

**NEW JERSEY CITY UNIVERSITY  
OFFICE OF GRADUATE STUDIES  
INDEPENDENT STUDY / RESEARCH CONTRACT**

Department: Mathematics Date: December 21, 2006  
Student Name: xxxxxxxxxxxx Student ID #: xxxxxxxx  
Course #: MA 661 Reference #: xxxxx  
Number of Credits: 3 Semester: Spring 2007

Title of Project: Research Credit in Mathematics

1. Specific Activities on Part of Student: To attend 2-1/2 hour meetings with instructor every two weeks, submit required assignments, and present a completed thesis at the end of the semester( Proposal Attached)
2. Specific Activities on Part of Faculty: To attend 2-1/2 hour meetings with student every two weeks and supervise his/her work throughout the semester.
3. Final Product and Deadline for Completion: A thesis consisting of an introduction, methods, results and final discussion will be submitted.
4. Grading Criteria: Thesis 100%. By successfully completing this thesis the student will have fulfilled the requirements for the MA661 Research Credit class.

1. Faculty Advisor: \_\_\_\_\_  
Signature Date

2. Chairperson: \_\_\_\_\_  
Signature Date

3. Dean: \_\_\_\_\_  
Signature Date

4. Student: \_\_\_\_\_  
Signature Date

Date Filed: \_\_\_\_\_

**NEW JERSEY CITY UNIVERSITY  
MATHEMATICS DEPARTMENT GRADUATE PROGRAM  
MA661 RESEARCH CREDIT IN MATHEMATICS PROPOSAL**

**Spring 2007**

Student Name:        xxxxxx

Date:    December 21, 2006

Advisor Name:        xxxx

Project Title:        History of  $\pi$

Description of Project

This project will provide a historical background of the number  $\pi$ , along with its current applications in mathematics and education, and the impact of technology on the study of this mathematical issue.

Timetable:

Introduction Section will be finished by February 2, 2007

Reference Section will be finished by February 9, 2007

Historical Background will be finished by February 16, 2007

Current uses and applications will be finished by March 16, 2007

Technology impact will be finished by March 23, 2007

Discussion and Conclusion sections will be finished by April 1, 2007

Final Report (thesis) will be finished by April 8, 2007

Copies of Thesis will be submitted by April 15, 2007

Tentative Abstract:

This study is an attempt to explore the history of the number  $\pi$ . This study traces the origin of the concept from the Middle Kingdom papyrus scroll, circa 1650 BC, to current presentations of this number. This study also presents various methods for approximating the value of  $\pi$  including current use of technology. This study further addresses this topic by exploring the use of  $\pi$  in mathematics and education.

**Form SP**