

## General Education Reform: More difficult than moving a graveyard.



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# NCA&T Futures Vision

North Carolina Agricultural and Technical State University aspires to be the premier interdisciplinary-centered university in America that builds on its comparative advantages in engineering, technology, and business; a strong civil rights legacy; and status as an 1890 land-grant institution.

This in turn impacted the vision of mission of the College of Arts and Sciences.



**NCATSU's Greensboro Four...the last shall be first**

# Without proper theory than can be no effective practice.

- ◆ Linkage to University strategic plan, core curriculum renamed to University Studies
- ◆ Emphasis on societal problems using interdisciplinary thinking; a framework for lifelong learning.
- ◆ The UNST curriculum promotes
  - *critical thinking skills*
  - *effective communication of ideas*
  - *appreciation for diversity and world cultures*
  - *commitment to civic engagement and social responsibility*



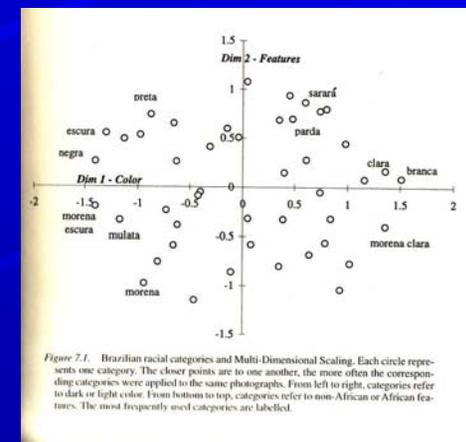
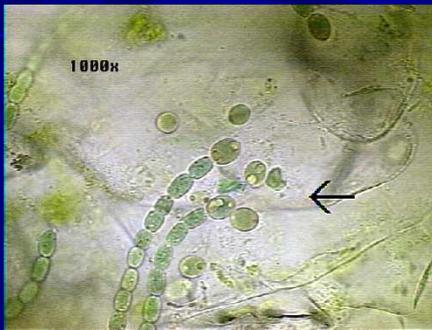
# UNST Core Values

- ◆ Open process
- ◆ Faculty engagement
- ◆ Research-based
- ◆ Intentionality
- ◆ Assessment
- ◆ Continuous improvement



# Curriculum Structure

- ◆ Total credit hours: 37
  - ◆ Foundation courses (13 credits)
  - ◆ Electives (12 credits)
  - ◆ Major specified courses (9 credits)
  - ◆ Capstone experience (at least 3 credits)
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- ◆ Volunteer service (50 hours)

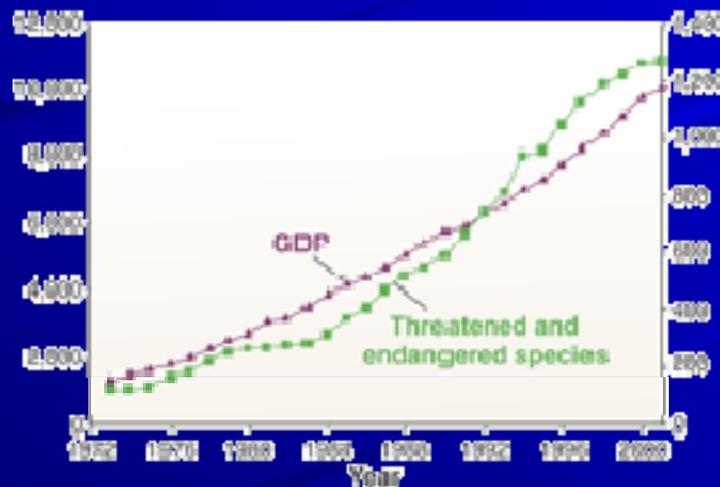


# Foundation Courses

- ◆ Five Foundation Courses (13 credit hours)
  - UNST 100 University Experience (1)
  - UNST 110 Critical Writing (3) – piloted in fall 2005, spring 2006.
  - UNST 120 The Contemporary World (3) – piloted several times by spring 2006.
  - UNST 130 Analytical Reasoning (3) – piloted in Spring 2006.
  - UNST 140 The African-American Experience: An Interdisciplinary Perspective (3) – piloted in Spring 2006.
- ◆ Focus on the four major goals of the UNST program
- ◆ Emphasize active learning and interdisciplinary thinking

# Theme Clusters

- ◆ Science, Technology & Society (20 courses, 8 new )
- ◆ Energy, Environment, & Society (17 courses, 4 new)
- ◆ Community, Conflict, & Society (23 courses, 5 new)
- ◆ Health, Lifestyles, and Society (19 courses, 6 new)
- ◆ We hope to eventually have 10 theme clusters.
- ◆ Courses are reviewed by UNST Faculty Roundtable for suitability for each cluster.
- ◆ Theme courses were approved by Academic Senate last semester.
- ◆ Departmental majors with inclusion of UNST requirements are being reviewed by Academic Senate this semester.



