# Master's Programme in Integrative Plant Sciences (IPS) degree structure 2020-2023 and a 2-years' model study scheduler

The degree structure 2020-2023 and a two-year model study schedule for the students, who start in the autumn 2021 (in an odd year)

# MSc degree in Integrative Plant Sciences (IPS), 120 cr

#### IPS-100 Integrative Plant Sciences, Advanced studies, 80 cr

#### Joint studies in the Master's Programme, 50 cr

IPS-001 Personal Study Plan (PSP), 0 cr (1/I)

IPS-002 Plants in a Changing World, 5 cr (1/I)

IPS-003 Design & Planning of Biological Experiments, 5 cr (1/II)

IPS-004 Master's Thesis Seminar, 5 cr (1/III-IV)

IPS-005 Literature Examination, 5 cr (1-2/I-IV)

IPS-006 Master's Thesis, 30 cr (2/I-IV)

VIIKB-001 Maturity Essay, 0 cr (2/IV)

#### Alternative modules, 30 cr (choose 2 x 15 cr)

#### IPS-110 Plant Growth and Developmental Biology 15 cr:

IPS-111 Plant Developmental Biology, 5 cr (1/III)

IPS-112 Wood Structure, Growth and Differentiation, 5 cr (1 or 2/II)

IPS-113 Lectures in Plant Physiology, 5 cr (1 or 2/l)

#### IPS-120 Plant Biotechnology and Molecular Biology 15 cr:

IPS-121 Plant Biochemistry and Cell Biology, 5 cr (1/I)

IPS-122 Plant Biotechnology and Molecular Biology, 5 cr (1/II)

IPS-123 Laboratory Course in Plant Biotechnology, 5 cr (1/III-IV)

## IPS-130 Advanced Plant Molecular Biology 15 cr:

IPS-131 Advanced Course in Plant Molecular Biology, 15 cr (1/IV)

#### IPS-140 Plants in Their Environment 15 cr:

IPS-141 Sensory and Physiological Ecology of Plants, 5 cr (EVEN YEARS 1/III)

IPS-142 Plant Adaptation, 5 cr (EVEN YEARS 2/I)

IPS-143 Plants, Ecosystems and Bioresilience, 5 cr (ODD YEARS 2/III)

# IPS-150 Subarctic Ecology and Flora 15 cr:

IPS-154 Subarctic Habitats and Biota, 5 cr (EVEN YEARS 1/IV+SUMMER)

IPS-153 Flora of Subarctic Europe, 5 cr (web)

IPS-172 Polypores as Tools in Forest Conservation, 5 cr (ODD YEARS 1/I)

#### IPS-160 Taxonomy and Systematics 15 cr:

IPS-161 Biological Collections, 5 cr (EVEN YEARS 2/I)

IPS-164 Introduction to Phylogenetics, 10 cr (EVEN YEARS 2/II)

#### IPS-170 Diversity and Distribution of Plants and Fungi 15 cr:

Elective, choose 15 cr

IPS-172 Polypores as Tools in Forest Conservation, 5 cr (ODD YEARS 1/I)

IPS-173 Mapping Plant Distributions, 5 cr (EVEN YEARS 1/IV+SUMMER )

IPS-174 Tropical Flora of East Africa, 5 cr (web)

IPS-175 Flora and Vegetation of East Africa, 5 cr (EVEN YEARS 2/II+ODD III)

EEB-301 Fundamentals of Conservation Biology, 5 cr (web)

IPS-177 Flora of Southern Finland, 5 cr (web)

IPS-178 Threatened Vascular Plants of Finland, 5 cr (web)

#### Optional modules, 0-40 cr (examples)

Modules from your own MSc programme or from other MSc programmes. Please note that you don't have to take any optional study modules in your Master's Degree, if you don't want, but instead, you can take individual optional study units in the Other studies section in order to get 120 credits in your Master's Degree.

