Course Schedule - Fall 2008

Astronomy

100 ***Perspectives in Astronomy*** credit: 3 hours.
One-term introduction to astronomy. The nature of science; sun, planets, and moons; origin of the solar system; nature and evolution of stars; exploding stars; stellar remnants, including white dwarfs, neutron stars, and black holes; molecules in space; galaxies and quasars; past and future of the universe; and life in the universe. Lectures and observation; a field trip to Parkland Staerkel Planetarium may be required, nominal charge. Intended for non-science majors; students with credit in PHYS 102 are encouraged to take ASTR 121 and/or ASTR 122. Credit is not given to students with credit in ASTR 121, ASTR 122, ASTR 210, PHYS 212, or equivalent.

This course satisfies the General Education Criteria for a Physical Sciences course.

Students interested in ASTR 100 should also consider ASTR 121 or ASTR 122 which cover the same materials and topics but in two semesters instead of one. ASTR 121 and ASTR 122 include two lectures each week and one weekly small discussion meeting for more individual attention. ASTR 121 and ASTR 122 are independent offerings and can be taken in any order. While ASTR 100, ASTR 121 and ASTR 122 are for non-science majors, problem solving with basic algebra is required. Science and astronomy majors should take ASTR 210.

CRN	Type	Section	Time	Days	Location	Instructor
41827	lecture	1	10:00 AM - 10:50 AM	MWF	room 1320 Digital Computer Laboratory	Maddox, L
41827: Physical Sciences course.						
31278	lecture	2	11:00 AM - 11:50 AM	MWF	room 100 Gregory Hall	Kaler, J
31278: Physical Sciences course.						
31279	lecture	3	12:00 PM - 12:50 PM	MWF	room 100 Gregory Hall	Myers, A
31279: Physical Sciences course.						

121 ***The Solar System*** credit: 3 hours.
Introductory survey of the universe; structure and motions of the earth and moon; planetary motions; physical nature of the planets; comets and meteors; origin and evolution of the solar system. Emphasis will be placed on problem-solving and scientific methods. Two lectures and one discussion each week, and observing sessions during the term. Intended for non-science majors; science and Astronomy majors should take ASTR 210. Credit not given to students with credit in ASTR 100 or ASTR 210 or GEOL 116; or in PHYS 212 or higher-level Physics course. Students with credit in PHYS 211 are encouraged to take ASTR 210. Prerequisite: Credit or concurrent enrollment in a Quantitative Reasoning I course.

This course satisfies the General Education Criteria for a Physical Sciences, and Quant Reasoning II course.

ASTR 121 and ASTR 122 cover the same topics as ASTR 100, but the material and topics are covered in much more depth over two semesters instead of one. ASTR 121 and ASTR 122 are independent offerings and can be taken in any order. While ASTR 121 and ASTR 122 are for non-science majors, problems solving with basic algebra is required. science and astronomy majors should take ASTR 210. Students must register for one discussion and one lecture section.

CRN	Type	Section	Time	Days	Location	Instructor

37115	discussion-recitation	AD1	10:00 AM - 10:50 AM	R	room 143 Altgeld Hall	Sutton, E; Athanassiadou, T
37115: Physical Sciences, and Quant Reasoning II course.						
37117	discussion-recitation	AD2	10:00 AM - 10:50 AM	R	room 304 Noyes Laboratory	Sutton, E; Lien, A
37117: Physical Sciences, and Quant Reasoning II course.						
37118	discussion-recitation	AD3	11:00 AM - 11:50 AM	R	room 164 Noyes Laboratory	Sutton, E; Lien, A
37118: Physical Sciences, and Quant Reasoning II course.						
37120	discussion-recitation	AD4	11:00 AM - 11:50 AM	R	room 311 Davenport Hall	Sutton, E; Athanassiadou, T
37120: Physical Sciences, and Quant Reasoning II course.						
37122	discussion-recitation	AD5	12:00 PM - 12:50 PM	R	room 311 Davenport Hall	Sutton, E; Athanassiadou, T
37122: Physical Sciences, and Quant Reasoning II course.						
37124	discussion-recitation	AD6	12:00 PM - 12:50 PM	R	room 321 Gregory Hall	Sutton, E; Lien, A
37124: Physical Sciences, and Quant Reasoning II course.						
36991	discussion-recitation	AD7	02:00 PM - 02:50 PM	R	room 134 Astronomy Bldg	Sutton, E
36991: Discovery, Physical Sciences, and Quant Reasoning II course.First Year Discovery Program Course. Registration restricted to freshmen. Students should enroll in only one Discovery course.						
37107	lecture	AL1	02:00 PM - 02:50 PM	MW	room 213 Gregory Hall	Sutton, E
37107: Physical Sciences, and Quant Reasoning II course.						

