

CSCI 105 – Fundamental Ideas in Computer Science

Spring 2010

Instructor: Dr. Matthew Lang
Office: PPHAC 213
Email: lang@cs.moravian.edu
Office Phone: (610) 625-7786
Google Voice: (484) 893-0782

Class: MWF 10:20–11:30 in PPHAC113
Office Hours: MW 1–2:30 (or by appointment)

Course Description

What is computation? What is intelligence? Can computation tell us anything about who we are? Can it tell us anything about music or art (and vice versa)?

This course is a meditation and mind-trip through the answers to the previous questions (and more). It is primarily a course about intelligence and computation and its strange loop of a goal is to use the lens of computation to change the way that you think about the world.

Course Outline

Over the course the semester, we will be reading Douglas Hofstadter's Pulitzer prize-winning text *Gödel, Escher, Bach: An Eternal Golden Braid*. The course will be run as a seminar; each class meeting we will be discussing a portion of Hofstadter's text. As a seminar, you will be responsible for keeping up with the readings and coming prepared to discuss what you have read. In addition, after the first few meetings—during which I will lead discussion—discussions will be student-led. This means that you will be assigned a set of dates for which you will be responsible for guiding our discussion of the reading.

Texts

Required:

Gödel, Escher, Bach: An Eternal Golden Braid by Douglas Hofstadter.

Optional:

Musical Offering by J.S. Bach.

The Art of the Fugue by J.S. Bach.

Note: The two preceding “texts” are compositions by Bach. There are countless recordings—of varying quality—of these works, some of which are public domain. I have recordings that we will listen to in class, but it may be helpful or illustrative for you to have access to copies for your own use.

Attendance Policy

This course does not have a rigid attendance policy in the sense that there is a rule stipulating the number of lectures that you must attend. However, please do not take this as a license to never show up to class; I expect you to be at each class meeting. Since this class is a seminar, a large portion of your final grade will be based—both directly and indirectly—on your class participation.

Academic Honest Policy

Please read and understand the College's Academic Honesty Policy (which you can find in the Student Handbook).

Grading Policy

There are four components to your grade:

- **Class participation:** You are expected to make meaningful contributions to our discussions, either by asking insightful questions or by lending insightful observations. I will keep a record of your daily participation, upon which I will base this portion of your grade. **Weight: 20%**
- **Class presentations:** You will be expected to lead discussion a few times throughout the semester and will be graded on your preparedness and the quality of your questions and observations. **Weight: 30%**
- **Journals:** You will keep a reading journal; for each of the assigned readings, you will record points you find interesting and questions raised by the text. **Weight: 20%**
- **Culture Points:** *“Ugh!” you exclaim, “Not another class involving culture points!”* Yep. Sorry. **Weight: 10%**
- **Final:** A cumulative final exam will be given on Thursday, May 6 at 8:30. **Weight: 20%**

Other policy matters:

- **Grading Scale:** I will use the standard scale with pluses and minuses to assign grades.
- **Late Journals:** I will not accept late work. The purpose of journal assignments is to prepare for the in-class discussion. As such, there is little point in doing them after the fact. If you are going to miss a class period, you may email me your journal entry along with an explanation of the circumstance (see below for valid/invalid circumstances).
- **Presentation/Exam Absence:** As we are scheduling your presentation dates well in advance, there should be no conflict between your schedule and your presentation. If you miss a presentation due to some other circumstance, you must let me know as soon as possible and provide me with documentation. Valid circumstances include events like illness and family trauma. Invalid circumstances are events like hangovers and faulty alarm clocks.
- **Academic Accommodations:** Please let me know immediately if you have any disability that requires accommodation.

This syllabus is subject to change.