

UNIVERSITY STUDIES PROGRAM

**2006-07 ANNUAL REPORT**



The University Studies core curriculum at North Carolina A&T State University is designed to provide a framework for critical inquiry. It is fully interdisciplinary and serves as a foundation for continuing academic development and life-long learning. Through discovery, inquiry, analysis, and application, the core curriculum promotes:

- *broad-based critical-thinking skills*
- *effective written and oral communication of ideas*
- *appreciation for diverse cultures,*
- *commitment to ongoing civic engagement and social responsibility*

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**NORTH CAROLINA AGRICULTURAL AND  
TECHNICAL STATE UNIVERSITY**

*OFFICE OF THE DEAN  
University Studies*

June 1, 2007

Dr. Janice Brewington, Provost and Vice-Chancellor  
Division of Academic Affairs

***Dowdy Building***

**CAMPUS**

Dear Dr. Brewington:

Enclosed is the annual report for the University Studies Program (UNST) for the 2006-2007 academic year. The program has made great strides from when I arrived, when the program consisted of one jointly appointed tenure track faculty member and a temporary administrative assistant. This document reports the program activities of University Studies in its first year of implementation. It highlights the major activities of the program and describes its accomplishments. Once again our faculty scholarly productivity is astonishing, with regard to publications, presentations and extramural funding, especially when considering our student contact hours per faculty member.

I am pleased to summarize our activities and share this information with you.

This report also gives University Studies an opportunity to thank the Central Administration for its support of this program. I also want to thank the faculty and staff of University Studies for their many contributions to the efforts to make this program a reality.

Feel free to contact me should you have any questions or comments.

Sincerely,

A handwritten signature in cursive script, reading "Dr. Joseph L. Graves, Jr.".

Dr. Joseph L. Graves, Jr.  
Dean and Professor of Biological Sciences

Enclosure

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## **Executive Summary**

### **Introduction: Purpose and Mission**

University Studies, the new interdisciplinary general education program at NCATSU, began instruction in the fall of 2006. This program is one of the boldest innovations in general education amongst American universities today. It redresses over a half century of malaise in higher education, in which general education course offerings were often driven by narrow departmental agendas and faculty popularity contests.

The program resulted from a study of the best practices in general education across the nation. Indeed, Derek Bok, former President of Harvard, has recently written of the crucial problems in academe. Universities are unclear concerning the purpose of higher education. Yet in this cacophony of uncertainty, several themes emerged. Universities across the nation believe that they must teach their students to communicate, think critically, understand the principles of moral reasoning, prepare for citizenship, live with diversity, live in a more global society, prepare for life-long learning, and finally prepare them for vocations in the rapidly shifting global job markets of the 21<sup>st</sup> century<sup>1</sup>.

University Studies was constructed with all of these aims in mind. Its goal is to provide students with a framework for critical inquiry that serves as a foundation for continuing academic development and life-long learning. The program is motivated by the principle that scholarship is best learned by the way it is practiced, University Studies applies discovery, inquiry, analysis, and application in the classroom to promote:

- *broad-based critical-thinking skills,*
- *effective written and oral communication of ideas,*
- *appreciation for diverse cultures,*
- *commitment to ongoing civic engagement and social responsibility.*

The University Studies core curriculum is developing in students an understanding of the interdisciplinary nature of knowledge, encouraging cross-disciplinary dialogue, and promoting the development of intentional learners who will take responsibility for their learning.

### **Significant Developments & Accomplishments in Fall 2006**

The implementation of University Studies curriculum could not have come at a more difficult time. Several factors collided to make implementation more difficult than would have been predicted by the nature of the curriculum change alone. First, in the spring of 2006, the University saw a change in its top leadership. Chancellor James Renick and Provost Carolyn Meyers left the university to take up other posts. This is significant in that both had played a major role in supporting the curriculum revision and the development of the division of University Studies. The uncertainty caused by the leadership change over may have played an important role in allowing irrational resistance to the university's change in overall direction to find voice. At the same time, the some of the university's failings with regard to retention and graduation had begun to come to light. In some sense, the revelation of ever increasing attrition

rates over the decade of the late 90's to mid 00's was validation for the new curriculum. However, this negative exposure along with contingent events of implementation, left some of our students with the impression that they were being "experimented on."

In addition to changes in leadership and negative publicity, an inordinate amount of university class room space was undergoing renovation and finally, the division was significantly short of the number of faculty required to effectively teach the curriculum. The situation concerning the dearth of faculty resources was anticipated in the program's development. It was never the intention of the designers of University Studies to place the delivery of general education solely on the shoulders on the newly formed division of University Studies. In that regard, several sections of the 1 credit hour University Experience course (UNST 100) were taught by the Center for Student Success, School of Business and Economics, School of Nursing, School of Education, and School of Technology. The Contemporary World course (UNST 120, 3 crs.) was taught utilizing members of the History Department (Drs. Porter, Roberto, Woods, and Zhang), as well as Dr. James Crawford (jointly appointed between UNST and Arts & Sciences.) Analytical Reasoning (UNST 130, 3 crs) was supposed to include 4 faculty members from the College of Engineering. However, only two were available (Drs. Roberts and Dent.) Dr. Dent had little to no experience teaching at the undergraduate level, and this produced a variety of difficulties in the course. To make up for its original promise of four faculty members, the College of Engineering supported the salary of 4 graduate teaching assistants in the fall 2006.

Still, the amount of aid the division received for instructing the foundation courses was less than required to allow for the best student/teacher ratios in freshman instruction. This situation is hard to explain from a model of university-wide cooperation with regard to general education. In other words, at NCATSU the amount of faculty resources that are devoted to lower division instruction are out of line with the need (particularly when our retention rates are viewed.) Case in point, in fall 2006, University Studies taught 14,515 sch (source: Office of Planning, Assessment, and Research, May 9, 2007). This was accomplished with 4 tenure track faculty, 2 administrators, and 24 lecturers/adjuncts.) The school of Business and Economics and the College of Engineering taught 16,099 and 9,436 sch respectively. These programs have at least 79 and 89 Ph.D level faculty respectively. This is an issue the university must address. Is it the chicken or the egg? Are the disparities in faculty devoted to upper and lower division simply the result of student attrition in freshman and sophomore years? Or does the lack of faculty resources devoted to lower division courses account for much of the attrition? Clearly, theory suggests that for general education to achieve its stated aims, there must be a greater university-wide commitment to delivering the general education curriculum, both in regards to faculty teaching in specific general education courses, and also to reinforcing the learning objectives throughout the overall curriculum (see sense of *Greater Expectations*, Rameley and Leskes, AAC&U, 2002.)

Despite all of its practical difficulties and setbacks the program continues to receive national and regional attention. University Studies was featured in the January 2006 annual meeting of the American Association of Colleges and Universities along with Butler University of Indiana as national models of general education curriculum reform (*More Difficult Than Moving a Graveyard: Curriculum Reform at North Carolina A&T State University*, Drs. Graves, UNST; Sarin, Engineering; and Simkins, Academy of Teaching and Learning.) In December of 2006,

we presented our curriculum and program at the meeting of the Southern Association of Colleges and Schools (SACS...*And yet it moves: Curriculum Reform at North Carolina A&T State University*, Drs. Graves, UNST and Simkins, Academy of Teaching and Learning.) Finally, Dean Graves was added to the faculty of the 2007 AAC&U Institute on General Education. The institute was held at Salve Regina University, in Newport RI. There Dean Graves presented two workshops. The first featured general education reform and the second discussed strategies to facilitate faculty buy-in to curricular change. Dean Graves was the faculty advisor for the teams from Norfolk State University and Regis University. In addition, he met with teams representing Yeshiva University, UNC Pembroke, S.E. Missouri State, St. Mary's (Indiana), Univ. of Wisconsin, Milwaukee, and Berea College, KY. It was clear from both the interactions with the institute organizers and faculty teams, the NCATSU is very far in front of the general education reform curve.

Finally, the most significant accomplishment has been successfully concluding a second wave of hiring for the program. The search to expand the faculty began during the middle of spring semester 2007. The division offered campus interviews to 14 individuals. We extended offers to 12 persons, with 10 persons accepting the offers. The table below highlights those who will be joining the faculty for fall of 2007.

<b>Name</b>	<b>Former Institution</b>	<b>Ph.D.</b>	<b>Scholarship</b>	<b>Course</b>
Ms. Beth Kaufka	Bowling Green State University	MFA	Politically engaged writing	Critical Writing
Mr. Chad Rohrbacher	Bowling Green State University	MFA	Learning Communities	Critical Writing
Dr. Agye Boake-Boaten	Columbus State CC	yes	Street children of the world	Contemporary World
Dr. Robert Drake	Siena College	yes	Teaching and Learning	Contemporary World
Dr. Philip Rubio	Duke & NCCU	yes	Labor History	Contemporary World
Dr. Dianne Williams	NCATSU	yes	Criminal Justice	Contemporary World
Dr. Wendy Hamblett	Paul Maillet Centre for Ethics, Ottawa	yes	Violence studies	Contemporary World
Dr. Gary Bailey	Midland Lutheran College	yes	Religious philosophy, origins of Christianity	Analytical Reasoning
Dr. DeReef Jamison	Xavier University	yes	African American psychology	Af. Am. Experience
Dr. Tanya Price	U.M. Kansas City	yes	African/African American music	Af. Am. Experience

The division is particularly pleased with the diversity of the candidates hired in the search. Of the ten, 4 were women and by ethnicity the new faculty include 1 Asian American woman, 1 Hispanic male, 2 African Americans (male and female), 1 Afro-Caribbean (woman), 1 West African (male), and four European Americans (males.)

## **Common syllabus**

The faculty of University Studies realized that concomitant with its mission of ensuring that the learning objectives of the curriculum were being taught was the responsibility of helping to professionalize the freshman students. We reasoned that from our experience with undergraduate students that a major obstacle to their learning was their lack of understanding concerning the requirements of university life. This was also consistent with the principle of providing, as much as possible, a uniform experience in our freshman courses. This to this end, common policies and practices were encoded in all University Studies courses (at least those taught by members of the division.) These common principles and practices were designed with the aim of fostering interpretable assessments of the learning objectives and based upon policies and requirements of students in the Undergraduate Bulletin.

The following material was required in all University Studies syllabi. It began with an introduction to the curriculum, followed by academic integrity policy, attendance requirements, course materials – including clickers, educational etiquette, instruction for use of Turnitin.com – anti-plagiarism software, timely submission of work, and finally information concerning disabilities and differences. The boilerplate text is given in appendix 1.1.

## **Part I Assessment of Foundation Courses in Academic Year 2006-07**

The 2005-06 Annual report identified eight specific goals for University Studies implementation. Chief amongst those was the implement of foundation courses at scale enrollments. During implementation, we were charged with collecting assessment data for the UNST learning objectives.

The fall 2006 and spring 2007 semesters saw the foundation courses implemented at scale enrollments (UNST 100, The University Experience; UNST 110 Critical Writing; UNST 120 The Contemporary World; UNST 130 Analytical Reasoning; and UNST 140 The African American Experience.) In addition, the division taught UNST 103 Basic Writing. This class was designed for students who had failed the freshman writing proficiency examination. Its goals were to bring students up to university level writing. Total student contact hours taught by University Studies faculty was 14,515 in fall 06 and 13,373 in spring 07.

Formative and summative assessments of University Studies learning objectives were collected for all foundation courses.

### **I. The University Experience (UNST 100): UNST Learning Objectives: 10, 14, 16, 17**

Approximately 37 sections of UNST 100, the University Experience were taught in fall 06, with an additional 5 sections offered in spring 07. Some of these sections were offered by specific schools or departments and tailored to the interests of their majors, such as Business & Economics, Technology, Nursing, Physics, and Mathematics. The majority of the sections were offered by faculty in the Center for Student Success, who designed the course. Most sections were limited to 40 students, but Business and Economics used large section format (~160 students per section.)

This situation produced both benefits and detriments. It was beneficial, in that it relieved some of the instructional pressure off of the division of University Studies, and also allowed content in sections to be better integrated to the needs of the specific majors. It was detrimental, in the sense that, the vast majority of these faculty were not members of the division, therefore did not report to the Dean of University Studies, nor did they attend University Studies faculty meetings. A further problem was the fact that the division of University Studies could not guarantee or enforce instructional standards in the sections. For example, some sections were offered pass/fail (as recommended by the division) and some were offered with a grade. Some sections utilized the text book: Ellis, *Becoming a Master Student* 11<sup>th</sup> edition, (as recommended by the division), and some did not require the text. Furthermore, no systematic reports of the formative assessment of learning objectives were reported to the division. Thus other than the pass/fail rates, we have no means of determining whether learning objectives were met in these sections.

