

College of Arts and Sciences

The College of Arts and Sciences consists of the Divisions of Humanities, Social Science, and Science. Those subjects referred to as the “liberal arts” are to be found in humanities and social science. Courses in these areas provide opportunities for students who wish to obtain a broad undergraduate preparation for leadership roles in our society, for the development of creative talents that can address themselves to the value conflicts of contemporary society, and for intellectual development that adds to the richness of life.

GENERAL EDUCATION

The college recognizes a conceptual distinction between distribution requirements and general education requirements. Distribution requirements compel students to take a specific number of credits in each of the areas of humanities, science, and social science. General education requirements usually involve more direction. The assumption is that there are certain identifiable skills and knowledge areas that should be part of a baccalaureate program. Therefore, university distribution requirements specifying that students complete 12 credits in each of the three areas have been incorporated into the general education program developed by the college. The program is based upon the following goals and objectives:

1. A liberally educated person communicates effectively.
 - 1.1 Students will give a presentation before a group.
 - 1.2 Students will write papers that require locating, analyzing, and formally referencing information sources to support conclusions.
2. A liberally educated person uses quantitative methods effectively.
 - 2.1 Students will use mathematical methods to solve problems.
 - 2.2 Students will interpret, make inferences, and draw conclusions from data presented in tabular or graphical form.
 - 2.3 Students will determine if numerical results are reasonable.
3. A liberally educated person appreciates diversity and possesses the intellectual foundations of a variety of disciplines, including their histories and processes of knowledge construction, and the understanding necessary to apply their backgrounds to the theories and models of those disciplines.
 - 3.1 Students will have the intellectual background to understand how science explains the workings of the natural and physical world using theories and models that can be tested using experiments and observations.
 - 3.2 Students will understand and apply social science theories and qualitative and quantitative methods to questions of human behavior, mental processes, communication, and social and cultural structures and institutions.
 - 3.3 Students will acquire historical and aesthetic knowledge, and use analysis and interpretation to evaluate and critique historical and aesthetic context, evidence, artifacts, and arguments.
4. A liberally educated person thinks, reads, and communicates critically and understands and uses frameworks of ethical judgment.
 - 4.1 Students will examine, evaluate, and refine their habits of thinking, and accept ambiguity while questioning assumptions and ideas.
 - 4.2 Students will make claims and draw conclusions supported by the marshalling and evaluation of evidence.
 - 4.3 As reflective learners and thinkers across and within disciplines, students will synthesize divergent contents, methodologies, and models.
 - 4.4 Students will develop the theoretical tools and imaginative capacity to make ethical judgments and effectively empathize with others.

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At least one of these four courses must be at an advanced level (300 level). This requirement must also be met by students taking two semesters of modern language at the elementary or intermediate level in the same language.

* The same course cannot be used to satisfy both the aesthetics/philosophy and the history requirements.

SCIENCE (12 CREDITS)

Awareness of the natural world requires cultivation of the knowledge of and insight into phenomena that affect all life forms. Observation and reflection lead scientists to propose explanations for natural and physical phenomena that have predictive power and are both testable and falsifiable through carefully controlled experimentation. The constant forming, testing, and revising of hypotheses define the process of science and lead to the formation of scientific knowledge. Integral to this process, scientists respect the beauty inherent in the order and diversity of the natural and the physical realms.

- Three to four science courses, including one semester of a science course with an associated laboratory (12 credits)

Students at Widener University are required to take 12 credits of sciences to learn how scientific knowledge is constructed and question knowledge. In these courses, students develop an understanding of how scientific knowledge is constructed and learn quantitative and qualitative skills necessary to develop models, propose and test hypotheses, and evaluate experimental results. Students learn how to access and clearly communicate scientific information, critically analyze conclusions, and judge the limits of scientific methods. As a result of these experiences, students acquire critical-thinking skills and an understanding of ethical conduct in science, thereby developing their ability to make rational, informed decisions about the use of science and technology in society.

SOCIAL SCIENCE (12 CREDITS)

Courses in the social sciences develop an appreciation for both the quantitative and qualitative methods for assessing human behaviors and interactions. Research questions are grounded in theoretical assumptions. The courses encompass a range of disciplines: anthropology, communication studies, criminal justice, political science, psychology, and sociology.

- Societal/cultural perspective—Two introductory social science courses in different fields (6 credits)
- Advanced study—Two additional courses in social science, one of which must be at an advanced level (200 level and above) (6 credits)

VALUES SEMINAR (3 CREDITS)

An upper-level interdisciplinary course that involves a discussion of values as affecting individual and societal decision making. Prerequisites: junior or senior status and completion of a minimum of six semester hours in each of the three divisions.

ACADEMIC REQUIREMENTS

Students are expected to make regular progress toward completion of course and cumulative grade-point average requirements for their major. In accordance with university requirements, a student will be dismissed who fails to meet the minimum standards for academic progress. A student who falls below a 2.0 cumulative average will be limited to 12 semester hours in the following semester. Subsequent failure to demonstrate progress toward the minimum standard will result in either a warning that the student is subject to dismissal at the next semester-end review or dismissal from the college.