122 ***Stars and Galaxies*** credit: 3 hours.
Introduction to astrophysical objects and phenomena beyond the solar system, and the governing basic physical principles; galaxies, quasars, and structure of the universe; cosmology; the Milky Way; the interstellar medium and the birth of stars; distances, motions, radiation, structure, evolution, and death of stars, including neutron stars and black holes. Emphasis will be placed on problem-solving and scientific methods. Two lectures and one discussion each week, and observing sessions during the term. Intended for non-science majors; science and Astronomy majors should take ASTR 210. Credit not given to students with credit in ASTR 100 or ASTR 210, or in PHYS 212 or higher-level physics course. Students with credit in PHYS 211 are encouraged to take ASTR 210. Prerequisite: Credit or concurrent enrollment in a Quantitative Reasoning I course.

This course satisfies the General Education Criteria for a Physical Sciences, and Quant Reasoning II course.

ASTR 121 and ASTR 122 cover the same topics as ASTR 100, but the material and topics are covered in much more depth over two semesters instead of one. ASTR 121 and ASTR 122 are independent offerings and can be taken in any order. While ASTR 121 and ASTR 122 are for non-science majors, problems solving with basic algebra is required. Science and astronomy majors should take ASTR 210.

CRN	Type	Section	Time	Days	Location	Instructor

39753	discussion-recitation	AD1	10:00 AM - 10:50 AM	F	room 145 Altgeld Hall	Brunner, R; Stephens, I
39753: Physical Sciences, and Quant Reasoning II course.						
39754	discussion-recitation	AD2	10:00 AM - 10:50 AM	F	room 164 Noyes Laboratory	Byrne, E; Brunner, R
39754: Physical Sciences, and Quant Reasoning II course.						
39755	discussion-recitation	AD3	11:00 AM - 11:50 AM	F	room 1120 Foreign Languages Bldg	Byrne, E; Brunner, R
39755: Physical Sciences, and Quant Reasoning II course.						
39756	discussion-recitation	AD4	11:00 AM - 11:50 AM	F	room 36 English Bldg	Brunner, R; Stephens, I
39756: Physical Sciences, and Quant Reasoning II course.						
39757	discussion-recitation	AD5	11:00 AM - 11:50 AM	F	room 134 Astronomy Bldg	Brunner, R
39757: Discovery, Physical Sciences, and Quant Reasoning II course.First Year Discovery Program Course. Registration restricted to freshmen. Students should enroll in only one Discovery course.						
39748	discussion-recitation	AD6	12:00 PM - 12:50 PM	F	room 214 Davenport Hall	Byrne, E; Brunner, R
39748: Physical Sciences, and Quant Reasoning II course.						
39749	discussion-recitation	AD7	12:00 PM - 12:50 PM	F	room 311 Davenport Hall	Brunner, R; Stephens, I
39749: Physical Sciences, and Quant Reasoning II course.						
39752	lecture	AL1	11:00 AM - 11:50 AM	TR	room 112 Chemistry Annex	Brunner, R
39752: Physical Sciences, and Quant Reasoning II course.						
39750	lecture	H	09:00 AM - 09:50 AM	MWF	room 134 Astronomy Bldg	Kaler, J
39750: Camp Honors/Chanc Schol, Physical Sciences, and Quant Reasoning II course.For Chancellor's Scholars; others may enroll with consent of instructor and Director of the Campus Honors Program.						

