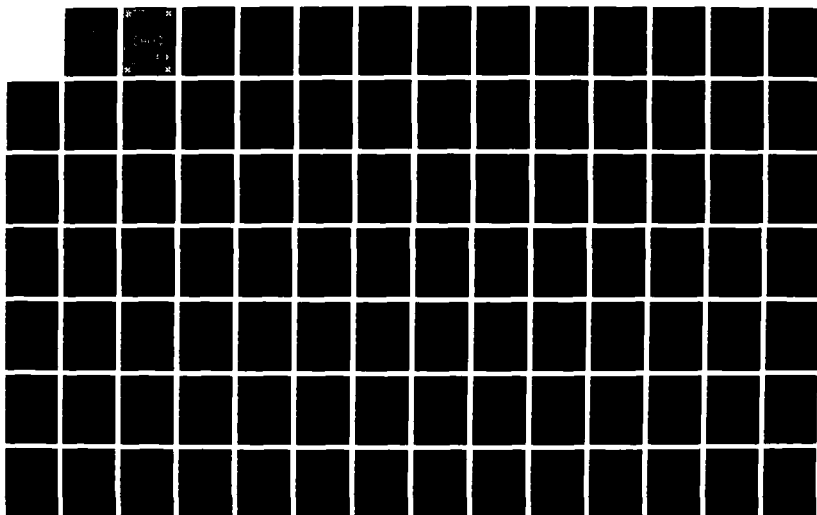


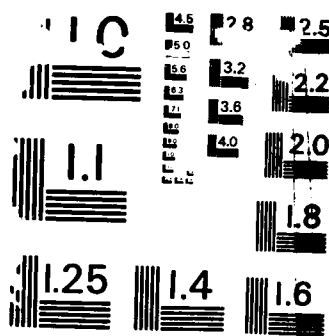
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AND SOFTWARE ENGINEERING (CREASE) VERSION 50(U) ADA
JOINT PROGRAM OFFICE ARLINGTON VA APR 88

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Ada INFORMATION CLEARINGHOUSE

AD-A193 539

CATALOG OF RESOURCES FOR EDUCATION IN
ADA AND SOFTWARE ENGINEERING (CREASE),

Version 5.0,

April 1988

Handwritten:
Gandhi



Prepared for:

Ada Joint Program Office
3D139 (1211 S. Fern, C-107)
The Pentagon
Washington, DC 20301-3081

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APR 18 1988
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PREFACE

The effectiveness of the Ada programming language will be determined by the degree to which people are able to use it to implement software engineering practices in applications programming. A carefully planned education and training program, which teaches both fundamental software engineering concepts and the effective use of the Ada language, is therefore essential.

This publication is intended to serve as a source of information about resources available for those who are planning such programs or planning to enroll in an Ada course. It is hoped that this catalog will serve as a ready reference for Ada course offerings and that it will also increase awareness of the many aspects of education in Ada and software engineering.



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1. Introduction

This catalog is a listing of courses and seminars that provide education and training on the Ada language and software engineering concepts. The Ada Joint Program Office (AJPO) has developed the Catalog of Resource in Ada and Software Engineering (CREASE) to report the availability of Ada language educational resources within academic institutions and does not intend this to be a recommendation on or endorsement of any Ada resource by the AJPO or the Department of Defense.

1.1 Survey Methodology

In compiling the data for this catalog, the Ada Information Clearinghouse (AdaIC) surveyed academic institutions throughout the country to obtain information on current Ada language educational opportunities. More than 1,500 surveys were mailed to academic institutions, and 700 institutions that offer courses in computer science were surveyed over the telephone. The entries in CREASE are the result of the telephone and mail surveys.)

The automated catalog production process necessitated the editing of some responses in order to comply with formatting and field limitations. Every effort was made to preserve the content.

1.2 Organization of CREASE Version 5.0

The responses are divided into two chapters: course offerings and textbooks. The course offering chapter is organized alphabetically by state.) In cases where no responses were received from academic institutions in a particular state, the state is still listed in the table of contents followed by "no response" in parenthesis.

Publications are listed in the textbook section alphabetically by text title. The textbooks included in the survey were all written by individual professors at the academic institutions surveyed. For more information on Ada language textbooks, contact the AdaIC.

1.3 Updates to CREASE

The AJPO intends to update CREASE Version 5.0 quarterly until Spring 1989 when CREASE Version 6.0 will replace it. Quarterly updates will be made available over the AJPO remote bulletin board system. Notification of changes or new offerings would be greatly appreciated. For your convenience, information on how to be included in future CREASE editions is provided at the end of this catalog. Offerors of resources included in CREASE will receive a complimentary copy of the catalog; non-

PREFACE

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This publication is intended to serve as a source of information about resources available for those who are planning such programs or planning to enroll in an Ada course. It is hoped that this catalog will serve as a ready reference for Ada course offerings and that it will also increase awareness of the many aspects of education in Ada and software engineering.

contributors requesting copies are charged on a cost-reimbursement basis. Catalog ordering information is supplied at the back of this catalog.