REQUIREMENTS

The following general education requirements have been established for the College of Arts and Sciences.

SKILLS

Competence in writing, mathematics, critical thinking, and computer skills are identified as goals of general education.

Writing Skills—The writing general education requirements are:

- **Writing Enriched Courses.** In addition to ENGL 101, students must complete at least four courses (preferably one per year) that are designated as writing enriched.
- **Annual Writing Sample.** Each fall semester, all students, except freshmen, will be given the writing sample administered by the Writing Center. Students who score at level 3 or below during the sophomore year or at level 4 or below during the junior year will be referred to the Writing Center for additional help.
- **Level 5 Competency.** All students must attain level 5 competency on the writing sample prior to graduation. Students may satisfy the level 5 requirement any time in the junior or senior year. Students who do not attain level 5 during the fall of their junior year (or first semester of third year) will be encouraged to begin to satisfy the level 5 requirement early.

Mathematics Skills—The mathematics general education requirements are:

- MATH 101 or at least Level 3 on the Mathematics Assessment.
- Completion of one MATH course beyond MATH 101, or completion of PHIL 120. The MATH course counts as one of the required science general education courses; PHIL 120 counts as one of the required humanities general education courses.

Quantitative Reasoning—Completion of one course beyond the mathematics/PHIL 120 requirement designated “Quantitative Reasoning” (QR). QR courses expect students to (a) use simple mathematical methods from arithmetic, algebra, geometry, or statistics to solve problems; (b) determine if numerical results are reasonable; (c) recognize the limitations of the methods they have been taught to use; and (d) interpret, make inferences, and draw conclusions from data presented in tabular or graphical form. These goals are a central focus, and emphasis on quantitative reasoning is sustained throughout the required course. QR courses are structured so that the emphasis is on students doing the reasoning. The students’ work in these courses takes the form of problem sets, projects, computer programs, field research, lab reports, and similar assignments, and involves a process of growth through opportunities to correct/revise assignments.

Computer Skills—Computer skills appropriate to the major.

Critical Thinking—Satisfied by courses in the major and the Values Seminar.

HUMANITIES (12 CREDITS)

Courses in the humanities foster a sense of historical consciousness, aesthetic appreciation, and philosophical judgment. The study of the humanities demands rigorous interpretation and openness to multiple perspectives. Through this program, students develop depth and breadth in their understanding of the human condition.

- History, art history, or music history course (3 credits)*
- Aesthetics/philosophy—Any course in literature (ENGL 130 or above, or 300-level modern language), art history, dance, creative writing, fine arts, music (excluding performance), philosophy, or studio art (3 credits)*
- Two additional courses in humanities (6 credits)

MAJORS

The major programs of the College of Arts and Sciences are explained in detail in the pages that follow.

Humanities Majors

creative writing
English
fine arts
French
history
Spanish

Social Science Majors

anthropology
communication studies
criminal justice
international relations
political science
psychology
sociology

Science Majors

biochemistry
biology
chemistry
computer information systems
computer science
environmental science
mathematics
physics
science education

Interdisciplinary Majors

digital media informatics
gender and women’s studies

Double Majors

creative writing/English
criminal justice/political science
criminal justice/psychology
criminal justice/sociology
environmental science/biology
mathematics/computer science

Dual Degrees

chemistry/chemical engineering
physics/mechanical engineering
physics/electrical engineering
psychology/social work

Besides courses within the major programs of Arts and Sciences, students can also pursue studies in art, music, and philosophy. In addition, the teacher education program in the School of Education, Innovation, and Continuing Studies makes it possible for students majoring in the College of Arts and Sciences to obtain certification as an early childhood, elementary, special education, and secondary school teacher in a number of areas, including English, the sciences, and social studies. Students interested in the teaching profession should consult the “Division of Education” section.

Students invited to participate in the Honors Program in General Education can take honors sections of Arts and Sciences courses. These can be used to fulfill requirements in majors and general education. These courses include Freshman Honors English and the Freshman Honors Seminar in the social sciences and humanities. History majors may graduate with honors upon fulfillment of the Honors in History requirements.

In the course of a student’s college career, total semester hours will be divided among distribution requirements, a major field of concentration, subjects allied to and supporting the major, and free electives. Students can structure their free electives to pursue one of the minors listed below. A number of multidisciplinary certificate programs are also available to Arts and Sciences majors.

PRE-MEDICAL CONCENTRATION

The Health Professions Committee has approved the following concentration of courses to assist students preparing for the study of medicine, optometry, dentistry, podiatric medicine, and veterinary medicine. Students are encouraged to consult with the health professions advisor to plan their programs. The courses listed as foundation courses satisfy the entrance requirements of most health professions schools. To be competitive, a student should have a cumulative average of 3.5 or better overall and in the sciences at the end of the junior year. Most medical and health professions schools minimally require two courses in

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