Problem Solving Using Computers
Syllabus

CATALOG DESCRIPTION:
This course introduces problem solving techniques, critical thinking skills, algorithm development and computer programming using real-world problems. Topics include: computer literacy, hardware, data representation, structured and object-oriented programming techniques, modularity and reusability, and testing and debugging techniques.

TEXTBOOKS:
No formal textbook is required for this course. Notes will be provided via the course webpage. Additionally, online resources will be used.

REFERENCE:


Other books on Visual Basic may be helpful.

COURSE SOFTWARE:
This course uses Microsoft Visual Studio 2015/17. This software is available in campus computer labs. Additionally, students may obtain this software by purchasing it from the IUSB Barnes and Noble bookstore. Another option is to download for free the VS Community 2017 edition.

COORDINATOR:  Dr. David R. Surma  
Office: 339 Northside  
Fax #: (574) 520-5589  
Course Webpage: http://mypage.iu.edu/~dsurma

E-mail: dsurma@iusb.edu  
Office Phone: (574) 520-4412  
Secretary: (574) 520-5521

OFFICE HOURS:  Mondays & Wednesdays 11:45am-12:45pm, Thursdays 11:30am-12:45pm and others by appointment. Questions via E-mail are encouraged. Students are encouraged to make use of office hours and/or contact the professor early if they are experiencing any problems associated with the course.

ORGANIZATION:  The course meets Mondays and Wednesdays in NS 340 from 1:00-2:15pm for lecture. A weekly lab is held on Thursdays in NS 164 from 1:00-3:00pm.
Laboratory Assignments:
Attending labs is a required part of the class and each person must perform the assignments on their own unless otherwise stated. At the beginning of the lab period the assignment will be distributed. It will usually not be available before this time. Lab exercises are due when the Instructor calls for them either at the end of the lab period or, on some occasions, at the beginning of class on a specified due date. Labs are due even if you are unable to attend that day.

No late lab assignments will be accepted for any reason! However, one lab assignment will be dropped - subject to stipulations given in class.

Assignments:
Homework assignments and/or projects are regularly assigned and will be due on the date specified on the handout or posted on the course website. Some of these assignments may be turned in one class meeting day late – with a 25% penalty. After this time, the assignment will not be accepted. One attempted assignment will be dropped - subject to stipulations given in class. If no work is completed/submitted for an assignment it cannot be dropped.

Attendance:
One of the keys to success in this class is to attend the lecture sessions. Because this is so important, a portion of the final grade will be derived from your attendance. 5% of the final grade will be given on an ‘all or nothing’ basis. You are allowed to miss three lectures without penalty. Any misses beyond this and the 5% is forfeited. Missing lab periods will be handled under the following policy.

Conduct & Participation:
Since you, or someone on your behalf, is paying for this course it is expected that you actively participate in both lecture and lab sessions. While this does not mean that you must raise your hand to answer every question, it means that you should attend, take an interest in the class and maintain a good attitude toward learning the course material. Furthermore, you are expected to be prepared for each class period. This means having a notebook and a writing instrument. You are required to take notes and the form of this will be discussed on the first day of class.

Along with participation you are required to treat the Instructor and your fellow students with respect. To encourage you to conduct yourself professionally and to properly participate in the class 5% of your final grade is assigned to this category. Additional details of what is expected will be provided by the Instructor at the first class meeting. The following is a note from the IUSB student handbook:

Disabilities Note:
If you have a disability and need accommodation, contact the Disability Support Services office (Administration Building, room 113, phone: 574-520-4832) as soon as possible to establish your eligibility for disability support services. Once the DSS office has provided you with a letter identifying your needed accommodation(s) bring the letter to me, preferably during office hours or by scheduling an appointment. For more information, visit the DSS website: www.iusb.edu/disability-support/services.php

Tests and Quizzes:
There will be three in-class written examinations. One of these will be dropped. Because of this policy, no makeups will be given for any reason. The instructor reserves the right to have quizzes. These quizzes will be announced ahead of time and the points will count with the “Assignments” portion of the final grade.

Policy on Incompletes:
The granting of an Incomplete in this course is highly discouraged. Thus, it will be done only in very rare cases and will conform fully to the college policy. Keep up with the course and notify the instructor promptly of any problems. You will receive more help if you act early.

Grading:
The following weights will be used to determine the final grade:

- Assignments: 24%
- Labs: 12%
- Conduct/Participation: 4%
- Attendance: 5%
- Exams: 30%
- Final Exam (Comprehensive): 25%

Your final grade will be based on your average for the total number of possible points. An average that falls between 90 and 100 earns an "A", an average that falls between 80 and 90 earns a "B", etc. Plus and minus grades will be given if an average falls within 1.5% of the cutoff score; for example, an average of 88.6% will earn a B+, and an average of 91.4% earns an A-.

