

Doctoral Programme Brain & Mind (B&M) Degree Structure 1.8.2017-

1. DOCTORAL THESIS
2. SUBJECT-SPECIFIC STUDIES (30 ECTS)
2.1. Scientific content training (≥15 ECTS)
<p>Obligatory studies:</p> <ul style="list-style-type: none">• Research ethics (1 cr)• Book exam (5 cr) <p>Elective courses within the following fields:</p> <ul style="list-style-type: none">• Developmental neuroscience• Excitability, synaptic transmission, and neuronal networks• Disorders of the nervous system• Sensory and motor systems• Neuroimmunology, neuroendocrine systems and sleep• Cognition and behavior• Systems and computational neuroscience
2.2. Scientific seminars and activities (1-15 ECTS)
<ul style="list-style-type: none">• B&M Symposium (obligatory 1 cr with a poster)• Scientific seminars, conferences, symposia• Research visit
3. TRANSFERABLE SKILLS STUDIES (10 ECTS)
<p>Elective courses within the following topics:</p> <ul style="list-style-type: none">• Communication and teaching• Management and entrepreneurship• Career planning and development• Legislation• Basic research tools and skills

DOCTORAL PROGRAMME BRAIN & MIND (B&M) DEGREE STRUCTURE

1. NEUBM-999 Doctoral thesis
2. NEUBM-998 Substance-specific training (30 cr)
3. NEUBM-997 Transferable skills courses (10 cr)

Search for courses at www.brain-mind.fi//courses-and-events

TOPIC/TITLE	CODE	Credits (ECTS)	Obligatory / Optional
2. SUBSTANCE-SPECIFIC TRAINING	NEUBM-998	30	Obligatory
2.1. Scientific content training		≥15	
• Research ethics	921181	1-2	Obligatory (at least 1 cr)
• Book exam 1	NEUBM-010	5	Obligatory
<i>Developmental neuroscience</i>			
• Developmental neuroscience	NEU-531	5	Optional
• Regenerative medicine: from bench to bedside	TMED-203	5	Optional
• Stem cells and organogenesis	GMB-305	5	Optional
• Growth factors and their receptors	ILS-303	5	Optional
• Neuroepigenetics	NEUBM-532	2	Optional
• Elective course(s)			
<i>Excitability and synaptic transmission</i>			
• Integrative neurobiology	NEU-104	5	Optional
• Introduction to neurobiophysics	NEU-541	5	Optional
• Electrophysiological techniques	NEU-542	5	Optional
• Synaptic signaling and plasticity	NEU-502	5	Optional
• Brain slice electrophysiology	NEU-543	5	Optional
• Elective course(s)			
<i>Disorders of the nervous system</i>			
• Basic mechanisms of nervous system diseases	NEU-521	5	Optional
• Biological psychiatry 1	NEUBM-301	1-3	Optional
• Biological psychiatry 2	NEUBM-302	1-3	Optional
• Pre-clinical models of neurological diseases and emerging therapies	NEU-552	5	Optional
• Corticolimbic regulatory systems in health and disease	TMED-405	5	Optional
• NeuPhar 1	NEUBM-303	2-5	Optional