As a result of these issues over academic year 2006-07, on April 11, 2007, the dean of University Studies met with the TCSS faculty concerning the delivery of UNST 100. It was decided that beginning fall 2007, the division of University Studies would require more uniformity in delivery in this course and also take greater responsibility for monitoring its content. In particular, all departments and schools offering UNST 100 sections will be required to more closely adhere to the common syllabus, use the new textbook that is being custom published for UNST 100 by Tapestry Press, and pay greater attention to ensuring that the learning objectives are assessed. Finally, it was also decided that the content of UNST 100 would pay more attention to critical retention related skills, such as time management, study skills, and the transition from high school to university level expectation.

**Box 1: Learning Goals of the University Experience**

- 10. Interact effectively with people from diverse cultures.
- 14. Understand and apply ethical reasoning principles to resolve moral, social, and professional issues.
- 16. Understand and promote principles of wellness that include nutrition, exercise, avoidance of mind-altering chemicals, development of healthy relationships and personal growth
- 17. Recognize behaviors that place individuals, families and communities at risk.

**II. Critical Writing (UNST 110): UNST Learning Objectives: 1, 2, 3, 4.**

There were 53 and 56 sections of Critical Writing offered in fall 06 and spring 07 respectively. Enrollment in these sections was capped at 26 students. The faculty of Critical Writing were primarily lecturers or adjunct faculty members in the Division of University Studies (appendix 2.1).

Each section of UNST 110 was expected to adhere to general syllabus but each was organized around a theme for critical thinking and discourse. These themes in fall 06 included: Truth and Perception, Education: Asking Questions about Our World, Globalization and Inequities in the World, Terrorism around the World, Identity and Perceptions, Race, Class, and Identity, Identity,

Family, and Culture, Identity and Perceptions, HIV/AIDS Pandemic, Freedom and Confinement, Lies, Food and Its Influence, Sustainability, Contemporary Slavery around the world.

### Course Learning Objectives and Formative Assessments used in Critical Writing

All students who enrolled in Critical Writing passed the freshman writing proficiency examination. This exam was given during freshman orientation and was carried out utilizing Educational Testing Service's online Criterion program. Criterion is an artificially intelligent computer program that is based on a rubric of expected college level writing ability. However, to determine whether students have actually increased their writing and critical thinking ability over the semester, the Critical Writing faculty assign students a diagnostic essay during the first week of class. A list of the assignments, activities, assessments and their relation to the learning domains within the course is given in appendix 2.2.

The activities and assessments described above allowed the Critical Writing faculty to alter their teaching emphasis to meet the student needs throughout the semester. One example of this in action was the development of the e-reading rooms (described in appendix 2.3.)

As a result of observations of the difficulties that some of our student learning during the fall 2006, Virgil Renfro, a critical writing instructor developed the concept of e-reading rooms. The e-reading rooms utilize Blackboard chat rooms to allow the students to learn the vocabulary and to better comprehend the readings in a team environment. These are being adapted for use across the foundation courses.

### Summative Assessments in Critical Writing (UNST 110.)

In fall 2006 data were collected from 6 instructors accounting for 597 students (43.2%) enrolled in Critical Writing. A sample this large is generally considered a reliable estimate of the entire population. The frequency report is provided in appendix 2.4. In this semester, 13.7% of the students failed the course and 10.4% received D's. Conversely, 24.3% and 33.3% received either an A or a B. This is illustrated by the frequency distribution graph which is skewed toward higher grades. The mean grade from this sample was 2.44 with a standard deviation of 1.32. The grades for spring 2007 were significantly worse (the same result was observed in Analytical Reasoning and the Contemporary World.) Based on a sample of 719, the mean grade dropped to 1.91 with a standard deviation of 1.28. The frequency of F's significantly increased from 13.7% to 23.1%. The fact that general decrease in student performance occurred in several of our classes suggests that this had nothing to do with changes in instruction. There were no significant changes in they way Critical Writing was taught between semesters. One instructor in Critical Writing was able to show that the majority of the increase in F scores for spring 2007 in her course resulted from student lack of attendance (32/42 F's awarded came from never attending or lack of attendance.)



**Box 2: Learning Goals of Critical Writing**

1. Effectively use information technology to find, interpret, evaluate, and use information discerningly.
2. Effectively communicate in diverse settings and groups using written, oral, and visual means.
3. Effectively employ critical thinking skills in written and oral communication.
4. Effectively relate ideas and concepts, as well as modes of inquiry, across disciplines.

**III. The Contemporary World (UNST 120): UNST Learning Objectives: 1, 2, 11, 12.**

The Contemporary World (UNST 120) was a course that began as History of World Civilizations Pt. II. (History 101.) It was designed by the faculty of the History department and modified to become a University Studies course. In academic year 2006-07 the faculty teaching the course were: Drs. Thomas Porter, Michael Roberto, James Wood, and Yunqui Zhang (History) and Dr. James Crawford (jointly appointed between University Studies and History.)

This course was designed to be taught in large lecture format (300 students.) As such, an important objective of the course was the teaching the students to properly use the Blackboard learning system. The key elements of the course syllabus are given in appendix 3.1.

Challenges of Interdisciplinarity in the Contemporary World

From its inception the Contemporary World was not sufficiently interdisciplinary. This concern was raised by the University Studies faculty as a whole with the instructors of the Contemporary World (whose appointments reside in History.) The course as delivered in academic year 2006-07 was in the main a history of the 20<sup>th</sup> century course, organized around geographic regions of the world. This was in part the result of the courses origin in the history department, and the academic training of its instructors (all were historians.) In spring 2007, the removal of the history faculty from Contemporary World was agreed to by the deans of Arts and Sciences and University Studies. This had the mutual benefit of returning the history faculty to teach upper division courses in A&S, and allowing the content of the Contemporary World course to be determined by the University Studies faculty. In this regard, the Contemporary World course is undergoing revision during the summer of 2007. The aim of the revision is to make the course more fully interdisciplinary and to change the focus from the history of various geographical regions to a focus on key global issues of the 21<sup>st</sup> century. The issues will include topics such as globalism, science and technology, environment, population, global governance, and terrorism and statelessness. This will be facilitated by the change in faculty expertise within the course (Appendix 3.2.)

Class size

Contemporary World was taught with 300 student lecture sections in academic years 2005-06 and 2006-07. National data suggest that very large lectures are difficult on students, particularly with regard to engagement (Glenn, D., *Chronicle of Higher Education*, May 27, 2007; Greenwald, A., Validity concerns and usefulness of student ratings of instruction, *American*

*Psychologist*, 1997 Nov Vol. 52(11) 1182-1186; Marsh, H. and Roche, L.A., Making students' evaluations of teaching effectiveness effective: The critical issues of validity, bias, and utility, *American Psychologist*, 1997 Nov Vol. 52(11) 1187-1197.) These studies suggest that students routinely rank large classes lower on student evaluations, without regard to the quality of instruction in these courses. This may result from students feeling less engaged in large lecture courses. To deal with this possibility, Contemporary World will be offered in 150 student sections in the fall of 2007. The course will also be team taught with both professors present in all sessions (this was not the practice in academic year 06-07.) Each section will be provided with at least one graduate teaching assistant, resulting in a student to instructor ratio of 50:1.

### Formative and Summative Assessments of Contemporary World

Classroom response technology (clickers) was piloted in this course in fall 2006 and used more extensively in the course in spring 2007. These response systems allowed faculty to determine whether students were grasping material presented in lecture and gave the ability to provide instant feedback. The software collects responses for every student in every lecture they attend. Thus, the clickers were essential for both keeping accurate attendance records in the 300 student lecture, and also allowing faculty to track individual student progress (examples of this data will be provided in the section on Analytical Reasoning.)

Summative assessments indicate that the course was effective in delivering the stated learning objectives. Despite unsupported claims to the contrary, the performance of students in the Contemporary World was quite strong. The distribution of student performance from fall 2006 is given in appendix 3.3. Withdrawals were not included in this report, however all sections were limited to 300 students (Section 120-01 was allowed to over enroll.) This means at most, there could have been 18, 8, and 22 withdrawals from sections 120-02, 120-03, and 120-04 respectively. Thus in the fall of 2006, 53.9% of students enrolled in the Contemporary World earned an A or B, compared to only 20.1% who received a D or an F.

The Contemporary World saw fall off in student performance similar to what occurred in Critical Writing and Analytical Reasoning in spring 2007. The mean student grade dropped from 2.34 to 1.88. In addition, the percentages of D and F's increased to 14.9 and 21.9%.

#### **Box 3: Learning Objective of the Contemporary World**

1. Effectively use information technology to find, interpret, evaluate, and use information discerningly.
2. Effectively communicate in diverse settings and groups using written, oral, and visual means.
11. Understand and appreciate the diversity and interrelationship of cultures locally, regionally, nationally, and internationally
12. Understand the role of social, political, and economic institutions and processes in the development of societies and the factors that lead to dynamic change in societies over time.

#### **IV. Analytical Reasoning (UNST 130): UNST Learning Objectives: 5, 6, 7, 8.**

Analytical Reasoning is the most interdisciplinary of the foundation courses, and as such is the course most difficult for students and faculty alike to comprehend. Its purpose was to demonstrate the linkages between general critical thinking skills, formal logic, mathematical and statistical reasoning, and the scientific method. The learning objectives of this course do not specify that any particular mathematical or science content matter be presented or acquired in this course. The course is about how to think, not what you should know.

The majority of the faculty who taught analytical reasoning were members of the division of University Studies, with two originating in Engineering, and one from the Chemistry Department. Appendix 4.1 describes the individuals who taught the lecture, their expertise, and topics they were responsible for in the course.

This course was designed to be taught in large lecture format (160 students.) In the fall of 2006, each large lecture was broken into 4 breakout sections (40 students each) to facilitate active learning exercises and allow students to receive feedback in smaller groups. The breakout sections were taught by a combination of tenure track faculty, adjunct faculty, and graduate teaching assistants. The graduate teaching assistants and adjunct instructors had received a week of training organized by the division of University Studies in conjunction with the Academy of Teaching and Learning in the summer of 2006. Unfortunately, there was wide variation in the quality of instruction that occurred in breakouts in the fall 2007. For example, at least one breakout instructor (David Pollard, Chemistry) simply stopped teaching his sections four weeks into the semester. This precipitated an emergency situation, requiring town hall meetings with the impacted students. To redress the student's legitimate need for a breakout experience, the dean of University Studies was forced to take on the instruction of these sections. After a review of the instruction of the breakout sections, it was decided to discontinue them for spring 2007. The main problem was the lack of experience amongst the GTA pool. None of these students had taken a course devoted to interdisciplinary thinking in mathematics and sciences as undergraduates. Resumption of the breakout sections for analytical reasoning may be possible after the quality of our graduate programs increases, or it would require additional faculty resources for the division.

The role of GTA's was also changed in the spring semester of 2007. Since they were not being used for this purpose, they were assigned as supplemental instructors for the main lectures. The GTA tutoring sessions were scheduled to allow maximum flexibility for student attendance. Two GTA's were assigned to each section, along with the two lead instructors (providing a student/faculty ratio of 40:1.) Students could attend the tutoring sessions of any lecture of the sections.

As in Contemporary World, an important objective of the course was teaching the students to properly use the Blackboard learning system. Appendix 4.2 provides the course syllabus and describes the conduct and content of the course.

#### Formative and Summative Assessments of Analytical Reasoning

Assessment in Analytical Reasoning began with a pre-test to determine student preparedness in the broad areas of critical thinking/logic, mathematical and statistical reasoning, and scientific

literacy (content and method.) The purpose of the pre-test was to establish a base line by which any value-added during the semester could be determined. Appendix 4.3 presents the data generated from the fall 2006 and spring 2007 pre-tests.

The data were available for 410 of the 950 students who took the pre-test (43.1%). The highest score was a 69% and the lowest a 7%. The mean was 0.3941 with a standard deviation of 0.103. The cumulative frequencies indicated that 90% of students registered scores lower than 50%. The results from the spring 2007 pre-test were not significantly better. These results were generated on 325 of the 800? Students. The maximum was a 72% and the minimum was a 7%. The mean was 42.83 with a standard deviation of 0.107. The cumulative frequencies indicated that 84.9% of the students scored less than 51% on the pre-test.