Discrepancies:
If you have any questions regarding how any assignment or test/quiz is graded and you think that you deserve more points than you received, you must see the Instructor within one week of the time the assignment is first returned to the class. No claims, justifiable or not, will be considered after this deadline. Be advised that any assignment brought to the Instructor is subject to a total re-grading.
**Final Note on Grades:**
It is the opinion of the Instructor that a grade is to be *earned* - not bargained for or pleaded for at the end of the term. Therefore, keep up with the work during the entire semester and do not try to ‘save’ your grade during the final week(s) of the semester.

**Important Dates:**

<table>
<thead>
<tr>
<th>Event</th>
<th>Dates</th>
</tr>
</thead>
<tbody>
<tr>
<td>MLK Jr. Day - no classes</td>
<td>Monday, January 20&lt;sup&gt;th&lt;/sup&gt;</td>
</tr>
<tr>
<td>Last Day to Withdraw with automatic W</td>
<td>Sunday, March 15&lt;sup&gt;th&lt;/sup&gt; 11:59pm</td>
</tr>
<tr>
<td>Spring Break - no classes</td>
<td>Monday, March 16 - Friday, March 20</td>
</tr>
<tr>
<td>Last Day of Class</td>
<td>Wednesday, April 29&lt;sup&gt;th&lt;/sup&gt;</td>
</tr>
<tr>
<td>Final Exam</td>
<td>Wednesday, May 6&lt;sup&gt;th&lt;/sup&gt;, 1:00pm</td>
</tr>
</tbody>
</table>

**Tentative Dates for Exams:**
February 10<sup>th</sup>, March 11<sup>th</sup>, April 15<sup>th</sup>
Exam dates will be confirmed one week in advance.

**Final Examination:**
The final exam is comprehensive and will be given on the university assigned date and time. If you have any special circumstances that might conflict with this time you MUST discuss it with the Instructor prior to April 13<sup>th</sup>. No changes from this time will be allowed for any reason after this date.

**Course Webpage and course communication:**
This class will make use of the WWW to post lab assignments and an occasional announcement. During the semester lab assignments will be generally be posted sometime *AFTER* they are distributed to the class. In the event that a student has to miss class, the assignment should be obtained from either this web site or from a classmate. Assignments will *NOT* be emailed to students. The course website is located at [http://mypage.iu.edu/~dsurma](http://mypage.iu.edu/~dsurma).

Also, Email sent to your IUSB account is considered by the university to be an official form of communication. Therefore, you need to check that Email account regularly or have that Email forwarded to a personal account that you do check on a daily basis. In short, you are responsible for any/all information that is sent to your IUSB account.

**Use of cell phones, notebook computers and other electronic devices:**
During lectures all cell phones and portable electronic devices must be turned off or put in “silent” mode and *be put away* (book bag, etc.) The use of computers and phones of any kind during lectures is not allowed unless special permission has been granted by the Instructor. If a cell phone/tablet is visible during lecture or while in the lab you will be counted absent for that day.
Use of social networking sites and non-course related applications:
Lab time is to be used to complete lab assignments and projects for this course. While it is acceptable for students to do personal tasks prior to the start of lab, once lab starts students may not visit Facebook, Twitter or other such sites nor are they allowed to check, read, write or send Email or text messages. Students who finish their course work early should leave the lab, but they may stay if working on other assignments for this course. Students are not authorized to do other tasks. The campus has many open labs that can be used for such purposes.

Class Atmosphere:
Class time is a precious commodity. Therefore, please be on time and when in class be courteous to your fellow students. This is an introductory class and the students will bring with them a wide range of backgrounds in computers. The goal is to provide everyone with an opportunity to learn as much as they desire. Always feel free to ask questions and to take part in discussions.

IUSB Attendance and Course Commitment Policy:
This course has been approved to enforce the IUSB Attendance and Course Commitment Policy. The full text of this policy is available at http://registrar.iusb.edu/attendance

As part of this policy, students are subject to administrative withdrawal from their coursework for failing to attend their classes during the first week of the semester.

As a student in this course, you are expected to attend scheduled class meetings and actively participate in all class activities. Students who miss the first week of the semester or who do not attend 50% of the scheduled class meetings before the end of the fourth week of the semester may be subject to administrative withdrawal. Regardless of attendance, students who do not actively participate in this class by not submitting their assignments by the posted due date are subject to administrative withdrawal. Students who are administratively withdrawn from this class after the fourth week will not be eligible for a tuition refund. Administrative withdrawals may have an impact on the student’s financial aid awards and visa status.

