

Community Science Scholars  
**FALL 2017 CLASS SCHEDULE**

Instructor Name	Subject Code	Course Title	Credit Hours	Course Description	Meeting Time	Days	Room Name
<a href="#">Donald McCarthy</a>	ASTR 170B1	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.	9:00 AM - 9:50 AM	MWF	<a href="#">Steward Observatory</a> SO N210
<a href="#">Tom Fleming</a>	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.	2:00 PM - 3:15 PM	TTh	<a href="#">Flandrau Science Center &amp; Planetarium</a> Flandrau Theater
<a href="#">Richard Poss</a>	ASTR 333	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.	11:00 AM - 11:50 AM	MWF	<a href="#">Steward Observatory</a> SO 202



<a href="#">Charles Weidman</a>	ATMO 170A1	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.	8:00 AM - 9:15 AM	TTh	<a href="#">Integrated Learning Center</a> ILC 130
<a href="#">Charles Weidman</a>	ATMO 170A1	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.	9:30 AM - 10:45 AM	TTh	<a href="#">Integrated Learning Center</a> ILC 130
<a href="#">Roger Miesfeld</a>	BIOC 384	Foundations in Biochemistry	3	Structure and function of proteins, lipids, carbohydrates, and nucleic acids, with a focus on understanding the molecular function of essential biomolecules.	9:30 AM - 10:45 AM	TTh	<a href="#">Environment and Natural Resources 2</a> ENR2 N120
<a href="#">Laura Van Dorn</a>	CHEM 101A	Lectures in General Chemistry	3	An introduction to chemical principles designed for students with a minimal background in science and mathematics. This course is designed for nontechnical students and is not a prerequisite for higher level chemistry courses.	3:30 PM - 4:45 PM	TTh	<a href="#">Koffler Building</a> KOFFL 204
<a href="#">John Pollard</a>	CHEM 105A	Honors Fundamentals of Chemistry	3	Fundamental concepts of modern chemistry, with emphasis on theoretical and physical principles; atomic and molecular structure and quantum theory; chemical bonding; properties of gases, liquids and solids; solutions; thermochemistry.	10:00 AM - 10:50 AM	MWF	<a href="#">Biological Sciences West</a> BIO W 301



<a href="#">Bobbi Anglin</a>	CHEM 241A	Lectures in Organic Chemistry	3	General principles of organic chemistry.	5:15 PM - 6:30 PM	TTh	<a href="#">Koffler Building</a> KOFFL 204
<a href="#">Andrei Sanov</a>	CHEM 380	Mathematical Physics for Chemistry	3	This course covers the fundamentals and techniques of mathematics with applications to common problems in chemistry and chemical physics. CHEM 380 is designed to be a survey of applied math as encountered in chemistry. Application oriented (rather than proof-driven), covering at an introductory level most types of math encountered in a typical chemistry curriculum. Mathematical tools are introduced and explored in a chemistry context.	1:00 PM - 1:50 PM	MWF	<a href="#">Koffler Building</a> KOFFL 218
Benjamin Dicken	CSC 101	Introduction to Computer Science	4	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.	8:00 AM - 8:50 AM	MWF	<a href="#">Koffler Building</a> KOFFL 204
<a href="#">Hans Otto</a>	ECOL 182R	Introductory Biology II	3	Origin, diversity and evolution of life; physiology of plants, animals and organ systems; processes of micro and macroevolution; animal behavior and ecology of populations and communities emphasizing biotic interactions and biogeography. Designed for biology majors.	12:00 PM - 12:50 PM	MWF	<a href="#">Physics- Atmospheric Sciences</a> PAS 201
<a href="#">Michael Barker</a>	ECOL 296B	Seminar in Bioinformatics	1	This seminar course provides an overview of and introduction to the field of bioinformatics. Talks by faculty who do research in bioinformatics and computational biology, as well as by scientists from the biotechnology industry, give a sense of the current directions in the field.	3:30 PM - 5:30 PM	W	<a href="#">Social Sciences</a> S SCI 206
<a href="#">Judith Bronstein</a>	ECOL 302	Ecology	4	Single species population biology, competition, predation and mutualism, community and organization, behavioral ecology and evolutionary ecology.	2:00 PM - 3:15 PM	TTh	<a href="#">Chemistry</a> CHEM 111
<a href="#">Jeremiah Hackett</a>	ECOL 326	Genomics	3	Introduction to the study of genomics and its relevance to molecular, cellular and organismal biology, human health and disease. This course integrates readings and discussions of current topics, and exercises that apply web-based computational tools for genome analysis.	10:00 AM - 10:50 AM	MWF	<a href="#">Saguaro Hall</a> SAGHA 101



