

FALL 2018 CLASS SCHEDULE

Instructor Name	Subject Code	Course Title	Credit	Course Description	Meeting Time	Days	Location
Thomas Fleming	ASTR170A1	Planet Earth: Evolution of the Habitable World	3	This course develops a planetary perspective on the evolutionary processes that shaped Earth throughout history. We will examine why Earth is habitable, that is, why any kind of life can live on it, we will discuss the unique influences that biological processes and atmosphere/ocean systems have on each other, and we will review current notions of climate change, including evidence for the influence of human activities on it. This interdisciplinary treatment of Earth and its sister planets will encourage students to think about how science and engineering must be applied to today's challenges if humankind is to have a promising future on (and off) this planet.	2:00PM-3:15PM	MW	Flandrau Planetarium Theater
Don McCarthy	ASTR170B1	The Physical Universe	3	This course presents an introduction to the science of Astronomy placed in the broader context of the physical sciences. Our survey of the Universe will include our current understanding of our Solar System, stars, the Milky Way Galaxy, other galaxies, and the large-scale structure and evolution of the Universe. We will also cover the basic principles of physics, chemistry, and geology needed to interpret astronomical observations. The application of the scientific method will be emphasized throughout the course.	10:00 AM-10:50 AM	MW	Steward Observatory Rm N210
Dan Stark	ASTR201	Cosmology	3	Extragalactic astronomy and cosmology are among the fastest developing fields in astronomy. This course presents cosmology as a modern, quantitative science. It describes what we know about galaxies, the large scale structure of the universe and the beginnings and evolution of the Universe. We know quite a bit, assume a lot and have a great deal to learn. The course critically examines our picture of the universe using lectures, a hands-on project, and discussion groups.	11:00AM-11:50AM	MWF	Steward Observatory Rm N210



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Serena Kim	ASTR202	Life in the Universe	3	The main goal for students in this course is to have fun learning about the possibilities for life in the Universe and, in the process, gain an appreciation for the methods used in science. To achieve this goal, we will study such seemingly diverse topics as the origin of the Universe, heavy element production, the formation of stars and planets, the nature of planets and their atmospheres, basic chemistry, geological and atmospheric evolution, biological evolution, cultural and technological evolution, interstellar travel, and communication techniques.	12:30PM-1:45PM	TTH	Steward Observatory Rm N210
David Sand	ASTR 203	Stars	3	This course, intended for non-science majors, provides an in-depth and comprehensive study of the stars. Topics to be covered may include: the naming of stars and constellations, the classification and properties of stars, star formation and evolution, nuclear fusion, black holes, Einstein's theories of relativity, and the demographics of the stars in our Galaxy. The basic principles of physics which are needed to understand the stars (e.g. gravity, light, structure of the atom) will also be reviewed.	11:00AM-12:15PM	TTH	Steward Observatory Rm N210
Ann Zalbudoff	ASTR 204	Great Debates in Astronomy	3	This course, intended for non-science majors, provides an in-depth and comprehensive study of the stars. Topics to be covered may include: the naming of stars and constellations, the classification and properties of stars, star formation and evolution, nuclear fusion, black holes, Einstein's theories of relativity, and the demographics of the stars in our Galaxy. The basic principles of physics which are needed to understand the stars (e.g. gravity, light, structure of the atom) will also be reviewed.	11:00AM-12:15PM	TTH	Flandrau Science Ctr Rm 301



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Ilaria Pascucci	ASTR 214	Astrobiology: A Planetary Perspective	3	This course, intended for non-science majors, provides an in-depth and comprehensive study of the stars. Topics to be covered may include: the naming of stars and constellations, the classification and properties of stars, star formation and evolution, nuclear fusion, black holes, Einstein's theories of relativity, and the demographics of the stars in our Galaxy. The basic principles of physics which are needed to understand the stars (e.g. gravity, light, structure of the atom) will also be reviewed.	11:00AM-12:15PM	TTH	Kuiper Space Sci. Rm 308
Richard Poss	ASTR333	Astronomy and the Arts	3	Course examines astronomical ideas in works of literature, art, and music. It then contextualizes each work as a bridge between the history of astronomy and the history of the arts. A diverse assortment of cultural works from different periods will be examined, both for their astronomy and for their art. These include novels, philosophical tales, poetry, painting, music and operas. Classroom sessions will be a combination of lecture and discussion. There will be mid-term, a final exam, several short papers and a research project.	12:00PM-12:50PM	MWF	Steward Observatory Rm 202
Charles Weidman	ATMO170A1	Introduction to Weather and Climate	3	An introduction to the science of weather processes and climate, including the genesis of fronts and cyclones, precipitation processes, the wind systems of the world, severe storms, and weather forecasting. Special emphasis will be given to natural phenomena which have strong impacts on human activities including tornadoes, hurricanes, El Nino, global warming, ozone depletion, and air pollution. The fundamental importance of physics, chemistry, and mathematics to atmospheric science will be stressed.	8:00AM-9:15AM	TTH	M Pacheco ILC Rm 150