Required Item from IU/IUSB:
What you should know about sexual misconduct: IU South Bend does not tolerate acts of sexual misconduct, including sexual violence. If you have experienced sexual violence, or know someone who has, the University can help. It is important to understand that federal regulations and University policy require faculty to immediately report complaints of sexual misconduct known to them to the IU South Bend Deputy Title IX Coordinator to ensure that appropriate measures are taken and resources are made available. IU South Bend will work with you to protect your privacy by sharing information with only those that have a legitimate administrative or legal reason to know. If you are seeking help and would like to speak to someone confidentially, you can make an appointment with a Mental Health Counselor on campus through the Student Counseling Center. Find more information about sexual violence, including campus and community resources, at http://stopsexualviolence.iu.edu/.
Academic Integrity and Academic Honesty Statement:
“As a student you have a right to learn in an environment that provides for intellectual and ethical growth. This is also your responsibility and requires you to behave in an ethical manner. Therefore, your conduct must conform to the Indiana University Code of Student Rights, Responsibilities, and Conduct (http://studentcode.iu.edu/index.html). It is the responsibility of the student to know of the prohibited actions such as cheating, fabrication, plagiarism, academic, and personal misconduct, and thus, to avoid them. All students are held to the standards outline in the code. Please reference the entire code for a complete listing http://www.iu.edu/~code/code/index.shtml). Part 2 of the Code defines academic and personal misconduct. Any violation may result in serious academic penalty, ranging from receiving a warning, to failing the assignment, to failing the course, to expulsion from the University.

“Since dishonesty harms the individual, all students, and the integrity of the University, policies on scholastic dishonesty will be strictly enforced with zero tolerance.”

• Basic Descriptions:
  o Cheating: Copying, communicating, giving or seeking aid, buying/using answer keys, …. during exams/quizzes is cheating.
  o Collusion: Sharing/showing your code/assignment answers with another student, even temporarily, is collusion.
  o Plagiarism: Copying code/assignment answers (e.g. from a tutor, the Internet, another student, or from a previous semester) without appropriate acknowledgement is plagiarism.

• In all, if your name is on the assignment that you submit to the Instructor, make sure it is your own answers!
• Violators of the ethics code will be reported accordingly.

KEYS TO SUCCESS:

This class is designed so that everyone should be able to get out of it whatever they desire. To obtain a high final grade, the following are some time-tested techniques which should help.

* Come to class and be on time. Believe it or not, even if you are not at your best, just being in class always helps.

* Keep up with the work. Do not fall behind and think that you will be able to catch up later in the course. If you cannot turn a lab in for credit it is still important to do it. Labs typically build upon other lab work.

* Utilize office hours and campus resources if needed. They exist to help you.
* Notify the Instructor **immediately** if something happens which causes you to miss class, lab, etc. Informing the Instructor a week or more after the fact will not be received well and penalties accrue until the Instructor is notified. The Instructor can be contacted via telephone (his or through the secretary), e-mail, or fax. Not being able to ‘reach’ the Instructor will not be accepted as an excuse.

* Remember that if you miss class, it is YOUR responsibility to find out what you missed and to get caught up with the work. Therefore, if you can, call a classmate as soon as possible to learn what was covered that day.

* Missing a class is NO excuse for late work. You MUST get the assignment turned in when it is due. This might require you to turn it in early, send it with a classmate, or even fax it or e-mail it in.

* If you find that you will not be able to complete the course, do yourself a favor and formally withdraw. The process is simple and a “W” on your transcript is far better than an “F” of “FN”. Also, while the university does allow late withdrawals, the instructor for this class may exercise the option to grant this late withdrawal but with a grade of “F”. Therefore, do not simply stop coming to class unless you have formally withdrawn – and by the posted deadline.

* Remember that late work is either not accepted or is accepted with a significant late penalty. Late is defined as when the Instructor calls for the assignment at the beginning of the period when the work is due (or the exact time for electronically submitted assignment). Always submit assignments on time. This will typically require you to come to class/lab on time.

* Realize that programming is a “results business”. Credit is not granted solely for effort/time expended.

* Have a good attitude. This class should be enjoyable as well as being informative. The Instructor strives to make the class environment one where learning can occur in a relaxed atmosphere.

* Be respectful of your fellow students and the Instructor.

**Finally ...**

Please don't let any of the above policies scare you away. The intent is to make you fully aware of the way the course will be run so that everyone knows right from the beginning. The policies will be strictly followed so when you have questions always first refer to this document. If you still have questions feel free to contact the Instructor.