199 ***Undergraduate Open Seminar*** credit: 1 to 5 hours.
Approved for both letter and S/U grading. May be repeated.

CRN	Type	Section	Time	Days	Location	Instructor
10395	independent study		ARRANGED			
10395: Instructor Approval Required						

31281	conference	DS1	06:30 PM - 08:20 PM	W	room 134 Astronomy Bldg	Chu, Y
31281: 1 hoursDiscovery course.Meets first 8 weeks. 1 hour credit. S/U graded credit. Designed to let first year students majoring or interested in Astronomy meet faculty in a small group setting in the Astronomy Department. Students will meet in room 134 of the Astronomy building. First Year Discovery Program Course. Registration restricted to freshman. Students should enroll in only one Discovery course.Meets 25-Aug-08 - 18-Oct-08.						

210 ***General Astronomy*** credit: 3 hours.
Survey of modern astronomy for students with background in physics. Topics include: the solar system; nature and evolution of stars; white dwarfs, neutron stars, and black holes; galaxies, quasars and dark matter; large scale structure of the universe; the Big Bang; and Inflation. Emphasis will be on the physical principles underlying the astronomical phenomena. Prerequisite: Credit or concurrent registration in PHYS 212.

This course satisfies the General Education Criteria for a Physical Sciences course.

CRN	Type	Section	Time	Days	Location	Instructor
30268	lecture	1	03:00 PM - 03:50 PM	MWF	room 134 Astronomy Bldg	Mouschovias, T
30268: Physical Sciences course.						

350 ***Introduction to Cosmology*** credit: 3 hours.
Descriptive course on modern cosmological theories. Topics include aspects of special and general relativity; curved spacetime; the Big Bang; inflation; primordial element synthesis; the cosmic microwave background; the formation of galaxies and large scale structure. Prerequisite: ASTR 100, or ASTR 121, or ASTR 122, or ASTR 210, or consent of instructor.

This course satisfies the General Education Criteria for a Physical Sciences course.

CRN	Type	Section	Time	Days	Location	Instructor
30269	lecture	1	02:00 PM - 02:50 PM	MWF	room 134 Astronomy Bldg	Wandelt, B
30269: Physical Sciences course.						
51316	lecture	CH	10:00 AM - 10:50 AM	MWF	room 134 Astronomy Bldg	Mohr, J
51316: 3 hoursCamp Honors/Chanc Schol, and Physical Sciences course.For Chancellors Scholars only; others may enroll only with the permission of the instructor and the Campus Honors Program.						

390 ***Individual Study*** credit: 1 to 4 hours.
Individual study at an advanced undergraduate level. Prerequisite: Consent of advisor and of staff member who supervises the work.

CRN	Type	Section	Time	Days	Location	Instructor

10396	independent study		ARRANGED			
10396: Instructor Approval Required						

401 ***Scientific Writing for Astro*** credit: 1 hours.
Development of journal-style writing skills. Papers written in accordance with the Astrophysical Journal Manual of Style on topics approved by the instructor. Emphasis on developing adequate and critical coverage of the topic, brevity compatible with clarity, and effective presentation. Proper referencing, footnotes, and bibliography are covered. 1 undergraduate hour. Prerequisite: Concurrent enrollment in a designated 400-level astronomy course.

This course satisfies the General Education Criteria for a Advanced Composition course.

CRN	Type	Section	Time	Days	Location	Instructor
30271	conference	C1	ARRANGED			Chu, Y
30271: Advanced Composition course.						
30271: Composition II course meeting with ASTR 404.						

404 ***Stellar Astrophysics*** credit: 3 hours.
Introduction to astrophysical problems, with emphasis on underlying physical principles; includes the nature of stars, equations of state, stellar energy generation, stellar structure and evolution, astrophysical neutrinos, binary stars, white dwarfs, neutron stars and pulsars, and novae and supernovae. 3 undergraduate hours. Graduate students in Astronomy will not receive credit in ASTR 404. Prerequisite: PHYS 213 or PHYS 214; or consent of instructor.

