

Astronomy B.S. Program Course Check List Requirements – 11/04/09

** Indicates courses offered in alternating years (S) - Spring Only (F) - Fall Only

<u>Physics Courses</u>	<u>Credits</u>	<u>Prerequisites</u>	
PHYS 1310 College Physics I	4	(Conc. MATH 2200)	_____
PHYS 1320 College Physics II	4	1310	_____
PHYS 2310 College Physics III (F)	4	1320	_____
PHYS 2320 College Physics IV (S)	3	1320	_____
PHYS 3650 Physics/Electronics Lab (F**)	4	2320	_____
PHYS 4210 Classical Mechanics I (S)	3	2310	_____
PHYS 4310 Quantum Mechanics I (F)	3	4210	_____
PHYS 4410 Electricity and Magnetism I (F)	3	4210	_____
PHYS 4420 Electricity and Magnetism II (S)	3	4410	_____
PHYS 4510 Thermo/Statistical Phys. (S or F only)	3	4310	_____
PHYS 4840 Computational Methods (S**)	3	COSC1010	_____
PHYS 4970 Independent Research (S)	<u>3</u>	4420	_____
	40		

<u>Astronomy Courses</u>	<u>Credits</u>	<u>Prerequisites</u>	
ASTR 2310 General Astronomy (S**)	4	PHYS1210,MATH2200	_____
ASTR 2320 General Astronomy (S**)	4	PHYS1210,MATH2200	_____
ASTR 4610 Introduction to Astrophysics (F**)	<u>3</u>	ASTR 2310,PHYS4410	_____
	11		

<u>Mathematics Courses</u>	<u>Credits</u>	<u>Prerequisites</u>	
MATH 2200 Calculus I (QB)	4		_____
MATH 2205 Calculus II	4	2200	_____
MATH 2210 Calculus III	4	2205	_____
MATH 2250 Elementary Linear Algebra	3	2200	_____
MATH 2310 Applied Differential Eqns	<u>3</u>	2205	_____
	18		

<u>Misc. Technical Courses</u>	<u>Credits</u>	<u>Prerequisites</u>	
COSC 1010 Intro. Comp. Science	4		_____

Misc Upper division (to complete 48 hrs at 3000+ level)

8 hours _____

Select from: ENGL 4010 Technical writing (pre: WA, WB); CHEM 4505 Physical Chemistry (pre: CHEM 1030); GEOL 3500 Global Change (pre: none); GEOL 4200 Planetary Geology (pre: none); PHIL 3140 Philosophy of Science (pre: 6 hrs of science); PHIL 3500 History of Science (pre: 3hrs of PHIL, 3 hrs of science); COSC 4530 Image Processing (pre: MATH 2205, 2250, COSC 1030); STAT 4220 Engineering Statistics (pre: MATH 2204); MATH 4230 Complex Analysis (pre: MATH 2210); MATH 4340 Numerical Analysis (MATH 2310, 2250, COSC1030); MATH 4440 Partial Diff Eqns (pre: MATH 2210); PHYS 4350 Atomic & Molecular Physics (pre: PHYS 4210, 4310, 4420, MATH 4440); PHYS 4510 (Statistical Mechanics (pre: PHYS 4310); PHYS 4830/40 Math Physics I, II (pre: PHYS 2310 or 2320; MATH 2210); ASTR 4610 Astrophysics (pre: ASTR 2310); ASTR 5420/30 Stellar Atmospheres; ASTR 5440 Milky Way; ASTR 5460 Galaxies; ASTR 5470 Interstellar Matter; ASTR 5150 Astrophysical Techniques

<u>University Studies Courses</u>	<u>Credits</u>	<u>Prerequisites</u>
Physical Activity & Health (P)	1	_____
Intellectual Community (I) and Information Literacy (L)	1	_____
Foreign Language	4	_____
Foreign Language	4	_____
Writing 1 (WA)	3	_____
Writing 2 (WB)	3	_____
Writing 3 (WC - usually ENGL 4010)	3	_____
Oral Communication (O)	3	_____
U.S. & Wyoming Constitutions (V)	3	_____
Non-Western (NW)	3	_____
Cultural Context (C or CH)	3	_____
May also satisfy D (Diversity) or G (Global)		
Cultural Context (C or CA)	3	_____
May also satisfy D (Diversity) or G (Global)		
Cultural Context (C or CS)	3	_____
May also satisfy D (Diversity) or G (Global)		
Upper Division (3000 level or higher, not in physics dept.)	3	_____
Upper Division (3000 level or higher, not in physics dept.)	3	_____
Upper Division (3000 level or higher, not in physics dept.)	<u>3</u>	_____
	46	
Total	119	

Minimum 120 credits total for degree Minimum 48 hours from 3000+ level classes

Also highly recommended for grad-school track students are

<i>MATH 4230 Complex Analysis (Upper Division) (S)</i>	3	<i>MATH2210</i>
<i>MATH 4440 Partial Diff. Equations (Upper Division) (S)</i>	3	<i>MATH2210</i>
<i>PHYS 4350 Atomic & Molecular Physics (S**)</i>	3	<i>MATH4310</i>
<i>PHYS 4830 Mathematical Methods I (F)</i>	3	