

Binghamton Scholars Course Offerings
Fall 2008

You are required to take two scholars seminars during your first two years here at Binghamton University. Scholars I refers to fall offerings and Scholars II to spring offerings.

All scholars' courses have a SCHL rubric. Some of these may also be cross listed with other departments. Students register themselves for all scholars' courses except SCHL395 an independent study course for scholars who wish to receive academic credit for study abroad or internship experience required for Scholars III. Please contact the program office if you would like to be registered for this course.

Scholars I Seminars

Choose one of the following scholars' seminars for the fall semester.

SCHL280A Peace: A Historical Reflection Gen Ed (H, J)

Course Instructor: George D. Catalano, Director, Scholars Program, Professor of Bioengineering

Course Schedule: Tuesday and Thursday 2:50-4:10

The UN General Assembly unanimously proclaimed the first decade of the 21st century to be a Decade for a Culture of Peace and Nonviolence. In response to this and my research interests, the following new course is proposed. Students will be challenged to confront the issues of peace and non-violence through a careful consideration of the works of many of the most important writers and activists. A partial list of the authors includes:

- Barbara Deming
- Martin Luther King, Jr.
- Mahatma Gandhi
- Daniel Berrigan
- Dorothy Day
- Joanna Macy
- Hildegard Goss-Mayr
- Cesar Chavez
- Buddha
- Thomas Merton
- Ralph Waldo Emerson
- Albert Camus

Course Objectives:

By the end of the term, students will be able to:

- Describe various philosophical foundations used in formulating ideas concerning peace.
- Describe issues related to attitudes towards peace in the advanced world.

SCHL 280C: Energy and...You! (O)

Course Instructor: John Fillo, Associate Dean, Watson School of Engineering

Course Schedule: Tuesdays and Thursdays 10:05-11:30 TU-205

Present energy consumption by sector, i.e., transportation, industrial, commercial, residential and energy supply modes such as coal, oil, natural gas, nuclear. Factors for consideration when predicting future energy needs. Prospects for alternative fuels such as synthetic oils and hydrogen.

Students will present careful analysis of various issues both using written and oral formats. It is anticipated that each student will produce approximately fifteen pages of formal composition and after review and revision will be required to resubmit the manuscripts.

Each student will make a minimum of three oral presentations throughout the term. Classmates along with the instructor will provide critical review and suggestions for improvement.

Course grading will be based on oral presentations and written assignments as well as class participation. Class attendance will be required.

SCHL280D: Great Ideas in Physics (J)

Course Instructor: Professor Robert Pompi, Physics

Course Schedule: Tuesdays and Thursdays 11:40-1:05 TU-205

We will be exploring popular expositions of cosmology and string theory as we approach a non-mathematical understanding of the formation of the universe and the role of strings as the underlying constituent component of all matter. Reading will be assigned for each class period. Each student will prepare three questions and answers based on the reading for that day. The questions and answers will be produced using an appropriate word processor. Each of these submissions must be dated and handed in at the beginning of the class. These questions and answers should be no longer than a single page. The questions should be prepared to initiate a discussion of the assigned readings, not merely a listing of facts. Each question will have the specific page from the assigned reading indicated.

Each student during the course of the semester will be required to give at least two oral presentations on the day's reading. These presentations are to be approximately ten minutes in length and will be graded. At the end of each oral presentation, the presenting

student must present a question or item of general interest which will serve as the first item for group discussion. The remaining students will submit an evaluation of that presentation. Those evaluations will be given to the presenter after the name of the evaluator has been expunged. One week after each assigned book has been read and discussed, a 6 – 7 page paper will be submitted discussing the three most important ideas presented in the book.

Assigned texts:

TEXTS:

D. Falk, “Universe on a T-Shirt”, ISBN# 1-55970-733-X (Arcade)

S. Hawking, “The Universe in a Nutshell”, ISBN# 0-553-80202-X (Bantam)

M. Kaku, “Parallel Worlds: A Journey Through Creation, Higher Dimensions, and the Future of the Cosmos”, ISBN# 1-4000-3372-1 (Anchor)

B.Greene, “The Fabric of the Cosmos: Space, Time, and the Texture of Reality” ISBN# 0-375-727-205 (Vintage)

SCHL 280E - Natural Hazards in the World Today(J)

Course Instructor: Jeffrey Barker, Assoc. Prof. of Geophysics

Course Schedule: TR 10:05-11:30

The 2004 Sumatra earthquake and tsunami killed an estimated 380,000 people. In 2005 Hurricane Katrina killed at least 1,800 people and caused more than \$81 Billion in damage. The June 2006 flood in the Susquehanna River watershed devastated low-lying areas around Binghamton and cost more than \$1 Billion. Earthquakes, volcanic eruptions, landslides, wildfires, hurricanes and tornadoes are occurring all around us, seemingly with increasing frequency, certainly with increasing impact. What causes such natural disasters? How do they impact people, both directly and through broader economic effects? What is our government's response? How do we “survive” natural hazards?