# ATL Faculty Development



- ◆ Workshops/Seminars
- ◆ At least 80 faculty members took part in summer course development – 2005.
- ◆ From these 20 new theme courses were developed.
- ◆ Submission of NEH grant: “Who am I? Who are We?” By A&S/UNST Faculty – Appalachian State collaboration.
- ◆ Dean is/will be meeting regularly with Faculty in Core Courses 110, 120, 130, & 140.

# Implementation

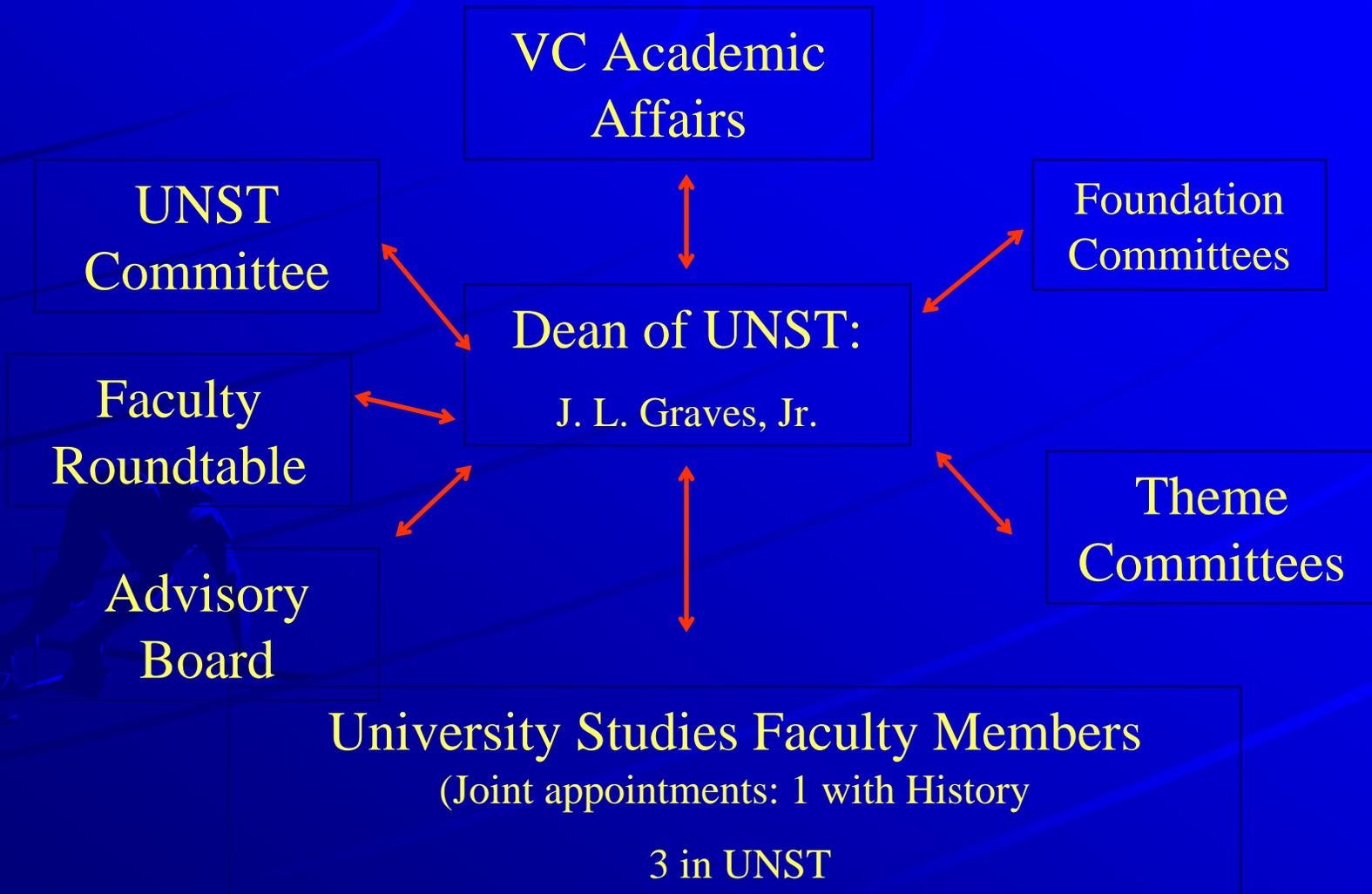
Funding for program:

NCAT is not a wealthy institution. Yet the Chancellor and Provost are providing faculty positions (4 hired already with more to come), space (centrally located and refurbished building), and an operating budget for UNST (consistent with its instructional load, about 25% of what A&S used to teach.)

Indeed, much of their commitment to the program was indicated by their willingness to do a national search for a Dean, who sits on the Dean council with the same authority as the Deans of the established Colleges.

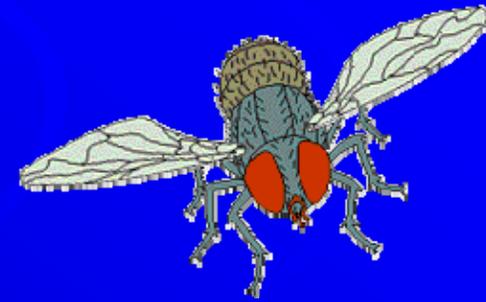
It can be argued that it is better not to try to move the graveyard, find new land, and build new construction!

