

## Bacheloruddannelsen i molekylærbiologi

Obl. mol. biol. fag
  Valgfag/Specialisering
  Obl. støttefag

1	Calculus – <i>alpha</i>		Almen kemi – mol. biol. & med.	Intro til molekylærbiologi
			Eksp. Biokemi	Fysisk biokemi
2	Mikrobiologi – mol. biol.	Genetik	Organisk kemi	Grundlæggende molekylærbiologi
	Bioinformatik med programmering		Biomolekylær struktur og funktion	Analytisk molekylærbiologi
4	Genomanalyse	med statistik	Metabolismens koncepter og design	Specialisering/Valg/Tilvalg
	Videnskabsteori – mol biol & med		Molekylære processer i cellen	Specialisering/Valg/Tilvalg
5	Anvendt molekylærbiologi			
6	Bachelorprojekt (20 ECTS); evt. 10 ECTS samt specialisering/valg/tilvalg10 ECTS			Specialisering/Valg/Tilvalg

## Kandidatuddannelsen i molekylærbiologi

7	Specialisering/Valg/Tilvalg	Specialisering/Valg/Tilvalg	Specialisering/Valg/Tilvalg
8	Specialisering/Valg/Tilvalg	Molekylærbiologisk projekt	Specialisering/Valg/Tilvalg
9	Specialeprojekt (60 ECTS; 2 semestre); evt. andet omfang med flere valgfag		
10			

## Specialized study directions in the molecular biology programs:

Undergraduate level (Bacheloruddannelsen):

10 ECTS Specialized course and experimental Bachelor Project (20 ECTS)

Directions and courses offered (all 10 ECTS)

- **Protein Science** \*\* (Proteins and their interactions (S - 2018))
- **Molecular Cell Biology** (From Cell to Organism (S - 2018))
- **Plant Molecular Biology and Technology** (From Cell to Organism (S - 2018))
- **Molecular Nutrition** (Molecular Nutrition (A - 2017))
- **Big Data in Molecular Biology** (**in progress**)

\*\* First "time": Offered as a Bachelor- and a Master specializing course.

## Specialized study directions in the molecular biology programs:

Graduate level (Kandidatuddannelsen):

30 – 40 ECTS Specialized courses (including project (F)) and experimental thesis project

Directions and courses offered (M, mandatory; R, recommended):

- **Protein Science:**

Protein MS (10 ECTS, A - 2018, M); Bio-Molecular Structure Determination (10 ECTS, S - 2018, M)  
*Immunology & Microbiology (10 ECTS, A - 2017, R); Organic Chemistry II (10 ECTS, S - 2018, R).....*

- **Molecular Cell Biology:**

Eukaryotic Research Organisms (10 ECTS, A - 2017, M); RNA Molecular Biology or Biology  
of the Cell in Health and Disease (10 ECTS, S - 2018, M); *Immunology and Microbiology (10 ECTS,  
A - 2017, R); General Physiology (10 ECTS, A - 2017, R), Neurobiology (10 ECTS, ?, R).....*

- **Plant Molecular Biology and Technology:**

Host Microbe Interaction (10 ECTS, A - 2017, M); Plant Biology and Technology (10 ECTS,  
S-2018, M); *Eukaryotic Research Organisms (10 ECTS, A - 2017, R); Next Gen. Sequencing (5 ECTS,  
S - 2018, R); Quantitative Genetics (5 ECTS, S - 2018, R); Gene Mapping (5 ECTS, S - 2018, R)*

## **Specialized study directions in the molecular biology programs:**

**Graduate level (Kandidatuddannelsen) continued:**

**30 – 40 ECTS Specialized courses (including project (F)) and experimental thesis project**

**Directions and courses offered (M, mandatory; R, recommended):**

**- Molecular Nutrition:**

**Bioactive Food Components (10 ECTS, A - 2017, M); Adv. Molecular Nutrition (10 ECTS, S - 2018, M); Eukaryotic Research Organisms (10 ECTS, A - 2017, R); Biology of the Cell in and disease (10 ECTS, S - 2018, R); *Immunology and Microbiology (10 ECTS, A - 2017, R); Organic Chemistry II (10 ECTS, S - 2018, R).....***

**- Big Data in Molecular Biology:**

**Bioinformatic Analysis of Genomics Data (5 ECTS, Q1 - 2017, M); Quantitative Genetics (5 ECTS, Q2 - 2017, M); Linear Models in Animal Breeding (5 ECTS, Q3 - 2018, M) and Gene Mapping (5 ECTS, Q4 - 2018, M)**