### I. Team Members

<table>
<thead>
<tr>
<th>Name</th>
<th>Specialty</th>
<th>Signature</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alice L. Dieli</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Frederick G. Schmitt</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### II. Program Review Committee

<table>
<thead>
<tr>
<th>Name</th>
<th>Committee (Chairs)</th>
<th>Signature</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Derek Wilson</td>
<td>Chair of Budget Committee</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chris Schultz</td>
<td>Curriculum Committee Chair</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Blaze Woodlief</td>
<td>Educational Planning Committee</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Erik Dunmire</td>
<td>Facilities Committee</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yolanda Bellisimo</td>
<td>Institutional Planning Committee/ Academic Senate President</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nick Chang</td>
<td>Instructional Equipment Committee (and Other Expenses)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sara Mckinnon</td>
<td>SLO Coordinator and Chair of The Program Review Committee</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Joetta Scott</td>
<td>Student Access and Success Committee</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### III. Vice President of Academic Affairs

<table>
<thead>
<tr>
<th>Name</th>
<th>Signature</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nick Chang</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### IV. Board of Trustees President

<table>
<thead>
<tr>
<th>Name</th>
<th>Signature</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phillip Kranenburg</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
I. Program Definition
The Computer Science program is designed to offer students a series of courses to help them reach their personal and professional goals with a two-year degree in Computer Science, appropriate preparation for transfer to a four-year institution, advancement in an established career, or retraining for moving into a new profession.

II. Program Purpose

<table>
<thead>
<tr>
<th>Primary Goal:</th>
<th>Secondary Goal:</th>
<th>Other Goal:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Degree/Transfer</td>
<td>Career/Work Training</td>
<td>Lifelong Learning</td>
</tr>
</tbody>
</table>

**Primary and Secondary Goals Description:**
The primary goal of the Computer Science program is to prepare students for a career in the Computer Science field by offering a program leading to an A.S. in Computer Science. Together with appropriate electives, students can also meet the requirements for transfer to a four-year institution to receive a baccalaureate degree in a science, engineering, or business discipline.

The secondary goal of the Computer Science program is to offer courses which give students skills necessary for advancement in the computer industry or retraining for an entry-level position.

III. Students Served
Students enrolled in Computer Science courses include:
(a) high school students and graduates seeking a two-year degree in subject areas including computer science,
(b) high school students and graduates taking courses required for transfer to a four-year institution as a Computer Science major,
(c) returning students seeking skills for advancement in their current career or preparing to change professions,
(d) returning students seeking new knowledge in fulfillment of a personal goal.

IV. Program History
Although some core courses in Computer Science have been part of the program for a number of years, new courses have been added as computer technology and Computer Science education have changed. For example, new courses in Java were designed to reflect changes in Computer Science education, and also to meet the needs of the demand for web-based presence in every profession. Another new course introducing computers for scientists and engineers teaches specific skills and techniques like data analysis and problem solving using examples from other disciplines.

As our college enrollments have declined, so have enrollments in computer courses. This decline is reflected in computer programs at other community college and four-year institutions as well, and seems to be the result of a two major factors:
(a) The dot-com bust has had an especially major negative impact in our geographic area on future employment opportunities for graduates in the computer industry. Rather than programmers, the employment market is richer for application specialists.
(b) the export of technical positions off-shore, roughly paralleling the dot-com bust, further drives enrollment declines in the computer field.

However, our students are assured that their courses will be accepted in accordance with the regulations in place in the UC and CSU systems.

Our present schedule offers courses that enable a student to complete the core courses and additional requirements necessary for an A.S. degree over four consecutive semesters, provided they have the necessary high school background.

V. Attachments
n/a
## I. Program Enrollment

<table>
<thead>
<tr>
<th>How has this changed?</th>
<th>change from</th>
<th>to</th>
</tr>
</thead>
<tbody>
<tr>
<td>FTES</td>
<td>Fa02</td>
<td>Sp07</td>
</tr>
</tbody>
</table>

### Why has this occurred?

Enrollment in Computer Science classes has declined at a slightly faster pace than enrollment in Computer Science courses statewide. This trend may have been exacerbated in our curriculum due to the changing demographics in our geographical area.

