Master program in Computational Science at the University of Oslo

Admission Criteria

Planned start: Fall 2018

Admission criteria: Applied Mathematics and Risk Analysis

This study direction requires 90 ECTS in mathematics and informatics courses.

1. 70 ECTS have to be from the following courses, equivalent or similar to the University of Oslo mathematics and programming courses MAT1110, MAT1120, MAT2100/MAT2400, STK1100, MAT-INF1100, INF1000/INF1110 and IN2900 (new code).

2. In addition, 20 ECTS have to come from at least two of the advanced courses MAT-INF3100, MAT-INF3360, STK2130, STK3405, INF3311, MAT-INF3xxx (Numerical analysis, new code) and/or MAT-INF3yyy (Dynamical systems, new code).

3. An average mark C (European grading scale) is required for the above courses.

Admission criteria: Astrophysics

The program has a minimum course requirement of 120 ECTS (European Credit Transfer System) at the undergraduate level (bachelor degree or equivalent) in astrophysics, bioscience, chemistry, computer science and informatics, geoscience, mathematics, materials science, mechanics and physics.

1. Of these 120 ECTS, 40 ECTS have to include basic mathematics and programming courses, equivalent to the University of Oslo mathematics courses MAT1100, MAT1110, MAT1120 and at least one of the corresponding computing and programming courses INF1000/INF1110 or MAT-INF1100/MAT-INF1100L/BIOS1100/KJM-INF1xxx.

2. The remaining 80 ECTS have to be within at most two of the fields of astrophysics, bioscience, chemistry, computer science and informatics, geoscience, mathematics, materials science, mechanics and physics. 40 of these 80 ECTS have to be advanced undergraduate courses at the 2000 and 3000 level and a minimum of 20 ECTS must be at the 3000 level within physics/material science/astrophysics/informatics/mathematics/mechanics.

3. An average mark C (European grading scale) is required for the 40 ECTS in mathematics and programming (corresponding to the University of Oslo courses MAT1100, MAT1110, MAT1120 and the corresponding computing and programming courses INF1000/INF1110 or MAT-INF1100/MAT-INF1100L/BIOS1100/KJM-INF1xxx or similar courses) and the 40 ECTS at the 2000 and 3000 level. A minimum of 20 ECTS must be at the 3000 level within physics/material science/astrophysics/informatics/mathematics/mechanics.

Admission criteria: Bioinformatics

The program has a minimum course requirement of 120 ECTS (European Credit Transfer System) at the undergraduate level (bachelor degree or equivalent) in Astrophysics, bioscience, chemistry, computer science and informatics, geoscience, mathematics, materials science, mechanics and physics.

1. Of these 120 ECTS, 80 ECTS have to be within Informatics/Mathematics/Statistics (courses labeled as INF/IN, INF-MAT, MAT-INF, MAT and STK) where of 50 ECTS have to include basic mathematics and programming courses, equivalent to the University of Oslo mathematics courses MAT1100, MAT1110, MAT1120 and the corresponding computing and programming courses INF1000/INF1110 and INF1010/IN2900.

2. A total of at least 40 ECTC out of the 120 ECTC have to be advanced undergraduate courses at the 2000 and 3000 level.

3. An average mark C (European grading scale) is required for the above-specified 80 ECTS in Informatics/Mathematics/Statistics.

Admission criteria: Bioscience

The program has a minimum course requirement of 120 ECTS (European Credit Transfer System) at the undergraduate level (bachelor degree or equivalent) in Astrophysics, bioscience, chemistry, computer science and informatics, geoscience, mathematics, materials science, mechanics and physics.

1. Of these 120 ECTS, 40 ECTS have to include basic mathematics and programming courses, equivalent to the University of Oslo mathematics courses MAT1100, MAT1110, MAT1120 and at least one of the corresponding computing and programming courses INF1000/INF1110 or MAT-INF1100/MAT-INF1100L/BIOS1100/KJM-INF1xxx.

2. The remaining 80 ECTS have to be within at most two of the fields of astrophysics, bioscience, chemistry, computer science and informatics, geoscience, mathematics, materials science, mechanics and physics. 40 of these 80 ECTS have to be advanced undergraduate courses at the 2000 and 3000 level and a minimum of 20 ECTS must be at the 3000 level within bioscience.