CRN	Type	Section	Time	Days	Location	Instructor
39758	lecture	1	01:00 PM - 01:50 PM	MWF	room 134 Astronomy Bldg	Chu, Y

450 ***Astrochemistry*** credit: 4 hours.
Same as CHEM 450. See CHEM 450.

CRN	Type	Section	Time	Days	Location	Instructor
51085	lecture-discussion	A	02:00 PM - 03:20 PM	TR	room 165 Noyes Laboratory	McCall, B

452 ***Introduction to Geophysics*** credit: 4 hours.
Same as GEOL 452. See GEOL 452.

CRN	Type	Section	Time	Days	Location	Instructor

37578	lecture	AL1	09:00 AM - 09:50 AM	MWF	room 258 Natural History Bldg	Song, X

496 ***Seminar in Astronomy*** credit: 1 to 4 hours.
Lectures on topics of current interest in astronomy and astrophysics; for advanced undergraduates and graduates. See Class Schedule for current topics. Approved for both letter and S/U grading. May be repeated. Prerequisite: Consent of instructor.

CRN	Type	Section	Time	Days	Location	Instructor
51350	lecture	GA	09:30 AM - 10:50 AM	TR	room 134 Astronomy Bldg	Wong, T
51350: 4 hoursASTR 496/596. Galactic Astronomy. This course focuses on the observable properties of the Milky Way and nearby galaxies. Determination of stellar distances and velocities. Observed and derived properties of stellar populations. Galaxy photometry and internal kinematics; evolution of the stellar and gas content; star formation in galaxies. Components of the Milky Way and the fossil record of its formation.						

504 ***Theoretical Stellar Physics*** credit: 4 hours.
Application of physical principles to energy generation and flow in astrophysical environments: equations of state; thermonuclear reactions; radiative transport; convection; stellar spectra; nebular spectra; evolution of both single and binary stars; compact stars; accretion disks; thermal and particle history of the universe. Same as PHYS 542. Prerequisite: PHYS 436, PHYS 427, and PHYS 486; or consent of instructor.

CRN	Type	Section	Time	Days	Location	Instructor
51351	lecture	1	11:00 AM - 12:20 PM	TR	room 134 Astronomy Bldg	Webbink, R
51351: 4 hoursApplication of physical principles to energy generation and flow in astrophysical environments: equations of state; thermonuclear reactions; radiative transport; convection; stellar spectra; nebular spectra; evolution of both single and binary stars; compact stars; accretion disks; thermal and particle history of the universe. Same as PHYS 542. Prerequisite: PHYS 436, PHYS 427, and PHYS 486; or consent of instructor.						

590 ***Individual Study*** credit: 2 to 8 hours.
Individual study or nonthesis research. May be repeated to a maximum of 16 hours. Prerequisite: Consent of adviser and of staff member who supervises the work.

CRN	Type	Section	Time	Days	Location	Instructor
10399	independent study		ARRANGED			
10399: Instructor Approval Required						

596 ***Seminar in Special Topics*** credit: 0 to 16 hours.

Approved for both letter and S/U grading. May be repeated. Prerequisite: Consent of instructor.

CRN	Type	Section	Time	Days	Location	Instructor
51349	lecture	GA	09:30 AM - 10:50 AM	TR	room 134 Astronomy Bldg	Wong, T
51349: 4 hoursASTR 496/596. Galactic Astronomy. This course focuses on the observable properties of the Milky Way and nearby galaxies. Determination of stellar distances and velocities. Observed and derived properties of stellar populations. Galaxy photometry and internal kinematics; evolution of the stellar and gas content; star formation in galaxies. Components of the Milky Way and the fossil record of its formation.						

599 ***Thesis Research*** credit: 0 to 16 hours.
Approved for S/U grading only.

CRN	Type	Section	Time	Days	Location	Instructor
10387	independent study		ARRANGED			
10387: Instructor Approval Required						