

NORTH CAROLINA AGRICULTURAL AND TECHNICAL STATE UNIVERSITY
DIVISION OF UNIVERSITY STUDIES
UNST 207 – ETHICS AND BIOTECHNOLOGY

Course Description: This course examines ethical issues arising from scientific and technological advancements. The central normative question students will consider is: Simply because we can do something does this mean we should? After exploring various standards of morality, students analyze issues such as reproductive technologies, cloning, genetic engineering, stem cell research, lifespan extension, genetically modified foods, and ethical concerns within nanotechnology.

Objectives:

Ethics and Biotechnology has the following five objectives:

- ◆ Students will be familiar with several moral theories, be able to discuss the scope of morality, and be able to apply ethical reasoning principles to resolve moral issues.
- ◆ Students will be able to articulate the function of morality and to address the question: “why be moral?”
- ◆ Students will be able to effectively use information technology and be able to evaluate and interpret electronic research data.
- ◆ Students will be able to analyze the relationship between technology and progress and to evaluate conditions that technology must meet to satisfy ethical standards.
- ◆ Students will be able to integrate data from other disciplines to resolve ethical issues.

Required Texts:

Winston, Morton E., & Edelbach, Ralph D. (2006) *Society, Ethics, and Technology* (3rd ed.). Belmont, CA: Thomson/Wadsworth. ISBN-13: 978-534-52985-4 or ISBN-10: 0-53452085-5

Prerequisites: Students enrolled in **Ethics and Biotechnology** must have completed all five of their University Studies foundation courses.

University Studies

- ◆ **Open Door Policy:** Each of your Division of University Studies instructors maintains an open door policy. You are free to visit us during the posted office hours or, if you prefer a different time, arrange an appointment. If you are having a problem with the course, please contact your instructor immediately.
- ◆ **Note:** If you need to talk to me at any time during the semester, I will be available to meet with you at the times stated above. If you cannot see me at any of these times, please make an appointment. The best time to make an appointment is after class. Then again, you may call me at the telephone number above. If you call me and I am not in, please leave your name, a brief message, and your telephone number and I will return your call. Alternatively, you may send me an email message at the above address.

University Studies is a bold, new approach to general education. Until now, general education utilized distribution requirements, which asked students to choose fairly randomly among a list of introductory courses in the humanities, social and natural sciences. Exposing students to a wide variety of subject matter and critical approaches was the primary objective of this educational tradition. Thus, little attention was paid to the ways students might synthesize or profit from the learning objectives and outcomes of different disciplines. As a result, students proceeded into their major studies with few identifiable skills and abilities gleaned from their general education experience. University Studies was conceived to redress these problems.

The rationale for an interdisciplinary approach to general education stems from the acknowledged complexities of the contemporary world. The problems facing modern humanity are rarely if ever understood using the perspectives and tools of a single discipline. Given that, University Studies maintains that critical thinking, logic, writing, humanistic and artistic inquiry, as well as the social and natural sciences are best understood via interdisciplinary methods. Indeed many interdisciplinary fields, such as African American Studies, Science and Technology Studies, Cultural Studies, and Women’s Studies developed due to either the unwillingness or the inability of the traditional disciplines to address the issues posed in these bodies of scholarship.

All University Studies [UNST] courses are interdisciplinary. This means that they combine the intellectual methods and subject matter from a variety of disciplines in order to help students learn critical thinking and problem solving. UNST courses are interconnected in such a manner that they can guarantee that a student will be exposed to specified learning objectives that address real-life concerns. During the first year, students will learn skills for critical engagement; during the

second and third years, students will apply these newly honed skills in theme-based courses; in the senior year, students will exercise the skills and knowledge they have gained in a capstone experience and service-learning activity. If undertaken seriously and with intentionality, UNST students can expect to emerge with a set of useful intellectual tools that will allow them to engage effectively a dynamic and complex world.