### How can the positive results be maintained or the negative results be improved?

Many of our courses require math prerequisites which can be completed at the senior high school or college level. Although an incoming student may have passed a prerequisite course, the rigorous nature of computer science courses demand that a student be proficient in the prerequisite skills, not merely familiar with them. In order to give students a better idea what is expected of them, we will try to communicate more frequently with counselors and advisors both on our campus and at area high schools.

If there are courses you wish to highlight, please describe changes and trends.

## II. Faculty Units

<table>
<thead>
<tr>
<th>How has this changed?</th>
<th>change from</th>
<th>to</th>
</tr>
</thead>
<tbody>
<tr>
<td>Faculty Units</td>
<td>Fa02</td>
<td>Sp08</td>
</tr>
</tbody>
</table>

### Why has this occurred?

The number of students taking Computer Science courses has declined as demonstrated by the fact that we offered 7 sections of Computer Science courses in Fall 2002 and this semester we are only offering 1.

### How can the positive results be maintained or the negative results be improved?

Although the demographics in our geographical area have changed such that the needs of the students have changed to demand more remedial and basic level coursework, more outreach activities to high schools in the area may highlight our program and increase the number of students interested in enrolling in our Computer Science.

If there are courses you wish to highlight, please describe changes and trends.

## III. Demographic Trends

## VI. Student Retention Rates

### Student Retention Rate Within The Program (All courses combined)

<table>
<thead>
<tr>
<th>Retention has Remained at</th>
<th>change from</th>
<th>to</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 %</td>
<td>Fa02</td>
<td>Sp07</td>
</tr>
</tbody>
</table>

### Why has this occurred?

Retention rates have remained between 70% and 92% except for a class of 19 students with a low rate of 57% and a class of 10 with a high rate of 100%. Those classes had the lowest numbers of enrolled students during the period Fall 02-Spring 07 and would be considered anomalous.

### How can the positive results be maintained or the negative results be improved?

Based on anecdotal data only, from some of the students who leave the classes, retention rates have been influenced by the fact that students are not clear about the rigorous requirements of the classes or the level of expertise they need in their prerequisite classes. More specific and thorough communication between counselors and prospective students may help students acquire a more realistic idea of the amount and level of work and skill required in these courses.

If there are courses you wish to highlight, please describe changes and trends.

## VII. Student Success Rates

## VIII. Certificates, Degrees, and Transfer

<table>
<thead>
<tr>
<th>How has the number of Degrees</th>
<th>awarded changed from</th>
<th>to</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Sp03</td>
<td>Sp07</td>
</tr>
</tbody>
</table>

### Why has this occurred?

-
Our program has only awarded 2 degrees since Spring 2003. This represents 0.3% of the number of degrees awarded at our college, however this semester, for example, the number of students in our classes is only .0015% of the total number of students enrolled in credit classes. However, we would like to increase both the number of students in our courses and the number of degrees awarded.

**How can the positive results be maintained or the negative results be improved?**

We are presently conducting a review of our degree requirements, examining our program as it compares to other programs in our state, and considering new courses to revitalize interest in our degree program.

**If there are courses or awards you wish to highlight, please describe changes and trends.**

Three of our core courses, Comp 130, 160, and 220, have been revised in the past year.

**IX. Justification**

**Evidence:** What data or evidence supports your projected requirements?

**Attachments:**

College of Marin Program Review Student Access and Success• AS v.2 June 2008
## PROGRAM REVIEW
### Curriculum and Articulation Report
#### COMP-2008

### I. Projected Course Actions Report

<table>
<thead>
<tr>
<th>Action</th>
<th>Course ID</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>Deletion</td>
<td>COMP 110</td>
<td>Introduction to Computers</td>
</tr>
<tr>
<td>Deletion</td>
<td>COMP 115</td>
<td>Technical BASIC Programming</td>
</tr>
<tr>
<td>Deletion</td>
<td>COMP 140</td>
<td>Fundamentals of Programming in FORTRAN</td>
</tr>
<tr>
<td>Deletion</td>
<td>COMP 230</td>
<td>Programming in C</td>
</tr>
</tbody>
</table>