The results of the pre-test were not surprising. Our operational hypothesis was that many of our students would be deficient in areas of mathematics and science. This hypothesis is supported by national data on math and science proficiency demonstrating that a large disparity exists between historically underserved populations (African Americans, Hispanics, and American Indians) versus historically privileged populations (European Americans and Asian Americans.) For example, in 2005, The Nation's Science Report Card demonstrated that only 2% of African American 12<sup>th</sup> graders were proficient in science, compared to 86% of European Americans. In North Carolina, the 2005 National Assessment of Education Progress showed that only 12% and 6% of African American 8<sup>th</sup> graders were proficient in mathematics and science, compared to 42% and 31% of European Americans respectively. Thus, based on the academic characteristics of our freshman class, we expected that many of them would have deficiencies in their mathematics and science backgrounds.

The questions in the pre-test were pitched at a level such that a high school senior with the standard repertoire of math and science courses should have been able to answer them with no difficulty. The pre-test was administered with a questionnaire that allowed us to determine the mathematics and science background of the students. The data indicated that the vast majority of these students had taken both the standard math and science sequence expected of North Carolina high school students. The questionnaire asked the students to rank themselves relative to their peers in mathematics and science ability (1 poor, 2 fair, 3 good, 4 excellent.) In a sample of 171 student tests administered in the fall 2006, the mean self-rank was 2.82 with a standard deviation of 0.706, and 2.59 with a standard deviation of 0.724 in mathematics and science respectively. The students were also asked whether they considered themselves "critical thinkers." No definition of critical thinking was given in the questionnaire, and 50.1% of the students described themselves as critical thinkers. The scores on the pre-test within this sample contradicts the self-ranking. While most students ranked themselves between fair and good in mathematics and science, the mean score for this sample group was 0.399 with a standard deviation of 0.103. Thus the mean score on the test indicates a poor knowledge of mathematics and science for this group. Neither was there any correlation between a student's self-rank and their performance on the test. The Pearson correlation coefficient ( $r$ ) for the self-rank with test score was 0.171 and 0.085, for mathematics and science with test score ( $N = 171$ , ns.) Neither correlation was statistically significant. There was a highly significant correlation for the student's self-rank in mathematics with their self-rank in science ( $r = 0.355^{**}$ ). Taken together these data indicate that this sample of students entered the university with a false sense of their

mathematics and science comprehension. The situation was worse when one considers that the majority of students began with this false sense of mathematics and science proficiency combined with the idea that they were critical thinkers.

#### Clicker use in formative assessment

To help offset the disadvantage of large class room settings, radio frequency class room response systems were used in Analytical Reasoning (clickers.) In academic year 2006-07, the clickers were provided by Interwrite PRS, the industry leader in classroom response. The PRS system allows instructors to develop questions that can be used for formative assessment within a classroom presentation. Each student has a clicker with a unique radio frequency id. Thus there answers are recorded by the PRS system and stored in the electronic gradebook. During the lecture the student responses are displayed on the board allowing the students immediate feedback concerning whether they grasp a concept discussed in class. Instructors have the option of allowing the students to receive a message informing them of whether their individual responses are correct. Or, instructors may choose to not allow students to receive this message, allowing for the option of peer teaching during the class session. To insure that students were accurately responding to the formative assessment within class, students were informed that one question amongst those used in the session would be counted as a graded quiz. The students were not told, which question would be counted. Appendix 4.4 gives an example taken from a session report in Interwrite-PRS. The question is shown, along with the class responses, as well as an accounting of each individual student's response. We have this data for every class session that used Interwrite-PRS in academic year 2006-07. The ability to collect this sort of data involving student learning has tremendous potential to improve teaching at North Carolina A&T State University, and should be considered for adoption by every academic unit.

The implementation of the Interwrite-PRS system required learning on both the part of the students and the faculty. Many of our students had underdeveloped technical and information literacy skills in fall 2006. These students had difficulty logging on to the registration web site to register their clickers. There were also some technical problems with loading student responses directly into Blackboard. These issues were ironed out by the University Studies faculty over the course of fall 2006. Enough concerns about the ease of use of Interwrite-PRS remained such that in the spring 2007, an alternative system from Turning Point was piloted in two sections of Analytical Reasoning. At the end of the semester, a survey was taken to allow the students to compare the two systems. The results are given in appendix 4.5.

#### Summative Assessments from Analytical Reasoning

The summative assessments of this course suggest that despite all of the difficulties experienced in its implementation, students learned significantly. The fall and spring summative assessments are given in appendix 4.6. The fall results include all grades submitted to the registrar, while the spring results were calculated by the grades submitted to the Dean at the time of the writing of this report. On the face of the data, the fall and spring summative results are diametrically opposed. In fall 2006, a significant percentage of students received an A or B (24.6% and 29.4%) versus a much smaller percentage of D or F's (5.6% and 10.9%) respectively. This situation is reversed in the spring 2007 sample (A and B's are 6.2% and

19.3% versus D and F's at 23.0% and 22.5%.) It is hard to interpret these results. It could be that elements of the course changed significantly, or it could be that elements of the student population changed significantly. Given that the difference between fall and spring results is also observed in Critical Writing, it is more likely that the student population is somehow different in spring semester. One explanation for this would be if there was a higher rate of failure in students who are repeating the course, versus those who are taking it for the first time. Appendix 4.6 includes an analysis of fall 2006 grades broken out by major. These results showed that students who declared Nursing as their major performed best in fall 2006, followed by Engineering, Business, Arts and Sciences (math-science) and Agriculture. An analysis of variance by major was performed with bonferroni post-hoc analysis showing the major effect was statistically significant. However, it also revealed that statistically, Nursing, Engineering, and Business only fared better than undeclared students, Education, and Technology. They did not do better statistically than Art and Science majors, whether they were science or non-science. These results are important in that they vitiate the claim made by some detractors of the AR course, that science and engineering students don't really require this course. In fact, by objective, measurable outcomes, their learning in AR was equivalent to those of non-science students. It must be remembered that the benchmark for assessing learning in this course are the pre-test results, which indicated that all students entered in fall 2006 with weak critical thinking, science and mathematics proficiency.

While incomplete, the results for spring 2007, require serious attention. The mean grade in the course dropped from 2.51 in fall to 1.63 in spring. This is startling when one considers that the logistics of the course were running much more smoothly in spring as opposed to fall semester. It is possible that when grades from the remaining AR sections become available that the disparity between spring 07 and fall 06 will get smaller. However, the faculty will review the differences between the two semester to ensure that fall 2007 does not see a repeat of this phenomenon.

**Box 4: Learning Objectives of Analytical Reasoning**

5. Use analytical thinking skills to evaluate information critically.
6. Apply multiple modes of inquiry, including quantitative and qualitative analysis, to formulate, describe, evaluate, and solve problems.
7. Apply scientific reasoning skills to model natural, physical, social, and aesthetic phenomena using multiple modes of inquiry.
8. Use a wide range of disparate information and knowledge to draw inferences, test hypotheses, and make decisions.

**Part V. UNST 140: UNST Learning Objectives: 9, 13, 14, 15.**

In many ways, the African American Experience is just as interdisciplinary as Analytical Reasoning. Yet for a number of reasons, the resistance to interdisciplinarity in this course was much less on the parts of the students and the faculty. In part, this results from the fact that the discipline of African American Studies has been interdisciplinary from its inception in the late 1960's. Generally, African American Studies has been predominated by the arts, humanities, and social sciences. Furthermore, the subject matter of the African American Experience was

more easily appreciated by our students, many of whom, had never had any significant exposure to this content in their high schools.

The faculty who taught the African American Experience were members of the division of University Studies. Appendix 5.1 describes the individuals who taught the lecture and their expertise. By far, the African American Experience course was the most understaffed relative to the instructional need. For this reason, two tenure track hires were made during the spring 2007 faculty search. In the fall 2007, Drs. DeReef Jamison and Tanya Price will be joining the African American Experience group.

This course was delivered in a variety of formats, including large lecture (160 students), with 4 breakout sections (40 students each.) These were used to facilitate active learning exercises and allow students to receive feedback in smaller groups. The breakout sections were taught by a combination of tenure track faculty, adjunct faculty, and graduate teaching assistants. The graduate teaching assistants and adjunct instructors had received a week of training organized by the division of University Studies in conjunction with the Academy of Teaching and Learning in the summer of 2006. In addition, some sections were taught at a limit of 40 students, as well as an honors section that was taught with 28 students in spring 2007. Dr. Cecily McDaniel taught the course in on-line format both semesters.

The course was designed around topics in the African American Experience. Appendix 5.2 describes the course syllabus and learning objectives. One of the most distinctive features of the course was the group projects. The projects were assigned in all sections, and the students judged which of their peer projects was best in their section. The winning projects went on to a division wide competition which was judged with the aid of faculty from across the campus. The division-wide winners will be honored in a University Studies award ceremony to be held in the fall of 2007.

#### Formative and Summative Assessments in the African American Experience

Formative and summative assessments in this course followed techniques used in both Critical Writing, as well as Analytical reasoning. Appendix 5.3 provides summative data from spring 2007. The frequency of A and B's was 9.0% and 35.9% respectively, compared to 12.3% and 11.9% D and F's. The mean grade for the course was 2.17 with a standard deviation of 1.13. This appendix also includes an analysis of grades by instructor. The analysis of variance shows that there was an instructor effect, however this resulted from the fact that Graves and McDaniel taught sections that were in different formats compared to the general courses of Alston, Barnes, and Blackmore. Graves had an honors section which scored significantly higher grades, and McDaniel taught on-line. Neither format would be expected to be equivalent to the general sections.

**Box Five: Learning Objectives of the African American Experience**

9. Understand African/African-American culture and traditions, including political, economic, and social challenges affecting people of African descent.
13. Understand the role of literature, music, and the fine arts in describing, defining, and celebrating the human condition in diverse world cultures.
14. Understand and apply ethical reasoning principles to resolve moral, social, and professional issues.
15. Understand the role that markets, governments and other social institutions can play in reducing social and economic inequality

Summary of Part I: Implementation and Assessment of University Studies Foundation Courses in Academic Year 2006-07

The implementation of the University Studies foundation courses in academic year 2006-07 was a massive enterprise, taken on by two few, at possibly one of the most challenging times in the history of the institution. With that said, the data presented in this report indicate, that from the point of view of the changing over the core curriculum, the mission was amazingly successful. The faculty's goal from the onset was to change the culture of scholarship amongst the freshman class. We wanted to raise standards and communicate high expectations. We consistently communicated this message, despite all of the negative publicity that appeared in the local press, and the fear-mongering and invective that was hurled at the members of this division. The strain produced by the gap between the enormity of our charge and the resources on hand to accomplish it, had a number of negative side effects. In hind sight, some of these may have been avoidable. In fall 2007 there will be much to do to repair damage that resulted from this situation. These tasks are far from insurmountable, and with new faculty resources added to the division, we feel that we will be able to address any new concerns that arise. However, our data suggest that the foundation courses are firm, despite claims to the contrary.



## Appendix 1.1: Boiler Plate Material in All University Studies Syllabi.

University Studies ###  
Fall 2006

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 student 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 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.

### 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 student honor code.

### 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 can/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.

Courses that follow a MWF schedule will meet on Friday as required.

### 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.  
[lost or stolen clickers]

### Educational Etiquette

All cell phones, pagers, and personal communication devices must be tuned off for the duration of the class period.

There will be no eating or drinking in class (other than bottled water.) Students will be respectful of their professor and colleagues. Any behavior that distracts (e.g. eating, talking while others are talking, etc.) or is disrespectful (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.

Student success in this course depends upon the development of scholarly habits. Participation in class discussion and group work is mandatory. Collegial responsibility and respect are also compulsory.

### Turnitin

All written assignments in UNST courses will be turned in electronically via **Turnitin.com**. Access to this web site will be given to you by the instructor. Turnitin compares your writing with virtually every reference that exists on the internet as well as a bank of student papers that has been submitted from all over the world. Its purpose is to help students learn the difference between proper citation and quotation of other authors' work and plagiarism (copying others writing without citation.) Students who do not own a PC will submit their work via one of the computer labs on campus.

The URL for turnitin.com is:

<http://www.turnitin.org/static/home.html>

You will go there and create a user profile using the following information:

<b>class ID:</b>	1434615
<b>password</b>	analytical06

### 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 self-identify 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 (A309 NCB) and the Center for Student Success (312 Hodgin Hall).