Students will write weekly short papers (1-3 pages) in response to readings, often of controversial points of view. Working together in small groups, they will research and lead two discussions on a particular case study of natural hazards, concentrating on the facts of the case. They will each then write an extended essay paper on the cause, human impact and governmental response to natural hazards of the type presented. Students will submit more than 20 pages of writing for evaluation. Students' written work and oral presentations will receive instruction, peer and instructor critique and review, followed by revision and final instructor evaluation. The short response papers in total will account for 33% of the grade, the oral presentations of case studies another 33% and the extended essay will account for the final 33% of the grade.

--

SCHL 280F/PHIL210: Plato and Aristotle (H,J)

Course Instructor: Professor Tony Preus, Philosophy

Course Schedule: Lecture Tuesday and Thursday 8:30-9:55

Scholars Discussion Section 01 Wed. 8:30-9:30 TU-123

Introduction to Greek Philosophy to 323 BCE. Brief introduction to philosophy before Socrates; more extensive study of Socratic dialogues and Plato's philosophy; general introduction to Aristotle's science, metaphysics, and ethics. For majors and non-majors. This is a "J" course with many short quizzes, short weekly writing assignments, several oral presentations, and a final portfolio. Lectures meet twice a week with Philosophy 201; discussions with Professor Preus once a week.

Books:

Curd & McKirahan, *A Presocratics Reader*, mostly not available online.

Plato, *Complete Works*, ed. Cooper, dialogues also available online.

Aristotle, *A New Aristotle Reader*, ed. Ackrill, most readings also available online and on Blackboard

Course Calendar:

8/26: Lecture 1: Intro; Before the Greeks; Milesians: begin reading CM

8/27: Scholars section: setting up oral component; what is Greek Philosophy?

8/28: Lecture 2: Pythagoras, Xenophanes, Heraclitus: continue CM

8/29: Reading Report 1 due midnight

9/2: Lecture 3: Parmenides, Zeno, Melissus: continue CM

9/3: Scholars: oral presentation 1.1

9/4: Lecture 4: Empedocles, Anaxagoras, Democritus: continue CM

9/5: Reading Report 2 due midnight (on Presocratics)

9/9: Lecture 5: Sophists & Socrates; Background for Plato: finish CM

9/10: Scholars: oral presentation 1.2

9/11: Lecture 6: Plato, *Euthyphro*, *Apology*: The Trial of Socrates. Cooper pp. 1-36

9/12: Reading Report 3 due midnight (on Socrates)

9/16: Lecture 7: *Crito*. Cooper 37-48

9/17: Scholars: Oral presentation 1.3

9/18: Lecture 8: *Phaedo* I. Cooper 49-73

9/19: RR 4: on *Crito*, *Phaedo*

9/23: Lecture 9: *Phaedo* II. Cooper 73-100

9/24: Scholars: Oral presentation 1.4

9/25: (Lecture 10) 201 Exam 1; Scholars meet; no oral presentation (makes up for 10/8)

9/27-10/1: Rosh Hashanah Break, no RR, no scholars section October 1.

10/2: Lecture 11: *Republic* I. Cooper 971-998.

10/3: RR 5: on *Phaedo*, *Republic* I

10/7: Lecture 12: *Republic* "Gyges," Kallipolis," "Sun-Line-Cave": II to 376 (Cooper 998-1014), VI.505-VII.521 (Cooper 1125-1138)

10/8-10/12: Yom Kippur Break: No Scholars Seminar, no RR

10/14: Lecture 13: *Parmenides* "Third Man": Cooper 359-370; begin *Theaetetus*: Cooper 157-206

10/15: Scholars: Oral Presentation 2.1

10/16: Lecture 14: *Theaetetus* concluded, to Cooper p. 234

10/17: RR6: on *Republic, Parmenides, Theaetetus*

10/21: Lecture 15: *Timaeus*: Plato's theology and science: Cooper 1224-1255

10/22: Scholars: Oral Presentation 2.2

10/23: Lecture 16: Aristotle's Life & Works; *Categories, Interpretation*: Start reading Ackrill

10/25: RR7: on *Timaeus* or Aristotle *Cat, Int*

10/28: Lecture 17: Aristotle's Logic: *Posterior Analytics* (Selections from Ackrill)

10/28: Scholars: Oral Presentation 2.3

10/30: Lecture 18: Teleological Understanding of Nature: *Physics* I, II (as in Ackrill)

10/31: RR8: on Aristotle Logic or Physics

11/4: Lecture 19: 201: Exam 2, alternative meeting for Scholars

11/5: Scholars: Oral Presentation 2.4

11/6: Lecture 20: The Hylomorphic Soul: *De Anima* I & II. Readings on Blackboard and in Ackrill

