PhD Program in Physics

Required Courses

1st year

PHYS 8005 Math Methods (F)	PHYS 8020 Adv Electrodyn I (S)
PHYS 8010 Part Cont Mech (F)	PHYS 8040 Stat Mech (S)
PHYS 8030 Quantum Mech I (F)	PHYS 8000 Seminar (S)
	PHYS ADV CORE ELECTIVE
PHYS 8999 Non-Cand Research	PHYS 8999 Non-Cand Research
PHYS 8001 Colloquium	PHYS 8001 Colloquium
PHYS 8003 Teaching Practicum	PHYS 8003 Teaching Practicum

Formal courses: 9 hrs
Research: 4 hrs

Formal courses: 10 hrs
Research: 3 hrs

2nd year

PHYS ELECTIVE	Qualifying Exam: Write and defend a research proposal
PHYS ELECTIVE	
PHYS BREADTH ELECTIVE	
PHYS 8999 Non-Cand Research	PHYS 8999 Non-Cand Research
PHYS 8001 Colloquium	PHYS 8001 Colloquium
PHYS 8003 Teaching Practicum	PHYS 8003 Teaching Practicum

Formal courses: 9 hrs
Research: 4 hrs

Formal courses: 0 hrs
Research: 13 hrs

Only two semesters of Phys 8003 are required.

3rd year and beyond

"Work. Finish. Publish." – M. Faraday
Publish one or more
peer-reviewed journal articles

PhD Defense: Write and defend a research dissertation

PHYS 9999 PhD Diss Research	→	PHYS 9999 PhD Diss Research
PHYS 8001 Colloquium	→	PHYS 8001 Colloquium

After reaching 72 credit hrs, register for 0 hrs in subsequent semesters.

Must successfully complete 6 semesters.

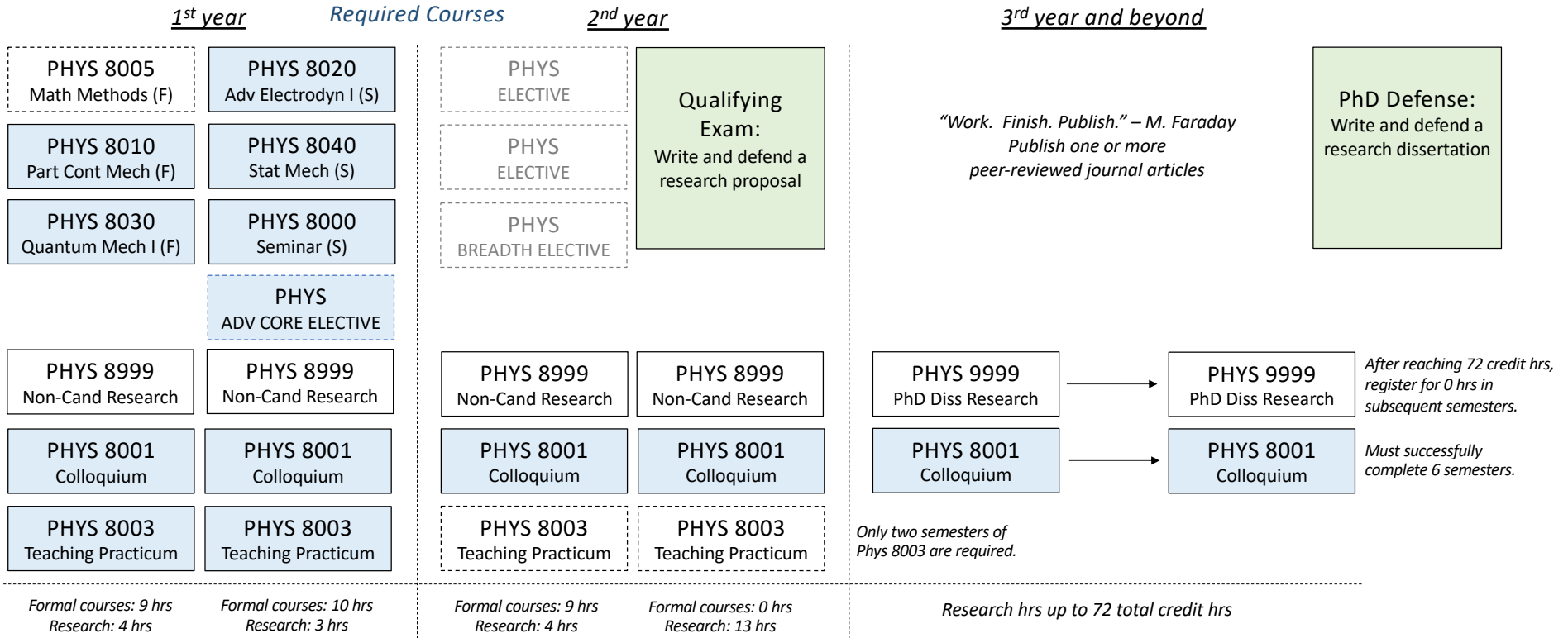*Research hrs up to 72 total credit hrs*

Advanced Core Electives
≥ 1 required

PHYS 8021 Adv Electrodyn II (F)	PHYS 8152 Quant Mech Solids
PHYS 8031 Quantum Mech II (S)	CPBP 8306 Intro Chem Phys Biol

Other Physics Electives

PHYS 8100 Sel Top Theor Phys	PHYS 8124 Phys Meas Biol Sys	PHYS 8142 Rel Heavy Ion Phys	PHYS 8156 Surf Struct & Dynam	PHYS 8161 Cosmology
PHYS 8105 Spec Top Expt Phys	PHYS 8126 Theor Expt Sys Biol	PHYS 8144 Expt Nuclear Phys	PHYS 8158 Inter Phot Atom Mol	PHYS 8164 Many-Body QM
PHYS 8120 Biomolecular Phys	PHYS 8128 Biophys Electrodyn	PHYS 8150 Electromag Spectros	PHYS 8159 Expt Nano Fab Char	PHYS 8170 Quant Field Theor I
PHYS 8122 Physics Living Sys	PHYS 8140 Nuclear Theory	PHYS 8154 Nanoscale CM Phys	PHYS 8160 General Relativity	PHYS 8171 Quant Field Theor II

Graduate courses in ASTR and other programs may also count if approved by the DGS.