• NeuPhar 2	NEUBM-304	2-5	Optional
• Neuropharmacology	PROV-502	5	Optional
• Elective course(s)			
<i>Sensory and motor systems</i>			
• Sensory biology	NEU-551	5	Optional
• Studies of sensory performance in animals and humans	NEU-552	5	Optional
• Elective course(s)			
<i>Neuroimmunology, neuroendocrine systems and sleep</i>			
• Advances in neuroinflammation	NEUBM-205	2-3	Optional
• How factors from outside the brain influence neuronal development, plasticity and regeneration	NEUBM-306	2-4	Optional
• Sleep school	NEUBM-207	1-3	Optional
• Elective course(s)			
<i>Cognition and behavior</i>			
• Systems and cognitive neuroscience	NEU-511	5	Optional
• Animal models in behavioural neuroscience	NEU-512	5	Optional
• Biological psychiatry 1	NEUBM-301	1-3	Optional
• Biological psychiatry 2	NEUBM-302	1-3	Optional
• Biological psychiatry preparation course	NEUBM-305	5	Optional
• Infant auditory system development	DPBM-114	3	Optional
• Music for remediation, health and wellbeing	KLTO-119	3	Optional
• Summer School on Auditory Cognitive Neuroscience	NEUBM-208	3-6	Optional
• Cognitive Neuroscience and Psychobiology Journal Club	TMED-402	2-3	Optional
• Elective course(s)			
<i>Systems and computational neuroscience</i>			
• Systems and cognitive neuroscience	NEU-511	5	Optional
• Time series analysis in neuroscience	NEUBM-453	5	Optional
• Computational neuroscience	NEUBM-309	2-5	Optional
• Brain dynamics	NEUBM-310	3	Optional
• Elective course(s)			

Other elective subjective-specific courses			
• Big questions in neuroscience and current limits of knowledge	NEUBM-610	1-2	Optional
• B&M “What’s up” Journal club	NEUBM-507	1-2	Optional
• Topics in the history of neuroscience	NEUBM-611	5	Optional
• Zebrafish neurobiology	NEUBM-612	6	Optional
• Book exam 2	NEUBM-011	1-5	Optional
• Other elective studies	NEUBM-771	1-10	Optional
• Elective course(s)			
2.2. Scientific seminars and activities		≤ 15	
• B&M Symposium 1	NEUBM-101	1-4	Obligatory (minimum 1 cr with poster presentation)
• B&M Symposium 2	NEUBM-102	1-4	Optional
• B&M Symposium 3	NEUBM-103	1-4	Optional
• B&M Symposium 3	NEUBM-104	1-4	Optional
• Neuroscience seminar series	NEU-606	2	Optional
• Scientific seminars, conferences, symposia	NEUBM-105	2-6	Optional
• Research visit	NEUBM-106	2-3	Optional
• Scientific publications not included in the thesis (1-2 cr/publication)	NEUBM-107	1-4	Optional

3. TRANSFERABLE SKILLS COURSES	NEUBM-997	10	Obligatory
<i>Communication and teaching</i>			
• B&M seminar on scientific presentation	NEUBM-701	1-2	Optional
• Public outreach in neuroscience	NEUBM-702	1-4	Optional
• Critical analysis of scientific publication	NEUBM-311	1-2	Optional
• Teaching in courses	HEALTH-103	1-3	Optional
• Academic rhetoric and argumentation	HEALTH-100	1	Optional
• Poster workshop and feedback	HEALTH-101	1	Optional
• Theory of pedagogics	HEALTH-102	1	Optional
• Elective course(s)	HEALTH-104		
<i>Management and entrepreneurship</i>			
• Student council and doctoral programme/school activities	HEALTH-110	1-2	Optional
• Introduction to quality management	HEALTH-107	1	Optional
• Project management and leadership	HEALTH-105	2	Optional
• Research funding	HEALTH-106	1	Optional
• Elective course(s)	HEALTH-111		
<i>Career planning and development</i>			
• DSHealth Career Day	HEALTH-112	1	Optional
• Company visits	HEALTH-108	1	Optional
• Open science online course	HEALTH-118	1	Optional
• Nordic Summit for doctoral candidates	HEALTH-121	1	Optional
• Elective course(s)	HEALTH-113		
<i>Legislation</i>			
• Biomedical view to patenting	HEALTH-114	1	Optional
• Medical and bio law	HEALTH-115	1	Optional
• Introduction to labour law	HEALTH-116	1	Optional
• Elective course(s)	HEALTH-117		
<i>Basic research tools and skills</i>			
• Laboratory animal science	NEU-603	2-5	Optional
• Philosophy of biological and biomedical science	HEALTH-119	3	Optional
• Biostatistics/data analysis			
• Elective course(s)	HEALTH-120		