Note:

This syllabus describes the way this course will be conducted. Please contact the instructor if there are statements that are unclear, or that you disagree with. Questions and feedbacks are ALWAYS welcomed. Please feel free to talk to me if you have any concerns or needs. Specifics are subject to change with appropriate notice.

Instructor: Dr. Jinzhu Gao

- **Office:** CSB 110  **Phone:** 946-3037  **FAX:** 946-7326  **Email:** jgao@pacific.edu  
  **Homepage:** http://www1.pacific.edu/~gaoj
- **Lecture:** MWF 9:30 am – 10:50 am at CSB 111
- **Office hours:**
  - MWF: 3:00pm – 4:30pm
  - Or by appointment

Textbooks:


*myCodeMate*, http://www.mycodemate.com/

Blackboard:

Blackboard, [https://pacific.blackboard.com](https://pacific.blackboard.com), will be used for distributing course notes, assignments and announcements. Students are responsible for checking the site regularly.

Prerequisite:

Students must have completed the basic math skills requirement.

Course Description:

This course is an introduction to computing and computer science. The emphasis of the course is the development of basic skills necessary to write programs to command computers to carry out specific tasks. The course will also cover the fundamental components of computer systems and an overview of core concepts in computer science.

While most of us are familiar with the use of computer applications to assist in well-defined tasks such as writing a report or playing a game, you will often come across unique problems for which no application is available. Learning to program a computer allows you to create new applications to solve such unique problems by giving the computer new instructions in a general-purpose language.
We will use the programming language C++ to introduce program design and problem solving techniques. The skills and techniques learned in the course are also applicable to similar programming languages such as Java and Python.

Students will learn to:

- Understand how computing systems function.
- Design the flow of control (the order in which instructions are executed) for a program and implement that flow using a variety of selection and iteration structures.
- Design appropriate data storage for a program and implement the storage using basic data types and simple data structures.
- Develop functions and classes to modularize program structure.
- Utilize a variety of software libraries.
- Analyze and debug misbehaving programs.

Course Outcome: You will understand how computing systems work and how people tell computers what to do. You will be able to develop programs in a popular general purpose programming languages and have skills that can be applied to a wide variety of languages and computing environments.

Grading:

<table>
<thead>
<tr>
<th>Component</th>
<th>Percentage</th>
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</thead>
<tbody>
<tr>
<td>Attendance and Participation</td>
<td>10%</td>
</tr>
<tr>
<td>Homework/Labs</td>
<td>30%</td>
</tr>
<tr>
<td>Quizzes</td>
<td>20%</td>
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<tr>
<td>Midterm Exam</td>
<td>20%</td>
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<tr>
<td>Final Exam/Final Project</td>
<td>20%</td>
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Homework: Homework assignments will include both written exercises and programming projects. There will be approximately 8 assignments, biweekly throughout the semester.

Homework submission format: Homework will be submitted electronically through Blackboard. All submissions must be typeset and printed. Hand written submissions will not be accepted. All submitted files must include (a) your name, (b) the assignment number and (c) the submission date at the top of the first page.

Labs: There will be weekly lab sessions (programming exercises) held during class time. Labs are designed to give you supervised hands-on experience in programming and to give you an opportunity to share programming ideas with your classmates.

Lab exercises will be designed to be completed during the lab session. Grading of labs will be based on your effort to complete the exercise. If you attend and fully participate in all labs, you should expect to receive full credit for that portion of the course grade.

Quizzes: Quizzes will be given periodically throughout the semester. Most quizzes will be announced ahead of time, although "pop quizzes" may occasionally be necessary. The purpose of the quizzes is help you assess your understanding of the material and to help you to prepare for the examinations. Quizzes will be given at the end of lecture on the assigned date. There will be approximately 8 quizzes.
Written Exams: Tentatively, there will be two written exams, the mid-term and the final. The final exam will be comprehensive and may be replaced by a final project. For each exam, you will be allowed to use one "cheat sheet", a standard size piece of paper on which you may write any notes you feel will be helpful. You may also use calculators on exams.

Attendance: Class attendance is necessary and expected. Students missing a class are responsible for making up the material discussed in that class on their own. Students are responsible for being aware of any announcements made during their absence.

Late Assignments and Make-up Work: The only acceptable excuses for missing an assignment due date, lab, quiz or exam are serious illness, death in the immediate family or important professional activities. Illness or death in the family may require documentation. Excuses for professional activities must be approved by the instructor in advance.

Homework assignments should be submitted through Blackboard on the assigned due date. Late assignments will be accepted up to 48 hours after the due date (excluding weekends and holidays), with a 20% late penalty.

There will be NO makeup quizzes, labs or exams, except for excused absences.

Individual Work and Collaboration: Computer professionals usually work in a cooperative environment, yet proper assessment requires that work be done by individuals. To alleviate confusion, the following policy will be followed:

Collaborative work is encouraged. This includes students working together on problem sets, planning solution strategies and helping each other to debug programs. Collaboration must stop short of the writing of program code or English that represents your work. You may not directly copy the work of another student. It is your responsibility to ensure that the work you submit is an honest representation of your own understanding of the material.

Marginal cases will be resolved by oral examination of the students involved. If they understand the material in the assignment, it will be considered honest collaboration. If they do not, then it will be considered academic dishonesty.

Honor Code and Academic Dishonesty: The University Honor Code is an essential element of academic integrity. It is a violation of the Honor Code to give or receive information from another student during an examination or to submit all or part of someone else's work as one's own. If a student violates the Honor Code, the faculty member may refer the matter to the Office of Student Life. If found guilty, the student may be penalized with failure of the assignment or the course. The student may also be reprimanded or suspended from the University.

Cases of academic dishonesty will not be tolerated. On a first offense, the student will be given a written warning and a grade of zero for the work in question. On a second offense, notice will be sent to the student's academic advisor, the Dean of the School of Engineering and Computer Science and the Dean of the student's own school, and the matter will be turned over to the Office of Student Life for resolution.