

# Why study at Umeå Plant Science Centre?

Umeå Plant Science Centre (UPSC) is a leading research centre for basic research in plant physiology and plant molecular biology, forest tree genetics and biotechnology. More than 40 research groups are supported by scientific infrastructures with state-of-the-art techniques. The centre is known for its Spruce Genome Project, which deciphered this largest genome that was the ever decrypted. One department from Umeå University and one from Swedish University of Agricultural Sciences comprise this centre of excellence.

The atmosphere at UPSC is friendly and relaxed, and the contacts between teachers and students are non-authoritarian and democratic. The teachers help students not only with their studies but also with practical details, such as study planning, study techniques and career planning.

UPSC hires scientists from all over the world, and usually there are around 40 different nationalities represented at the Centre. This means that English is the main language of the Centre. English is also the study language of the Master's programme.



## How is life in Umeå?

You can easily reach Umeå by plane, which takes only one hour from Stockholm.

All students (except for foreign students with formal exchange agreements) have to organize their housing themselves. This can be done through a municipal housing company "Bostaden" ([www.bostaden.umea.se](http://www.bostaden.umea.se)). Rent for a normal student room close to the university is around 240 € per month.

A wide array of cultural and social activities are available at the campus area and downtown. The biggest sports center in Sweden is located right beside the campus with activities for swimming, floorball, volleyball, different forms of workout training, rock climbing etc. (see [www.iksu.se](http://www.iksu.se)).

UPSC international can also provide assistance with practical details and give you information on housing and living in Umeå.



## Why study in Umeå?

Umeå has two highly-ranked universities that together teach more than 35 000 students. The research environments are international. Researchers at Umeå University and the Swedish University of Agricultural Sciences are internationally known for their open interdisciplinary research collaborations.

Several research teams of the UPSC are involved in strong research collaborations at the Chemical Biological Centre KBC, which are dedicated to solar fuels and artificial photosynthesis. UPSC is part of Green Future, one priority area of research collaboration which also consists of the research programme Future Forests, the government's designated strategic research area Bio4Energy, marine research ECOCHANGE, and future biorefineries.

In 2014, Umeå University was ranked best university in Northern Europe among the top 50 universities established within the last 50 years. ([www.umu.se](http://www.umu.se)).



[www.upsc.se/about-upsc/international](http://www.upsc.se/about-upsc/international)

[www.upsc.se/study-at-upsc/masters-programme.html](http://www.upsc.se/study-at-upsc/masters-programme.html)



# Master's programme in Plant and Forest Biotechnology

Second generation ethanol and biofuel production, modification of tree fibres, increased plant tolerance to diseases and environmental stresses as well as the development of functional foods, are examples of research areas in biology and biotechnology that will have a large impact on our society in the future. Plant biotechnology is becoming increasingly important as a tool to solve some of the global problems related to food, fuel and ecosystem management by environmentally friendly and sustainable means.

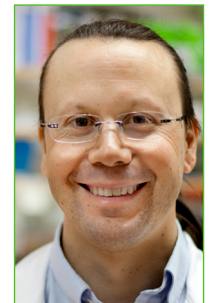
Umeå Plant Science Centre organizes a two-year Master of Science Programme in Plant and Forest Biotechnology that aims to provide students with specialized expertise and skills to recognize, understand and find solutions to these challenges.

The programme engages enthusiastic teachers that are internationally recognized scientists in their fields. The education is anchored to the strong research topics of UPSC, such as cell and molecular biology, development, photosynthesis, genomics, genetics, wood biology and forest production and biotechnology. Within the programme, you can choose to study the application of biotechnology to plants in general or focus specifically on forest biotechnology. In addition, several of the courses contain components that can be tailored according to the interests of

## Programme co-ordinators



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## Recommended study plan

<b>Year 1</b>		<b>Plant Cell and Molecular Biology</b> 15 ECTS	<b>Growth and Development of Plants</b> 15 ECTS	<b>Plant Biotechnology and Molecular Breeding</b> 15 ECTS	<b>Biology and Biotechnology in Forest Production Systems</b> 15 ECTS
<b>Year 2</b>	Option 1	<b>Computational and Systems Biology (elective)</b> 15 ECTS	<b>Project course in Plant Biology (elective)</b> 15 ECTS	<b>Degree thesis project</b> 30 ECTS	
	Option 2	<b>Degree thesis project</b> 60 ECTS			

[www.upsc.se/study-at-upsc/masters-programme.html](http://www.upsc.se/study-at-upsc/masters-programme.html)