

## Certificate in Statistics

A certificate in statistics consists of MATH 3680, 4610, 4650, and one additional course concerning the application of statistical methods to another discipline, chosen in consultation with the undergraduate advisor in the Department of Mathematics. Acceptable courses include, but are not limited to, the following: CHEM 3451, DSCI 3870, ECON 4870 and 4875, GEOG 3190 and 4410, PHYS 4110 and 4310, PSCI 3300, and PSYC 3630.

## Graduate Degrees

The department offers degree programs leading to the Master of Arts, Master of Science and Doctor of Philosophy. For information, consult the *Graduate Catalog*.

## Scholarships and Financial Assistance

The department administers five scholarship funds: the E. H. Hanson Scholarship, the Roger L. Perry Memorial Scholarship, the Mildred Masters McCarty Scholarship, the John Ed Allen Scholarship and the John W. Neuberger Scholarship. Jobs as tutors and graders also are available for mathematics majors. Contact the mathematics department office for information and application forms.

## Courses of Instruction

All Courses of Instruction are located in one section at the back of this catalog.

## Course and Subject Guide

The "Course and Subject Guide," found in the Courses of Instruction section of this book, serves as a table of contents and provides quick access to subject areas and prefixes.

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# Department of Philosophy and Religion Studies

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## J. Baird Callicott, Chair

## Faculty

*Professors* Callicott, Frodeman, Gunter, Hargrove, Yaffe. *Associate Professors* James, Klaver, Rozzi. *Assistant Professors* Figueroa, Fredericks, Kaplan.

## Introduction

*The great virtue of philosophy is that it teaches not what to think, but how to think. It is the study of meaning, of the principles underlying conduct, thought and knowledge. The skills it hones are the ability to analyze, to question orthodoxies and to express things clearly. However arcane some philosophical texts may be ... the ability to formulate questions and follow arguments is the essence of education.... Philosophy is, in commercial jargon, the ultimate "transferable work skill."*

— The Times, London, August 15, 1998

The study of philosophy has always been an important component of higher learning. Indeed, in the early Greek proto-universities, the Academy of Plato and the Lyceum of Aristotle, philosophy was the very foundation of all study. In the history of the European universities, from the 13th century to the present, philosophy has retained a significant place in the curriculum, even when challenged by advocates of religion, belles lettres, science or business. It has been studied as an end in itself, in its relation to other areas and as a preparation for studies in law, theology and medicine.

Philosophy develops finely honed analytic skills and problem-solving abilities that are extremely useful in almost any academic or scientific field and in a variety of professional careers, such as journalism, public health, criminal justice and the legal professions. It provides insight into our cultural heritage, through courses in the history of philosophy and comparative philosophy, and critical insight into many other fields in the humanities and the sciences, through such courses as philosophy of natural science, philosophy of social and behavioral science, theory of knowledge, and logic.

At the undergraduate level, the Department of Philosophy and Religion Studies provides a traditional program emphasizing the history of philosophy. It seeks to teach the student methods of thinking about the comprehensive themes of truth, beauty, goodness and wisdom, conclusions concerning which can be used in the classroom as well as in life situations. In addition, it provides an interdisciplinary minor in religion studies for students interested in seminary study or graduate studies in religion. The major emphases of the department at the graduate level are research and instruction in environmental ethics and environmental philosophy. It is the leading program in this area nationally and internationally. The department collaborates with the Department of Biological Sciences in the graduate environmental science program.

## Programs of Study

The department offers undergraduate and graduate programs in the following areas:

- Bachelor of Arts,
- Master of Arts, and
- Doctor of Philosophy, all with a major in philosophy.

## Bachelor of Arts

### Degree Requirements

1. **Hours Required and General/College Requirements:** A minimum of 120 semester hours, of which 42 must be advanced, and fulfillment of degree requirements for the Bachelor of Arts degree as specified in the “General University Requirements” in the Academics section of this catalog and the College of Arts and Sciences requirements.

