

Physics Major - Professional Track (BS) Checklist

Student name: _____ SPIRE #: _____ Advisor name & date: _____

	Course	Course title or description	# credits	Semester /grade	Career/professional development
F1	PHYS 181 (F)	Physics I (Mechanics)	4		<ul style="list-style-type: none"> • Handshake • Write resume • Get to know at least one faculty member • Use “career development checklist”
	PHYS 185 (F)	Freshman Colloquium (recommended)	1		
	MATH 131 (F or S)	Calculus I (or take higher class)	4		
	Other	<ul style="list-style-type: none"> • First-year freshman seminar • GenEd DU or DG 	1 4		
S1	PHYS 182 (S)	Physics II (E&M)	4		<ul style="list-style-type: none"> • Apply for summer job/internship: start in Dec., due in Feb. • Consider on-campus research, teaching, or outreach activities. • Meet with CNS career center.
	MATH 132 (F or S)	Calculus II (or take higher class)	4		
	PHYS 192M (S)	Intro/Measurement w/Arduino (recommended)	1		
	Other (optional)	<ul style="list-style-type: none"> • Practicum (research w/ faculty) • PHYS 281 (S1 or F2 – talk to advisor) • GenEd DU or DG if not already taken 	1-3 3 4		
F2	PHYS 287 (F)	Physics III (thermo, waves...)	3		<ul style="list-style-type: none"> • Consider on-campus research, teaching, or outreach activities. • Meet with CNS career center.
	PHYS 289 (F)	Physics III Lab	1		
	PHYS 281 (F or S)	Computational Physics	3		
	MATH 233 (F or S)	Calculus III, multivariable (or higher)	3		
	Other (optional)	<ul style="list-style-type: none"> • MATH 235 (Linear Alg, recommended) • TA, PHYS 390T, NATSCI 293A, research practicum, or indep. study 	3 3		
S2	PHYS 284 (S)	Modern Physics (relativity & intro QM)	3		<ul style="list-style-type: none"> • Apply for summer job/internship: start in Dec., due in Feb.
	PHYS 286 (S)	Modern Physics Lab	2		
	PHYS 282 (S)	Techniques of Theoretical Physics	3		
	MATH 331 (F or S)	Ordinary Differential Eqns	3		
	Other (optional)	<ul style="list-style-type: none"> • MATH 235 (Linear Alg, recommended) • PHYS 397 (Professional Development) 	3 1		
F3	PHYS 421 (F)	Mechanics	4		<ul style="list-style-type: none"> • Join on-campus research, teaching, or outreach activities. • Meet with CNS career center.
	PHYS 424 (F)	Quantum Mechanics	4		
	PHYS 381 (F or S)	Writing in Physics	3		
	Other (optional)	• TA, PHYS 390T, or research practicum	1-3		
S3	PHYS 422 (S)	Electricity and Magnetism	3		<ul style="list-style-type: none"> • Apply for summer job/internship: start in Dec., due in Feb.
	PHYS 423 (S)	Statistical Physics (stat. mech. & thermo.)	3		
	Other (optional)	<ul style="list-style-type: none"> • Advanced course (from list below) • PHYS 381 if not yet taken • PHYS 498G if considering PhD • PHYS 397 Professional Development 	3-4 3 1 1		
F4 & S4	PHYS 440 (F or S)	Intermed. Lab (ILab) - email instructors.	4		<ul style="list-style-type: none"> • Join on-campus research, teaching, or outreach activities. • Apply for jobs or graduate programs
	Advanced Course	Choose from the list below	3-4		
	Other (optional)	<ul style="list-style-type: none"> • Other electives or skills courses • Research 	3 1-3		

Advanced course requirement. One course from: PHYS 531 Electronics, 551 Biological Physics, 553 Optics, 556 Nuclei and Elementary Particles, 558 Solid State, 562 Advanced E&M, 564 Advanced Quantum Mechanics, 568 General Relativity, ASTRON 337 Optical and IR Astronomy, A338 Radio Astronomy, A451 Astrophysics I, A452 Astrophysics II, or other 500-level physics if approved in advance by UPD.
Students are encouraged to take more than one.