The Ada Joint Program Office appreciates your interest in and support of the Department of Defense's Ada program.

Questions and comments should be referred to the AdaIC at (703) 685-1477.

2. Course Offerings

2.1 Alabama

CS 592-003 Ada AND CONCURRENT PROGRAMMING

University Offeror: University of Alabama at Tuscaloosa
Department of Computer Science
University, AL 35487-6321
(205) 348-6363

The objective of this course is to introduce Ada and concurrent programming. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) software engineering, design concepts, technical programming, and programming support environment. The concepts covered in this course are real-time programming, exception handling, generics, strong typing, tasking, packages, abstract data types, and problem solving.

The audience of this course includes systems analysts and engineers. There are prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text Ada Language and Methodology by David A. Watt. The IBM personal computer running MS-DOS and the Meridian Advantage compiler are used. Students receive hands-on experience with the Ada language.

This two credit course is taught periodically. The class meets for 14 weeks for a total of 28 days and 28 hours. Undergraduate degree students and graduate degree candidates are eligible to participate in this course. This course is offered for graduate credit.

This course is taught by Dr. Wen-Kai Chung. For more information on this course, contact Dr. Wen-Kai Chung at the above address and phone number.

ALTERNATIVE LANGUAGES

4 - Year College Offeror: Birmingham-Southern College
Division of Science and Mathematics
800 8th Ave West
Birmingham, AL 35254
(205) 226-4870

The objective of this course is to introduce students to a number of programming languages other than their primary language. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) software engineering, design concepts, and programming support environment. The concepts covered in this course are real-time programming, exception handling, generics, strong typing, tasking, packages, abstract data types, and problem solving.

The audience of this course includes programmers, systems analysts, technical managers, and program managers. There are prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text Programming Languages: A Grand Tour by Horowitz. The VAX 11/750 computer running UNIX and the Verdix compiler are used. Students receive hands-on experience with the Ada language.

This three credit course is taught periodically. The class meets for 15 weeks for a total of 45 days and 45 hours. Undergraduate degree students, the general public, and the military/DoD are eligible to participate in this course. This course is offered for graduate credit.

This course is taught by Richard Turner. For more information on this course, contact Richard Turner at the above address and phone number.

THE Ada PROGRAMMING LANGUAGE

4 - Year College Offeror: Birmingham-Southern College
Division of Science And Mathematics
800 8th Ave. West
Birmingham, AL 35254
(205) 226-4870

The objective of this course is to provide an in-depth study of the Ada programming language. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) software engineering, design concepts, management overview, technical programming, and programming support environment. The concepts covered in this course are real-time programming, exception handling, generics, strong typing, tasking, packages, abstract data types, and problem solving.

The audience of this course includes programmers, systems analysts, and program managers. There are prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text Programming in Ada by J.G.P. Barnes. The VAX 11/750 computer running UNIX and the Verdix compiler are used. Students receive hands-on experience with the Ada language.

This three credit course is taught periodically. The class meets for 13 weeks for a total of 39 days and 39 hours. Undergraduate degree students, the general public, and the military/DoD are eligible to participate in this course. This course is offered for graduate credit.

This course is taught by Richard Turner. For more information on this course, contact Richard Turner at the above address and phone number.

PROGRAMMING LANGUAGE: Ada

University Offeror: University of Southern Alabama
Division of Computer and Information Science
Mobile, AL 36688
(205) 460-6390

The objective of this course is to familiarize students with Ada applications. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) software engineering, design concepts, technical programming, and programming support environment. The concepts covered in this course are real-time programming, exception handling, generics, strong typing, tasking, packages, abstract data types, and problem solving. The application area emphasized is using Ada as a development tool.

The audience of this course includes programmers, systems analysts, engineers, and program managers. There are prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text Introduction to Ada Programming. The IBM AT computer running MS-DOS and the JANUS/Ada compiler are used. Students receive hands-on experience with the Ada language.

This three credit course is taught each semester or quarter. The class meets for 14 weeks for a total of 28 days and 32 hours. Undergraduate degree students, graduate degree candidates, the general public, and the military/DoD are eligible to participate in this course. This course is offered for graduate credit.

This course is taught by Marino Niccolai. For more information on this course, contact Marino Niccolai at the above address and phone number.

SOFTWARE DEVELOPMENT AND DESIGN USING Ada

University Offeror: University of Alabama/Huntsville
CSC Department
Huntsville, AL 35899
(205) 895-6088

The objective of this course is to show how to use real-time Ada software. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) software engineering and technical programming. The concepts covered in this course are real-time programming, exception handling, generics, strong typing, tasking, packages, and abstract data types. The application area emphasized is real-time systems.

The audience of this course includes programmers and systems analysts. There are prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text Software Engineering with Ada by Grady Booch. Students receive hands-on experience with the Ada language.