<a href="#">Joellen Russell</a>	GEOS 212	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.	11:00 AM - 12:15 PM	TTh	<a href="#">Environment and Natural Resources 2</a> ENR2 N120
<a href="#">Jessica Tierney</a>	GEOS 342	History of Earth's Climate	3	GEOS 342 offers a comprehensive introduction to Earth systems and climate science, including a full discussion of how Earth's geology and planetary aspects shape the climate system, and an overview of the history of Earth's climate throughout geologic time.	12:30 PM - 1:45 PM	TTh	<a href="#">Chavez Building</a> CHVEZ 304
<a href="#">Paul Ferre</a>	HWRS 170A1	Earth: Our Watery Home	3	An introduction to the science of water and its movement in and through the earth system and interactions with people and ecosystems. Special emphasis will be given to how the physical properties of water and the complexity of the earth system interact with human societies and ecosystems to create the challenges and opportunities of water resources. The fundamental importance of physics, chemistry, and mathematics to water science will be stressed.	9:30 AM - 10:45 AM	TTh	<a href="#">Integrated Learning Center</a> ILC 150
<a href="#">Joseph Watkins &amp; Ning Hao</a>	MATH 363	Introduction to Statistical Methods	3	In Introduction to Statistical Methods, we shall be using your background in biology and your previous knowledge of calculus and differential equations to consider the issues of collection, model derivation and analysis, interpretation, explanation, and presentation of data. Even though our examples derive mainly from the life sciences, statistics is applicable to a wide variety of academic disciplines, from the natural and social sciences to the humanities.	9:30 AM - 10:45 AM	TTh	<a href="#">Chavez Building</a> CHVEZ 301
<a href="#">Lisa Rezende</a>	MCB 181L	Introductory Biology Lab	1	Laboratory exercises presenting techniques and fundamental principles of modern biology. Designed to complement the information concurrently presented in 181R.	-	Online	-



<a href="#">Stephanie Capaldi</a>	MCB 181R	Introductory Biology I	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.	9:30 AM - 10:45 AM	TTh	<a href="#">Physics-Atmospheric Sciences</a> PAS 201
<a href="#">Michael Barker</a>	MCB 296B	Seminar in Bioinformatics	1	This seminar course provides an overview of and introduction to the field of bioinformatics. Talks by faculty who do research in bioinformatics and computational biology, as well as by scientists from the biotechnology industry, give a sense of the current directions in the field.	3:30 PM - 5:30 PM	W	<a href="#">Social Sciences</a> S SCI 206
<a href="#">Angel Pimentel</a>	MCB 404	Bioethics (Contemporary Biology in Human Affairs) Titles are different in the schedule of classes	3	Advances in biomedical research will be reviewed and their ethical, social and legal implications discussed. Honors section available (Fall and Spring only).	4:30PM - 5:45PM	W	<a href="#">Chemistry</a> CHEM 134
<a href="#">Alan Nighorn</a>	NROS 307	Cellular Neurophysiology	3	Molecular and biophysical mechanisms underlying the signals within and between neurons and glial cells. Examination of properties of individual neurons followed by study of how these cells function in circuits and how circuits can change with experience. Emphasizes the importance of experimental data and model systems to understand the functions of cells in the nervous system.	3:00 PM - 3:50 PM	MWF	<a href="#">Integrated Learning Center</a> ILC 150
<a href="#">Lynne Oland</a>	NSCS 170C1	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.	11:00 AM - 11:50 AM	MWF	<a href="#">McClelland Park</a> MCPRK 103



<a href="#">Christopher Hamilton</a>	PTYS 170A1	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.	9:30 AM - 10:45 AM	TTh	<a href="#">Kuiper Space Sciences</a> SP SC 308
<a href="#">Stephen Kortenkamp</a>	PTYS 206	Our Golden Age of Planetary Exploration	3	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.	1:15 PM - 2:30 PM	MWF	<a href="#">Flandrau Science Center &amp; Planetarium</a> Flandrau Theater
<a href="#">Joseph Spitale</a>	PTYS 214	Astrobiology: A Planetary Perspective	3	We will explore questions about the origin, evolution, and future of life on Earth and the possibility of life arising independently elsewhere in the Universe. We will examine what it means for a planet to be habitable, both in terms of basic necessities for living organisms to function and environmental limits to their ability to survive. Finally, we will review different approaches for searching for life within the Solar System and beyond using direct and remote sensing techniques.	11:00 AM - 12:15 PM	TTh	<a href="#">Kuiper Space Sciences</a> SP SC 308

