

IDS 101: Math as Metaphor, Fall, 2010

Instructor:	Erin McNicholas Office: Ford Hall, Room 211	email: emcnicho@willamette.edu Phone: 503-370-6590
Office Hours:	Monday 2:15-3:30pm (Bistro), Wednesday 2:15-3:30pm, Thursday 1:00-2:00pm, or by appointment	
Writing Assistant:	Kali Boehle-Silva, kboehles@willamette.edu	
Class Listserv:	ids-101-21@willamette.edu	
Class Website:	Course information, assignments, due dates, and policies are all available on the course website under WISE	
Class Meetings:	Class meets in Ford 222 every Monday, Wednesday and Friday from 12:40-1:40 pm	

"Pure mathematics is, in its way, the poetry of logical ideas." - Albert Einstein

"Many people who have never had occasion to learn what mathematics is confuse it with arithmetic and consider it a dry and arid science. In actual fact it is the science which demands the utmost imagination. One of the foremost mathematicians of our century [Weierstrass] says very justly that it is impossible to be a mathematician without also being a poet in spirit... It seems to me that the poet must see what others do not see, must see more deeply than other people. And the mathematician must do the same." -Sofya Kovalevskaya, 1890

Class Objectives

As part of the College Colloquium, this course is designed to strengthen your academic discourse skills. The four primary components of effective academic discourse are: identifying interesting and thought provoking questions; critically analyzing resources (often through critical reading); engaging in thoughtful, persuasive, and collegial discussion; and using well organized, well supported, and effective writing to argue your point. Your grade will be based on your level of achievement in each of the following student learning outcomes:

- Your ability to question (i.e. think critically)
The worth of a question is measured more by the subsequent questions it generates, than by its answer. Identifying interesting questions is fundamental to every academic discipline. In this course you will practice the art of effective questioning through the development of paper prompts and discussion topics.
- Your ability to engage in the material (i.e. think and read critically)
As demonstrated by close, critical reading of texts; and meaningful, insightful contributions to class discussions
- Your ability to write critically
As demonstrated by intriguing, organized, and logically supported arguments

Course Themes:

Conceptual Metaphors

Mathematicians on Mathematics: The nature of the field and its practitioners

Math as metaphor in fiction

Course Grades:

Grades are based on 3 components

- Contributions to class discussion, discussion topics, paper prompts, etc. (20%)
- Intermediate writing assignments such as story boards, rough drafts, interviews, personal responses, section summaries, etc. (20%)
- 3 formal essays (60%)

More information about each of these assignments will be posted on the class WISE site.

Late Assignments and Missed Classes:

I expect everyone to attend all classes and turn in all assignments. If for some reason you are unable to attend class or turn in an assignment, please let me know as soon as possible, preferably *before* the missed class or assignment.

Cell Phone/Screen Policy:

No laptops, iPads, or other devices which take your eyes off your fellow classmates and the class discussion. Electronic devices such as cell phones, pagers, iPods, etc. must be turned off during class meetings. *If your cell phone goes off during class you will be responsible for bringing treats for the entire class at the next class meeting.* Papers should not be read during class, though I applaud your efforts to stay abreast of current events and tackle the latest crossword or sudoku puzzle.

Academic Integrity:

In accordance with Willamette University CLA catalog: "Plagiarism and cheating are offenses against the integrity of the courses in which they occur and against the College community as a whole... Ignorance of what constitutes plagiarism shall not be considered a valid defense. If students are uncertain as to what constitutes plagiarism for a particular assignment, they should consult the instructor for clarification." Cheating is unethical and I take it very seriously. The Deans Office will be notified if anyone is found cheating and appropriate sanctions will be given. If you are unsure of what constitutes cheating, please ask me.

Tentative Schedule

The following schedule is subject to change. In addition to the listed assignments, there will be daily writing assignments related to the discussion and readings.

- Assignments due (Red)
- Assignments assigned (Green)
- Readings due for *that* class (Blue)
- In-class activities, or movie nights (Purple)

Day	Class Activities & Discussions	Assignments
<i>Metaphors</i>		
Th (8/26)	Glossary of literary terms & Metaphor Theories	Personal description of mathematics writing assignment
F (8/27)	MWLB Ch.s 25, 27, & 28 (26pgs)	
Sa (8/28)	BBC Interview	Proposed Interview Questions Interview Assignment
M (8/30)	MWLB Ch.s 29-30 (13pgs)	1-3 page summary of metaphor theory (can be an outline)
W (9/1)	Hilbert's Radio Address The Math Life (30 mins)	
F (9/3)	Metaphor Analysis	Metaphor Theory Summary
M (9/6)	No Class: Labor Day	
W (9/8)		Discussion/Paper Topics Analyzed Interview Transcripts
<i>Mathematicians on Mathematics</i>		
F (9/10)	MA Snow's Foreword (60pgs)	Paper 1 Assigned
M (9/13)	No Class: Meet with Me or WA to go over Paper #1 Intro and Storyboard	
W (9/15)	MA: §1-19, (55pgs)	
W (9/15)	Movie Night: Good Will Hunting	
F (9/17)	MA: §19-end, (38pgs)	
M (9/20)	Peer Editing Day	Pre-Marked Rough Draft Due
W (9/22)	LYM Preface, Ch.s 3 & 4 (30 pgs)	
F (9/24)	LYM Ch.s 6 & 15 (25pgs)	Paper #1 Due
M (9/27)	LYM Ch.s 16 & 21, Drawbridge Up (38 pgs)	
W (9/29)	Pop Science Readings	Marking Responses Assigned
F (10/1)		
M (10/4)	The Proof, Nova video	Marking Responses Due
W (10/6)	Excerpts from Fermat's Enigma (100 pages)	Paper prompts due
Math as Metaphor		
F (10/8)	Flatland §1-5 (12 pgs)	Paper # 2 Assigned
M (10/11)	Storyboard Peer Editing Day	Introduction and Storyboard for Paper # 2 Due
W (10/13)	Flatland §6-12 (20pgs)	
W (10/13)	Movie Night: A Beautiful Mind	
F (10/15)	Flatland §13-17 (16pgs)	
M (10/18)	No class: Meet with me or WA to go over Rough draft of Paper # 2	
W (10/20)	Flatland §18-end (17 pgs)	
F (10/22)	No Class: Mid-semester break	
M (10/25)	Watch π	Paper #2 Due
W (10/27)	Finish watching π	
F (10/29)	Proof Act I (45 pgs)	
M (11/1)	Proof Act II (35 pgs)	Paper #2 Markings Response
T (11/2)	Movie Night: Proof	
W (11/3)		
F (11/5)	Arcadia Act I (51 pgs)	Paper # 2 Markings Response Due
M (11/8)	Arcadia Act II (45 pgs)	
W (11/10)		
F (11/12)		Paper prompt suggestions Paper # 3 Assigned
M (11/15)	Peer editing of Intro and Storyboard	Paper # 3 Intro and Storyboard Due
W (11/17)		
F (11/19)	No Class: Meet with me or WA to go over Rough Draft of Paper # 3	
M (11/22)		Paper # 3 Due
W (11/24)	Last Day of Class	