2. **Major Requirements:** The major requires completion of 30 hours in philosophy including:

- PHIL 2050, Introduction to Logic, or PHIL 3300, Symbolic Logic
- PHIL 3310, Ancient Philosophy
- PHIL 3330, Modern Philosophy

- PHIL 4400, Metaphysics; or PHIL 3110, Epistemology; or PHIL 3600, Philosophy of Religion
  - PHIL 3400, Ethical Theory, or PHIL 3120, Introduction to Social and Political Philosophy
  - PHIL 4550, Philosophy of Science and Technology, or PHIL 4750, Philosophy and Public Policy
  - PHIL 4700, Environmental Ethics, or PHIL 4450, Philosophy of Ecology
  - PHIL 4970, Capstone Seminar
  - 6 additional hours of philosophy advanced courses.
3. **Other Course Requirements:** None.
  4. **Minor:** Optional.
  5. **Electives:** See four-year plan.

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### BA with a Major in Philosophy

*The following four-year plan is one example of a variety of ways in which you can complete your chosen degree in four years, and will serve as guide for you to design your pathway to degree completion. Variations will depend on whether you need to take prerequisites or have college credit from exams or dual enrollment.*

*The College of Arts and Sciences expects you to have completed the State recommended high school program and be ready to enroll for Language 2040 or a mathematics course above college algebra. If you are not prepared for this level, the necessary prerequisites will either replace electives or increase the hours required for the degree.*

#### FRESHMAN YEAR

FALL	HOURS
ENGL 1310, College Writing I, or ENGL 1313, Computer Assisted College Writing I*	3
LANG 2040, Foreign Language (intermediate, may be used to satisfy a portion of the Understanding the Human Community requirement)**	3
PSCI 1040, American Government*	3
MATH (see approved list)**	3
Social and Behavioral Sciences*	3
<b>Total</b>	<b>15</b>

SPRING	HOURS
ENGL 1320, College Writing II, or ENGL 1323, Computer Assisted College Writing II*	3
LANG 2050, Foreign Language (intermediate, may be used to satisfy a portion of the Understanding the Human Community requirement)**	3
PHIL 2050, Introduction to Logic, or PHIL 3300, Symbolic Logic	3
PSCI 1050, American Government*	3
Visual and Performing Arts*	3
<b>Total</b>	<b>15</b>

**SOPHOMORE YEAR****FALL**

	<b>HOURS</b>
HIST 2610, United States History to 1865*	3
PHIL 3310, Ancient Philosophy	3
Elective	3
Humanities*	3
Physical Science**	<u>3</u>
Total	15

**SPRING**

	<b>HOURS</b>
HIST 2620, United States History Since 1865*	3
PHIL 3330, Modern Philosophy	3
Elective	3
Natural Sciences**	3
Visual and Performing Arts*	<u>3</u>
Total	15

**JUNIOR YEAR****FALL**

	<b>HOURS</b>
PHIL 3110, Epistemology; or PHIL 3600, Philosophy of Religion; or PHIL 4400, Metaphysics	3
PHIL 3120, Introduction to Social and Political Philosophy, or PHIL 3400, Ethical Theory	3
PHIL Elective (advanced)	3
Elective	3
Laboratory Science**	<u>3</u>
Total	15

**SPRING**

	<b>HOURS</b>
PHIL 4550, Philosophy of Science and Technology, or PHIL 4750, Philosophy and Public Policy	3
PHIL 4700, Environmental Ethics, or PHIL 4450, Philosophy of Ecology	3
Elective (advanced)	3
Elective	3
Elective	<u>3</u>
Total	15

**SENIOR YEAR****FALL**

	<b>HOURS</b>
PHIL Elective (advanced)	3
Elective (advanced)	3
Elective (advanced)	3
Elective	3
Elective	<u>3</u>
Total	15

**SPRING**

	<b>HOURS</b>
PHIL 4970, Capstone Seminar	3
Elective (advanced)	3
Elective (advanced)	3
Elective	3
Elective	<u>3</u>
Total	15

*\*See the University Core Curriculum section of this catalog for approved list of course options.*

*\*\*See Arts and Sciences degree requirements section of this catalog for approved list of course options.*

*Actual degree audits may vary depending on availability of courses in a given semester.*

*Some courses may require prerequisites not listed.*

*Students may wish to use opportunities for electives to complete a minor of their choice.*

### **Minor in Philosophy**

A minor in philosophy consists of 18 semester hours, including 6 advanced hours.

