COMMITTEE ON COURSES OF INSTRUCTION
ACADEMIC SENATE - BERKELEY

REQUEST FOR COURSE APPROVAL OR WITHDRAWAL

E0610 (R7/92)

DATE SUBMITTED (MO/DY/YR): 10/5/95

FIRST TERM EFFECTIVE (TERM/YR): SPRING/1996

GRADING (LETTER, P/NP, S/U, IP): LETTER

FOR TRANSCRIPT PURPOSES

TRANSCRIPT TITLE *(19 CHARACTERS INCLUDING SPACES)*: C++ for Prog

COURSES COMPLETED PRIOR TO THIS COURSE RESTRICTING CREDIT: Refer to computer science service course restrictions.

DEPARTMENT: Electrical Engineering and Computer Sciences

CHECK AS MANY AS APPLY: (NEW COURSES MUST INCLUDE SYLLABUS, READING LIST, ETC., TO BE PROVIDED ON SEPARATE SHEET)

- [X] New Course in regular program of Department
- [ ] Special purpose course to be offered only once
- [ ] Change unit value
- [ ] Change course description *(500 spaces limit)*
- [ ] American Cultures Course
- [ ] Change prerequisite
- [ ] Change course format
- [ ] Change grading option
- [ ] Withdrawal of course
- [ ] Other (Explain under "remarks")
- [ ] Summer Course
- [ ] Change course title
- [ ] Restoration of course (*previous course #* _____ *(last offered:* 19 *)*
- [ ] Change course number *(from:* _____ *to:* _____ *)* *(last offered:* 19 *)*
- [ ] IDS (cross-listed)

REMARKS:

NOTE: FILL OUT INFORMATION IN THIS SHADED AREA EXACTLY AS YOU WISH IT TO APPEAR IN THE CATALOG

COURSE NUMBER	COURSE TITLE (FOR GENERAL CATALOG)	UNIT VALUE
CS 9F	C++ for Programmers	1

SPECIAL INSTRUCTIONS: *(E.G., FORMERLY CALLED, MAY BE REPEATED FOR CREDIT, ETC.)*

COURSE FORMAT: *(E.G., THREE 1-HOUR LECTURES AND ONE 3-HOUR LABORATORY PER WEEK)*

Self-paced

PREREQUISITES: (E.G., NEED CONSENT OF INSTRUCTOR)

Programming experience equivalent to that gained in Eng. 77S or CS 61A.

COURSE DESCRIPTION:

Introduction to the constructs provided in the C++ programming language for procedural and object-oriented programming, aimed at students who already know how to program.

Paul N. Hilfinger, Chair, EECS Undergraduate Study Committee

INSTRUCTOR:	SEMESTER(S) OFFERED (FALL, SPRING OR SUMMER)
M. Clancy	FALL, SPRING

DEPARTMENT CHAIR	COMMITTEE ON COURSES
L & S COMMITTEE ON COURSES	GRADUATE COUNCIL

RETN: OFFICE OF RECORD: 5 YRS - PERMANENT
OTHER COPIES: UNTIL SUPERSEDED

ACADEMIC SENATE

COMMITTEE ON COURSES OF INSTRUCTION
ACADEMIC SENATE - BERKELEY

REQUEST FOR COURSE APPROVAL OR WITHDRAWAL

E0610 (R7/92)

DATE SUBMITTED (MO/DY/YR): 10/5/95

FIRST TERM EFFECTIVE (TERM/YR): SPRING/1996

GRADING (LETTER, P/NP, S/U, IP): LETTER

FOR TRANSCRIPT PURPOSES

TRANSCRIPT TITLE *(19 CHARACTERS INCLUDING SPACES)*: C++ for Prog

COURSES COMPLETED PRIOR TO THIS COURSE RESTRICTING CREDIT: Refer to computer science service course restrictions.

DEPARTMENT: Electrical Engineering and Computer Sciences

CHECK AS MANY AS APPLY: (NEW COURSES MUST INCLUDE SYLLABUS, READING LIST, ETC., TO BE PROVIDED ON SEPARATE SHEET)

- [X] New Course in regular program of Department
- [ ] Special purpose course to be offered only once
- [ ] Change unit value
- [ ] Change course description *(500 spaces limit)*
- [ ] American Cultures Course
- [ ] Change prerequisite
- [ ] Change course format
- [ ] Change grading option
- [ ] Withdrawal of course
- [ ] Other (Explain under "remarks")
- [ ] Summer Course
- [ ] Change course title
- [ ] Restoration of course (*previous course #* _____ *(last offered:* 19 *)*
- [ ] Change course number *(from:* _____ *to:* _____ *)* *(last offered:* 19 *)*
- [ ] IDS (cross-listed)

REMARKS:

NOTE: FILL OUT INFORMATION IN THIS SHADED AREA EXACTLY AS YOU WISH IT TO APPEAR IN THE CATALOG

COURSE NUMBER	COURSE TITLE (FOR GENERAL CATALOG)	UNIT VALUE
CS 9F	C++ for Programmers	1

SPECIAL INSTRUCTIONS: *(E.G., FORMERLY CALLED, MAY BE REPEATED FOR CREDIT, ETC.)*

COURSE FORMAT: *(E.G., THREE 1-HOUR LECTURES AND ONE 3-HOUR LABORATORY PER WEEK)*

Self-paced

PREREQUISITES: (E.G., NEED CONSENT OF INSTRUCTOR)

Programming experience equivalent to that gained in Eng. 77S or CS 61A.

COURSE DESCRIPTION:

Introduction to the constructs provided in the C++ programming language for procedural and object-oriented programming, aimed at students who already know how to program.