This three credit course is taught each semester or quarter. The class meets for 15 weeks for a total of 30 days and 42 hours. Undergraduate degree students, graduate degree candidates, and the military/DoD are eligible to participate in this course. This course is offered for graduate credit.

This course is taught by Warren Mosely. For more information on this course, contact Doug Williams at the above address and phone number.

ADVANCED PROGRAMMING IN Ada

4 - Year College Offeror: Auburn University
Computer Science and Engineering
Department
111 Dunstan Hall
Auburn, AL 36849
(205) 826-4330

The objective of this course is to acquaint students with the advanced features of Ada as a software engineering language. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) software engineering, technical programming, and programming support environment. The concepts covered in this course are generics, strong typing, tasking, packages, and abstract data types.

The audience of this course includes engineers and program managers. There are prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text Ada As A Second Language by Norman H. Cohen. The VAX 11/780 computer running VMS and the VAX Ada compiler are used. Students receive hands-on experience with the Ada language.

This three credit course is taught periodically. The class meets for 18 weeks for a total of 48 days and 48 hours. Undergraduate degree students and graduate degree candidates are eligible to participate in this course. This course is offered for graduate credit.

This course is taught by Dr. Thomas Phillips. For more information on this course, contact Dr. Thomas Phillips at the above address and phone number.

STRUCTURED PROGRAMMING WITH ADVANCED LANGUAGES: Ada

University Offeror: Alabama A & M University
Department of Computer and Information
Sciences
P.O. Box 88
Normal, AL 35762
(205) 859-7339

The objective of this course is to teach formal concepts of advanced structured programming with problem solving and software engineering. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) software engineering, design concepts, management overview, and technical programming. The concepts covered in this course are exception handling, generics, strong typing, tasking, packages, abstract data types, and problem solving. The application area emphasized is problem solving.

The audience of this course includes programmers, systems analysts, engineers, and program managers. There are prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text Programming with Ada by Wienear and Sincovec. The IBM 4341 computer running VM370 and the MicroSoft compiler are used. Students receive hands-on experience with the Ada language.

This three credit course is taught each semester or quarter. The class meets for 18 weeks for a total of 54 days and 54 hours. Undergraduate degree students, graduate degree candidates, the general public, and the military/DoD are eligible to participate in this course. This course is offered for graduate credit.

This course is taught by Dr. Hrishikesh Saha. For more information on this course, contact Dr. Hrishikesh Saha at the above address and phone number.

Offeror's comments: This is also offered as a short course.

ADVANCED PROGRAMMING IN Ada

University Offeror: Auburn University
Department of Computer Science and
Engineering
107 Dunstan Hall
Auburn University, AL 36849-5347
(205) 826-4330

The objective of this course is to introduce procedural or command languages not otherwise available in the curriculum. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) software engineering. The concepts covered in this course are exception handling, generics, strong typing, tasking, packages, and abstract data types. The application area emphasized is data abstraction/information hiding.

The audience of this course includes programmers, systems analysts, engineers, and technical managers. There are prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text Ada As A Second Language by Norman H. Cohen. The VAX 11/780 computer running VMS 4.7 and the VAX Ada 1.4 compiler are used. Students receive hands-on experience with the Ada language.

This three credit course is taught periodically. The class meets for 15 weeks for a total of 45 days and 45 hours. Undergraduate degree students and graduate degree candidates are eligible to participate in this course. This course is offered for graduate credit.

This course is taught by Dr. Thomas M. Phillips, Dr. David B. Brown, and Dr. James Cross. For more information on this course, contact Dr. Thomas M. Phillips at the above address and phone number.

Offeror's comments: This course is an integral part of Auburn's total computer science and engineering program.

2.2 Alaska

Ada FOR PROGRAMMERS

University Offeror: University of Alaska Southeast
School of Business and Public Administration
1108 F Street
Juneau, AK 99801
(907) 789-4402

The objective of this course is to provide an introduction to Ada language by emphasizing software engineering concepts. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) software engineering, design concepts, and technical programming. The concepts covered in this course are exception handling, generics, strong typing, tasking, packages, abstract data types, and problem solving.

The audience of this course includes programmers and systems analysts. There are prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text Understanding Ada by Bray. The VAX 8600 computer running VMS and the TeleSoft compiler are used. Students receive hands-on experience with the Ada language.

This three credit course is taught periodically. The class meets for 16 weeks for a total of 32 days and 48 hours. Undergraduate degree students, graduate degree candidates, the general public, and the military/DoD are eligible to participate in this course. This course is not offered for graduate credit.

This course is taught by Timothy J. Fullam. For more information on this course, contact Timothy J. Fullman at the above address and phone number.

CS 202: COMPUTER PROGRAMMING II

University Offeror: University of Alaska
Department of Mathematics and Computer
Science
Chapman Building
Fairbanks, AK 99775-1110
(907) 474-7332

The objective of this course is to teach fundamental programming skills. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) technical programming. The concepts covered in this course are generics, strong typing, tasking, abstract data types, and problem solving.