3. An average mark C (European grading scale) is required for the 40 ECTS in mathematics and programming (corresponding to the University of Oslo courses MAT1100, MAT1110, MAT1120 and the corresponding computing and programming courses INF1000/INF1110 or MAT-INF1100/MAT-INF1100L/BIOS1100/KJM-INF1xxx or similar courses) and the 40 ECTS at the 2000 and 3000 level. A minimum of 20 ECTS must be at the 3000 level within bioscience.

Admission criteria: Chemistry

The program has a minimum course requirement of 120 ECTS (European Credit Transfer System) at the undergraduate level (bachelor degree or equivalent) in Astrophysics, bioscience, chemistry, computer science and informatics, geoscience, mathematics, materials science, mechanics and physics.

1. Of these 120 ECTS, 40 ECTS have to include basic mathematics and programming courses, equivalent to the University of Oslo mathematics courses MAT1100, MAT1110, MAT1120, MAT1050 and MAT1060 and at least one of the corresponding computing and programming courses INF1000/INF1110 or MAT-INF1100/MAT-INF1100L/BIOS1100/KJM-INF1xxx/GEO-KJM1040.

2. The remaining 80 ECTS have to be within at most two of the fields of astrophysics, bioscience, chemistry, computer science and informatics, geoscience, mathematics, materials science, mechanics and physics. 40 of these 80 ECTS have to be advanced undergraduate courses at the 2000 and 3000 level and a minimum of 20 ECTS must be at the 3000 level within physics/material science/mechanics/astrophysics/informatics/mathematics/bioscience/chemistry/geoscienc

3. An average mark C (European grading scale) is required for the 40 ECTS in mathematics and programming (corresponding to the University of Oslo courses MAT1100, MAT1110, MAT1120, MAT1050 and MAT1060 and the corresponding computing and programming courses INF1000/INF1110 or MAT-INF1100/MAT-INF1100L/BIOS1100/KJM-INF1xxx/GEO-KJM1040 or similar courses) and the 40 ECTS at the 2000 and 3000 level. A minimum of 20 ECTS must be at the 3000 level within physics/material science/astrophysics/mechanics/mathematics/informatics/bioscience/chemistry/geoscienc

Admission criteria: Geoscience

The program has a minimum course requirement of 120 ECTS (European Credit Transfer System) at the undergraduate level (bachelor degree or equivalent) in Astrophysics, bioscience, chemistry, computer science and informatics, geoscience, mathematics, materials science, mechanics and physics.

1. Of these 120 ECTS, 40 ECTS have to include basic mathematics and programming courses, equivalent to the University of Oslo mathematics courses MAT1100, MAT1110, MAT1120 and at lest one of the corresponding computing and programming courses INF1000/INF1110 or MAT-INF1100/MAT-INF1100L/BIOS1100/GEO1040/GEO-KJM1040.

2. The remaining 80 ECTS have to be within at most two of the fields of astrophysics, bioscience, chemistry, computer science and informatics, geoscience, mathematics, materials science, mechanics and physics. 40 of these 80 ECTS have to be advanced undergraduate courses at the 2000 and 3000 level in the fields of astrophysics, bioscience, chemistry, computer science and informatics, geoscience, mathematics, materials science, mechanics and physics.

3. An average mark C (European grading scale) is required for the 40 ECTS in mathematics and programming (corresponding to the University of Oslo courses MAT1100, MAT1110, MAT1120 and the corresponding computing and programming courses INF1000/INF1110 or MAT-INF1100/MAT-INF1100L/BIOS1100/GEO1040/GEO-KJM1040 or similar courses) and the 40 ECTS at the 2000 and 3000 level within the fields of astrophysics, bioscience, chemistry, computer science and informatics, geoscience, mathematics, materials science, mechanics and physics.

Admission criteria: Imaging and Biomedical Computing

The program has a minimum course requirement of 120 ECTS (European Credit Transfer System) at the undergraduate level (bachelor degree or equivalent) in Astrophysics, bioscience, chemistry, computer science and informatics, geoscience, mathematics, materials science, mechanics and physics.