## Appendix 2.1: Critical Writing Faculty – Fall 06 – Spring 07

<b>Deborah Barnes</b> .....	<b>Assoc. Prof.</b>
B.A., Tuskegee Institute, M.A., University of North Carolina A&T, Ph.D., Howard University.	
<b>Joseph Goeke</b> .....	<b>Lecturer</b>
<b>Noreen Hannon</b> .....	<b>Lecturer</b>
B.A., St. Xavier University; M.A., University of North Carolina at Greensboro	
<b>Matthew C. Armstrong</b> .....	<b>Instructor</b>
B.A., James Madison University; M.A., University of Virginia, M.F.A. University of North Carolina at Greensboro	
<b>Leslie M. Brown III</b> .....	<b>Instructor</b>
B.A., Elizabeth City State University; M.A., University of North Carolina at Greensboro	
<b>Marlene Hendricks</b> .....	<b>Instructor</b>
B.A. UNC Greensboro, M.A. North Carolina A&T State University	
<b>James T. Hill</b> .....	<b>Instructor</b>
B.A., West Virginia Wesleyan College; M.A., West Virginia University; M.A. Hollins University; M.F.A., University of North Carolina at Greensboro	
<b>Moussa Issifou</b> .....	<b>Instructor</b>
B.A., M.A., Universite' du Benin	
<b>Jennifer K. Noller</b> .....	<b>Instructor</b>
B.A., Davidson College; M.A., Hollis University, M.F.A., University of North Carolina at Greensboro	
<b>Ruth Omunda</b> .....	<b>Instructor</b>
B.A. University of Nairobi, M.A. North Carolina A&T State University	
<b>Virgil Renfroe</b> .....	<b>Instructor</b>
B.A., M.A., University of North Carolina at Greensboro	
<b>Pamela Richardson</b> .....	<b>Instructor</b>
B.A., M.A., North Carolina A&T State University	

## Appendix 2.2: Assignments, Activities, and Assessments in Critical Writing

Cluster	Assignment	Activities	Assessments	Learning Domain/Critical Thinking Skill
<b>Weeks 1-2</b>	Diagnostic Essay	Describe an artifact		Knowledge
	Narrative/Description	Interview	Ask students to cooperate with others	Observation
		Event Review	Weekly reports	(describe, identify, define)
	(Introduce Portfolio)	(Collaboration)	Image analysis	
			Concept Mapping	
			Reflection	
			Annotate Draft	
			Minute Papers	
			Muddiest Question	
			Oral Response	
<b>Weeks 3-4</b>	Learning Skills	Summarize	captioning	Comprehension
		Paraphrase	Double entry journal	Experience
		Note-taking /Outlining	Typed notes	(summarize, interpret, associate)
		Critical Reading	Reading quizzes	
		Plagiarism/ Documentation	Scavenger hunt	
		Vocabulary Acquisition	Explication exercise where students show they Comprehend mature vocabulary, Understand, and integrates literal and figurative meanings of a text	
		Visual Literacy	Photograph syntax	
		Using Technology	Power point presentation	
		Speaking Skills	Mini presentations	
		Group Work	Group project assignments	
<b>Weeks 5-8</b>	Analytic Essay	Introduce Course Theme	Analyze and interpret	Analysis

	Oral Presentation/ Collaboration	Shaping Argument	Present issues that give students opportunity to argue	Reasoning
		Frame Productive Questions		(demonstrate, solve, apply)
		Access Information		
		Evaluate Information /Sources		
		Consider All Points of View		
		Reinforce Interdisciplinarity	Assign work that considers approaches across disciplines	
		Logos, Pathos, Ethos	Written and oral exercises for students to practice the use of the 3 modes	
		Induction/Deduction	Have students identify reasoning modes from texts	
		Logical Fallacies	Have students identify fallacies in selected arguments	
		Group Work		
		Integrating Technology		
		Library Visit		
<b>Weeks 10-13</b>	Researched Argument	Generate Research Questions	Have students demonstrate their ability to formulate effective questions through in class exercises	Synthesis
		Developing a Claim/Support	Have students identify issues, and then ask them to write supportable claims.	Reflection
		Exploring/Gathering Sources		(generalize, integrate, recommend)
		Synthesize Ideas w/ Source Material	Have students select articles on class theme	

			and synthesize the information	
		Documentation/ Plagiarism		
<b>Week 14</b>	Portfolio with Reflective Essay	Revision/Reflection		Evaluation
		Journal		Communication
		Course Evaluation		(write, present, debate)

## **Appendix 2.3: Pedagogy and Technology 1: e-Reading Rooms and Their Implications for Underperforming Universities**

### **Benefits:**

1) e-Reading Rooms, if used to their potential, will help UNST programs meet many of their Learning Goals, as they do with UNST 110: “Effectively use information technology to find, interpret, evaluate, and use information discerningly.” “Effectively communicate in diverse settings and groups using written, oral, and visual means” (written). “Effectively employ critical thinking skills in written and oral communication” (written). “Use analytical thinking skills to evaluate information critically.”

2) At NCA&T, e-Reading Rooms will help combat the obstacles that come with low verbal scores, namely poor comprehension. Students often say they don’t “get” the reading, but as a group, with duties parceled out among members, in a setting that is interesting in itself to them, and with credit given towards weekly writing requirements, the task should appear less daunting and boring and fruitless. Because duties rotate from member to member, and because one of the duties (as I have it set up) is to locate a source and then email the link to other group members (therefore applying technological skills to real situations), students will be participating in student-centered learning. While participating, students can practice identifying, analyzing and creating (therefore learning *and* applying) inductive and deductive arguments; can do the same with logos, pathos and ethos; and they will be writing non-stop for the duration that individual instructors choose. In a best-case scenario, peer pressure will work to produce positive outcomes.

So far in my experience, students are taking the task seriously, are writing in excited tones, and are working together well. Whatever the course, faculty should be able to combat under-prepared readers by using these rooms.

3) If we can demonstrate with collected evidence that these e-Reading Rooms work and then publish a correlation study between participation and success on quizzes, we can think about convincing all underperforming, higher-level institutions to utilize them. I could lead workshops at those universities that would cover everything gone over here, as well as information gathered over the next six or so months.

### **e-Reading Room Breakdown:**

e-Reading Rooms are essentially chat rooms in which students meet outside of class, from anywhere on campus to anywhere in the world. Because they are chat rooms, students will be writing non-stop for the duration. This has obvious benefits, so long as students understand specific requirements when it comes to the level of writing they are expected to maintain. Although they are valuable for the small and hopefully lasting scholarly communities they will help build, the Rooms may be most valuable for the venue they provide to discuss and practice difficult lessons, such as inductive and deductive reasoning, or seeking out the assumptions behind claims. Personally, I find it difficult to say where the most value lies. I am currently using them to help students grasp the international and highly political literature we’re reading for our



course theme, terrorism. In upcoming weeks, I plan on asking them to evaluate any claims in articles with assumptions in mind.

Note: I split the course theme up into sub-categories in some way. As mentioned, my theme is terrorism. This semester I have divided e-Reading Rooms according to North, East, South, West and Central Africa. I have provided a source for them to read on a weekly basis: *Africa's Mail & Guardian*. (This is an on-line newspaper the link to which I copied and pasted into External Links.) Students meet outside of class one hour a week to discuss an article that is related to terrorism, whether directly or indirectly. Students must have read the article before their meeting. If there are no appropriate articles on their region for that particular week, the designated student is to do a search and find an article involving terrorism in that region, albeit from a different source. (I checked to be sure there would be a supply of articles in each region.) The link to this they must email to the other students.

Example: When going over assumptions behind claims, ask students to identify those assumptions, but not only behind the claims the author might make but also behind the claims their peers make (again, practicing then applying what they've learned to real situations) throughout the discussion. In addition, ask them to assess the comprehensibility of each others' writing. Note to them that this should include grammar, sentences, spelling, etc. At the end of the session, students should nominate one another for best set of posts\*. Offer prizes for winners.

\*Change criteria according to weekly lessons. Try to figure out what criteria will allow your department to attain some of the specific learning outcomes it is striving to meet. Students with the most nominations should be rewarded, in some manner. Evaluation based upon criteria is a key aspect of critical writing.

**Group Delegations:** These should be on a rotating basis, and the duties would need to be adapted from course to course.

As stated above, one student must be responsible for deciding which article from their section (in my case, their geographical section of Africa) that the group of five will read. This student must use the "email group option" and provide a link to the article by cutting and pasting the URL into the message they send.

One student must be responsible for searching the definitions of unfamiliar vocabulary, whether by using an up-to-date dictionary or by opening up another screen\* and searching via an online dictionary. They must then report back with the definition\*\*.

One student must provide maps to the other students that show the geographical location within its larger context, preferably both nationally and internationally. This student would also cut and paste the URL and email it to the other students *before the group meets*.

Each week this leaves two other members whose primary duties are to put forth questions about the selected article.

I give students two pages of credit towards their five pages a week for these because they are writing for an hour non-stop each week. I stipulate that each must use correct Standard English, and stress to them the need for complete sentences, correct grammar and appropriate capitalization, as well as disallowing chat language.

\*Students must open a new window. If they try to leave Blackboard itself then the e-Reading Room will close for them, though they can easily get back to it.

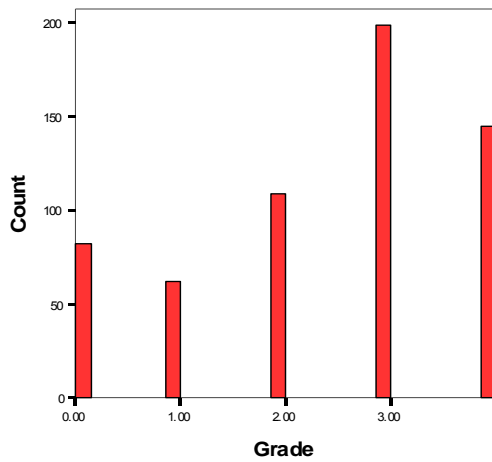
\*\*Students do not have the option to cut and paste into these rooms, for some reason. They should be prepared. They can quickly email the information if they wish.

## Appendix 2.4: Summative Assessments for Critical Writing

### Sample Grades Critical Writing Fall 06

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	.00	82	13.7	13.7	13.7
	1.00	62	10.4	10.4	24.1
	2.00	109	18.3	18.3	42.4
	3.00	199	33.3	33.3	75.7
	4.00	145	24.3	24.3	100.0
	Total	597	100.0	100.0	

### Frequency Distribution for Critical Writing Grade Sample – Fall 2006

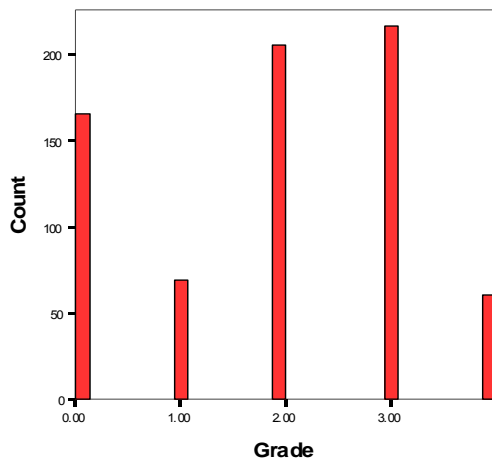


### Mean score for Critical Writing Grade Sample – Fall 2006

	N	Minimum	Maximum	Mean	Std. Deviation
Grade	597	.00	4.00	2.4405	1.32929
Valid N (listwise)	597				

**Sample Grades Critical Writing Spring 2007**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	.00	166	23.1	23.1	23.1
	1.00	69	9.6	9.6	32.7
	2.00	206	28.7	28.7	61.3
	3.00	217	30.2	30.2	91.5
	4.00	61	8.5	8.5	100.0
	Total	719	100.0	100.0	



**Frequency of Grades Critical Writing, Spring 2007**

**Mean Grade Critical Writing Spring 2007**

	N	Minimum	Maximum	Mean	Std. Deviation
Grade	719	.00	4.00	1.9138	1.28666
Valid N (listwise)	719				

## **Appendix 3.1: Contemporary World Syllabus**

### **Required Text**

Your text for the course is a soft cover publication titled *The Contemporary World: University Studies 120 for North Carolina A&T*. The cover has a photo of the “February One (1960)” monument to the A&T Four.

### **PRAXIS competencies**

#### **World History Questions**

- Nationalism and Imperialism in Europe, the Americas, Africa, and Asia
- Twentieth Century
- Current Trends

#### **Geography Questions**

- Physical Geography
- Regional Geography

### **Blackboard: The Course Website**

Learning to use Blackboard technology skillfully is an important objective for this course. To insure success, students must develop a level of basic mastery of its e-learning component. Students must be personally responsible for accessing and using Blackboard.

**Accessing Blackboard:** All of the assignments and assessments of student learning in this course will be done electronically using Blackboard. It is absolutely imperative that you establish access to Blackboard at the start of the semester. You must first get your PIN from your advisor and create an Aggie Email account to access Blackboard the first time. You will then use the first part of your email log-in and PIN to get into the Blackboard site for your particular course and section. Check this site daily for new information.

