

# MASTER CURRICULUM – AP – 2023/2024

Compulsory course AP				
Code	Course	EC	Q	Timeslot
<a href="#">3MA010</a>	Computational and mathematical physics	5	GS1	B

General Elective AP				
Code	Course	EC	Q	Timeslot
<a href="#">3ME120</a>	Physics of engineering problems	5	GS2	D
<a href="#">3MC010</a>	Career development	2,5	GS2 or GS4	D1,C2

Compulsory Courses Master Tracks AP					
Code	Course	EC	Track	Q	Timeslot
<a href="#">3MB010</a>	Physics of plasma and radiation	5	PB	GS1	A
<a href="#">3MQ010</a>	Condensed matter at the nanoscale	5	NQP	GS1 or GS3	C, X
<a href="#">3MS010</a>	Advanced fluid dynamics	5	FBSM	GS1	E
<a href="#">3MS020</a>	Soft matter physics	5	FBSM	GS2	B

FBSM Track Electives - Fluids, Bio & Soft Matter				
Code	Course	EC	Q	Timeslot
<a href="#">3MT150</a>	Environmental fluid mechanics	5	GS1	C
<a href="#">3MQ110</a>	Advanced materials modelling using multiscale methods	10	GS2 and GS3	A
<a href="#">4EM10</a>	Gasdynamics	5	GS2	B2,B3
<a href="#">3MT160</a>	Introduction to NMR/MRI for imaging and flow visualization	5	GS2	C
<a href="#">3MN150</a>	Nanomagnetism	5	GS2 or GS4	D
<a href="#">3MN170</a>	Molecular biosensing	5	GS2	E
<a href="#">3MQ100</a>	Photonics and modern optics	5	GS2	C
<a href="#">3MT140</a>	Experimental methods in transport and soft matter physics	5	GS2	E
<a href="#">3MN100</a>	Polymer physics	5	GS3	B
<a href="#">3MT100</a>	Chaos	5	GS3	D
<a href="#">3MT120</a>	Advanced computational fluid and plasma dynamics	5	GS3	E
<a href="#">3MA100</a>	Physics behind medical technology: equipment and physiology	5	GS4	A
<a href="#">3MN110</a>	Landau theory & the statics and dynamics of phase transitions	5	GS4	A
<a href="#">3MT110</a>	Geophysical fluid dynamics	5	GS4	B
<a href="#">3MN210</a>	Single molecule microscopy for nanomaterials	5	GS4	C
<a href="#">3MT170</a>	Machine learning for fluid dynamics	5	GS1	D
<a href="#">3MT130</a>	Transport in porous media	5	GS4	E

Internship & Graduation AP			
Code	Course	EC	Timeslot
<a href="#">3MA15</a>	External internship Applied Physics	15	X
<a href="#">3MA30</a>	External internship Applied Physics	30	X
<a href="#">3MA45</a>	Graduation project Applied Physics	45	X
<a href="#">3MA60</a>	Graduation project Applied Physics	60	X
<a href="#">3APIDD225</a>	Combined graduation project - Applied Physics Part	22,5	X
<a href="#">3APIDD30</a>	Combined graduation project - Applied Physics Part	30	X

# MASTER CURRICULUM – AP – 2023/2024

PB Track Electives - Plasmas & Beams				
Code	Course	EC	Q	Timeslot
<a href="#">3MF100</a>	Fusion on the back of an envelope	5	GS1	E
<a href="#">3MQ110</a>	Adv. materials modelling using multiscale methods	10	GS2 and GS3	A
<a href="#">3MF110</a>	Magnetic confinement and MHD of fusion plasmas	5	GS2	C
<a href="#">3MA020</a>	Advanced electrodynamics	5	GS2	B
<a href="#">3MP120</a>	Astrophysics	5	GS2	D
<a href="#">3MP100</a>	Gas discharges	5	GS2	E
<a href="#">3MQ100</a>	Photonics and modern optics	5	GS2	C
<a href="#">3MQ010</a>	Condensed matter at the nanoscale	5	GS1 or GS3	C, X
<a href="#">3MP170</a>	Plasma processing science and technology	5	GS3	B
<a href="#">3MP140</a>	Accelerators and beams	5	GS3	C
<a href="#">3MF130</a>	Heating and diagnosing fusion plasmas	5	GS3	B
<a href="#">3MP110</a>	Solar cells	5	GS3	D
<a href="#">3MP180</a>	Optical diagnostics: techniques and applications	5	GS4	A
<a href="#">3MP150</a>	Ultracold quantum physics	5	GS4	B
<a href="#">3MF120</a>	Fusion reactors: extreme materials, intense plasma wall interaction	5	GS4	E

NQP Track Electives - Nano, Quantum & Photonics				
Code	Course	EC	Q	Timeslot
<a href="#">3MN190</a>	Semiconductor nanophysics	5	GS1	E
<a href="#">6EMA53</a>	Molecular photophysics	5	GS1	D
<a href="#">3MQ110</a>	Adv. materials modelling using multiscale methods	10	GS2 and GS3	A
<a href="#">3MN150</a>	Nanomagnetism	5	GS2 or GS4	D
<a href="#">3MQ100</a>	Photonics and modern optics	5	GS2	C
<a href="#">3MN120</a>	Organic electronics	5	GS3	B
<a href="#">3MP170</a>	Plasma processing science and technology	5	GS3	B
<a href="#">3MN180</a>	Nanophotonics	5	GS3	D
<a href="#">3MP110</a>	Solar cells	5	GS3	D
<a href="#">5LHB0</a>	Optical sensing and metrology	5	GS3	E
<a href="#">3MP150</a>	Ultracold quantum physics	5	GS4	B
<a href="#">3MN210</a>	Single molecule microscopy for nanomaterials	5	GS4	C
<a href="#">3MN220</a>	Nanospintronics	5	GS4	E
<a href="#">5LFB0</a>	Terahertz systems	5	GS4	E
<a href="#">3MQ120</a>	Hybrid quantum computing	5	GS2	B
<a href="#">5LTD0</a>	Introduction to quantum sensing	5	GS2	E
<a href="#">5LTE0</a>	Quantum communications	5	GS3	E