FOR-306 Forest Biotechnology, 30 cr (\*see the course list below)

FOR-307 Forest Production Ecology, 25 cr:( \*see the course list below)

AGRI-230 Plant Breeding, 15 cr (\*see the course list below)

AGRI-250 Plant Pathology, 15 cr (\*see the course list below)

VIIKB-200 Study Module Accomplished at Another University, 15-45 cr

VIIKB-201 Study Module Completed in a Foreign University , 15-25 cr

or any other optional module from IPS or from other MSc programmes  $% \left( \mathbf{r}\right) =\left( \mathbf{r}\right)$ 

#### Other studies in MSc degree, 0-40 cr (examples)

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	022	2022 - 2023* Second year							
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Study units from your own MSc programme or from other MSc programmes.										
Career orientation and professional skills studies (examples, recommended)										
IPS-008 Advanced Training in a Research Group, 5-10 cr	(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)
IPS-009 Practical Training, 5-10 cr	(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)
IPS-010 Learning by Doing in Scientific Natural History Collections, 5 cr	(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)
IPS-011 Project Work, 5 cr	(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)
IPS-012 Plant Biology Journal Club, 5 cr	(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)
IPS-013 Symposia and Seminars, 5 cr	(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)
IPS-014 Learning by Teaching, 2-5 cr	(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)
VIIKB-002 Tutoring , 5 cr (1/IV and 2/orientation week)	(///	(///	(///	5	(^)	0	(//)	(//)	(///	(//)
VIIKB-005 Demanding Participation in Administrative Bodies and Student Organisations, 2	(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)
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Other optional studies (examples)										
VIIKB-003 Orientation Week, 1 cr (orientation week)	1									
EEB-005 Master's Thesis course: Part II , 5 cr (2/III-IV)								2.5	2.5	
KK-ENG501, Academic Writing 1: Principles and Practice (MSc Students) (CEFR C1), 2 cr (1/	1	1								
KK-ENG502, Academic Writing 2: Process and Feedback (MSc Students) (CEFR C1), 2 cr (2/l						2				
VIIKB-100 Studies Accomplished at Another University, 1-15 cr	(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)	(x)
or any other optional study units from IPS or from other MSc programmes	(*)	(^)	(*)	(//)	(^/	(///	(^,	(^,	(^)	(//)
*Course list of optional modules (examples):										
FOR-306 Forest Biotechnology 30 cr:										
FOR-231 Basic Biotechnology Applications in Forestry, 5 cr (1 or 2/l)	(5)					(5)				
IPS-112 Wood Structure, Growth and Differentiation, 5 cr (1 or 2/II)	\-/	(5)				(- /	(5)			
FOR-232 Forest Microbiology, 10 cr (1 or 2/II)		(10)					(10)			
FOR-233 Advanced Forest Mycology and Pathology, 10 cr (1 or 2/II)		(10)					(10)			
		()					()			
FOR-307 Forest Production Ecology 25 cr:										
FOR-211 Tree Ecophysiology, 5 cr (1 or 2/II)		(5)					(5)			
FOR-212 Forest Production, Growth and Yield, 5 cr (1 or 2/III)		(5)	(5)				(5)	(5)		
FOR-213 Field Course in Biogeochemistry and Production Ecology, 5cr (1/SUMMER)			(5)		5			(5)		
FOR-215 Mitigation of Climate Change in Forestry, 5 cr (EVEN YEARS 1/III)			5							
FOR-216 Adaptation of Forestry to Climate Change, 5 cr (ODD YEARS 2/III)								5		
Total 210 Adaptation of Forestry to climate change, 5 or (555 12/1/5 2/1/1)								,		
AGRI-230 Plant Breeding 15 cr:										
AGRI-231 Conservation of Plant Genetic Resources, 5 cr (EVEN YEARS 1/IV)				5						
AGRI-232 Breeding of Crop Plants, 5 cr (ODD YEARS 1/I)	5			3						
AGRI-233 Forest Tree Breeding, 5 cr (EVEN YEARS 2/I)						5				
7.011.255 Forest Free Breeding, 5 th (24214 F2/110 2/1)										
AGRI-250 Plant Pathology 15 cr:										
AGRI-251 Fungal Plant Pathogens, 5 cr (ODD YEARS 1/I)	5									
AGRI-252 Plant Pathogenic Bacteria, 5 cr (EVEN YEARS 1/III)			5							
AGRI-253 Plant Virology, 5 cr (ODD YEARS, 2/III)								5		
+ Other optional study units from the Plant Production Sciences										
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l										
The degree structure 2020-2023 and a two-year model study schedule for the students,			Δ τωρ.ν	ear mod	el study sch	edule fo	r 2021.2	022 + 20	122-202	2
who start in the autumn 2021 (in an odd year)					22	caule 10		022 + 20 <b>022</b>		2023*
addamin zozz (m an oda year)										