The audience of this course includes programmers and systems analysts. There are prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text Ada As A Second Language by Norman H. Cohen. The VAX computer running VMS is used. Students receive hands-on experience with the Ada language.

This three credit course is taught periodically. The class meets for 9 weeks for a total of 27 days and 27 hours. Undergraduate degree students, the general public, and the military/DoD are eligible to participate in this course. This course is offered for graduate credit.

This course is taught by Barbara Lando, Mitch Roch, and Susan Jevtic. For more information on this course, contact Ron Gatterda at the above address and phone number.

2.3 Arizona

CSC 201 INTRODUCTION TO Ada

University Offeror: Arizona State University
Computer Science Department
Tempe, AZ 85287-5406
(501) 965-2774

The objective of this course is to introduce Ada as a second language. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) software engineering and technical programming. The concepts covered in this course are exception handling, generics, strong typing, packages, abstract data types, and problem solving.

The audience of this course includes programmers. There are prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text Understanding Ada by Gary Bray. The VAX 8600 computer running VMS and the TeleSoft TeleGen 2 compiler are used. Students receive hands-on experience with the Ada language.

This three credit course is taught periodically. The class meets for 15 weeks for a total of 2 days and 30 hours. Undergraduate degree students, graduate degree candidates, and the general public are eligible to participate in this course. This course is offered for graduate credit.

This course is taught by Dr. Terry Mellon. For more information on this course, contact Dr. Terry Mellon at the above address and phone number.

2.4 Arkansas

No responses were received from academic institutions in Arkansas.

2.5 California

SOFTWARE ENGINEERING WITH Ada

4 - Year College Offeror: Merritt College
Oakland, CA

The objective of this course is to have students develop a capability of developing programs in the Ada language. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) software engineering, design concepts, management overview, and technical programming. The concepts covered in this course are real-time programming, exception handling, generics, strong typing, tasking, packages, abstract data types, and problem solving.

The audience of this course includes programmers, systems analysts, engineers, technical managers, program managers, and Computer Information Sciences students. There are prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text Ada: A Guided Tour and Tutorial by Jeffrey Gilpin. The IBM personal computer running MS-DOS and the ALSYS or JANUS/Ada compiler are used. Students receive hands-on experience with the Ada language.

This one credit course is taught each semester or quarter. The class meets for 16 weeks for a total of 1 day and 16 hours. Undergraduate degree students, graduate degree candidates, and the general public are eligible to participate in this course. This course is offered for graduate credit.

This course is taught by Richard D. Riehle. For more information on this course, contact Dr. Richard D. Riehle at the above address.

ADVANCED SOFTWARE PRACTICES

University Offeror: California State University/Chico
Department of Computer Science
Chico, CA 9592041
(916) 895-6442

The objective of this course is to discuss the principles of program design and implementation by using Ada as the main vehicle. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) software engineering. The concepts covered in this course are exception handling, generics, strong typing, tasking, packages, and problem solving.

The audience of this course includes programmers and systems analysts. There are prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text Good Programming Practice in Ada by Paul Luker. The PRIME computer running Primos and the Gensoft compiler are used. Students receive hands-on experience with the Ada language.

This three credit course is taught periodically. The class meets for 15 weeks for a total of 30 days and 38 hours. Undergraduate degree students, graduate degree candidates, the general public, and the military/DoD are eligible to participate in this course. This course is offered for graduate credit.

This course is taught by Paul Luker. For more information on this course, contact Paul Luker at the above address and phone number.

Ada

University Offeror: California State Polytechnic
University/Pamona
Department of Computer Science
Pamona, CA 91788
(714) 869-3440

The objective of this course is to teach computer science majors the Ada language. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) technical programming. The concepts covered in this course are exception handling, generics, strong typing, tasking, packages, abstract data types, and problem solving.

The audience of this course includes programmers, engineers, and program managers. There are prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text Ada Language and Methodology by Watt, Wichmann and Findley. The ISI computer running UNIX and the Irbin compiler are used. Students receive hands-on experience with the Ada language.

This three credit course is taught periodically. The class meets for 10 weeks for a total of 30 days and 30 hours. Undergraduate degree students, the general public, and the military/DoD are eligible to participate in this course. This course is offered for graduate credit.

This course is taught by Dr. Kenneth McDonald. For more information on this course, contact Dr. Kenneth McDonald at the above address and phone number.

Ada

University Offeror: University of California at Irvine
Information and Computer Science Department
Irvine, CA 92717
(714) 856-7403

The objective of this course is to introduce Ada and emphasize the concepts about software embodied in the language. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) design concepts, technical programming, and programming support environment. The concepts covered in this course are real-time programming, exception handling, generics, strong typing, tasking, packages, abstract data types, and problem solving.

The audience of this course includes freshmen. There are no prerequisites that must be satisfied before enrolling in this course. No previous computer programming experience is necessary.

The course materials include the text Introduction to Programming Using Ada by Martin Katz and Dennis Volper. The SUN 350 computer running UNIX and the Verdix compiler are used. Students receive hands-on experience with the Ada language.