11/7: RR9, on *Physics/De Anima*

11/11: Lecture 21: Intellect: *De Anima* III, reading in Ackrill

11/12: Scholars: Oral Presentation 3.1

11/13: Lecture 22: Biology: Biological selections from Ackrill and posted in Blackboard

11/14: RR10, on *De An.* III or Biology

11/18: Lecture 23: *Metaphysics*, part I: selections from Ackrill

11/19: Scholars oral presentation 3.2

11/20: Lecture 24: *Metaphysics*, part II: selections from Ackrill

11/21: RR11, on *Metaphysics*

11/25: Lecture 25: The Ethical Virtues: *Nicomachean Ethics* I, II, III

11/26: Scholars oral presentation 3.3

Thanksgiving Break, no RR

12/2: Lecture 26: *The Intellectual virtues: EN* V, VI, VII.

12/3: Scholars oral presentation 3.4

12/4: Lecture 27: Pleasure, Friendship, Intellect: *EN* IX, X

12/5: RR12, on *Ethics*

12/9: Lecture 28: *Politics*, as in Ackrill

12/10: Scholars: discussion of portfolio

12/11: Lecture 29: *Metaphysics* XII, as in Ackrill

12/12: Portfolio Due

(201 will have a final exam in exam week; Scholars excused)

Scholars Courses Offered Each Semester

SCHL 227: Leadership and Achieving Goals

1 Credit Hour

Check Banner for Sections and Times

Scholars Requirement: 2 Sections of SCHL227 OR 1 section of SCHL127 and 1 section of SCHL227 completed by end of senior year.

Binghamton Scholars students will learn and develop powerful new strategies for tackling solving open-ended design problems. Solving design problems in a team format will enable students to develop both their leadership and teamwork skills. The development of both critical and creative thinking skills is addressed. A formal design methodology shall be introduced which consists of the following seven universal design principles:

- Acceptance
- Definition of the problem
- Analysis or breaking up the problem into smaller parts
- Brainstorming or ideation (i.e. searching for alternatives)
- Idea selection
- Idea implementation
- Evaluation of the solution

Students will be able to choose problems of particular interest to them. During the first week of class, student teams will be formed and the problem chosen from either a list of approved projects or students may suggest their own topics with faculty approval.

There will be two (2) oral presentations assigned. The first will describe the problem to be solved and the approach to be taken by the team. The second will occur at the end of the term and describe the implemented solution and evaluate the effectiveness of the result. In addition, a final report will be required which documents the entire experience.

Oral presentation I	10 %
Oral presentation II	20 %
Final Report	50 %

Text:

The Universal Traveler: A Soft-Systems Guide to Creativity, Problem-Solving, and the Process of Reaching Goals, Don Koberg, Jim Bagnall, Crisp Publications

SCHL395 Worlds of Experience – Independent Study Course

Variable 2-4 Credit Hours

Course Instructor: Professor George D. Catalano

The Binghamton Scholars Program offers each semester SCHL395: Worlds of Experience an independent study course specifically for scholars to earn credit for their Scholars III internship or study abroad requirement. Please note, scholars are not required to receive credit for the Scholars III requirement, it is optional. Any scholar who has completed their internship or study abroad and would like to receive academic credit for Fall 2008 should contact the program office.

For Freshman Only

SCHL 127: Freshman Scholars Seminar
Developing the Scholar Within: How to Think Like Leonardo daVinci

Incoming Binghamton Scholars students will learn and develop powerful new strategies for tackling challenges both timely and timeless, including open-ended problem solving, critical and creative thinking, self-expression, goal setting and balancing life's myriad of competing interests. As a model for developing young scholars, the principles described by Leonardo daVinci shall be discussed and practiced in a highly student-centered learning environment. The principles are:

- An insatiably curious approach to life and unrelenting quest for learning
- A commitment to test knowledge through experience and persistence, and a willingness to learn from mistakes.
- The continual refinement of the senses.
- A willingness to embrace ambiguity, paradox and uncertainty.
- The development of balance between science and art, logic and imagination.
- The cultivation of grace, ambidexterity, fitness and poise.
- Recognition of and the appreciation for the interconnectedness of all things and phenomena.

In addition, other elements of the course will include:

- Introduction to the various support systems in place for BU students including the Health Center, the Counseling Center, the Discovery Center and tutoring
- Presentation on the multiple opportunities available for study abroad and internships.
- Guest presentations from an array of faculty scholars from throughout the university
- Presentations and discussions led by upper class students in the Scholars program
- Discussion of the various components of the Scholars program from the freshman year to the final year project.

- Leadership development through the successful completion of an open-ended team based design project.

Text:

- Michael Gelb, *How to Think like Leonardo daVinci*, Delacorte Press: New York, New York, 1998.
- Michael Gelb, *How to Think like Leonardo daVinci: Personal Workbook*, Delacorte Press: New York, New York, 1998.