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Janalee Obagy	CSC101	Introduction to Computer Science	3	This course introduces students to some of the big ideas in computer science. It will excite students about the application of computer science to various disciplines, and show the social impact possible through the use of technology in developing regions, politics, medicine, and other fields.	3:30PM-4:45PM	T	BioScience West Rm 301
Judith Bronstein, Katrina Dlugosch	ECOL302	Ecology	3	Single species population biology, competition, predation and mutualism, community and organization, behavioral ecology and evolutionary ecology.	2:00PM-3:15PM	TTH	Center for English as a Second Language (CESL) Rm 103
Joellen Russell and Paul Goodman	GEOS212	Introduction to Oceanography	3	Introduces the oceans and their geological, physical, chemical and biological processes with emphasis on their history and formation and the interactions of humans with the marine environment.	12:30PM-1:45PM	TTH	Env & Nats Rsrchs Phas2, Rm N120
Paul Kapp	GEOS304	Structural Geology	3	Description, analysis, and mechanisms of rock deformation. Weekly laboratory assignments focused on analysis and construction of geologic maps and cross sections, analysis of deformed rocks, and how rock deformation relates to tectonics.	9:30AM-10:45AM	TTH	M Pacheco ILC Rm 125
Martha Whitaker	HWRS203	Arizona Water Issues	3	Study of the use and misuse of water throughout Arizona and the fundamental tools used to study water supply, quality, and conservation. Introduction to basic hydrologic principles to help students deal with issues they will encounter later as public citizens in their own communities.	12:30PM-1:45PM	TTH	M Pacheco ILC Rm 119



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Susan Jorstad	MCB181R	Introductory Biology 1	3	Introduction to biology covers fundamental principles in molecular and cellular biology and basic genetics. Emphasis is placed on biological function at the molecular level, with a focus on the structure and regulation of genes, the structure and synthesis of proteins, how these molecules are integrated into cells, and how these cells are integrated into multicellular systems. Examples stem from current research in bacteria, plants, and animals (including humans) in the areas of cell biology, genetics, molecular medicine and immunology.	3:30PM-4:45PM	TTH	Sci-Engineering Library Rm 200SW
Angel Pimento	MCB404	Bioethics	3	Advances in biomedical research will be reviewed and their ethical, social and legal implications discussed.	4:30PM-5:45PM	W	M Pacheco ILC Rm 141
Lynne Oland	NSCS170C1	Frontiers in Brain Science	3	Explores how scientists are challenging and changing our ideas of how the brain develops and functions over the human lifespan, how it responds to the demands of learning, disease and injury, and how close we are to living with droids and cyborgs.	11:00AM-11:50 AM	MWF	Harvill Bldg Rm 204
Alyson Peel	NSCS200	Fundamentals of Neuroscience & Cognitive Science	3	Fundamental concepts in the development, evolution, organization and function of neural circuits underlying behavior, including biological, ethological, computational and psychological perspectives. The course will provide an introduction to the principles of neuroanatomy, neurophysiology and cognitive science. Topics will be addressed with material from philosophy, psychology, computer science and neuroscience, and will incorporate data from work with animals, humans and machines.	5:00PM-6:00PM	W	McClelland Park, Rm 102
Jessica Andrews-Hanna	PSY300	Cognitive Neuroscience: A Guide to Mind and Brain	3	In this core CNS class, students will learn the core principles of cognitive neuroscience and cognitive psychology.	2:00PM-2:50PM	MWF	M Pacheco ILC Rm 130



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<p>Stephen Kortenkamp</p>	<p>PTYS206</p>	<p>Our Golden Age of Planetary Exploration</p>	<p>3</p>	<p>We will review current understanding of the contents of our Solar System and emphasize the processes that unite all of the planets and smaller bodies, such as tectonics, weathering, cratering, differentiation, and the evolution of oceans and atmospheres. The course will build on this knowledge to understand humankind's motivation to explore beyond our Solar System, especially to search for planets around distant stars and to look or listen for evidence of life elsewhere in the Universe.</p>	<p>2:00 PM-3:15PM</p>	<p>TTH</p>	<p>Flandrau Science Ctr Theater</p>
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