This one credit course is taught each semester or quarter. The class meets for 15 weeks for a total of 30 days and 30 hours. Undergraduate degree students, the general public, and the military/DoD are eligible to participate in this course. This course is offered for graduate credit.

This course is taught by Dr. Dennis Volper and Stephen Franklin. For more information on this course, contact Dr. Dennis Volper at the above address and phone number.

PROGRAMMING LANGUAGES

4 - Year College Offeror: Harvey Mudd School
Department of Computer Science
Claremont, CA 91711
(714) 621-8225

The objective of this course is to understand the semantics of modern programming languages. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) software engineering and technical programming. The concepts covered in this course are exception handling, generics, strong typing, tasking, packages, abstract data types, and problem solving.

The audience of this course includes programmers, systems analysts, and engineers. There are prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text An Introduction to Ada by S. Young. The SEQUENT B21K computer running UNIX and the Verdix compiler are used. Students receive hands-on experience with the Ada language.

This three credit course is taught each semester or quarter. The class meets for 15 weeks for a total of 45 days and 45 hours. Undergraduate degree students, the general public, and the military/DoD are eligible to participate in this course. This course is offered for graduate credit.

This course is taught by Michael Erlinger. For more information on this course, contact Dr. Michael Erlinger at the above address and phone number.

INTRODUCTION TO PROGRAMMING

4 - Year College Offeror: Harvey Mudd School
Department Computer Science
Claremont, CA 91711
(714) 621-8225

The objective of this course is to teach first time students a block-structured language. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) software engineering and design concepts. The concepts covered in this course are exception handling, strong typing, tasking, packages, abstract data types, and problem solving.

The audience of this course includes programmers. There are no prerequisites that must be satisfied before enrolling in this course. No previous computer programming experience is necessary.

The course materials include the text Programming In Ada: A First Course by Clark. The VAX 8600 computer running VMS and the DEC compiler are used. Students receive hands-on experience with the Ada language.

This three credit course is taught periodically. The class meets for 15 weeks for a total of 30 days and 45 hours. Undergraduate degree students are eligible to participate in this course. This course is offered for graduate credit.

This course is taught by Michael Erlinger. For more information on this course, contact Michael Erlinger at the above address and phone number.

SOFTWARE ENGINEERING WITH Ada

University Offeror: California State University/Northridge
Department of Computer Science
School of Engineering
Northridge, CA 91320
(818) 885-3398

The objective of this course is to teach software development using Ada with emphasis on the real-time systems. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) software engineering, design concepts, technical programming, and programming support environment. The concepts covered in this course are real-time programming, exception handling, generics, strong typing, tasking, packages, abstract data types, and problem solving. The application area emphasized is real-time programming.

The audience of this course includes programmers, systems analysts, engineers, and technical managers. There are prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text Software Engineering with Ada by Grady Booch. The MicroVAX computer running VMS and the DEC compiler are used. Students receive hands-on experience with the Ada language.

This three credit course is taught each semester or quarter. The class meets for 16 weeks for a total of 32 days and 48 hours. Undergraduate degree students, graduate degree candidates, the general public, and the military/DoD are eligible to participate in this course. This course is offered for graduate credit.

This course is taught by Shawn Barkataki. For more information on this course, contact Shawn Barkataki at the above address and phone number.

Offeror's comments: This course is also offered on closed circuit television.

SOFTWARE ENGINEERING WITH Ada

University Offeror: California State University/Long Beach
Computing Science and Engineering Department
1250 Bellflower Blvd.
Long Beach, CA 90840
(213) 498-4285

The objective of this course is to acquire the skills necessary to write fairly complex Ada programs with intensive study of all Ada features. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) software engineering, design concepts, and technical programming. The concepts covered in this course are real-time programming, exception handling, generics, strong typing, tasking, packages, abstract data types, and problem solving.

The audience of this course includes programmers and engineers. There are prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text Ada Language and Methodology by Watt and Finley. The VAX computer running VMS and the DEC compiler are used. Students receive hands-on experience with the Ada language.

This three credit course is taught periodically. The class meets for 15 weeks for a total of 30 days and 60 hours. Undergraduate degree students, graduate degree candidates, the general public, and the military/DoD are eligible to participate in this course. This course is offered for graduate credit.

This course is taught by Joel Carissimo. For more information on this course, contact Joel Carissimo at the above address and phone number.

Ada PROGRAMMING

University Offeror: California State University/Los Angeles
Department of Math and Computer Science
5151 State University Drive
Los Angeles, CA 90032
(213) 224-3287

The objective of this course is to familiarize students with the structure, features and advances of the Ada language. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) software engineering, design concepts, and technical programming. The concepts covered in this course are exception handling, generics, strong typing, tasking, packages, and problem solving. The application area emphasized is defense applications.