**Using Blackboard:** Use these parts of the course website to:

- Read and consult the syllabus = Syllabus
- Check for daily/weekly announcements from instructors = Announcements
- Take the online quizzes = Course Information
- Check your quiz and exam scores = Gradebook
- View the lists of key terms = Course Documents
- Investigate issues = External Links
- Discuss issues = Discussion Board

**Taking the Online Quizzes:** Follow these steps to avoid problems

- When taking the online quizzes, try whenever possible to log-in from one of the on-campus computer labs or Bluford Library, which has wireless laptops and numerous computer stations available. This will help you avoid network problems.
- Go to Course Information to locate the links to the quizzes. Once you begin a quiz you cannot open a new browser window to search for information.

Doing so will cause the quiz to crash and you may get “locked-out” of the quiz. Also do not hit the Save button. Simply input your answers and when you are ready to turn it in hit the Submit button.

- If you have a technical problem during a quiz you will see a small lock icon where you would normally see your quiz score (in the online grade book). Your instructors can reset your account so that you can re-take the quiz. Pay attention to your instructors’ in-class and Blackboard announcements on the days before and during the quizzes.
- You will have four days to take each quiz. If a student does not attempt a quiz within its window of availability that student will not be allowed to make it up. There are no make-up quizzes or exams in this course except under extraordinary circumstances (which require written documentation).

### **A&T Email and Blackboard Issues**

- Aggie Help Desk = (336) 334-7195 (basement of Bluford Library)
- For Aggie Email Accounts go to <http://www.ncat.edu/accounts/request.php>

### **Quizzes, the Final Exam, and Final Course Grades**

- Final course grades will be determined by a point system and grading scale
- Each student can earn up to 175 points by adding up their five quiz scores and their final exam score
- There will be a total of five quizzes given during the semester.
- Students are required to take all quizzes. See the Course Schedule for specific days and times.
- Quizzes will be available on Blackboard for a period of four days – after that the link to that quiz will not work - instructors will provide additional instructions on taking the online quizzes in class during the semester (and always watch for last-minute Announcements on Blackboard). See also “Taking the Online Quizzes” on pg. 4 above.
- The final exam will be given during final exams week. See the Course Schedule for specific days and times.
- The final exam will be a cumulative exam – it will build upon the material covered in the previous quizzes.

### **Point System**

5 Quizzes = 125 points (25 points each)

Final Exam = 50 points

Total points = 175

### **Grading Scale**

A = 157-175 points

B = 140-156

C = 122-139

D = 105-121

F = 104 and below

**Schedule of Readings:** See the Course Schedule for the specific weekly reading assignments in the custom textbook. It is imperative that students keep up with the reading to be successful in this course. The quizzes and the final exam will include material covered in the textbook that may not be covered elsewhere.

**Lists of Key Terms:** At the end of each unit, students are encouraged to use the lists of key terms to review and prepare for the quizzes. Make sure you can identify each term (or pair of terms) and its relationship to the major themes of the course. The lists should also help students stay focused on the main points when they take notes on the readings (strongly recommended).

**Bibliography:** At the end of every chapter in your custom textbook are several useful tools. These include suggestions for further reading and searching the web, as well as standard bibliographies. Students wishing to explore any of the subjects covered in the course in greater depth are strongly encouraged to use these tools. Also check the External Links section of the course website for selected links on modern and contemporary world history.

### **Course Outline (subject to minor changes)**

***Introduction to the Course:*** comments by faculty team, going over the syllabus, explaining University Studies

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#### ***What is the Contemporary World?***

**Instructor: Dr. Roberto**

Topics: Defining the Contemporary World; Facts and Figures; Historical and Political Concepts; Overview of the Long 20<sup>th</sup> Century

Reading: “International Contact and Conflicts, 1914 – 1999”

**MLK Day, Monday 1/16, No Classes**

**QUIZ #1:**

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#### ***Europe and Russia***

**Instructor: Dr. Porter**

Topics: Geography and Population; Apex of European Imperialism; the First World War; the Russian Revolution and the USSR; The Great Depression, the Rise of Fascism; the Second World War; the Holocaust; Postwar Germany and Europe, Stalinism; Cold War Crises in Europe, Nuclear Arms Race; the Revolutions of 1989; Collapse of the Soviet Union; European Union

Reading: “Russia and Eastern Europe;” plus review “International Contacts and Conflicts, 1914 – 1999”

**QUIZ #2:**

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*China and India*

**Instructor: Dr. Zhang**

Topics: Geography and Population; European Imperialism in Asia; India's Struggle for Independence; India since Independence; The Chinese Revolution of 1911; WWII in East Asia; the Chinese Revolution of 1949; China under Communism; China since the Cold War

Reading: "China and India, 1914 – 2000"

**QUIZ #3:**

---

*The Americas*

Instructor: Dr. Wood

Topics: Geography and Population; Political Independence and Neocolonialism; US Interventions in Latin America; Mexican Revolution; Populism and Socialism; Cuban Revolution; Cold War and Military Rule; Latin America since the Cold War

Reading: "Latin America: Revolution and Reaction in the 20<sup>th</sup> Century"

**QUIZ #4:**

---

The Middle East & North Africa

*Instructor:*

Topics: Geography and Population; WWI and the Collapse of the Ottoman Empire; the Creation of Israel and the Arab-Israeli Conflict; Oil in the Middle East; Iranian Revolution; the Persian Gulf Wars

Reading: "The Middle East and North Africa, 1880s – 2000"

**QUIZ #5:**

---

*Sub-Saharan Africa*

**Instructor:**

Topics: Geography and Population; Africa under European Imperial Rule; Movements for Independence; the Process of Decolonization; Rise and Fall of *Apartheid* in South Africa; the Problems of Postcolonialism

Reading: "Sub-Saharan Africa, 1914 – 2000"

---

*Summing Up: The Past in the Present*



**All Faculty**

What knowledge-based information have we learned?

What learning methods have we learned?

What skills have we developed?

How have our views of the contemporary world changed?

How can we go further with our study of the contemporary world?

Final Reading: “Globalization and Resistance: World History 1990-2003”

**FINAL EXAM:**

**Appendix 3.2: New Hires Slated to Teach Contemporary World, Fall 2007.**

<b>Name</b>	<b>Expertise</b>
Dr. Agye Boake-Boaten	Cultural Anthropology, Homelessness – Street Children
Dr. Robert Drake	History, Genocide
Dr. Philip Rubio	History, Labor History
Dr. Dianne Williams	Sociology, Criminal Justice
Dr. Wendy Hamblett	Philosophy, Violence scholar
Mr. Michael Lupro	Cultural Studies
Dr. James Crawford	History, Military Affairs

### Appendix 3.3: Student Grade Distribution Contemporary World

#### Fall 2006

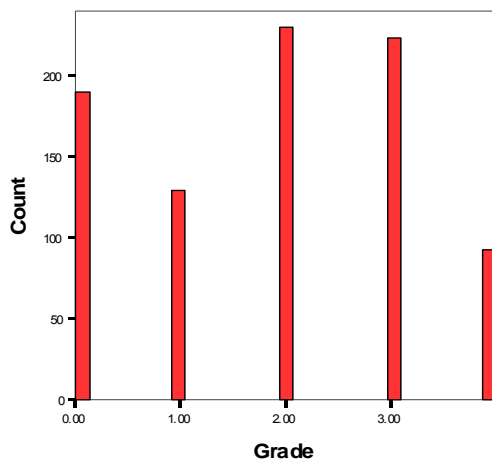
Grade	120-01	120-02	120-03	120-04	Total %
A	28	39	50	31	12.8
B	119	123	134	99	41.1%
C	91	75	64	68	25.8%
D	28	16	17	35	8.3%
F	37	28	27	45	11.8%
	303	282	292	278	

Mean Grade Fall 2006 = 2.34

#### Spring 2007

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	.00	190	21.9	22.0	22.0
	1.00	129	14.9	14.9	36.9
	2.00	230	26.6	26.6	63.5
	3.00	223	25.8	25.8	89.2
	4.00	93	10.7	10.8	100.0
	Total	865	99.9	100.0	
Missing	System	1	.1		
Total		866	100.0		

#### Frequency of Grades Spring 2007



#### Mean Grade Spring 2007

	N	Minimum	Maximum	Mean	Std. Deviation
Grade	865	.00	4.00	1.8844	1.30545
Valid N (listwise)	865				

**Appendix 4.1: Analytical Reasoning Faculty – Academic Year 06-07.**

<b>Name</b>	<b>Semester</b>	<b>Origin</b>	<b>Expertise</b>	<b>Crit./Logic</b>	<b>Math/Sci</b>
Dr. Joseph L. Graves, Jr.	Fall/Spr.	UNST	Biology	+	+
Dr. Fred Humphrey	Fall/Spr.	UNST	Philosophy	+	
Dr. Stephen Ferguson	Fall/Spr.	UNST	Philosophy	+	
Dr. Melissa Hagan-Hughes	Fall/Spr.	UNST	Epidemiology		+
Dr. Gelonia Dent	Fall	Eng.	Bioengineering	+	+
Dr. Kenneth Roberts	Fall/Spr.	Eng.	Mechanical	+	+
Dr. Ron Steed	Fall/Spr.	UNST	Engineering		+
Ms. Barbara Pioro	Spr.	UNST	Engineering		+
Mr. Virgil Renfroe	Spring.	UNST	Critical Writing	+	
Dr. John Emrani	Fall/Spr.	Chemistry	Chemistry		+

## Appendix 4.2: Syllabus of Analytical Reasoning

### OVERVIEW

This course is interdisciplinary. It will utilize subject matter from a variety of academic disciplines, to introduce students to critical thinking. We will emphasize logical, quantitative and scientific reasoning. The pedagogical approach utilized in this course introduces students to how critical thinking is accomplished for any specific discipline as well as for interdisciplinary problems. **It has five learning objectives:**

1. Students will learn the basic concepts of probability, estimation, data collection, recognition of erroneous data, and understand their importance in solving problems.
2. Students will use mathematical, scientific, and technological tools to analyze information and make informed decisions.
3. Students will develop critical, logical, and analytical thinking skills in order to evaluate data and formulate reasonable conclusions.
4. Students will use the scientific method and formulate questions that will enable one to logically define, test, and ultimately solve a variety of problems.
5. Finally, students will utilize the above tools to analyze and evaluate news reports and statistical studies.

### REQUIRED TEXTS:

1. Brooke Noel Moore and Richard Parker, *Critical Thinking* 8<sup>th</sup> Edition, McGraw Hill, 2007.
2. Jeffrey O. Bennett and William L. Briggs, *Essentials of Using and Understanding Mathematics: A Quantitative Reasoning Approach*, Addison-Wesley, 2003

### PREREQUISITES

There are no prerequisites for this class, other than an inquisitive mind. Students should be warned that analytical reasoning does require use of mathematical and statistical tools. We will present all the mathematics required to comprehend all of the topics addressed in the course.

### GRADING

The summative evaluation will consist of: homework and quizzes [20%]; writing assignments [10%]; in class examinations [20%]; mid-term examination [25%]; and a final examination [25%]. All grades are determined by your earned point totals. No other factors will be considered when determining your final grade. Anyone asking for special grading consideration will be referred to this policy.

### PAPER GRADES:

There will be writing assignments. A common student misconception is that everyone starts with full points and is marked down for errors or deficiencies. Papers that meet the standard requirements are C papers (75% of total points). Papers with errors or that leave out major arguments or objections are graded down from there. Papers that exceed the standard requirements and are superior to the average paper will receive a B. Only papers that are error free, meet all requirements, and demonstrate outstanding work for this course will receive an A.