### **Interdisciplinary Minor in Religion Studies**

A minor in religion studies consists of 18 semester hours from the departments of philosophy and religion studies, anthropology, history and English. Courses must be selected from an approved list, including at least one course in western religion and one course in eastern or comparative religion. Courses not on the approved list are to be selected with and approved by the religion studies advisor.

### **Graduate Degrees**

The department offers a Master of Arts with a major in philosophy. A non-thesis option is available for students pursuing non-academic environmental career opportunities. The department also offers a Doctor of Philosophy with a major in philosophy. Philosophy department faculty members participate in the Faculty of Environmental Ethics, a university-wide group within the Center for Interdisciplinary Graduate Studies. A description of graduate courses may be found in the *Graduate Catalog*.

### **The Center for Environmental Philosophy**

#### **Eugene C. Hargrove, Director**

The Center for Environmental Philosophy encourages and supports workshops, conferences and other special projects, including postdoctoral research in the field of environmental ethics. Activities currently include the publication of *Environmental Ethics: An Interdisciplinary Journal Dedicated to the Philosophical Aspects of Environmental Problems*, which is now in its 28th year of publication; Environmental Ethics Books, a reprint series of important books dealing with

environmental ethics and philosophy. Workshops on college and university curriculum development, environmental journalism, ecotheology, nature interpretation, and national research conferences focusing on selected topics in environmental ethics are held on an irregular basis.

### Scholarships and Financial Aid

The John C. Creuzot Scholarship provides \$500 per semester (\$1,000 annually) to one undergraduate philosophy major. The award continues from semester to semester as long as the recipient makes satisfactory progress toward the degree. Upon the scholarship holder's graduation, a new recipient is selected. To be eligible the student must be a philosophy major at the University of North Texas, maintain full-time enrollment at the university unless he or she has fewer than twice the number of semester hours required to be full time remaining in the program, have a minimum of 30 semester credit hours of course work at the University of North Texas, and a minimum of 9 semester credit hours in philosophy in the Department of Philosophy and Religion Studies, 6 of which should be upper level.

A \$500 award is given to the John Kimmey Memorial Scholar in the spring semester. The scholar is selected by the department and is the honoree at the Honors Day convocation.

A \$500 fellowship is provided to one graduate student each semester by the Richardson Environmental Action League, a nonprofit recycling organization in Richardson, Texas. To be eligible, a student must have completed 15 graduate semester credit hours.

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## Department of Physics

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**Christopher Littler, Chair**

### Faculty

*Professors* Duggan, Grigolini, Hu, Kobe, Krohkin, C. Littler, Matteson, McDaniel, Mueller, Neogi, Ordonez, Perez, Quintanilla, Roberts. *Associate Professors* Kowalski, Shiner, Weathers. *Assistant Professor* Philipose, Rout, Shemmer. *Lecturers* Lawler, K. Littler.

### Introduction

From advancing state-of-the-art processes in the semiconductor industry to developing computer software for simulating exotic phenomena, physicists and engineering physicists are helping to expand the frontiers of both basic science and high technology. The diversity of work conducted by physicists and engineering physicists occurs because physical science and engineering disciplines are based, to a large extent, on physics principles. A bachelor's degree in physics or engineering physics also prepares students for graduate work in acoustics, astrophysics, biophysics, computational physics, medical physics and other subfields and interdisciplinary fields in physics.

### Programs of Study

The department offers the following undergraduate and graduate programs:

- Bachelor of Arts with a major in physics;
- Bachelor of Science in Physics;
- Bachelor of Science in Engineering Physics;
- Master of Arts,
- Master of Science, and
- Doctor of Philosophy, all with a major in physics.