### II. Projected Certificate/Degree & Other Actions Report

<table>
<thead>
<tr>
<th>Category</th>
<th>Action</th>
<th>Total Courses</th>
<th>Total Units</th>
</tr>
</thead>
</table>

### III. Attachments

**Evidence:** What data or evidence have you provided? Please briefly describe.

none

**Attachments:** Description of attachment formats (file type, hard copy, etc.)

College of Marin Program Review Curriculum and Articulation Report• CG v.2 June 2008
# Faculty Unit Allocation and Support Staff Report

## I. Program Faculty

<table>
<thead>
<tr>
<th>Last Name</th>
<th>First Name</th>
<th>Status:</th>
<th>Years at COM:</th>
<th>Faculty Reassigned Units:</th>
<th>Year Retired:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Schmitt</td>
<td>Frederick</td>
<td>Full-time, tenured</td>
<td>35</td>
<td>15.00</td>
<td>00.000</td>
</tr>
</tbody>
</table>

**Specialty:**
List all areas of specialty and/or equivalency

**Leadership:**

## II. Instructional Support Staff

## III. Teaching Unit Requirements

## IV. Projected Staff Requirements

## V. Faculty Requirements
1. No full time instructors in the subject area.
2. Non-Availability of part-time instructors in a subject area.
3. Reduction in department Teaching Units as a result of full-time faculty retirements or other significant causes.
4. Recent or forthcoming growth as a result of additional sections of classes to enrollment demands.
5. Temporary growth in department Teaching Units as a direct result of a short-term grant or other interim resource.
6. Current or forthcoming changes that illustrate the immediate need of additional full-time faculty within this department.
7. Program Review findings.
8. Other considerations.

## VI. Attachments

**Evidence:** What data or evidence have you provided? Please briefly describe.

**Attachments:** Description of attachment formats (file type, hard copy, etc.)
## Facilities General

### COMP-2008

### I. Current Offices
(For the Program/Department, Faculty and Staff)

<table>
<thead>
<tr>
<th>Office:</th>
<th>Use:</th>
<th>Shared Office:</th>
</tr>
</thead>
<tbody>
<tr>
<td>SC 140</td>
<td>Faculty, Full-time</td>
<td>No</td>
</tr>
</tbody>
</table>

### II. Preferred Instructional Rooms
(Classrooms, Labs and Instructional Spaces)

<table>
<thead>
<tr>
<th>Room:</th>
<th>Type:</th>
<th>Sections/Year</th>
<th>Students/Section</th>
</tr>
</thead>
<tbody>
<tr>
<td>SC 144</td>
<td>Computer Lab</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Subject:</th>
<th>Course#</th>
<th>M</th>
<th>T</th>
<th>W</th>
<th>R</th>
<th>F</th>
<th>S</th>
<th>U</th>
<th>Start Time</th>
<th>End Time</th>
<th>Fa</th>
<th>Sp</th>
<th>Su</th>
</tr>
</thead>
<tbody>
<tr>
<td>COMP</td>
<td></td>
<td></td>
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<td></td>
<td></td>
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</tr>
</tbody>
</table>

Facility has limitations: NA

Used for several classes.

### III. Instructional Support Spaces
(Storage, Conference Room, etc.)

### IV. Justification for Projected Facility Requirements

Primary Goal: Degree/Transfer
Secondary Goal: Career/Work
Other Goal: Lifelong Learning

**Application:** Please indicate how the projected requirements will be applied.

Smart classrooms and lab facilities are needed to support Computer Science classes.

**Instruction:** How will instruction be improved for Student Learning and Success?

Instruction will become possible.

**Access:** How will access be improved for Student Learning and Success?

**Outcomes:** What Student Learning or other outcomes are expected?

Students will be able to learn.

