | D, E, E, Pi | X | E2 | Partial Differential Equations with Distribution Theory | | KS KE U W | | 2 | 3 | |
| EMAF10 | 5 | G2 | C, D, L | - | S | Applied Mathematics - Linear systems | X | KS KE U W | | | 3 | |
| EMA270 | 6 | A | C, D, E, F, Pi | X | E2 | Computer Vision | | KS KE U W | | | 3 | |
| EMA240 | 6 | G2 | D, E, E, I, Pi | X | E2 | Linear and Combinatorial Optimization | | KS KE U W | | | 3 | |

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| | | | | S.Ex. stud. | | | | 08/09 sp1 | 08/09 sp2 | 08/09 sp3 | 08/09 sp4 |
| EMA111 | 6 | A | D, E, E, Pi | - | S | Mathematical Structures | KS KE U W | | | 3 | |
| EMAF01 | 7 | G2 | E, N, Pi | - | S | Mathematics - Analytic Functions | KS KE U W | 1 | | | |
| EMAF01 | | | C, D, E, I, M | | | | X | | | 3 | |
| EMA190 | 6 | A | C, D, E, E, Pi | X | E2 | Algebra | KS KE U W | | | 3 | 4 |
| EMA021 | 7.5 | A | E, E, N, Pi | - | S | Applied Mathematics | KS KE U W | | | 3 | 4 |
| EMA062 | 7.5 | G2 | B, K, M, V, W | - | S | Applied Mathematics | KS KE U W | | | 3 | 4 |
| EMA435 | 7.5 | G1 | Pi | - | S | Calculus in Several Variables | KS KE U W | | | 3 | 4 |

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|------------------------|---------|-------|-------------------------------------|-------------|----|--------------------------------------|-----------------------------|--------------|--------------|--------------|--------------|
| | | | | S.Ex. stud. | | | | 08/09 sp1 | 08/09 sp2 | 08/09 sp3 | 08/09 sp4 |
| EMA200 | 6 | A | D, E, E, Pi | X | E2 | Calculus of Variations | KS KE U W | | | 3 | 4 |
| EMA120 | 6 | A | Pi | - | S | Matrix Theory | KS KE U W | 1 | | | |
| EMA120 | | | C, D, E, E, I, L, M | | | | | | | 3 | 4 |
| EMA023 | 3 | A | E, N, Pi | - | E1 | Applied Mathematics, Project | X KS KE U W | | | | 4 |
| EMA272 | 3 | A | C, D, E, E, Pi | X | E1 | Computer Vision, Project | KS KE U W | | | | 4 |
| EMA091 | 6 | G1 | C, D, E, E, Pi | - | S | Discrete Mathematics | KS KE U W | | | | 4 |
| EMAE05 | 7 | G2 | E, N, Pi | - | S | Mathematics - Systems and Transforms | KS KE U W | | 2 | | |

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|------------------------|---------|-------|--------------------------------------------|----------|----|-------------|-----------------------------|----------|---------------------------|--------------|--------------|--------------|---|
| | | | | | | | | | 08/09 sp1 | 08/09 sp2 | 08/09 sp3 | 08/09 sp4 | |
| FMAF05 | | | C, D, E, I, M | | | | | X | | | | | 4 |
| FMA656 | 4.5 | G1 | IBYA, IBYI, IBYV, IDA, IDL | - | S | | Mathematics, Linear Algebra | | KS KE U W | | | | 4 |
| FMA125 | 3 | A | Pi | - | E1 | | Matrix Theory, Project | | KS KE U W | | 2 | | |
| FMA125 | | | D, E, F | | | | | | | | | | 4 |

[FMAF10 \(C\)](#) Applied Mathematics - Linear systems: *Endast en av kurserna [FMAF05](#) och [FMAF10](#) får ingå i examen.*

[FMAF10 \(D\)](#) Applied Mathematics - Linear systems: *Kan bytas mot kurserna [FMAF01](#) samt [FMAF05](#). Kontakta studievägledare för mer information. Kurserna [FMAF10](#) och [FMAF05](#) kan inte samtidigt ingå i examen.*

[FMAF01 \(D\)](#) Mathematics - Analytic Functions: *Kan tillsammans med [FMAF05](#) läsas i stället för [FMAF10](#). Kontakta programledare eller studievägledare för mer information. Ges också som valfri kurs i årskurs 4.*

[FMA023 \(E, N, Pi\)](#) Applied Mathematics, Project: *Kursen fortsätter med ett redovisningstillfälle hösten 2009.*

[FMAF05 \(C\)](#) Mathematics - Systems and Transforms: *Endast en av kurserna [FMAF05](#) och [FMAF10](#) får ingå i examen.*

[FMAF05 \(D\)](#) Mathematics - Systems and Transforms: *Kan tillsammans med [FMAF01](#) läsas i stället för [FMAF10](#). Kontakta programledare eller studievägledare för mer information. Endast en av kurserna [FMAF05](#) och [FMAF10](#) får ingå i examen.*

Numerical Analysis

| Course Code | Credits | Cycle | Programme | S.Ex. stud. | Language | Course Name | Footnote | Links | 08/09 | 08/09 | 08/09 | 08/09 |
|------------------------|---------|-------|-----------------------------------|-------------|----------|----------------------------------------------|---------------------------|-------|-------|-------|-------|-------|
| | | | | | | | | | sp1 | sp2 | sp3 | sp4 |
| FMNN01 | 7.5 | A | E, E, M, Pi | X | E | Numerical Linear Algebra | KS KE U W | 1 | | | | |
| FMN100 | 6 | A | C, D, E, F, L, Pi | X | E1 | Numerical Methods in CAGD | KS KE U W | 1 | | | | |
| FMN091 | 7.5 | A | E, M, Pi | X | E1 | Finite Volume Methods | KS KE U W | | 2 | | | |
| FMN130 | 7.5 | A | B, E, I, K, Pi | X | E1 | Numerical Methods for Differential Equations | KS KE U W | | 2 | | | |
| FMN140 | 6 | G2 | V | - | S | Scientific Computing | KS KE U W | | 2 | 3 | | |
| FMN081 | 7.5 | G2 | M, V | X | E1 | Numerical Methods in Mechanics | KS KE U W | | | 3 | | |
| FMN041 | 6 | G2 | F | X | E1 | Numerical Methods in Physics and Engineering | KS KE U W | | | 3 | | |

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| | | | | | | | | 08/09 sp1 | 08/09 sp2 | 08/09 sp3 | 08/09 sp4 | | | | |
| EMN011 | 6 | G2 | C, D, L | X | E1 | Numerical Analysis | | KS | KE | U | W | | | | 4 |
| EMN050 | 6 | G2 | E, I | X | E1 | Numerical Analysis | | KS | KE | U | W | | | | 4 |

Degree Projects of the Department

The list contains the degree projects which are given by the department and which programme each degree project is included in.

Links

| Course Code | Credits | Programme | Course Name | Links |
|-------------|---------|---------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------|-------------------|
| FMS820 | 30 | C , D , E , F , I , Pi , RH | Degree Project in Mathematical Statistics for Engineers | U |
| FMA820 | 30 | C , D , E , F , I , M , Pi | Degree Project in Mathematics for Engineers | U |
| FMN820 | 30 | D , E , F , I , M , Pi | Degree Project in Numerical Analysis | U |