Grading: The summative evaluation will consist of the following components:

Class Participation	15%
Quizzes	15%
Writing Assignments	25%
First Examination	15%
Midterm Examination	15%
Final Examination	15%

Grades will be determined by the percentages of each of your assignments. No other factors will be considered when determining final grades. Anyone asking for special grading consideration will be referred to this policy. The final grading scale will be used to determine final grades:

Percentage	Letter Grade
100 – 90	A
89 – 80	B
79 – 70	C
69-60	D
59-0	F

Deadline and Student Responsibility Policy:

Students are responsible for meeting all course deadlines. A deadline is the last day something is due, not the day you should wait to do it. All deadlines can be found on the course calendar.

- ◆ If you are unable to meet a deadline, you must arrange for an extension in advance of the deadline. **Extensions are not automatic;** whether an extension will be granted is left to the discretion of the instructor.
- ◆ Any student who misses a deadline and failed to make prior arrangements will not receive an extension. In other words, the student will receive a zero for missed work.
- ◆ The only exception to this policy is if you can provide documentation demonstrating why a deadline could not be met given that you knew all deadlines in advance. Remember, responsible students plan ahead, complete work early, and contact us right away when a deadline cannot be met. All students will be held to this policy, including those who ask for special exceptions.
- ◆ **Note:** Students who have missed an assignment must arrange with the instructor for completing missed assignments **within one week of returning to class.**

Academic Integrity: Academic honesty is absolutely essential. Cheating, plagiarism, sharing of clickers or other academic misconduct will not be tolerated. If you are caught cheating, you will not pass this course and will be subject to any and all penalties specified in the North Carolina Agricultural and Technical State University Student Honor Code. Any student caught cheating will receive an “F” for that assignment; any student caught cheating a second time will receive an “F” for the course.

Attendance: University Studies strives to professionalize its students; therefore, regular attendance and punctuality are mandatory in all UNST courses. Attendance will be taken at the beginning of each class. Tardiness will not be tolerated.

- ◆ **Doors to the classroom will be closed ten minutes after class begins. Students arriving after that point will have been marked absent. Students having four unexcused absences will automatically receive an “F” for the course.**
- ◆ Absent or tardy students are responsible for any missed class work, including any changes to the syllabus or assignments announced in class.
- ◆ In short, absences and tardiness will diminish your grade. If you suffer prolonged illness or misfortune, you should consider dropping the course. Persistent tardiness and failure to observe established classroom etiquette will lead to failure of the course. Student athletes must submit a schedule of days they will be absent within the first week of classes.

COURSE MATERIALS:

- ◆ **Books:** Serious scholarship requires procurement of essential course materials. Students will purchase all books and materials required for UNST courses within the first two weeks of the semester. Sharing of books thereafter is prohibited.
- ◆ **Clickers:** Sharing of clickers is never appropriate and constitutes academic dishonesty. Students must replace lost or stolen clickers for class use. Replacements may be purchased at the university bookstore for \$35.00.

EDUCATIONAL ETIQUETTE:

Students will demonstrate their respect for their professors and colleagues. Any behavior that distracts (e.g., eating, talking while others are talking, etc.) or is disrespectful (inattention, personal attacks, studying for other courses during class, etc.) is unacceptable. Differences of opinion should be met with intellectual curiosity and rigor rather than insult, contumely, or discord.

- ◆ **All cell phones, pagers, and personal communication devices must be turned off for the duration of the class period.**
- ◆ **Students who fail to comply with this rule will be asked to leave the class and will be marked absent.**
- ◆ **Campus security will be asked to escort those students from of the classroom who fail to leave as requested.**
- ◆ There will be no eating or drinking in class (other than bottled water).
- ◆ Student success in this course depends upon the development of scholarly and collegial habits. Active participation in class discussion and group work is mandatory. Collegial responsibility and respect are also compulsory.

Email Policy: Official correspondence from faculty, instructors and graduate assistants will use the North Carolina A & T email address. Students are responsible for the information received and are required to monitor their email accounts on a regular basis.