The audience of this course includes programmers, systems analysts, and engineers. There are prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text Ada Programming: A Top-Down Approach by Caverly and Goldstein. The IBM personal computer running UNIX and the TeleSoft compiler are used. Students receive hands-on experience with the Ada language.

This three credit course is taught each semester or quarter. The class meets for 16 weeks for a total of 32 days and 32 hours. Undergraduate degree students, graduate degree candidates, the general public, and the military/DoD are eligible to participate in this course. This course is offered for graduate credit.

This course is taught by Mr. Fraser, I. Kastanas, and Mr. Huang. For more information on this course, contact Mr. Fraser at the above address and phone number.

HIGH LEVEL LANGUAGES: Ada

University Offeror: CSU/Dominguez Hills
1000 E. Victoria St.
Building NSM A132
Carson, CA 90747
(213)516-3390

The objective of this course is to bring advanced programmers up to speed in Ada. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) software engineering, design concepts, technical programming, and programming support environment. The concepts covered in this course are exception handling, generics, strong typing, tasking, packages, abstract data types, and problem solving. The application area emphasized is Engineering and Scientific.

The audience of this course includes programmers, systems analysts, engineers, program managers, and none. There are prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text Ada: Language and Methodology by Watt, Wickman, and Findlay. The Prime 9755 computer running Primos and the Ada emulator compiler are used. Students receive hands-on experience with the Ada language.

This four credit course is taught each semester or quarter. The class meets for 9 weeks for a total of 2 days and 30 hours. Undergraduate degree students, graduate degree candidates, and the military/DoD are eligible to participate in this course. This course is offered for graduate credit.

This course is taught by Dr. R. Huddleston and Dr. F. Chimenti. For more information on this course, contact Dr. Frank Chimenti at the above address and phone number.

Offeror's comments: A follow-up course may be added in the future.

STRUCTURED PROGRAMMING 2 - Ada

University Offeror: Azusa Pacific University
Computer Science Department
P.O. Box APU
Azusa, CA 91702-7000
(818) 969-3434

The objective of this course is to build on programming skills with emphasis on Ada. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) design concepts, technical programming, and programming support environment. The concepts covered in this course are exception handling, generics, strong typing, tasking, packages, abstract data types, and problem solving.

The audience of this course includes programmers, systems analysts, and program managers. There are prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text Introduction to Ada: A Top-Down Approach by Phillip Caverly. The VAX computer running VMS and the NTIC compiler are used. Students receive hands-on experience with the Ada language.

This three credit course is taught periodically. The class meets for 15 weeks for a total of 45 days and 45 hours. Undergraduate degree students, graduate degree candidates, the general public, and the military/DoD are eligible to participate in this course. This course is offered for graduate credit.

This course is taught by Wendell Scarborough. For more information on this course, contact Wendell Scarborough at the above address and phone number.

Offeror's comments: Adjuncts from industry have been brought in to teach.

CS 212A: Ada PROGRAMMING

University Offeror: California Lutheran University
60 West Olsen Road
Thousand Oaks, CA 91360
(805) 493-3362

The objective of this course is to introduce Ada and develop a competency in reading and writing Ada code. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) software engineering, design concepts, and technical programming. The concepts covered in this course are real-time programming, exception handling, generics, strong typing, tasking, packages, abstract data types, and problem solving.

The audience of this course includes programmers. There are no prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text Software Engineering with Ada by Grady Booch. The PC/AT computer running MS-DOS and the Meridian, ALSYS, and JANUS/Ada compilers are used. Students receive hands-on experience with the Ada language.

This three credit course is taught each semester or quarter. The class meets for 15 weeks for a total of 45 days and 45 hours. Undergraduate degree students, graduate degree candidates, the general public, and the military/DoD are eligible to participate in this course. This course is offered for graduate credit.

This course is taught by Roy James Guild. For more information on this course, contact Professor Guild at the above address and phone number.

PROGRAMMING LANGUAGES

University Offeror: University of California/Santa Barbara
Computer Science Department
Santa Barbara, CA 93106
(805) 961-3411

The objective of this course is to introduce basic concepts of language, modularity trends, exception handling, and why Ada is desirable. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) software engineering, management overview, and programming support environment. The concepts covered in this course are real-time programming, exception handling, generics, strong typing, tasking, packages, abstract data types, and problem solving.

The audience of this course includes programmers, systems analysts, and program managers. There are prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text Programming Language Concepts by Ghezzi and Jazayeri. The SUN computer running UNIX and the SUN compiler are used. Students receive hands-on experience with the Ada language.

This three credit course is taught periodically. The class meets for 16 weeks for a total of 32 days and 48 hours. Undergraduate degree students and graduate degree candidates are eligible to participate in this course. This course is offered for graduate credit.

This course is taught by Laura Dillon. For more information on this course, contact Laura Dillon at the above address and phone number.

SOFTWARE ENGINEERING WITH Ada

University Offeror: San Jose State University
Department of Math and Computer Science
San Jose State University
San Jose, CA 95192-0103
(408) 924-5139

The objective of this course is to examine those features of Ada that directly support the principles of software engineering. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) software engineering and design concepts. The concepts covered in this course are exception handling, generics, strong typing, tasking, packages, and abstract data types. The application area emphasized is software engineering principles.

