HNR 304 - 002
Spring 2010
Cryptology (3 credits)

INSTRUCTOR: Chris Christensen
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http://www.nku.edu/~cryptography/

OFFICE HOURS: M 8:00 – 8:50, T 8:00 – 9:00, W 2:00 – 2:50, R noon – 1:00,
F 1:00 – 2:00, by appointment, and by capture.

CLASS TIME: TR 1:40 – 2:55, HR 111.

PREREQUISITE: Students should be accepted into the Honors Program.

TEXTS: The Code Book: The Evolution of Secrecy from Mary Queen of
Scots to Quantum Cryptography by Simon Singh.

TOPICS: Course discussions will be based on the material in chapters 1, 2,
3, 4, 6, and 7 of The Codebook.

GRADING:
Cryptography and cryptanalysis exercises and participation throughout the course 30%

Short paper (4 – 6 pages)
Due R March 4 20%

Short paper (4 – 6 pages)
Due R April 8 20%

Project
Presented during the last two weeks of class 30%

Work missed during excused absences may be made up without penalty.

ATTENDANCE: Attendance and participation in class discussions is expected;
participation in cryptography and cryptanalysis exercises will be a portion of the course grade.

WITHDRAWAL: The deadline for withdrawing from this course with a grade of W is
Monday, March 29. Withdrawal after that date is not likely to be permitted.
Mid-Term grades for freshmen will be entered March 1 – March 15.

The instructor reserves the right to alter the syllabus if circumstances dictate.

The work you will do in this course is subject to the Student Honor Code. The Honor Code is a commitment to the highest degree of ethical integrity in academic conduct, an oath that, individually and collectively, the students of Northern Kentucky University will not lie, cheat, or plagiarize to gain an academic advantage over fellow students or avoid academic requirements.

Course learning objectives:

- The student will understand the cryptographic and cryptanalytic ideas that are the foundations of modern cryptology.
- The student will be able to construct and break a collection of classical ciphers.
- The student will be able to clearly and correctly express cryptologic ideas orally and in writing.
- The student will learn how to search for the ghosts of patterns in seemingly meaningless ciphertext.

Attainment of course learning objectives will be measured by class discussions, two papers, and a presentation.