- ◆ All faculty, instructors and graduate assistants will reply to legitimate email inquiries from students within 48 hours with the exception of weekends or university holidays. If you do not receive a reply within this period, please resubmit your question(s) or phone your instructor. Leave a message if necessary.
- ◆ In accordance with the Aggie Pride Compact, students should consistently communicate and behave in a manner that displays integrity, honesty, sound character, and virtuous ethics when using email to communicate with faculty, instructors, or graduate teaching assistants.
- ◆ Each email message must include the course name and number, section number, and a concise and clear statement of purpose in the subject line. You must also type your name as it appears on the course roster at the end of your message. [e.g., UNST130.01: Death in Family]; otherwise it is likely to be deleted, along with spam messages and messages potentially containing viruses.
- ◆ Please make sure you consult the course outline/syllabus, other handouts, and the course website BEFORE submitting inquiries by email.
- ◆ When a question cannot be easily or briefly answered by email, your instructor will simply indicate that the student should see him, her, or the appropriate TA during office hours.
- ◆ Email should **NOT** be seen as an alternative to meeting with your instructor or the TA during office hours. Nor should email be used as a mechanism to receive private tutorials (especially prior to tests) or to explain material that was covered in lectures you missed.

Timely Submission of Work: All assignments are due on the dates indicated in your syllabus. **No late work will be accepted in any UNST courses.** Exceptions will be made only in cases of documented medical or family emergency or religious observance. Please notify your professor by email ***before the assignment is due*** should an acceptable absence occur. Employment, child care or other academic pressures do not constitute a valid excuse for late work. There is no provision for additional papers or extra credit to substitute for missed course requirements.

Disabilities and Differences: Students with documented learning disabilities or differences should identify themselves to their professor and present appropriate documentation during the first week of classes. No accommodations will be made later in the semester for students who do not identify themselves at the beginning of the course.

Students who need developmental support should ask their professors for extra help or referral. All students should seek the support services of the Writing Center (A-309 GCB; 334-7764) and the Center for Student Success (312 Hodgin Hall; 334-7855).

UNST207.01 COURSE SCHEDULE

<i>Section:</i>	<i>Dates:</i>	<i>Outline of Topics to be Covered:</i>	<i>Readings</i>
ONE:	<u>PART I. PERSPECTIVES ON TECHNOLOGY</u>		
	Aug. 20-24:	<i>Introduction:</i>	Reading: Morton Winston, "Children of Invention" in <u>SET</u> , pp. 1-19. Jared Diamond, "The Great Leap Forward," in <u>SET</u> , I.1, pp. 22-33.
	A. Historical Perspectives		
	Aug. 27-31:		Readings: David Landes, "The Invention of Invention," in <u>SET</u> , I.2, pp. 33-43. Ruth Schwartz Cowan, "Industrial Society and Technological Systems," in <u>SET</u> , I.3, pp. 43-60.
	Sept. 03-07:		Readings: Rosalind Williams, "History as Technological Change," in <u>SET</u> , I.4, pp. 60-69.
	Monday, September 03:	<i>Labor Day Holiday!</i>	<i>No Classes!</i>
	B. Social Perspectives		
	Sept. 10-14:		Readings: Corlann Gee Bush, "Women and the Assessment of Technology," in <u>SET</u> , I.5, pp. 69-82. Richard Sclove, "I'd Hammer Out Freedom: Technology as Politics and Culture," in <u>SET</u> , I.6, pp. 83-91.
	Sept. 17-21:		Readings: Langdon Winner, "Artifacts / Ideas and Political Culture," in <u>SET</u> , I.7, pp. 91-97. Andrew Feenberg, "Democratic Rationalization," in <u>SET</u> , I.8, pp. 97-112.
	C. Philosophical Perspectives		
	Sept. 24-28:		Readings: Ian Barbour, "Philosophy and Human Values," in <u>SET</u> , I.9, pp. 112-19. Hans Jonas, "Technology and Responsibility: Reflections on the New Task of Ethics," in <u>SET</u> , I.10, pp. 119-30.
	Oct. 01-05:		Readings: Freeman Dyson, "Technology and Social Justice," in <u>SET</u> , I.11, pp. 130-40. David Strong, "Technological Subversion," in <u>SET</u> , I.12, pp. 140-51.
	TWO:	<u>PART II. CONTEMPORARY TECHNOLOGY AND THE FUTURE</u>	
A. Globalization, Economics, and Human Rights			
Oct. 08-12:			Readings: Thomas Friedman, "The New System," in <u>SET</u> , II.1, pp. 154-62. Jeffrey Sachs, "International Economics: Unlocking the Mysteries of Globalization," in <u>SET</u> , II.2, pp. 162-69.
October 08-09:		<i>Fall Break!</i>	<i>No Classes!</i>
Oct. 15-19:			Readings: Jagdish Bhagwati, "In Defense of Globalization," in <u>SET</u> , II.3, pp. 169-82. International Forum on Globalization, "What Should Be Off-Limits to Globalization?" in <u>SET</u> , II. 4, pp. 182-95. United Nations, "Globalization and Its Impact on the Full Enjoyment of All Human Rights," in <u>SET</u> , II.5, 196-207.
B. Computers, Robotics, and Information Technology			
Oct. 22-26:			Readings: Hans Moravec, "Universal Robots," in <u>SET</u> , II.6, pp. 207-16. Bill Joy, "Why the Future Doesn't Need Us," in <u>SET</u> , II.7, pp. 216-33.
Oct. 29-Nov. 02:		Readings: Ray Kurzweil, "Promise and Peril," in <u>SET</u> , II.8, pp. 233-38.	