# Program Administration



# Strategic hiring plan

- ✦ Motivated by the perspective that students learn best from faculty who are actively engaged scholars.
- ✦ Plan to hire faculty around research/scholarly questions related to UNST themes.
- ✦ UNST Dean met with Deans and Chairs of all the academic divisions who teach undergraduates.
- ✦ Asked them: What sorts of interdisciplinary scholars might best augment your own hiring needs?
- ✦ Proposed initial cluster hires around the issue of health-disparity.



Graves Research Lab 2000

# UNST Fall Lecture Series

Speaker	Date & Time	Title
<b>Dr. Jay Kaufman</b> UNC Chapel Hill Dept. of Public Health	<i>September 28</i> 5:00 PM <i>New Classroom Building</i> <i>Auditorium</i>	<b>Reproducing the Race Myth: Reciprocal Contamination Between Science and The Media</b>
<b>Dr. Fatimah Jackson</b> Dept. Anthropology Univ. of Maryland	<i>October 10</i> 5:00 PM <i>McNair Hall</i> <i>Auditorium</i>	<b>When Race Isn't Enough: Alternatives to Eliminating Health Disparities</b>
<b>Dr. Michael Rose</b> UC Irvine Director, Center for Experimental Evolution	<i>November 7</i> 5:00 PM <i>McNair Hall</i> <i>Auditorium</i>	<b>The Long Tomorrow: How Advances in Evolutionary Biology Can Help Us Postpone Aging</b>
<b>Dr. Constance Hilliard</b> Univ. North Texas Assoc. Professor of History	<i>November 30</i> 12:00—2:00 <i>New Classroom Building</i> <i>Auditorium</i>	<b>Can the Genetics of Race Diminish Black-White Health Disparities?</b>

# Is interdisciplinarity necessarily better?

- ✦ A series of assumptions have been made about interdisciplinarity, yet there is little empirical data to demonstrate whether, why, and how it is better than disciplinary learning?
- ✦ What are the educational outcomes of interdisciplinary courses? What are the behavioral, cognitive, and affective outcomes? What do assessments of student learning reveal? Do outcomes vary by the type of interdisciplinary course (informed, synthetic, trans- or conceptual?) Does interdisciplinarity work more effectively in particular programs (general education, concentration, science-based, humanities?)



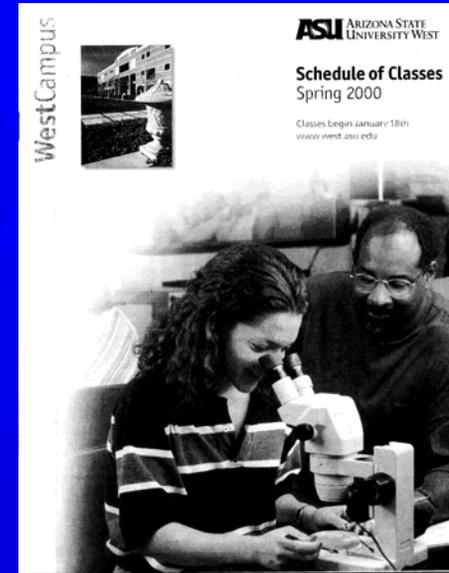
The Wizard of Riga, known for his dynamic and often speculative play, defeated the more conservative Mikhail Botvinnik in 1960...only to be defeated by Botvinnik in the return match a year later.

# Comparison?

- ◆ How do outcomes compare with students in discipline based courses? Are there some educational outcomes that are more readily achieved in interdisciplinary courses or vice versa? What accounts for the differences?
- ◆ Comparisons studies of student outcomes within and across institutions are needed.
- ◆ Student demographics, institutional and program selectivity, resources and instructional styles, as well as other variables need to be assessed.

# Who benefits?

- ◆ What types of students achieve the most in interdisciplinary courses.
- ◆ How does academic preparation, affective responses, and behavioral characteristics contribute to success in interdisciplinary or disciplinary courses?
- ◆ How will the students respond to and attribute success or failure to in these courses?



Graves Laboratory, Summer 2001

# What are the motivations and methods of faculty who teach these courses?

- ◆ What theories of learning to the instructors of interdisciplinary courses espouse (are they different from those in disciplinary courses?)
- ◆ What kinds of organizing questions drive these courses? Are interdisciplinary courses more likely to be structured around ill-structured questions (those with multiple approaches and answers?)
- ◆ Can disciplinary courses do just as well with ill-structures questions?
- ◆ What pedagogy is employed by interdisciplinary instructors? Do faculty that teach both disciplinary and interdisciplinary courses employ similar pedagogies in both?

# What we need to know?

Course	Faculty	Pedagogy	Learning Objectives	Learning Styles	Student Motivation
Disciplinary	+	-	-	-	+
Informed	-	+	+	-	-
Structural	+	+	+	-	-
Trans-	+	-	+	+	-
Conceptual	+	-	-	+	+

How would we evaluate this? Would we be able to work backward from student outcomes and determine the causality for any specific result?