Math 1105
CULTURAL MATHEMATICS
Catawba College
Block 2, Spring 2014
February 13, 2014 to March 10, 2014

Text: Introduction to Cultural Mathematics
(Required) with Case Studies in the Otomies and Incas
Thomas Gilsdorf,
Wiley Publishing, 2012
ISBN: 978-1-118-11552-7

Instructor: Mr. John Sullivan
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Class Meetings: Administration Building, Room 331
(Required) Mondays and Thursdays, 6:00-9:45 pm
Saturday (March 1), 8:00-11:45 am

Help Sessions: Ketner Hall, Room 205
(Recommended) Tuesdays and Wednesdays, 6:00-8:00 pm

Course Description: A study of how mathematical ideas play a role in non-traditional societies, to include graph theory, logic and set theory, symmetry and patterns, group theory, and game theory applied to areas such as religion, social relations, art, calendar modeling, and story telling aspects.

This course meets the Quantitative Literacy and Non-Western Learning Outcomes

Quantitative Literacy: This course will help students to think and communicate quantitatively and mathematically at a college level.

1. Students will apply mathematical methods to draw inferences from a mathematical model of real-world phenomena.
2. Students will create a mathematical model from an informal description of real-world phenomena.
3. Students will communicate mathematical ideas clearly and concisely.

Non-Western: This course will require students to think about human experience from a non-western perspective.

1. Students will describe at least one topic beyond western society.
2. Students will interpret at least one text or artifact beyond western society.

Course Objectives: Students who have successfully completed the course will have demonstrated the correct use of the following concepts:

1. Understanding the role of mathematics in non-western cultures,
2. numeration systems used in non-western cultures,
3. number gestures and symbols used in non-western cultures,
4. the role of mathematics in kinship and social relations.
5. the role of mathematics in art and decoration,
6. the use of mathematics in divination
7. the mathematical basis of games.
8. the mathematical development of calendars.

Class Policies:

Your on-time attendance is both expected and required. *You* are responsible for what is presented and/or announced in class under all circumstances. Be sure to see another student or me for any missed material. Departmental policy requires the automatic failure of any student who is absent more than one-quarter of the class meetings. We cover a considerable amount of material in a short amount of time, so attendance is very important!

Reading of the assigned chapters and completion of the homework assignments is expected. The specific exercises are included on the next page of this syllabus. In addition to attendance, the best way to meet the course objectives is to read the chapter before the class lecture/discussion and attempt the assigned problems for each class meeting.

There will be three tests given in addition to the final comprehensive exam. Tests should be taken at the scheduled times. *You* are responsible for making any other necessary arrangements with me PRIOR to the test time. Make-up tests are only given at help sessions, and must be taken before the next class meeting. Test dates are given on the next page of this syllabus. Absence from prior classes is not a valid excuse for taking a test at a later date. You will receive a zero on any test you miss.

Extra-credit is NOT given. Read ahead, work ahead, ask questions, attend the help sessions and do your best!

Evaluation:

Your course grade will be based on the following:

Tests	60% of Cultural Mathematics Final Average
Final Exam	40% of Cultural Mathematics Final Average

To determine your grade at any time during the course, divide the total number of points you have attained on the tests by the total number of points possible up to that point. Because this number is a percentage, you will need to multiply it by 100 and then use the following scale to determine your grade. Your test scores and current average can also be found on our Blackboard site.

Grading Scale:

The corresponding letter grades are as follows. Typical rounding rules do apply.

A- 90-92	A 93-100	
B- 80-82	B 83-86	B+ 87-89
C- 70-72	C 73-76	C+ 77-79
D- 60-62	D 63-66	D+ 67-69
	F 0-59	

Honor Code:

As a member of the Catawba College community, I will practice academic honesty, communicate truthfully, and show respect for the rights and property of others. I will also encourage others in the community to behave honorably.

Test Dates:

Thursday,	**February 20,**	**Test 1**
Thursday,	**February 27,**	**Test 2**
Thursday,	**March 6,**	**Test 3**
Monday,	**March 10,**	**Final Comprehensive Exam**

Reading of the chapter before each class meeting is an assumed assignment. In reading the chapters ahead of time you will be prepared for in class discussion and be better prepared for the classwork in general.

Attempting the assigned problems ahead of time is strongly recommended.

Assigned Problems:

Chapter 1: p. 18 #1.1 - 1.12

Chapter 2: p. 35 #2.1 - 2.12

Chapter 3: p. 50 #3.1 - 3.20

Chapter 4: p. 69 #4.1 – 4.10

Further chapter assignments will be given in class and/or through Blackboard.