*Analytical Reasoning*  
*University Studies 130*

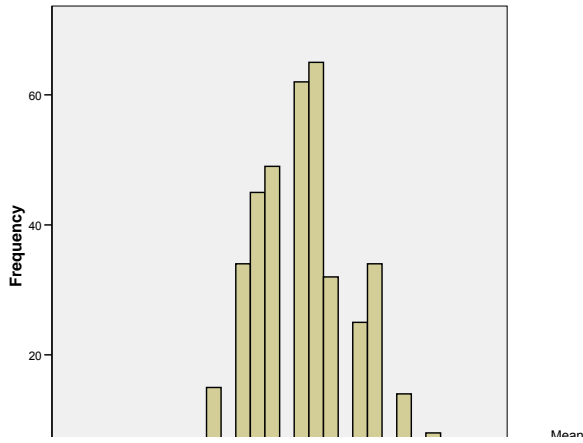
Section	Dates	Outline of Topics to be Covered	Readings
<b>ONE</b>		<b><i>What is Critical Thinking?</i></b>	
	August 21-25	<i>Introduction</i>	Chapter 1(Moore & Parker)
	Aug. 28-September 1	<i>Sharpening Our Tools: The Basics of Arguments</i>	Chapter 7,8 (Moore & Parker)
	September 4-8	<i>Credibility</i>	Chapter 3 (Moore & Parker)
	September 11-15	<i>Analysis: The Heart of Critical Thinking</i>	Adolph Reed, "Classifying the Hurricane"; Five Perspectives on Malcolm X Assassination
	September 18-22	<b><i>Examination #1</i></b>	
	September 25-29	<i>Thinking Critically: Steering Clear of Argumentative Quicksand</i>	Chapter 4 (Moore & Parker)
<b>TWO</b>		<b><u><i>Quantitative Reasoning</i></u></b>	
	October 2-6	<i>Numbers in the Real World</i> <b><i>Midterm Examination</i></b>	Units #3A, 3B (Bennett & Briggs)
	October 9-14	<i>Causal Reasoning.</i>	Chapter 11 (Moore & Parker)
	October 16-20	<i>Statistical Reasoning, Part 1</i>	Units #5A, 5B (Bennett & Briggs)
	October 23-27	<i>Statistical Reasoning, Part 2</i>	Units #5C, 5D, 5E (Bennett & Briggs)
	October 30-November 3	<b><i>Examination # 2</i></b>	
	November 6-10	<i>Probability: Living with the Odds.</i>	Units #7A, 7B (Bennett & Briggs)
<b>THREE</b>		<b><u><i>Scientific Reasoning</i></u></b>	
	November 13-17	<i>Introduction to Scientific Thinking and Scientific Method.</i>	TBA
	November 20-24	<i>Scientific Method</i>	TBA
	November 27-December 1	<i>Creationism, Evolution and the Criteria of Adequacy</i>	TBA
	December 5	Classes End	
	December 6	Reading Day	
	December 7-13	<b>Final Examination Week</b>	

**University Studies 130 - Analytical Reasoning**  
**Homework assignments**

<b>Week</b>	<b>Topic</b>	<b>Assignment</b>
August 21-25	What is Critical Thinking?	Ex. 1-3 (#2, 3, 5, 6, 7, 9, 10) Ex. 1-4 (#2,6,8,12, 14) Ex. 1-5 (#2, 5, 6, 7, 8) (Moore & Parker)
Aug. 28-September 1	Sharpening Our Tools: The Basics of Arguments	Ex. 7-2 (#2, 3, 5, 6, 8, 9) Ex. 7-3 (#2, 3, 5, 6, 8, 9) Ex. 7-10 (#2, 3, 5, 6, 9) Ex. 8-1 (#2, 3, 5, 6, 8) Ex. 8-3 (# 2, 3, 5, 6, 7) Ex. 8-4 (#2, 3, 5, 6, 8) (Moore & Parker)
September 4-8	Credibility	Ex. 3-9 (#4, 5) Ex. 3-10 (#2) (Moore & Parker)
September 11-15	Analysis: The Heart of Critical Thinking	TBA
September 18-22	<b>Examination #1</b>	No Homework
September 25-29	Thinking Critically: Steering Clear of Argumentative Quicksand  Numbers in the Real World	Ex. 4.1 (#1, 3, 5, 6, 8, 9, 11, 13, 14, 16, 17) (Moore & Parker)  Unit 3A 17-22 & 45-50 Unit 3 B 15-20 (Bennett & Briggs)
October 2-6	<b>Midterm Examination</b>	No Homework
October 9-14	Causal Arguments	Exercises 11-2 # 2, 8 11-4 #2,8 and 11-9 #3, 9 (Moore & Parker)
October 16-20	Statistical Reasoning, Part 1	Unit 5A 15-17 & 21-23 &35-38 Unit 5B 9-11 (Bennett & Briggs)
October 23-27	Statistical Reasoning, Part 2	Unit 5C- 15-16 Unit 5D- 14 Unit 5E- 13-15; 17-20 (Bennett & Briggs)
October 30-November 3	<b>Examination #2</b>	No Homework
November 6-10	Probability: Living with the Odds	7A-13-15& 23 7B- 11-15 & 22-26 (Bennett & Briggs)
November 13-17	Introduction to Scientific Thinking and Scientific Method	TBA
November 20-24	Scientific Method	TBA
November 27-December 1	Creationism, Evolution and the Criteria of Adequacy	TBA
December 5	<b>Classes End</b>	
December 6	<b>Reading Day</b>	

## Appendix 4.2: Pre-test Results Academic Year 2006-07.

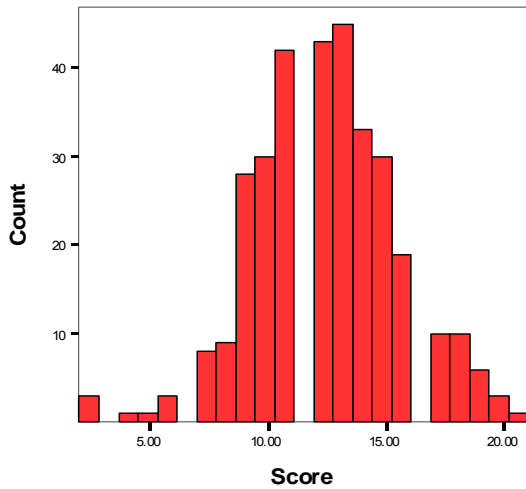
### Fall 2006



#### Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Score	410	.07	.69	.3941	.10338
Valid N (listwise)	410				

### Spring 2007



#### Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Percent	325	.07	.72	.4283	.10751
Valid N (listwise)	325				



## Appendix 4.4: Session Report Interwrite-PRS – 2/13/2007

The full session had 131 respondents. The mean score correct was 3.43 with standard deviation of 1.34. The lowest score in the session was 1 correct and the highest was 6 correct.

Example of student responses from Question 2.

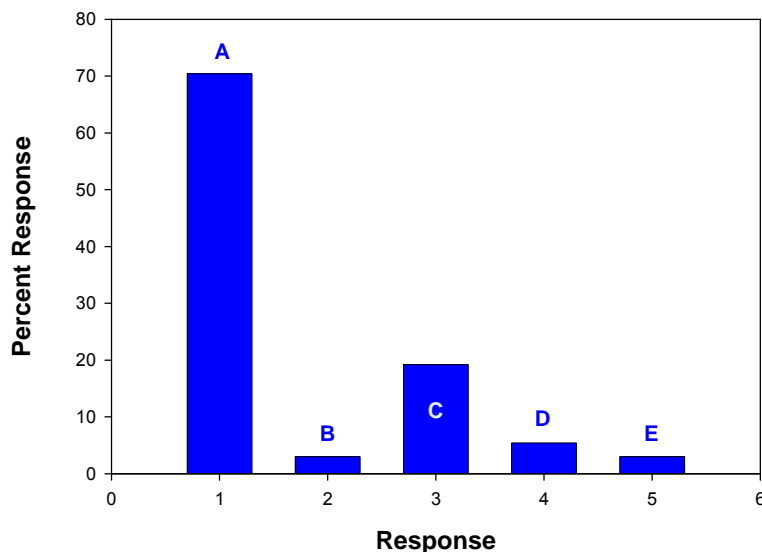
Which of these is an inductive argument? – Correct Answer: C

- ▶ A. Raleigh is in North Carolina. NC is in the United States, therefore Raleigh is in the United States. [This is a deductive argument...students who answered this, are still confused about the difference between deductive (premise guarantees conclusion) and inductive (premise does not guarantee conclusions.)]
- ▶ B. Time is money. Time flies. Therefore money flies. (Logical fallacy.)
- ▶ C. Most people do not live to be older than 100, therefore you won't live to be older than 100.
- ▶ D. Jamie Foxx is a better actor than Denzel Washington. (Subjective statement, but not an argument.)
- ▶ E. None of the above.



**Class Response:**

**Class Response Question 2**



*The class results show that the vast majority of the class could not distinguish a deductive from an inductive argument. However, the majority of the class could recognize an argument.*

**Appendix 4.4 Continued...Student ID in each response**

<b>Response A</b>	<b>Response B</b>	<b>Response C</b>	<b>Response D</b>	<b>Response E</b>	<b>None</b>
tmhughes	crjohns3	Dmwatts	tsratlif	csjones1	4994
jrlawary	jdstrait	112445	caadams	ndenglis	nrblount
jimaddox	anreynol	jbwinche	ahcobb	msyoung	srmalone
aymattoc	nrwillia	jlgardin	jonesnl	tsallen1	gwevans
gdthornw		jfneuman	kmtyson		d
696263		rjklugh			lwilson1
mdharris		jrgatlin			
rjnorman		dmthoma1			
615308		dzsmith			
wjlayer		mlfoste1			
3081		klwilli5			
Abadams		ljpierce			
cscopela		llsawyer			
dndarden		drbracey			
easiler		sldubrey			
ejtaylor		drflen			
elnewsom		algaine			
jjcadams		jkmicken			
jhbryant		jwmitche			
ldmacon		drmullin			
jlwilso1		slneal			
jahollan		brrhim			
ntmoore		lmrose			
sccolvin					
sdbrown3					
tsmy					
wshooker					
debailey					
rcbaker					
tabean					
adblackw					
cjbrinso					
dlbrown2					
esburton					
spbutler					
jlcanty					
kechapma					
bechrisp					
dscraig					

cvdavis					
jldavis3					
jedavis1					
djdomini					
dbdorsey					
jrescoba					
arestrad					
refarrow					
crgoodma					
cehall					
lmheckst					
rjhill1					
wcjames					
jbjohnso					
snjohns					
zajohns1					
cllawren					
belock					
pslockha					
lslopez					
mamajors					
gmmangum					
nomarabl					
csmarsha					
ramathe					
kpmcknig					
tlmcnair					
usmillik					
ccmims					
mimohame					
slnorwoo					
mcoluoch					
kjparker					
cjparks					
adpeaks					
slrankin					
dmrichard					
amross					
kdschofi					
jjserran					
ksmithjr					
agthomps					
cward					
jcweaver					
jawhite					

klwilli6					
mvwillia					
sawilli4					
kwright1					

## Appendix 4.5: Survey of Turning Point Clicker System

Question 1: I have used both the Turning Point and PRS clicker.

Answers	%
True	89.06
False	7.81
No Answer	3.12

Question 2: I found the Turning Point Clicker easy to use.

Answers	%
Strongly Agree	51.56
Agree	42.18
Disagree	1.56
Strongly Disagree	0.00
No Answer	4.68

Question 3: I like the size of the Turning Point Clicker.

Answers	%
Strongly Agree	48.43
Agree	25.00
Neutral	14.06
Disagree	7.81
Strongly Disagree	1.56
No Answer	3.12

Question 4: I found the Turning Point Clicker reliable

Answers	%
Strongly Agree	32.81
Agree	40.62
Neutral	17.18
Disagree	6.25
Strongly Disagree	0.00
No Answer	3.12

Question 5: I found the Turning Point questions easy to read.

Answers	%
Strongly Agree	39.06
Agree	37.50
Neutral	17.18
Disagree	1.56
Strongly Disagree	0.00
No Answer	4.68

Question 6: I found the Turning Point graphics easy to read.

Answers	%
Strongly Agree	37.50
Agree	42.18
Neutral	14.06
Disagree	3.12
Strongly Disagree	0.00
No Answer	3.12

Question 7: I found the Turning Point graphics easy to understand.

Answers	%
Strongly Agree	43.75
Agree	35.93
Neutral	17.18
Disagree	0.00
Strongly Disagree	0.00
No Answer	3.12

**Question 8: After the class answered a question, I understood the results that my teacher displayed on the screen.**

Answers	%
Strongly Agree	53.12
Agree	35.93
Neutral	6.25
Disagree	1.56
Strongly Disagree	0.00
No Answer	3.12

Question 9: I would recommend this clicker to other students at North Carolina A&T State University.

Answers	%
Strongly Agree	43.75
Agree	21.87
Neutral	25.00
Disagree	4.68
Strongly Disagree	1.56
No Answer	3.12

Question 10: In comparison to other clickers I have used, the Turning Point Clicker is better.

