Instructor Contact Information
Dr. Dave Binkley
Office: Donnelly Science, Room 125E
E-mail: binkley@cs.loyola.edu
Office Hours: 2:00-3:30 MWF or by appointment (email me)

Class Location and Times
Knott Hall, Room 006, MWF 1:00 – 1:50

Course Description
An introduction to computer science and software applications that includes the design and operation of personal computers, representation of data by computers, structure of operating systems, design and operation of computer networks, concepts of software design and programming, and social and ethical issues. Students get hands-on experience with spreadsheets, database management systems, and high-level programming.

Textbook
Invitation to Computer Science (Schneider) + LMS Integrated for MindTap Computing
- Print version: 9781337756181
- Digital version: 9781305970014

Learning Outcomes of the Course
Upon successful completion of this course, you will be able to
- understand how computers work and learn, and their capabilities
- write a simple Python program
- create and use a spreadsheet to format, compute, and graph data
- create and use a database to organize and query data

Tentative Schedule of Topics
Week 1: Introduction
Weeks 2-6: Spreadsheeting
Weeks 6-10: Programming
Weeks 11-12: Databasing
Weeks 13-15: Machine Learning

Course Structure and Assumptions
First up, I have it on good authority that I am not your mother. Leaving you responsible for waking up, getting dressed, handing in assignments on time, being prepared for class, etc. Class time will consist of
lectures and hands-on computer instruction. There is a substantial amount of computer-related work that needs to be done outside of the scheduled class period. This work may be done on your personal computer, assuming the necessary software is installed, or on a campus-based computing resource.

It will be assumed that you possess basic computer skills and knowledge. Additionally, you are expected to be functionally literate in the use of a word processor, using the Internet to research content specific to the course using various web browsers, and have a basic understanding of the Microsoft Windows 10 operating system including, but not limited to, how to save files to various storage locations and how to manipulate multiple windows on their desktop. The course will also include a brief discussion of Apple’s iOS operating systems, but our focus will be on the Microsoft Windows platform.

Other Software Requirements and Assumptions
We’ll be using the Microsoft Office 2016 application suite when discussing concepts related to Microsoft Excel and Microsoft Access. You are not required to purchase the Microsoft Office 2016 application suite for use with this course. You’ll have two options in order to access this software. First, all Loyola computing resources offer access to the Microsoft Office 2016 application suite. If, however, you would like access to the same software on your own personal computer, you may do so through a product called Microsoft Office 365, which can be accessed through an e-mail you should have received through your Loyola HoundNet e-mail account. You can request assistance in working with Microsoft Office 365 by visiting the Student Technology Center (STC) in Knott Hall 003, contacting the STC by phone at 410-617-5555, or by e-mail at ots@loyola.edu.

Grade Breakdown

<table>
<thead>
<tr>
<th>Component</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pop Quizzes</td>
<td>15%</td>
</tr>
<tr>
<td>Midterm exam</td>
<td>10%</td>
</tr>
<tr>
<td>Final exam</td>
<td>15%</td>
</tr>
<tr>
<td>Assignments</td>
<td>55%</td>
</tr>
<tr>
<td>Spreadsheets</td>
<td>10% + 15%</td>
</tr>
<tr>
<td>Programming</td>
<td>10% + 10%</td>
</tr>
<tr>
<td>Databases</td>
<td>10%</td>
</tr>
<tr>
<td>Class participation</td>
<td>5%</td>
</tr>
</tbody>
</table>

Moodle
Loyola University Maryland uses the Moodle Learning Management System (LMS) to coordinate course materials. Assignment details will be uploaded here as well. Please do not send assignments and/or projects via e-mail unless instructed to do so. You are responsible for class materials through the LMS as necessary throughout the semester. Additionally, when a deadline exists for content submission, be mindful of it and allow yourself plenty of time to submit in case of last minute issues.

Missed Midterm Exam/Quiz Policies
In general, there will be no makeup for missed quizzes or midterm exams. Exceptions can be made if you are able to provide a doctor's note, police report, or other suitable documentation (the latter accepted at the instructor’s discretion).

Natural Sciences Learning Aims
- To develop an innate curiosity about the natural world and take a life-long interest in science news advancements.
- To understand the process of science - its methodology, how questions are framed, how data are acquired, how arguments are constructed and conclusions reached.
- To learn to reason mathematically, and to think critically and analytically through statistical or mathematical methods.
• To learn how recent technological advances have facilitated and accelerated scientific inquiry.

**Computer Science Core Learning Outcomes**

• Understanding the theory and practical details of how computers and computational systems work, including their capabilities and limitations.
• Using a personal computer and the Loyola network to complete class assignments and prepare for lifelong professional and personal competence in computer technology and software.
• Ability to apply computer technology to substantial problems, to consider the consequences of these applications and to keep up to date with changing technology.

**Academic Honest Policy**

• Academic honesty is expected of all students. Work submitted by students as their own shall be their own and information and ideas taken from any other sources or individuals shall be clearly identified as such. Acts of cheating or plagiarism, and other violations of academic honesty are not acceptable. Penalty for any violations of the Honor Code will include a drastically reduced grade for the activity for all individuals involved.
• The Loyola University Honor Code states that
  o The students of Loyola University Maryland are citizens of an academic community that will conduct itself according to an academic code of honor, following the Jesuit Ideal of cura personalis and keeping within the school motto “Strong Truths Well Lived.”
• All work submitted in this course shall include the Honor Code statement with your signature:
  o “I understand and will uphold the ideals of academic honesty as stated in the Honor Code”