The audience of this course includes programmers. There are prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text Programming in Ada by J.G.P. Barnes. The SEQUENT BALANCE 8000 computer running DYNIX and the Verdix Ada compiler are used. Students receive hands-on experience with the Ada language.

This three credit course is taught periodically. The class meets for 14 weeks for a total of 28 days and 84 hours. Undergraduate degree students and graduate degree candidates are eligible to participate in this course. This course is offered for graduate credit.

This course is taught by Evelyn E. Obaid. For more information on this course, contact Evelyn E. Obaid at the above address and phone number.

Offeror's comments: Additional reference texts are kept on reserve for students.

2.6 Colorado

PARALLEL COMPUTING WITH Ada

University Offeror: University of Colorado at Denver
Mathematics Department University Box 170
1200 Larimer St.
Denver, CO 80204
(303) 556-8442

The objective of this course is to compare parallel architectures, limits on parallelism, concepts of synchronization, and deadlock prevention. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) software engineering, design concepts, and technical programming. The concepts covered in this course are real-time programming, exception handling, generics, strong typing, tasking, packages, abstract data types, and problem solving. The application area emphasized is parallel applications.

The audience of this course includes programmers, engineers, and technical managers. There are prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text Software Engineering with Ada by Grady Booch. The Sequent B-21 computer running UNIX/DYNIX and the Verdix 5.41.5 compiler are used. Students receive hands-on experience with the Ada language.

This three credit course is taught each semester or quarter. The class meets for 16 weeks for a total of 32 days and 64 hours. Undergraduate degree students, graduate degree candidates, the general public, and the military/DoD are eligible to participate in this course. This course is offered for graduate credit.

This course is taught by Zenas Hartvigson. For more information on this course, contact Zenas Hartvigson at the above address and phone number.

Offeror's comments: Dr. Hartvigson belongs to CU-Denver Computational Math Group.

CIT 218: INTRODUCTION TO Ada PROGRAMMING

2 - Year College Offeror: Pikes Peak Community College
3675 S. Academy Blvd.
Colorado Springs, CO 80906
(303) 576-7711

The objective of this course is to teach the syntax, format, and structure of the language through writing application programs. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) design concepts, technical programming, and programming support environment. The concepts covered in this course are real-time programming, exception handling, generics, strong typing, packages, and problem solving.

The audience of this course includes programmers. There are prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text Ada: An Introduction by Sabina Saib. The VAX 11/750 computer running VMS 4.1 and the VAX Ada 1.0 compiler are used. Students receive hands-on experience with the Ada language.

This three credit course is taught each semester or quarter. The class meets for 16 weeks for a total of 48 hours. Undergraduate degree students and the general public are eligible to participate in this course. This course is offered for graduate credit.

This course is taught by Vivian M. Challen.

CST 425: Ada AND SOFTWARE ENGINEERING II

University Offeror: University of S. Colorado
Computer Science Department
2200 N. Bonforte
Pueblo, CO 81001
(303) 549-2752

The objective of this course is to teach large-scale Ada projects. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) software engineering, design concepts, management overview, technical programming, and programming support environment. The concepts covered in this course are real-time programming, exception handling, generics, strong typing, tasking, packages, abstract data types, and problem solving.

The audience of this course includes programmers, systems analysts, engineers, and program managers. There are prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text Software Engineering with Ada by Grady Booch. The IBM AT computer running MS-DOS and the Meridian compiler are used. Students receive hands-on experience with the Ada language.

This three credit course is taught periodically. The class meets for 16 weeks for a total of 32 days and 48 hours. Undergraduate degree students, graduate degree candidates, the general public, and the military/DoD are eligible to participate in this course. This course is offered for graduate credit.

This course is taught by Robert Cook. For more information on this course, contact Robert Cook at the above address and phone number.

CST 325: SOFTWARE ENGINEERING WITH Ada

University Offeror: University of Southern Colorado
Computer Science Department
2200 N. Bonforte
Pueblo, CO 81001
(303) 549-2752

The objective of this course is to teach software engineering syntax and semantics of Ada. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) software engineering, design concepts, and technical programming. The concepts covered in this course are real-time programming, exception handling, generics, strong typing, tasking, packages, abstract data types, and problem solving.

The audience of this course includes programmers, systems analysts, engineers, and program managers. There are prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text Software Engineering with Ada by Grady Booch. The IBM AT computer running MS-DOS and the Meridian compiler are used. Students receive hands-on experience with the Ada language.

This three credit course is taught each semester or quarter. The class meets for 15 weeks for a total of 45 days and 45 hours. Undergraduate degree students, graduate degree candidates, the general public, and the military/DoD are eligible to participate in this course. This course is offered for graduate credit.

This course is taught by Robert Cook. For more information on this course, contact Robert Cook at the above address and phone number.

