

## DRAFT SYLLABUS, PART I

*PROMISE:*

I want to buy a new car. *How much can I afford to pay?* Retirement looms. *Will I have enough money to live on?* My boss wants to know if our company should lease or own the office furniture. **How will I answer? What will I answer? Will my answer be believed?**

Most, if not all of you, will use a computer to make a decision at some point in the future. In this course you will learn how to use a computer to organize and analyze information to help you solve problems and make decisions. (Notice the computer *helps* YOU solve problems.) Once you have organized information you can ask interesting questions about the past, like *Where* did my money go? You can also ask interesting question about the future, like *Will* I have enough money to . . .? Thus, you may be able to make reasonable plans.

Once you have a “solution” to your problem, the real intellectual challenge begins. *Is what the computer says correct? How do you convince yourself and others that the solution is trustworthy? reliable? accurate?* This is why in some circles I call this course INTRODUCTION TO APPLIED EPISTEMOLOGY.

And finally, suppose your boss comes to you with financial and performance data for the company’s employees: “Put all this in a spreadsheet so I can figure out who to fire.” *Could* you do it? *Would* you do it? *Should* you do it? While we won’t come to definitive answers to question of this sort, I will help you to think clearly about the use of computers in our society.

*ADMINISTRATION:*

Keith Brian Gallagher, Ph.D. Donnelly Science 124. Hours: Monday & Wednesday afternoons. Drop-ins accepted, provided that. . . Open door means I’m “open.” Closed door means I’m not there or busy. You may knock on the closed door. . . Phone 410-617-2854. Send mail to kbg@cs.loyola.edu. Course Files are available from my web site: [www.cs.loyola.edu/~kgb](http://www.cs.loyola.edu/~kgb). Browse my web site and find an interesting idea there.

*REQUIRED TEXTS:*

Dale and Lewis, “Computer Science Illuminated, 2<sup>nd</sup> ed.” Jones and Bartlett, 2004. ISBN: 0-7637-0799-7.  
Shaffer, *et al.*, “New Perspectives on Microsoft Office 2003,” Thompson, 2004. ISBN: 0-619-20658-6.

*RECOMMENDED:*

Bob Nelson, “1001 Ways to Take the Initiative at Work”  
Jerry Harvey, “How Come Every Time I’m Stabbed in the Back, My Fingerprints Are on the Knife?” (out of print, but available)  
Richard Feynman, “Six Easy Pieces: Essentials of Physics Explained by Its Most Brilliant Teacher”

*CATALOGUE DESCRIPTION:*

An intensive course in computer concepts and a survey of business applications including word processing, spreadsheets, database management, presentation graphics and Internet applications. Also includes a [sic] introduction to Visual BASIC. Applications incorporate extensive, hands-on experience on a personal computer. *Satisfies one math/science requirement.*

*COURSE OBJECTIVES:*

1. Develop an interest in further independent learning.
2. Provide a base of concepts and skills that will facilitate further learning and thinking.

*DEPARTMENT OBJECTIVE:*

To produce graduates who can author high quality solutions to real problems, communicate effectively with people as well as machines, and adapt in a rapidly changing technological environment.

*PERSONAL OBJECTIVE:*

To develop an interest in further learning and provide a basis of concepts and skills that will facilitate further learning and thinking.

*HOW YOU WILL ACCOMPLISH THESE GOALS AND OBJECTIVES:*

First, you must take responsibility for your own learning and engage this material, by submitting, once a week, a one-page summary of what you have learned, through blackboard. You can also engage the material by coming to class, (although I do not take attendance) reading and trying to understand the texts, working in timely fashion, contacting me as soon as possible if you need any extra help, and not waiting until you are totally lost to see me. You can prepare for class in two ways: review your notes before class, to generate questions, and after class, to make sure that you understood the discussion.

*HOW WE WILL WORK TOGETHER TO ACCOMPLISH THESE GOALS AND OBJECTIVES:*

(The first 2 statements below give a rationale for my being here: This is what I want you to know and why I want you to know it.)

I will show you how working Computer Scientist uses his tools to solve problems. You may not become a scientist of any sort, but you will need to use tools, in particular, computers and software, to solve problems.

I will show some of the “big ideas” of computer science. It is these ideas that make the discipline interesting.

I will begin every class with a review: “Any questions?”

You will give each other feedback on your weekly summaries of what you have learned. (See GRADING, below.)