# MSc degree in Integrative Plant Sciences (IPS), study track for Biology teachers, 120 cr

# IPS-101 Integrative Plant Sciences, study track for Biology teachers, Advanced studies, 60 cr

## Joint studies in the Master's Programme, 45 cr

IPS-001 Personal Study Plan (PSP), 0 cr (1/I)

IPS-002 Plants in a Changing World, 5 cr (1/I)

IPS-003 Design & Planning of Biological Experiments, 5 cr (1/II)

IPS-004 Master's Thesis Seminar, 5 cr (1/III-IV)

IPS-006 Master's Thesis, 30 cr (2/I-IV)

VIIKB-001 Maturity Essay, 0 cr (2/IV)

# Alternative modules, 15 cr (choose 1 x 15 cr)

IPS-110 Plant Growth and Developmental Biology 15 cr:

A two-year model study schedule for 2021-2022 + 2022-2023												
2021 - 2022						2022 - 2023*						
		Second year										
						(*a tentative model, changes possible)						
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IPS-111 Plant Developmental Biology, 5 cr (1/III)
IPS-112 Wood Structure, Growth and Differentiation, 5 cr (1 or 2/II)
IPS-113 Lectures in Plant Physiology, 5 cr (1 or 2/I)

#### IPS-120 Plant Biotechnology and Molecular Biology 15 cr:

IPS-121 Plant Biochemistry and Cell Biology, 5 cr (1/I)

IPS-122 Plant Biotechnology and Molecular Biology, 5 cr (1/II)

IPS-123 Laboratory Course in Plant Biotechnology, 5 cr (1/III-IV)

#### IPS-130 Advanced Plant Molecular Biology 15 cr:

IPS-131 Advanced Course in Plant Molecular Biology, 15 cr (1/IV)

#### IPS-140 Plants in Their Environment 15 cr:

IPS-141 Sensory and Physiological Ecology of Plants, 5 cr (EVEN YEARS 1/III)

IPS-142 Plant Adaptation, 5 cr (EVEN YEARS 2/I)

IPS-143 Plants, Ecosystems and Bioresilience, 5 cr (ODD YEARS 2/III)

# IPS-150 Subarctic Ecology and Flora 15 cr:

IPS-154 Subarctic Habitats and Biota, 5 cr (EVEN YEARS 1/IV+SUMMER)

IPS-153 Flora of Subarctic Europe, 5 cr (web)

IPS-172 Polypores as Tools in Forest Conservation, 5 cr (ODD YEARS 1/I)

#### IPS-160 Taxonomy and Systematics 15 cr:

IPS-161 Biological Collections, 5 cr (EVEN YEARS 2/I)

IPS-164 Introduction to Phylogenetics, 10 cr (EVEN YEARS 2/II)

## IPS-170 Diversity and Distribution of Plants and Fungi 15 cr:

Elective, choose 15 cr

IPS-172 Polypores as Tools in Forest Conservation, 5 cr (ODD YEARS 1/I)

IPS-173 Mapping Plant Distributions, 5 cr (EVEN YEARS 1/IV+SUMMER)

IPS-174 Tropical Flora of East Africa, 5 cr (web)

IPS-175 Flora and Vegetation of East Africa, 5 cr (EVEN YEARS 2/II+ODD III)

EEB-301 Fundamentals of Conservation Biology, 5 cr (web)

IPS-177 Flora of Southern Finland, 5 cr (web)

IPS-178 Threatened Vascular Plants of Finland, 5 cr (web)

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