2024 Curriculum for the Master of Science in Immunology and Inflammation at the Faculty of Health and Medical Sciences, University of Copenhagen

This curriculum comes into force on 1 September 2026 and shall apply in relation to students admitted on or after that date.
The curriculum was approved by the Dean March 2026.
The curriculum leading to the degree of Master of Science in Immunology and Inflammation is comprised by the subject-specific curriculum, the course and exam descriptions in the course database and the General Programme Regulations.

Part 1 Objectives and qualification profile

§ 1 Objectives

The objective of the Master of Science programme in Immunology and Inflammation (leading tothe degree of Master of Science/MSc in Immunology and Inflammation) is a theoretical and experimental education within the natural and health sciences. It qualifies graduates to find solutions as well as design new therapy strategies to combat human diseases.
1.2 Successful completion of the programme gives the right to use the title of Master of Science (MSc) in Immunology and Inflammation, the Danish title kandidat i immunologi og inflammation, candidatus / candidata scientiarum in Immunology and Inflammation, and cand.scient. in Immunology and Inflammation.
1.3 The degree is worth 120 ECTS credits.
1.4 The programme belongs under the Study Board for Human Biology, Immunology and Neuroscience.
1.5 The programme belongs under the Core of Danish Medical Examiners (Censorkorpset for Lægeuddannelsen i Danmark).

§2 Admission requirements

A maximum of 30 students is admitted to the programme annually. One third of the seats may be reserved for students from countries outside of the EU/EEA.

Directly qualifying bachelor's degrees from Danish universities
2.2 There are no bachelor's degrees that give legal right of admission to the MSc in Immunology and Inflammation. Applicants holding one of the following bachelor's degrees from a Danish university qualify for seeking admission to the programme:

- Biology
- Biochemistry
- Medicine
- Molecular Biomedicine/Molecular Medicine
- Veterinary medicine

2.3 Applicants holding a bachelor's degree, professional bachelor's degree or equivalent other than the above mentioned from a university in Denmark or abroad may be admitted if the degree is within the following areas:

- Biology
- Biochemistry
- Medicine

- Molecular Biomedicine/Molecular Medicine
- Veterinary Medicine

Furthermore, the applicant must have obtained at least 30 ECTS within cell biology, biochemistry, molecular biomedicine and genetics.

The bachelor's degree concerned must have been obtained within the last five years prior to the start of the first semester of the master's programme.

2.4. In exceptional circumstances the admissions committee may waive the requirement stipulated in 2.3 above.

2.5 Applicants must submit a document certifying English skills equivalent to Danish secondary school 'English level B' with a weighted average of 3 (Danish grading scale) or 'English level A" with a weighted average of 2 (Danish grading scale) or one of the following language tests: International English Language Testing System (IELTS/Academic) or the Test of English as a Foreign Language (TOEFL).

- IELTS-test (British Council) with a minimum score of 6.5
- Paper-based TOEFL-test with a minimum score of 560 points
- Internet-based TOEFL-test with a min score of 83 points
- Passed Cambridge English Certificate: Advanced (CAE) – level C1

2.6 Applicants with a degree from an English taught qualifying upper secondary school diploma, bachelor's degree or master's degree from USA, Canada, Australia, New Zealand, UK or Ireland are
exempted from the language requirement.

§3 Competence profile

The MSc in Immunology and Inflammation aims to develop candidates with highly specialized knowledge of immunology, inflammatory diseases, allergy and related topics such as immune-pathology, -toxicology, -pharmacology, -therapy, and translational medicine. Moreover, the education will focus on methodologies and newly developed in vitro and in vivo models that will complement the formation of the candidates with practical skills for a better and faster integration in their future employment within immunological research.

During the programme students will acquire the knowledge, skills, and competencies listed below enabling the graduates to work in the field of immunology. In addition to this, the students will acquire a number of individual qualifications through taking elective courses and producing a master's thesis based on experimental laboratory work.

Knowledge

Masters of Science in Immunology and Inflammation will:

- Possess highly specialized knowledge of immunology, inflammatory diseases, and allergy with emphasis on immune-pathology, -toxicology, -regulation, -pharmacology, -therapy, infectious diseases, microbiota and the immune system, and translational medicine within diverse areas of immunological research, disease prevention, and healthy aging.
- Possess knowledge on methodology and novel models for as well as practical skills, allowing for critical reflections on scientific methods used in the different fields of immunological research.
- Possess insight into the field of innovation and the R&D value chain from an industrial point of view.

Skills

Masters of Science in Immunology and Inflammation will be able to:

- Demonstrate ability to critically evaluate the established knowledge within immunology.

- Demonstrate ability to plan, perform, analyze, and critically evaluate own, and others immunological research.
- Critically evaluate, discuss and prioritise among scientific literature and key methodologies in the field of immunology, with regard to validity, reliability, and applicability.
- Apply biological models and methods to quantify complex immunological processes from molecular-, to whole body level, considering the impact of genetic, physiological and environmental factors.
- Communicate and discuss evidence-based immunological knowledge with researchers (specialists, and non-specialists) or lay-persons within or outside the employing organization.
- Achieve a personal license to independently plan, implement and take responsibility for the design and performance of animal experimentation within the European Union according to EU Directives and the Danish law.