At least once this semester, I will have each of you come to my office for a visit in which you will get to show

me how clever you are. I will cheer your insights and scowl when you do work that is beneath your ability. At the end of this session, you will give yourself grade, but I probably won't write it down.

### GRADING:

Premise from the college catalogue: [page 51 in the 2002-2003 version]:

**A** Excellent. Denotes outstanding achievement and an unusual degree of intellectual initiative. It is the highest grade awarded.

**B** Good. Denotes work which surpasses the objectives for the course. It is a mark of distinction.

**C** Satisfactory. Denotes work which achieves the objectives for the course. It is the lowest grade given for an acceptable performance.

**D** Unsatisfactory. Denotes work of an inferior quality compared to the objectives for the course. It is the lowest passing grade and a mark of inadequate performance.

**F** Failure. Denotes inadequate work below minimal standards of competence required to pass the course. A course with this grade does not satisfy prerequisite or degree requirements.

### Process:

Starting (for practice) on Tuesday 25 January (and for real) every Tuesday thereafter, you will submit by 5 p.m. your weekly summary of what you have learned in this course in the the past week to me, via blackboard. Within 24 hours they will be shuffled and forwarded to another student who has submitted a summary. You will then review and comment on the submission that you receive, PUT YOUR NAME ON THE EVALUATION and return it via blackboard by 5 p.m the following Friday. Your submission and notes will then be returned to you.

If you do this 12 times, once a week without exception, throughout the semester, you will receive a grade of **B**. To *earn* an **A**, you must submit all 12 weekly summaries and demonstrate "an unusual degree of intellectual initiative." I can't tell how to show initiative, because if I tell you to do something and you do it, you haven't shown any initiative... Having said that, there will be plenty of opportunities. To quote from the preface of the Feynman book,

I thought ... to make sure, if possible, that ... the class was unable to to completely encompass everything that was in the lectures – by putting in suggestions of applications of the ideas and concepts in various directions outside the main line of attack. For this reason, though, I tried very hard to make all the statements as accurate as possible, to point out every case where the ... ideas fit ... and how – when they learned more– such things would be modified. I also felt that it is important to indicate what it is that they should – if they are sufficiently clever– to be able to understand by deduction from what has been said before, and what was being put in as something new. When new ideas came in, I would either try to deduce them if they were deducible, or to explain that it *was* a new idea [and] was just added in.

I will also submit a weekly summary into the stew, so some of you will get to evaluate *my* progress! And I will review more than 1 per week, so some weeks, you will get 2 responses.

There are no other grades.

If, after reading this, you would like to transfer to another section, where the instruction is closer to your “classroom paradigm,” that would be OK with me.

*THE APPROACH:*

This will not be the “usual” CS 111, with packaged presentations, although I will probably do some. I plan to run the classes using the following template:

1. On Mondays, we will try to solve a problem using one of the application packages.
2. On Wednesday, we will discuss some idea from the Dale/Lewis book.
3. On Fridays, we will tie down the loose ends of the week.

*SPECIFIC THINGS WE WILL TALK ABOUT: TBD*

**Honor Code**

Out of concern for the College and the community in which we study, each student at Loyola must maintain the highest academic honesty. In order for us to uphold this degree of excellence, the Honor Code requires students to report any act of academic dishonesty or they will be violating the Mission of the Code and, thus, be guilty as well.

All students of the College are expected to understand the meaning of this Code. Ignorance of the Code is the fault of the student and not a valid reason for committing an act of academic dishonesty. The following will constitute violations of the Code and are defined below:

**Cheating** The use of unauthorized assistance or material or the giving of unauthorized assistance or material in the carrying out of an academic piece of work. Students will also be expected to follow the rules set by a course instructor as presented on a written syllabus.

**Stealing** The wrongful taking of another’s property or knowledge, either by force or in secret. This also applies to the property of the Loyola/Notre Dame Library.

**Lying** A false statement made with the conscious intent to mislead others from knowing the truth.

**Plagiarism** The act of imitating or presenting an already authored work as the original thought of one’s own mind. All quoted material must be recognizably cited as the work of another author. Phrasing or ideas that are not a student’s own must also be clearly credited to the original author. Faculty members are expected to review what constitutes “Common Knowledge” at the beginning of every course.

**Failure to Report a Violation:** The conscious failure to report any student who has committed a breach of this Code.

Having said that, **I expect you to help each other!** I will become very upset if I find out that you have refused to help someone. When you receive help, from any source, just say so.