Yes: 89.1%

No: 11.9%

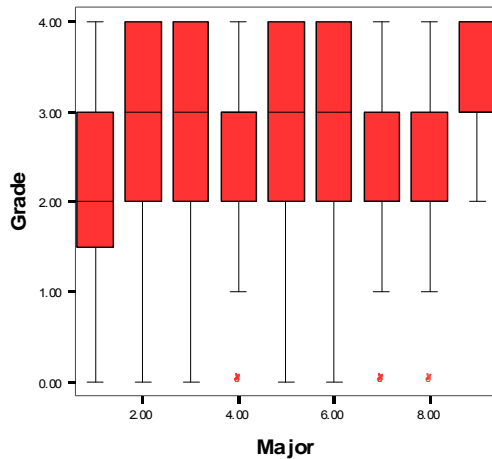
## Appendix 4.6: Summative Assessment of Analytical Reasoning, Academic Year 2006-07.

### Analytical Reasoning Grades, Fall 2006

		Grade			
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	.00	104	10.9	10.9	10.9
	1.00	53	5.6	5.6	16.5
	2.00	280	29.5	29.5	46.0
	3.00	279	29.4	29.4	75.4
	4.00	234	24.6	24.6	100.0
	Total	950	100.0	100.0	

The D, W, F ratio was 21.7%, not close to 30% requirement to be considered a high failure course. The percentage of B's was 29.4% which was more than 4 times the percentage of D's.

### Analysis of Analytical Reasoning Grades by Major – Fall 2006



#### Box Plot by Major

- 1 = Undeclared
- 2 = Engineering
- 3 = Business
- 4 = Arts and Sciences
- 5 = Arts and Sciences (Math/Science)
- 6 = Agriculture
- 7 = Education
- 8 = Technology
- 9 = Nursing



### ANOVA

Grade

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	85.614	8	10.702	7.467	.000
Within Groups	1456.097	1016	1.433		
Total	1541.711	1024			

One Way Anova for Grade v. Major

This tests the hypothesis that at least one major group has a mean different from the rest.

This test is highly significant.

### Bonferonni Analysis

#### Multiple Comparisons

Dependent Variable: Grade

Bonferroni

(I) Major	(J) Major	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
		Lower Bound	Upper Bound	Lower Bound	Upper Bound	Lower Bound
1.00	2.00	-.53194(*)	.10621	.000	-.8724	-.1915
	3.00	-.77146(*)	.12941	.000	-1.1863	-.3566
	4.00	-.39190	.13961	.183	-.8395	.0557
	5.00	-.54647	.20669	.300	-1.2091	.1161
	6.00	-.57706(*)	.15244	.006	-1.0658	-.0884
	7.00	-.19792	.14457	1.000	-.6614	.2655
	8.00	.06073	.19096	1.000	-.5514	.6729
	9.00	-1.21780(*)	.36913	.036	-2.4012	-.0344
	2.00	1.00	.53194(*)	.10621	.000	.1915
3.00		-.23952	.12682	1.000	-.6461	.1670
4.00		.14004	.13722	1.000	-.2998	.5799
5.00		-.01453	.20508	1.000	-.6720	.6429
6.00		-.04511	.15025	1.000	-.5268	.4366
7.00		.33403	.14226	.686	-.1220	.7901
8.00		.59267	.18921	.064	-.0139	1.1992
9.00		-.68586	.36823	1.000	-1.8663	.4946
3.00		1.00	.77146(*)	.12941	.000	.3566
	2.00	.23952	.12682	1.000	-.1670	.6461
	4.00	.37956	.15587	.542	-.1201	.8793
	5.00	.22499	.21800	1.000	-.4739	.9238
	6.00	.19440	.16746	1.000	-.3424	.7312
	7.00	.57354(*)	.16033	.013	.0596	1.0875
	8.00	.83219(*)	.20315	.002	.1809	1.4834
	9.00	-.44634	.37558	1.000	-1.6504	.7577
	4.00	1.00	.39190	.13961	.183	-.0557
2.00		-.14004	.13722	1.000	-.5799	.2998

	3.00	-.37956	.15587	.542	-.8793	.1201
	5.00	-.15457	.22421	1.000	-.8733	.5642
	6.00	-.18516	.17546	1.000	-.7477	.3773
	7.00	.19399	.16867	1.000	-.3467	.7347
	8.00	.45263	.20979	1.000	-.2199	1.1252
	9.00	-.82590	.37922	1.000	-2.0416	.3898
5.00	1.00	.54647	.20669	.300	-.1161	1.2091
	2.00	.01453	.20508	1.000	-.6429	.6720
	3.00	-.22499	.21800	1.000	-.9238	.4739
	4.00	.15457	.22421	1.000	-.5642	.8733
	6.00	-.03058	.23241	1.000	-.7756	.7145
	7.00	.34856	.22733	1.000	-.3802	1.0773
	8.00	.60720	.25931	.698	-.2241	1.4385
	9.00	-.67133	.40870	1.000	-1.9815	.6389
6.00	1.00	.57706(*)	.15244	.006	.0884	1.0658
	2.00	.04511	.15025	1.000	-.4366	.5268
	3.00	-.19440	.16746	1.000	-.7312	.3424
	4.00	.18516	.17546	1.000	-.3773	.7477
	5.00	.03058	.23241	1.000	-.7145	.7756
	7.00	.37914	.17943	1.000	-.1961	.9544
	8.00	.63779	.21854	.129	-.0628	1.3384
	9.00	-.64074	.38413	1.000	-1.8722	.5907
7.00	1.00	.19792	.14457	1.000	-.2655	.6614
	2.00	-.33403	.14226	.686	-.7901	.1220
	3.00	-.57354(*)	.16033	.013	-1.0875	-.0596
	4.00	-.19399	.16867	1.000	-.7347	.3467
	5.00	-.34856	.22733	1.000	-1.0773	.3802
	6.00	-.37914	.17943	1.000	-.9544	.1961
	8.00	.25864	.21312	1.000	-.4246	.9419
	9.00	-1.01989	.38107	.272	-2.2415	.2018
8.00	1.00	-.06073	.19096	1.000	-.6729	.5514
	2.00	-.59267	.18921	.064	-1.1992	.0139
	3.00	-.83219(*)	.20315	.002	-1.4834	-.1809
	4.00	-.45263	.20979	1.000	-1.1252	.2199
	5.00	-.60720	.25931	.698	-1.4385	.2241
	6.00	-.63779	.21854	.129	-1.3384	.0628
	7.00	-.25864	.21312	1.000	-.9419	.4246
	9.00	-1.27853	.40097	.053	-2.5640	.0069
9.00	1.00	1.21780(*)	.36913	.036	.0344	2.4012
	2.00	.68586	.36823	1.000	-.4946	1.8663
	3.00	.44634	.37558	1.000	-.7577	1.6504
	4.00	.82590	.37922	1.000	-.3898	2.0416
	5.00	.67133	.40870	1.000	-.6389	1.9815
	6.00	.64074	.38413	1.000	-.5907	1.8722
	7.00	1.01989	.38107	.272	-.2018	2.2415
	8.00	1.27853	.40097	.053	-.0069	2.5640

\* The mean difference is significant at the .05 level.

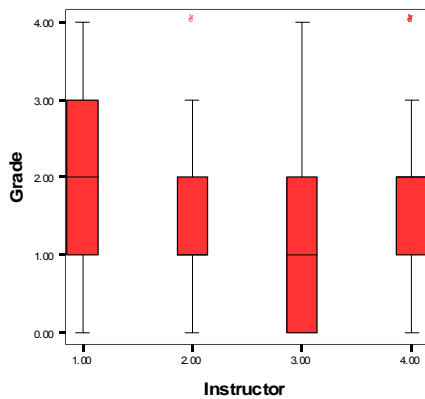
This shows that Engineering and Business majors did significantly better than Undeclared, Education, and Technology. Notable is the fact that A&S science students did no better than A&S non-science majors, nor did they do significantly better than Undeclared, Education, or Technology students. I shall perform further analysis to determine whether the advantage shown by Engineering and Business results from the fact that they may begin with students that have better university level preparation. This may be evidenced by examining the total SAT scores across majors. This taken together with the pre-test results vitiates the claim that science and engineering majors don't really need to take Analytical Reasoning because they already know the material presented in the course.

**Analytical Reasoning Grades – Spring 2007 – results from 4 of 8 sections.**

**Grade**

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid .00	128	22.5	22.5	22.5
1.00	131	23.0	23.0	45.5
2.00	165	29.0	29.0	74.5
3.00	110	19.3	19.3	93.8
4.00	35	6.2	6.2	100.0
Total	569	100.0	100.0	

**Analytical Reasoning Grades by Section**



## Report

Grade

Instructor	Mean	N	Std. Deviation
1.00	2.1053	152	1.32304
2.00	1.5391	128	.97933
3.00	1.2201	159	1.13432
4.00	1.6923	130	1.13333
Total	1.6362	569	1.19983

### Tests of Between-Subjects Effects

Dependent Variable: Grade

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	62.586(a)	3	20.862	15.610	.000
Intercept	1515.208	1	1515.208	1133.735	.000
Instructor	62.586	3	20.862	15.610	.000
Error	755.108	565	1.336		
Total	2341.000	569			
Corrected Total	817.694	568			

a. R Squared = .077 (Adjusted R Squared = .072)

### Multiple Comparisons

Dependent Variable: Grade

Bonferroni

(I) Instructor	(J) Instructor	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
		Lower Bound	Upper Bound	Lower Bound	Upper Bound	Lower Bound
1.00	2.00	.5662(*)	.13869	.000	.1990	.9334
	3.00	.8851(*)	.13114	.000	.5379	1.2323
	4.00	.4130(*)	.13811	.017	.0473	.7786
2.00	1.00	-.5662(*)	.13869	.000	-.9334	-.1990
	3.00	.3189	.13728	.123	-.0445	.6824
	4.00	-.1532	.14395	1.000	-.5344	.2279
3.00	1.00	-.8851(*)	.13114	.000	-1.2323	-.5379
	2.00	-.3189	.13728	.123	-.6824	.0445
	4.00	-.4722(*)	.13670	.004	-.8341	-.1103
4.00	1.00	-.4130(*)	.13811	.017	-.7786	-.0473
	2.00	.1532	.14395	1.000	-.2279	.5344
	3.00	.4722(*)	.13670	.004	.1103	.8341

Based on observed means.

\* The mean difference is significant at the .05 level.

**Mean for all Sections – Spring 2007 -- Descriptive Statistics**

	N	Minimum	Maximum	Mean	Std. Deviation
Grade	569	.00	4.00	1.6362	1.19983
Valid N (listwise)	569				

**Appendix 5.1: African American Experience Faculty – Academic Year 06-07.**

<b>Name</b>	<b>Semester</b>	<b>Origin</b>	<b>Expertise</b>
Dr. Joseph L. Graves, Jr.	Spr.	UNST	Biology of race, social dominance theory
Dr. Deborah Barnes	Fall/Spr.	UNST	Literary Studies, lynching
Dr. Jacqueline Blackmore	Fall/Spr.	UNST	African American History
Mr. Stephen Alston	Fall/Spr.	UNST	African American History
Dr. Cecily McDaniel	Fall/Spr.	UNST	African American History

## Appendix 5.2

# UNST 140 African American Experience

Dr. Deborah H. Barnes

Office hours, W 1-3 pm & by appointment; 285-2059, Hines Hall  
dhbarnes@ncat.edu

### BoilerPlate Material – Here

#### Course Description

UNST 140 introduces students to sociological, political, legal, scientific, artistic, and historical aspects of the African and African American experience in the Americas. Students will read key texts in Africana Studies from various fields of study. The materials are presented in an interdisciplinary format to encourage students' integration of events and concepts across disciplines.

#### African American Experience Course Objectives

- **Cultural Literacy:** demonstrate a transdisciplinary understanding of African American culture and experience through exams, written essays, and group work.
- **Critical Reading:** demonstrate critical reading skills in reading journals and class discussion
- **Communication:** demonstrate effective and informative communication skills through regular participation in class discussion and presentation
- **Collegiality:** develop habits of broadmindedness, civility, and ethnic responsiveness
- **Collaboration:** demonstrate an ability to work collaboratively on a variety of projects in small and large groups

#### UNST Learning Objectives

The African American Experience meets UNST objectives 2, 3, 4, 5, 9-15.

#### Communication

- 2 Encourages effective communication in diverse settings and groups using written, oral, and visual means
- 3 Aids in employment of critical thinking skills in written and oral communication
- 4 Helps students effectively relate ideas and concepts, as well as modes of inquiry across disciplines

#### Analytical Reasoning

- 5 Use analytical thinking skills to evaluate information critically

#### Multicultural Relations within a Global Society

- 9 Understand African and African American culture and traditions, including political, economic, and social challenges affecting people of African descent
- 10 Interact effectively with people from diverse cultures
- 11 Understand and appreciate the diversity and interrelationship of cultures locally, regionally, nationally, and internationally.