1. Of these 120 ECTS, 80 ECTS have to be within Informatics/Mathematics/Statistics (courses labeled as INF/IN, INF-MAT, MAT-INF, MAT and STK) where of 50 ECTS have to include basic mathematics and programming courses, equivalent to the University of Oslo mathematics courses MAT1100, MAT1110, MAT1120 and the corresponding computing and programming courses INF1000/INF1110 and INF1010/IN2900.

2. A total of at least 40 ECTC out of the 120 ECTC have to be advanced undergraduate courses at the 2000 and 3000 level.

3. An average mark C (European grading scale) is required for the above-specified 80 ECTS in Informatics/Mathematics/Statistics.

Admission criteria: Materials Science

The program has a minimum course requirement of 120 ECTS (European Credit Transfer System) at the undergraduate level (bachelor degree or equivalent) in Astrophysics, bioscience, chemistry, computer science and informatics, geoscience, mathematics, materials science, mechanics and physics.

1. Of these 120 ECTS, 40 ECTS have to include basic mathematics and programming courses, equivalent to the University of Oslo mathematics courses MAT1100, MAT1110, MAT1120 and at least one of the corresponding computing and programming courses INF1000/INF1110 or MAT-INF1100/MAT-INF1100L/BIOS1100/KJM-INF1xxx.

2. The remaining 80 ECTS have to be within at most two of the fields of astrophysics, bioscience, chemistry, computer science and informatics, geoscience, mathematics, materials science, mechanics and physics. 40 of these 80 ECTS have to be advanced undergraduate courses at the 2000 and 3000 level and a minimum of 20 ECTS must be at the 3000 level within physics/material science/astrophysics/informatics/mathematics/bioscience/chemistry/mechanics/geoscienc

3. An average mark C (European grading scale) is required for the 40 ECTS in mathematics and programming (corresponding to the University of Oslo courses MAT1100, MAT1110, MAT1120 and the corresponding computing and programming courses INF1000/INF1110 or MAT-INF1100/MAT-INF1100L/BIOS1100/KJM-INF1xxx or similar courses) and the 40 ECTS at the 2000 and 3000 level. A minimum of 20 ECTS must be at the 3000 level within physics/material science/astrophysics/mathematics/mechanics/informatics/bioscience/chemist

Admission Criteria: Mechanics

1. The program requires 80 ECTS within the basic mathematics and programming courses, equivalent to the University of Oslo mathematics courses MAT1100, MAT1110, MAT1120, MEK1100, MEK2200, INF1000/INF1100, MAT-INF3360.

2. In addition, the program requires one of the following courses INF3331, MAT-INF3100, MAT-INF3xxx (Numerical analysis, new code) and/or MAT-INF3yyy (Dynamical systems, new code).

3. An average mark C (European grading scale) is required for these courses.

Admission Criteria: Physics

The program has a minimum course requirement of 120 ECTS (European Credit Transfer System) at the undergraduate level (bachelor degree or equivalent) in Astrophysics, bioscience, chemistry, computer science and informatics, geoscience, mathematics, materials science, mechanics and physics.

1. Of these 120 ECTS, 40 ECTS have to include basic mathematics and programming courses, equivalent to the University of Oslo mathematics courses MAT1100, MAT1110, MAT1120 and at least one of the corresponding computing and programming courses INF1000/INF1110 or MAT-INF1100/MAT-INF1100L/BIOS1100/KJM-INF1xxx.

2. The remaining 80 ECTS have to be within at most two of the fields of astrophysics, bioscience, chemistry, computer science and informatics, geoscience, mathematics, materials science, mechanics and physics. 40 of these 80 ECTS have to be advanced undergraduate courses at the 2000 and 3000 level and a minimum of 20 ECTS must be at the 3000 level within physics/material science/mechanics/astrophysics/informatics/mathematics/bioscience/chemistry/geoscienc

3. An average mark C (European grading scale) is required for the 40 ECTS in mathematics and programming (corresponding to the University of Oslo courses MAT1100, MAT1110, MAT1120 and the corresponding computing and programming courses INF1000/INF1110 or MAT-INF1100/MAT-INF1100L/BIOS1100/KJM-INF1xxx or similar courses) and the 40 ECTS at the 2000 and 3000 level. A minimum of 20 ECTS must be at the 3000 level within physics/material science/astrophysics/mechanics/mathematics/informatics/bioscience/chemist