Competencies
Masters of Science in Immunology and Inflammation will have the competences to:
- Identify, and handle complex issues of immunology research, interpreting information in a systematic and competent way to make informed judgment and design programs and solutions to problems that arise, based on the best international research, of theories and methods.
- Evaluate, validate and disseminate existing data and design, carry out and co-ordinate scientifically valid and focused research, to advance knowledge in a particular problem area or issue of immunology.
- Perform research and develop and disseminate knowledge at various levels based on broad academic knowledge of immunology, and immune-related topics.
- Advise on, and formulate effective responses to complex practical immunological issues.
- Work effectively with cross-disciplinary problems on an individual basis as well as in teams, and be able to provide evidence-based solutions to immunological based pathologies.
- Independently assess and organize their own learning process and assume responsibility for continuous professional development with a view to life-long learning.
- Identify potential candidates for novel targets for future immuno-modulatory-, or immune-based therapies.

Part 2 Modules, instruction, maximum duration of study

§ 4 Modules, instruction
The programme consists of six compulsory modules (including the master's thesis) and two elective courses.
4.2. Instruction and training consists of dialogue-based classroom sessions and laboratory exercises augmented by lectures.
4.3 On the third and fourth semesters of the master's programme, an experimental thesis project must be completed. The scope of the thesis project is 60 ECTS points.

§ 5 Maximum duration of study
Students must complete the programme no more than three years following commencement.
5.2. In exceptional circumstances the Study Board may waive the deadlines in 5.1 above.

Part 3 Study and exam activities

§6 Compulsory, constituent subject elements and elective elements
The programme's constituent subject elements are:

- Compulsory courses including exams: 45 ECTS
- Master's Thesis: 60 ECTS
- Electives: 15 ECTS

§7 Study and exam activities
7.1 Table of courses and exams

First semester, bloc 1, Outline of courses, exams and ECTS-points

Courses and total ECTS-points credited	**Exam registration code**	**ECTS**
Basic Immunology SIIK24001U	Exam in Basic Immunology SIIK24001E	7.5
Computational Immunology SIIK24002U	Exam in Computational Immunology SIIK24002E	7.5

First semester, bloc 2, Outline of courses, exams and ECTS-points

Courses and total ECTS-points credited	**Exam registration code**	**ECTS**
The Immune Defence and Cancer SIIK16003U	Exam in The Immune Defence and Cancer SIIK16003E	7.5
The Immune Response to Infection SIIK16002U	Exam in Immune Response to Infection SIIK16002E	7.5

Second semester, bloc 3, Outline of courses, exams and ECTS-points

Courses and total ECTS-points credited	**Exam registration code**	**ECTS**
Clinical Immunology SIIK24003U	Exam in Clinical Immunology SIIK24003E	7.5
Skin Immunology SIIK19001U	Exam in Skin Immunology SIIK19001E	7.5

Second semester, bloc 4, Outline of elective courses, exams and ECTS-points

Courses and total ECTS-points credited	Exam registration code	ECTS
Laboratory Animal Science SIIK20002U	Exam in Laboratory Animal Science SIIK20002E	7.5
Vaccine Development SIIK26001U	Exam in Vaccine Development SIIK26001E	7,5

Third and fourth semester, bloc 1, 2, 3, 4 Master's Thesis

Courses and total ECTS-points credited	Exam registration code	ECTS
Master's Thesis SIIK16007U	Exam in Master's Thesis SIIK16007E	60

§8 Group exams
There are no group exams in this programme.

§9 Instruction and exam languages
The programme is conducted in English.

§10 Elective courses
The master's programme includes a compulsory element of electives worth 15 ECTS credits taken in the second semester, bloc 4.
10.2. The Study Board must ensure that students have access to at least two elective courses, each worth 7.5 ECTS points. These elective courses are described in the course database and announced no later than May 1 in the preceding semester.
10.3. The Study Board must approve the descriptions of the electives no later than a year prior to the start of the course concerned.
10.4. The Study Board offers electives that are aligned with the objective of the Master programme, see 1.1 above.

§11 Master's thesis
During the third and fourth semester of the programme students must complete a master's thesis. The thesis must demonstrate the student's ability to formulate, analyse and process issues within a relevant, limited subject in the medicine and health sciences in a qualified way.
11.2. The master's thesis must be prepared individually and be completed in accordance with the approved contract and comprise the equivalent of c. 60-70 A4 pages in 12 point Times New Roman. The thesis must be accompanied by an abstract in English of no more than one A4 page. The abstract must summarize the problem formulations, the methods used, significant results/findings, a discussion if relevant, and a conclusion. The abstract will be included in the overall assessment of the master's thesis.

11.3. When assessing bachelor projects, master's (candidatus) theses, master's project and other major written assignments, emphasis must, in addition to the academic content, also be placed on the student's spelling and writing skills.
11.4. The thesis may also comprise a published or unpublished scientific article in the field of immunology and inflammation, written or co-written by the student. If there is more than one author, each must submit a signed co-writer statement specifying the part or parts of the article for which he or she is responsible. The co-writer statement must reflect the relative contributions at the time of submission as a Master's project. The student will be examined on the article in accordance with the rules applying to the Master's thesis exam in general.
11.5. The master's thesis is worth 60 ECTS credits.

Part 4 Specific provisions

§12 Transitional arrangements
A separate interim arrangement between the 2016 curriculum and the 2024 curriculum for MSc in Immunology and Inflammation can be found on the curriculum website.

Part 5 Concluding remarks

§13 Exemptions from these provisions
In exceptional circumstances, the study board may grant exemptions from any curriculum provisions within the sole remit of the Study Board.

§14 Date of commencement
This study curriculum takes effect on 1 September 2026.