#### Historical and Social Processes in a Changing World

- 12 Understand the role of social, political, and economic institutions and processes in the development of societies and the factors that lead to dynamic change over time.

**Artistic and Literary Understanding**

- 13 Understand the role of literature, music, and the fine arts in describing, defining, and celebrating the human condition in diverse world cultures.

**Ethics and Social Responsibility**

- 14 Understand and apply ethical reasoning principles to resolve moral, social, and professional issues.
- 15 Understanding the role that markets, governments, and other social institutions can play in reducing social and economic inequality.

**Schedule of Readings – Fall06**

**Week 1**

- 8/21 – 25 Introduction to the course: **Race as Rubric**  
 Assessment: reading journals, learning logs  
 70 “What Can or Will We Do Without Race,” Graves

**Week 2**

- 8/28 – 9/1 72 from *Black Skin, White Masks*, Fanon  
 “*Recitatif*,” Toni Morrison  
**Quiz**

**Week 3**

- 9/4 **Labor Day: No Classes**  
 9/6– 8 **Manifestations of Race**  
 21 “Race Matters,” West  
 79 “The Miseducation of Hip Hop,” Evelyn  
 44 “Black American Cinema: The New Realism,” Diawara

**Week 4**

- 9/11-15 **Foundations and paradigms**  
 3 “Meaning of KMT,” Hilliard  
 36 “Africa, Slavery, and the Shaping of Black Culture,” Berry  
 74 “Black Psychology,” Karenga

**Week 5**

- 9/18 - 22 **Views from the Past**  
 11 from “The Life of Olaudah Equiano,” Equiano  
 31 “An Address,” Stewart

**Week 6**

- 9/25 – 29 **Education: the Pathway to Freedom**  
*Up From Slavery*, Washington  
**Exam**



### Week 7

- 10/2 – 6  
29 **The New Middle Class**  
28 “Growing Up in the New Negro Renaissance, Davis  
from *Black Bourgeoisie*, Frazier  
Visit University Galleries, Dudley Building

### Week 8

- 10/9 -10 **Fall Break [Monday & Tuesday]**  
**Arts and Letters**  
10/11 - 13 55 “Letter from the Birmingham Jail,” King  
26 “For My People,” Walker  
69 “I, Too,” Hughes  
54 “If We Must Die,” McKay  
56 “Toussaint,” Shange

### Week 9

- 10/16 - 20 52 **Resistance and Revolution**  
53 “The Haitian Revolution,” Geggus  
“The Ballot or the Bullet,” Malcolm X  
**Homecoming Weekend**

### Week 10

- 10/23 – 27 29 **A New Way Forward**  
67 “Marcus Garvey and the Universal Negro Improvement Association”  
68 “The Black Panther Party”  
“A Black Feminist Statement”  
**Exam**

### Week 11

- 10/30 – 11/3 ***The Souls of Black Folks, DuBois***  
**Quiz**

### Week 12

- 11/6 - 10 **Institutional Racism**  
43 “Bullet Holes in the Wall,” Barnes  
78 “Unnatural Disasters,” Dyson  
84 “Women in Prison: How We Are,” Shakur

### Week 13

- 11/13 – 17** **Politics of Health**  
22 “Sick and Tired of being Sick and Tired,” Davis  
82 “The Mother,” Brooks  
HIV/AIDS

### Week 14

11/20 – 21      80      “Voices from the Margin,” Rose  
11/22 -26      **Thanksgiving Break**

### Week 15

11/27-12/4      **The Future of Race**  
77      “Thoughts about Restitution,” Robinson  
85      “The African American Warrant for Reparations,” Asante

12/7 – 13      **Final Exam**

## Spring 2007

### Course Description

UNST 140 introduces students to sociological, political, legal, scientific, artistic, and historical aspects of the African and African American experience in the Americas. Students will read key texts in Africana Studies from various fields of study. The materials are presented in an interdisciplinary format to encourage students’ integration of events and concepts across disciplines.

### African American Experience Course Objectives

- **Cultural Literacy:** demonstrate a transdisciplinary understanding of African American culture and experience through exams, written essays, and group work.
- **Critical Reading:** demonstrate critical reading skills in reading journals and class discussion
- **Communication:** demonstrate effective and informative communication skills through regular participation in class discussion and presentation
- **Collegiality:** develop habits of broadmindedness, civility, and ethnic responsiveness
- **Collaboration:** demonstrate an ability to work collaboratively on a variety of projects in small and large groups

### UNST Learning Objectives

The African American Experience meets UNST objectives 2, 3, 4, 5, 9-15.

#### Communication

- 6 Encourages effective communication in diverse settings and groups using written, oral, and visual means
- 7 Aids in employment of critical thinking skills in written and oral communication
- 8 Helps students effectively relate ideas and concepts, as well as modes of inquiry across disciplines

#### Analytical Reasoning

- 9 Use analytical thinking skills to evaluate information critically

#### Multicultural Relations within a Global Society

- 16 Understand African and African American culture and traditions, including political, economic, and social challenges affecting people of African descent
- 17 Interact effectively with people from diverse cultures
- 18 Understand and appreciate the diversity and interrelationship of cultures locally, regionally, nationally, and internationally.

#### Historical and Social Processes in a Changing World

- 19 Understand the role of social, political, and economic institutions and processes in the development of societies and the factors that lead to dynamic change over time.

#### Artistic and Literary Understanding

- 20 Understand the role of literature, music, and the fine arts in describing, defining, and celebrating the human condition in diverse world cultures.

**Ethics and Social Responsibility**

- 21 Understand and apply ethical reasoning principles to resolve moral, social, and professional issues.
- 22 Understanding the role that markets, governments, and other social institutions can play in reducing social and economic inequality.

**Course Grade Distribution**

Exam I	5%	In class quizzes	20%
Exam II	10%		
Exam III	20%		
Final Exam	20%		
Group Project			

UNST 140 African American Experience  
Schedule of Readings

Class Schedule	T	R	Film Series FRI 7 – 9 pm NCB auditorium Tues. 7:30 pm 308 Noble Hall
Jan 8 – 12	Course Overview	Clicker Registration “The Meaning of Race”, p. 99.	<i>Sankofa</i>
Jan 16 – 19	Slavery	“Equiano” p 68; “An Address” p 196	<i>Africans in America Pt 1</i>
Jan 22 - 26	Reconstruction	<i>Up From Slavery</i>	<i>Africans in America Pt 2</i>
Jan 29 – Feb 2	Turn of the Twentieth Century	Paul Laurence Dunbar, selections [blackboard]	<i>Africans in America Pt 3</i>
Feb. 1		<b>Exam I—5%</b> knowledge/observation	
Feb 5 – 9	Jim Crow	<i>from Lay This Body Down</i> <i>library e-reserves</i>	<i>Rise and Fall of Jim Crow Pt 1</i>
Feb 12 – 16	Lynching Era	<i>from The Facts in the Case</i> [blackboard]	<i>Rise and Fall of Jim Crow Pt 2</i>
Feb 19 - 23	The Talented Tenth	<i>Souls of Black Folks</i>	<i>Rise and Fall of Jim Crow Pt 3</i>
Feb 26 – Mar 2	Harlem/Chicago Renaissance	“Growing up in the New Negro Renaissance” p 187	<i>Rise and Fall of Jim Crow Pt 4</i>
Mar. 1		<b>Exam II—10%</b> Comprehension/experience	
<b>Mar 5 – 9</b>	<b>Spring Break</b>	<b>Spring Break</b>	<b>Spring Break</b>
Mar 12 – 16	Civil Rights	“Letter from the Birmingham Jail,” p 426	<i>Eyes on the Prize</i>

<b>Mar 19 – 23</b>	Desegregation	<i>Recitatif</i>	<i>Ethnic Notions</i>
Mar 26 – 30	Integration	“African American Literature,” p 257	<i>February One: The Story of the Greensboro Four</i>
Mar. 29		<b>Exam III—20%</b> Application/reasoning	
Apr 2 – 5	Hip Hop Era	“Race Matters,” p 147 <b>Group Projects</b> synthesis/communication	<i>Bamboozled</i>
Apr 9 - 13	Twenty-First Century; HIV/AIDS	<b>Group Projects</b>	<i>One Week</i>
Apr 16 – 20	Globalism	“African American Warrant for Reparations,” p 595 <b>Group Projects</b>	<i>Sometimes in April</i>
Apr 23 - 27	Sexuality	“No More Secrets, No More Lies,” p 545	TBA
<b>Apr 30-May 1</b>	<b>Last day of class</b>	<b>Last day of class</b>	
<b>May 3 - 9</b>		<b>Final Exam—20%</b> analysis/reflection	

**Appendix 5.3: Summative Assessments African American Experience – Spring 2007-06-01**

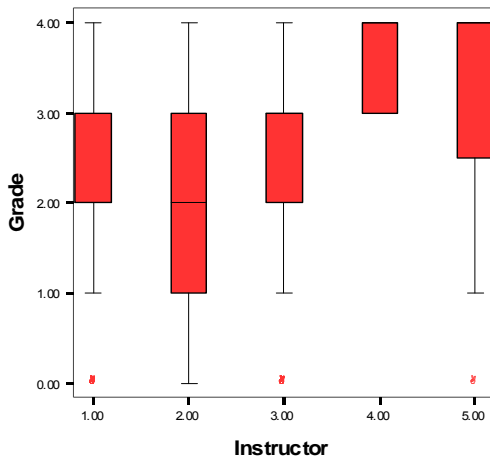
**Grade**

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid .00	119	11.9	11.9	11.9
1.00	123	12.3	12.3	24.2
2.00	308	30.9	30.9	55.1
3.00	358	35.9	35.9	91.0
4.00	90	9.0	9.0	100.0
Total	998	100.0	100.0	

**Mean Grade African American Experience spring 2007**

	N	Minimum	Maximum	Mean	Std. Deviation
Grade	998	.00	4.00	2.1774	1.13555
Valid N (listwise)	998				

**Grades by Instructor**



**Alston = 1**  
**Barnes = 2**  
**Blackmore = 3**  
**Graves\* = 4**  
**McDaniel\*\* = 5**

**\* = honors section**  
**\*\* = on-line section**

### Mean Grade by Instructor

Grade

Instructor	Mean	N	Std. Deviation
1.00	2.0762	328	1.04793
2.00	1.8299	294	1.17060
3.00	2.3774	310	1.00298
4.00	3.6154	26	.49614
5.00	3.0750	40	1.34712
Total	2.1774	998	1.13555

### Tests of Between-Subjects Effects

Dependent Variable: Grade

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	137.246(a)	4	34.312	29.670	.000
Intercept	2301.467	1	2301.467	1990.102	.000
Instructor	137.246	4	34.312	29.670	.000
Error	1148.362	993	1.156		
Total	6017.000	998			
Corrected Total	1285.608	997			

a R Squared = .107 (Adjusted R Squared = .103)

### Multiple Comparisons

Dependent Variable: Grade

Bonferroni

(I) Instructor	(J) Instructor	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
		Lower Bound	Upper Bound	Lower Bound	Upper Bound	Lower Bound
1.00	2.00	.2463(*)	.08637	.044	.0033	.4893
	3.00	-.3012(*)	.08518	.004	-.5408	-.0616
	4.00	-1.5392(*)	.21910	.000	-2.1556	-.9228
	5.00	-.9988(*)	.18010	.000	-1.5055	-.4921
2.00	1.00	-.2463(*)	.08637	.044	-.4893	-.0033
	3.00	-.5475(*)	.08754	.000	-.7938	-.3012
	4.00	-1.7855(*)	.22003	.000	-2.4045	-1.1664
	5.00	-1.2451(*)	.18123	.000	-1.7549	-.7352
3.00	1.00	.3012(*)	.08518	.004	.0616	.5408
	2.00	.5475(*)	.08754	.000	.3012	.7938
	4.00	-1.2380(*)	.21957	.000	-1.8557	-.6203
	5.00	-.6976(*)	.18067	.001	-1.2059	-.1893
4.00	1.00	1.5392(*)	.21910	.000	.9228	2.1556
	2.00	1.7855(*)	.22003	.000	1.1664	2.4045
	3.00	1.2380(*)	.21957	.000	.6203	1.8557
	5.00	.5404	.27091	.463	-.2218	1.3025
5.00	1.00	.9988(*)	.18010	.000	.4921	1.5055

2.00	1.2451(*)	.18123	.000	.7352	1.7549
3.00	.6976(*)	.18067	.001	.1893	1.2059
4.00	-.5404	.27091	.463	-1.3025	.2218

Based on observed means.

\* The mean difference is significant at the .05 level.