**Assessment:** How will the outcomes be measured for future planning?

not

**Evidence:** What data or evidence supports your projected requirements?

none

---

College of Marin Program Review Facilities General • CG v.I February 2008
I. Institutional Excellence. The Board believes that superior results originate in high aspirations. Therefore, the Board's basic and most important goal for the College is to excel in every activity it undertakes. By so doing, it will achieve a position of local, state and perhaps even national prominence.

Objective 1: Students will have the necessary background for entry into upper-division study at a four-year institution as Computer Science majors or minors.

Objective 2:

Attachments:

II. Academic Excellence. The College must offer its students rigorous, high-quality curricula including degree and certificate programs in lower division arts and sciences and in vocational and occupational fields; remedial instruction; English as a Second Language instruction; support services which help students succeed at the postsecondary level; adult noncredit education; and community services courses and programs, in keeping with state mandates. Academic excellence in all of the College's curricula and support services is at the core of the College's environment. The curricula must remain current and challenging.

Objective 1a: Students will be able to work collaboratively as a member of a group to advance the goals of the group.

Objective 1b:

Attachments:

III. Faculty and Staff Excellence. For the College to excel, it must attract and maintain a faculty and staff of the highest quality, one that functions within an environment of professional development and renewal, and one that focuses on and values the teaching and learning process.

Objective 1a: Students will be able to apply their knowledge of Computer Science to science, technology, or society in order to advance the goals of a business, research, academic, or governmental enterprise.

Objective 1b:

Attachments:

IV. Community Responsiveness. The College must offer broad curricula to meet the needs of students. It must select areas of special interest and need to the communities it serves.

Objective 1a: Students will have a reasonable understanding at a lower-division level of each of the subject areas that define the discipline at that level--algorithms, architecture, data structures, programming languages, software engineering, and discrete mathematics.

Objective 1b:

Objective 1c:

Attachments:

V. Diversity. The community college is the primary opportunity for people of great diversity to come together for growth and development. The College has an absolute obligation to bring together people of different ages, races, and ethnic backgrounds, male and female, at different levels of development, in an atmosphere of equal opportunity and tolerance.
Objective 1a:

Objective 1b:

Objective 1c:

Attachments:

VI. Fiscal Responsibility. The Board and the Administration must operate the College in a fiscally sound way. Together, they must limit expenditures to those that relate directly to the College’s mission, goals and objectives; maintain a prudent level of reserves; and generate new sources of revenue to supplement state funding allocations.

Objective 1c:

Attachments:

VII. Develop and implement sound and coordinated planning processes. Develop and implement sound and coordinated planning processes, utilizing data gathered through Program Review, and other data sources, to support institutional, instructional, and student support service goals, and to promote achievement of student learning outcomes.

Objective 1a:

Objective 1b:

Objective 1c:

Attachments:

VIII. Create a physical environment that is inviting to students, generates pride in the community, adheres to green principles, and supports the College’s Mission, Goals and Initiatives.

Objective 1c:

Attachments:
I. Program Excellence (Best Practices)
Briefly summarize examples staff/faculty, institutional, and academic excellence.

Students will have the necessary background for entry into upper-division study at a four-year institution as Computer Science majors or minors.

Students will have a reasonable understanding at a lower-division level of each of the subject areas that define the discipline at that level—algorithms, architecture, data structures, programming languages, software engineering, and discrete mathematics.

Students will be able to apply their knowledge of Computer Science to science, technology, or society in order to advance the goals of a business, research, academic, or governmental enterprise.

Students will be able to work collaboratively as a member of a group to advance the goals of the group.

II. Program Resources (Responsiveness)
Briefly summarize examples of key resources required for your program to meet or exceed the college goals (as cited in this review).

Counseling and administrative support.

III. Moving Forward Objectives (Planning)
Briefly summarize examples of data-driven and coordinated planning to improve student enrollment, learning and success.

Further liaison with counselors.

IV. Other Concluding Remarks
Briefly summarize any additional insight necessary to conclude this program review.

The U.S. President has said that the national economy is in fundamentally good shape to weather the current crisis. Despite reservations by many economists who consider him out of touch with reality, it's possible he's right. It would help the program if he were.