



## **North American AstroPhysical Observatory (NAAPO)**



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# SETI Popular in Colleges

By: Editors

## SETI SYLLABUS

The topics covered in the SETI course "Life in the Universe" (Astronomy 305) at Bowling Green State University given by Professor Roger Ptak are listed below. Although many SETI courses follow a similar outline, the Bowling Green syllabus shows in a concise step-by-step fashion how an appreciation of SETI requires a background of knowledge about the universe.

Preface  
Our star  
Other suns  
Starbirth  
Regular stars  
Dying stars  
And then there was iron  
The Galaxy  
When did time begin?  
Looking for other worlds  
Planet formation  
*First midterm exam*  
"The Ladder of Creation"  
The early earth  
From algae to algorithms  
Viking goes to Mars  
"The Search for Life"  
Life on Mars?  
The outer planets  
The zone of life  
How many are out there?  
Messages from space  
Tuning in

*Second midterm exam*  
Space at last!  
The greening of space  
"The Final Frontier"  
Cities in space  
Remaking the Universe  
*Final exam*

Many colleges and universities are giving or planning to give courses about the Search for Extra-Terrestrial Intelligence (SETI). In previous issues we have listed courses at the following institutions:

**Case Western Reserve University**  
Cleveland, Ohio

**Consumes River College**  
Sacramento, California

**John Carroll University**  
University Heights, Ohio

**Leeward Community College**  
Kaneohe, Hawaii

**Louisiana State University**  
Baton Rouge, Louisiana

**Menlo College**  
Menlo Park, California

**Ohio State University**  
Columbus, Ohio

**Otterbein College**  
Westerville, Ohio

**San Diego State University**

San Diego, California

**University of San Francisco**

San Francisco, California

**Stanford University**

Stanford, California

**Stockton State College**

Pomona, New Jersey

**Washington and Jefferson College**

Washington, Pennsylvania

**Wheaton College**

Norton, Massachusetts

In this issue we list courses at seven more institutions as follows:

**Institution:** Appalachian State University, Boone, North Carolina, 28608

**Instructor:** Prof. Thomas L. Rokoske, Dept. of Physics

**Title:** Search for Extraterrestrial Intelligence (1 hour credit)

**Content:** Development of SETI. Probability of life in the galaxy. Radio telescopes. Space travel. Space colonization. Physical and biological characterization of extraterrestrial intelligence.

**References:** Marcia S. Smith, "Possibility of Intelligent Life in the Universe" (U.S. Government Printing Office); Ronald Bracewell, "The Galactic Club"; Philip Morrison, John Billingham and John Wolfe, "The Search for Extraterrestrial Intelligence" (NASA SP-419); and others.

**Years given:** 1978, 1979.

**Enrollment:** 100 (1979).

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**Institution:** Bowling Green State University, Bowling Green, Ohio 43403

**Instructor:** Prof. Roger Ptak, Director of Astronomy

**Title:** Life in the Universe (Astronomy 305)

**Content:** Possibilities for life on other planets and other star systems, methods for

communicating with other intelligent life, and the movement of human life into space. (See accompanying box for more details).

**Reference:** Shklovskii and Sagan, "Intelligent Life in the Universe".

**Years given:** Each year beginning with 1976.

**Enrollment:** 30 (1976), 55 (1977), 80 (1978), 135 (1979).

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**Institution:** California State University, Fullerton, California 92634

**Instructor:** Robert H. Rubin, Dept. of Physics

**Title:** Extraterrestrial Intelligence (Physics 111, 3 units).

**Content:** Origin of the universe, origin of the elements, formation and evolution of stars, formation of planetary systems, habitable zones for planets, chemical evolution, origin of life and biological evolution, evolution of intelligence, the Drake equation, over-view of the universe, contact between extraterrestrial civilizations, space colonization.

**Year given:** 1979.

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**Institution:** Kansas State University, Manhattan, Kansas 66506

**Instructor:** Prof. C. E. Hathaway, Head, Dept. of Physics

**Title:** Life in the Universe—Are We Alone?"

**Format:** The Department of Physics has for four years operated a telephone-based course for honors high school students throughout Kansas. The telenet system allows two-way conversation to take place between enrolled students and scientists who speak from their own laboratories or offices. A speaker this year is Professor Philip Morrison of M.I.T.

**Enrollment:** 40 to 100.

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**Institution:** St. Olaf College, Northfield, Minnesota 55057

**Instructor:** Prof. Howard I. Thorsheim, Dept. of Psychology

**Title:** The Human Factor in Space Colonization and Long-Duration Spaceflight (Psychology 1a).

**Format:** Discussion of human factors on earth and in space environment, community and environmental psychology, time perception and value questions

implicit or explicit in human-system interactions. Guest speakers, films (such as NASA's "Apollo-Soyuz"), taped interviews with Michael Collins, Gerard O'Neill, Isaac Asimov and others and field trips, as to Minneapolis-Honeywell, provide a stimulating perspective. Cultures beyond the earth are considered. Since many of the students at St. Olaf College are of Scandinavian descent, the idea of space colonization has special relevance in comparison with an earlier period of "space" utilization, in which "space" was the Great Plains of the United States and the persons involved were the grandparents or great-grandparents of the students.

**References:** R. D. Johnson and C. Holbrow, Editors, "Space Settlements: A Design Study" (NASA, 1977); Gerard K. O'Neill, "The High Frontier"; Carl Sagan, "Cosmic Connection".

**Years given:** 1977, 1978, 1979, 1980 (January Interim Term).

**Enrollment:** Limited to 20.

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**Institution:** Sheridan College, Sheridan, Wyoming 82801

**Instructor:** Dr. Kenneth R. Ohm, Professor of Astronomy.

**Title:** The Search for Extraterrestrial Intelligence (non-credit).

**Content:** History and recent developments in SETI. Exploration of the solar system (Pioneer, Viking, Voyager, etc.).

**References:** Carl Sagan, "Murmurs of Earth"; **COSMIC SEARCH.**

**Year given:** Fall 1979.

**Enrollment:** 150.

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**Institution:** Western Michigan University, Kalamazoo, Michigan 49008

**Instructor:** Prof. Michael D. Swords, Natural Science.

**Title:** Aims and Achievements of Science.

**Content:** Cosmo-evolution (Big Bang to extraterrestrial intelligence); microcosmic frontiers (quarks to organisms).

**Years given:** 1975 to date.

**Enrollment:** Limited to 30.

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**Institution:** Western Michigan University, Kalamazoo, Michigan 49008

**Instructor:** Prof. Michael D. Swords, Natural Science.

**Title:** Science and Parascience.

**Content:** Examination of various debatable hypotheses on the frontiers and ragged edges of established science. Includes cosmo-evolution and extraterrestrial intelligence as necessary foundation information for examining the UFO and ancient astronaut questions.

**Years given:** 1975 to date.

**Enrollment:** Limited to 25.



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