Paul N. Hilfinger, Chair, EECS Undergraduate Study Committee

INSTRUCTOR:	SEMESTER(S) OFFERED (FALL, SPRING OR SUMMER)
M. Clancy	FALL, SPRING

DEPARTMENT CHAIR	COMMITTEE ON COURSES
L & S COMMITTEE ON COURSES	GRADUATE COUNCIL

RETN: OFFICE OF RECORD: 5 YRS - PERMANENT
OTHER COPIES: UNTIL SUPERSEDED

OFFICE OF THE REGISTRAR

COMMITTEE ON COURSES OF INSTRUCTION
ACADEMIC SENATE - BERKELEY

REQUEST FOR COURSE APPROVAL OR WITHDRAWAL

E0610 (R7/92)

DATE SUBMITTED (MO/DY/YR): 10/5/95

FIRST TERM EFFECTIVE (TERM/YR): SPRING/1996

GRADING (LETTER, P/NP, S/U, IP): LETTER

FOR TRANSCRIPT PURPOSES

TRANSCRIPT TITLE *(19 CHARACTERS INCLUDING SPACES)*: C++ for Prog

COURSES COMPLETED PRIOR TO THIS COURSE RESTRICTING CREDIT: Refer to computer science service course restrictions.

DEPARTMENT: Electrical Engineering and Computer Sciences

CHECK AS MANY AS APPLY: (NEW COURSES MUST INCLUDE SYLLABUS, READING LIST, ETC., TO BE PROVIDED ON SEPARATE SHEET)

- [X] New Course in regular program of Department
- [ ] Special purpose course to be offered only once
- [ ] Change unit value
- [ ] Change course description *(500 spaces limit)*
- [ ] American Cultures Course
- [ ] Change prerequisite
- [ ] Change course format
- [ ] Change grading option
- [ ] Withdrawal of course
- [ ] Other (Explain under "remarks")
- [ ] Summer Course
- [ ] Change course title
- [ ] Restoration of course (*previous course #* _____ *(last offered:* 19 *)*
- [ ] Change course number *(from:* _____ *to:* _____ *)* *(last offered:* 19 *)*
- [ ] IDS (cross-listed)

REMARKS:

NOTE: FILL OUT INFORMATION IN THIS SHADED AREA EXACTLY AS YOU WISH IT TO APPEAR IN THE CATALOG

COURSE NUMBER	COURSE TITLE (FOR GENERAL CATALOG)	UNIT VALUE
CS 9F	C++ for Programmers	1

SPECIAL INSTRUCTIONS: *(E.G., FORMERLY CALLED, MAY BE REPEATED FOR CREDIT, ETC.)*

COURSE FORMAT: *(E.G., THREE 1-HOUR LECTURES AND ONE 3-HOUR LABORATORY PER WEEK)*

Self-paced

PREREQUISITES: (E.G., NEED CONSENT OF INSTRUCTOR)

Programming experience equivalent to that gained in Eng. 77S or CS 61A.

COURSE DESCRIPTION:

Introduction to the constructs provided in the C++ programming language for procedural and object-oriented programming, aimed at students who already know how to program.

Paul N. Hilfinger, Chair, EECS Undergraduate Study Committee

INSTRUCTOR:	SEMESTER(S) OFFERED (FALL, SPRING OR SUMMER)
M. Clancy	FALL, SPRING

DEPARTMENT CHAIR	COMMITTEE ON COURSES
L & S COMMITTEE ON COURSES	GRADUATE COUNCIL

RETN: OFFICE OF RECORD: 5 YRS - PERMANENT
OTHER COPIES: UNTIL SUPERSEDED

DEPARTMENT RETAINS

CS 9F : Expanded Course Description

Units: 1
Format: Self-paced
Grading: LETTER

CS 9F : C++ for Programmers

Catalog Description

Introduction to the constructs provided in the C++ programming language for procedural and object-oriented programming, aimed at students who already know how to program.

Prerequisites

Programming experience equivalent to that gained in Eng. 77S or CS 61A.

Expanded Description

This course consists of several segments, each containing one or more quizzes and programming exercises:

1. Fundamentals. Types and variables; input/output; flow of control; functions, value parameters, and reference parameters; classes, member functions, public and private data, use of interface and implementation files; scope; function overloading.
2. Arrays, strings, and i/o streams. Indexing; multidimensional arrays; interaction of constructors for container/containee classes; straightforward use of files and string streams.
3. Linked structures. Pointers; new and delete; building and using linked lists and trees; use of iterators; the this pointer; copy constructors; destructors; memory allocation and deallocation.
4. Class design. Function and class templates; operator overloading; derived classes; virtual functions; friends.
5. Remnants of C. C-style arrays: malloc, free, sizeof, new[], delete[]; pointer arithmetic; `#define`, `typedef`; `scanf`, `printf`; simulation of reference parameters; `string.h`. (This material will be tested on a quiz but not in programming exercises or on the final exam. It is intended for students who anticipate programming in circumstances that involve significant C-style programming.)

All quiz and programming exercises will involve the use of a string class and a templated vector class that we provide, rather than C-style strings and arrays. Students in general will be discouraged from using C constructs that experience suggests will cause more trouble than they're worth.

In the class design segment, students will analyze class definitions and provide code that implements a given inheritance structure or class description. They will not be expected to evaluate object-oriented designs. Multiple inheritance will not be covered, nor will protected access.

Other constructs that will not be covered include exceptions, functions declared in `ioma-nip.h`, inline functions, bitwise operators, and unions.

Textbooks

C++: How to Program, Deitel and Deitel, Prentice-Hall, 1994.