<i>Section:</i>	<i>Dates:</i>	<i>Outline of Topics to be Covered:</i>	<i>Readings</i>
			Max More, "Embrace, Don't Relinquish, the Future," in <u>SET</u> , II.9, pp.238-44. Jay Stanley and Barry Steinhardt, "Bigger Monster; Weaker Chains," in <u>SET</u> , II.10, pp. 244-57.
C. Biotechnology and Genetic Engineering			
	Nov. 05-09:		Readings: Lee M. Silver, "A Glimpse of Things to Come," in <u>SET</u> , II.11, pp. 258-64. Leon Kass, "Preventing a Brave New World," in <u>SET</u> , II.12, pp. 264-76.
	Nov. 12-16:		Michael J. Sandel, "The Case against Perfection," in <u>SET</u> , II.13, pp. 276-87. Claire Hope Cummings, "Trespass," in <u>SET</u> , II.14, pp. 287-99. Mark Sagoff, "Genetic Engineering and the Concept of the Natural," in <u>SET</u> , II.15, 300-09.
D. Population, Energy, and the Environment			
	Nov. 19-23:		Readings: Garrett Hardin, "The Tragedy of the Commons," in <u>SET</u> , II.16, pp. 309-19. Kevin E. Trenberth, "Stronger Evidence of Human Influence on Climate—The 2001 IPCC Assessment," in <u>SET</u> , II.17, pp. 319-28.
	November 21-23:	<i>Thanksgiving Holidays!</i>	<i>No Classes!</i>
	Nov. 26-30:		Janet Sawin, "Charting a New Energy Future," in <u>SET</u> , II.18, pp.328-56. Amory B. Lovins, L. Hunter Lovins, and Paul Hawken, "A Road Map for Natural Capitalism," in <u>SET</u> , II.19, pp. 357-69. Robert W. Kates, "The Nexus and the Neem Tree," in <u>SET</u> , II.20, pp. 379-85.
	Dec. 03-07:		<i>Conclusion and Review for Final Examination!</i>
	Dec. 06:	<i>Classes End</i>	
	Dec. 07:	<i>Reading Day</i>	<i>No Classes!</i>
	Dec. 08-14:	<i>Final Examination Week</i>	

- ◆ **Note:** This syllabus, including the schedule above, is subject to revision as necessary at any time during the semester.

Wishing you a wonderful semester at North Carolina Agricultural and Technical State University,