2.7 Connecticut

ADVANCED TOPICS IN COMPUTER SCIENCE: Ada

University Offeror: Central Connecticut State University
Department of Mathematics and Computer
Science
1615 Stanley St.
New Britain CT 06050
(203) 827-7568

The objective of this course is to introduce Ada and to investigate how Ada was designed to facilitate software engineering principles. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) software engineering, design concepts, and technical programming. The concepts covered in this course are exception handling, generics, strong typing, tasking, packages, abstract data types, and problem solving.

The audience of this course includes programmers, systems analysts, technical managers, and program managers. There are prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text An Advanced Introduction to Ada by Gehani. The VAX computer running VMS and the DEC Ada compiler are used. Students receive hands-on experience with the Ada language.

This three credit course is taught each semester or quarter. The class meets for 15 weeks for a total of 37 days and 37 hours. Undergraduate degree students are eligible to participate in this course. This course is offered for graduate credit.

This course is taught by A. Zoe Leibowitz. For more information on this course, contact A. Zoe Leibowitz at the above address and phone number.

CS 154: Ada PROGRAMMING

University Offeror: Southern Connecticut State University
Computer Science Department
501 Crescent St.
New Haven, CT 06515
(203) 397-4514

The objective of this course is to teach students the basics of the Ada programming language. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) software engineering, technical programming, and programming support environment. The concepts covered in this course are real-time programming, exception handling, generics, strong typing, tasking, packages, abstract data types, and problem solving.

The audience of this course includes programmers and systems analysts. There are prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text Programming Languages by Terrence Pratt. The VAX 8650 computer running VMS and the DEC Ada compiler are used. Students receive hands-on experience with the Ada language.

This three credit course is taught periodically. The class meets for 15 weeks for a total of 30 days and 45 hours. Undergraduate degree students are eligible to participate in this course. This course is offered for graduate credit.

This course is taught by Dr. JoAnn Parikh. For more information on this course, contact Dr. JoAnn Parikh at the above address and phone number.

ORGANIZATION OF PROGRAMMING LANGUAGES

University Offeror: Southern Connecticut State University
Computer Science Department
501 Crescent Street
New Haven, CT 06515
(203) 397-4514

The objective of this course is to compare features of different programming languages and to introduce the design of various compilers. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) software engineering, design concepts, technical programming, and programming support environment. The concepts covered in this course are exception handling, generics, strong typing, tasking, packages, abstract data types, and problem solving.

The audience of this course includes programmers and systems analysts. There are prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text Introduction to Ada by Phillip Caverly and Goldstein. The VAX 8650 computer running VMS and the DEC Ada compiler are used. Students receive hands-on experience with the Ada language.

This three credit course is taught periodically. The class meets for 15 weeks for a total of 30 days and 45 hours. Undergraduate degree students are eligible to participate in this course. This course is offered for graduate credit.

This course is taught by Dr. JoAnn Parikh. For more information on this course, contact Dr. JoAnn Parikh at the above address and phone number.

ADVANCED TOPICS IN COMPUTER SCIENCE: Ada

University Offeror: Central State University
1615 Stanley Street
New Britain, CT 06050
(203) 827-7568

The objective of this course is to explore Ada while stressing its options that facilitate the use of good software engineering principles. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) software engineering, design concepts, and technical programming. The concepts covered in this course are exception handling, generics, strong typing, tasking, packages, and abstract data types.

The audience of this course includes programmers, systems analysts, technical managers, program managers, and educators. There are prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text Ada: An Advanced Introduction by Narain Gehani. The VAX 11/8650 computer running VMS is used. Students receive hands-on experience with the Ada language.

This one credit course is taught periodically. The class meets for 8 weeks for a total of 16 days and 16 hours. Undergraduate degree students and graduate degree candidates are eligible to participate in this course. This course is offered for graduate credit.

This course is taught by A. Zoe Leibowitz. For more information on this course, contact A. Zoe Leibowitz at the above address and phone number.

PROGRAMMING IN Ada

University Offeror: University of New Haven
Department of Industrial Engineering and
Computer Science
West Haven, CT 06516
(203) 932-7067

The objective of this course is to teach advanced programming concepts using the Ada programming language. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) software engineering, design concepts, technical programming, and programming support environment. The concepts covered in this course are exception handling, generics, strong typing, tasking, packages, abstract data types, and problem solving.

The audience of this course includes programmers, systems analysts, and technical managers. There are prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text Ada As A Second Language by Norman H. Cohen. The IBM personal computer running MS-DOS is used. Students receive hands-on experience with the Ada language.

This three credit course is taught periodically. The class meets for 14 weeks for a total of 42 days and 42 hours. Undergraduate degree students and graduate degree candidates are eligible to participate in this course. This course is offered for graduate credit.

This course is taught by Gary Walters, Alice Fisher, and Howard Okrent. For more information on this course, contact Gary Walters at the above address and phone number.

2.8 Delaware

No responses were received from academic institutions in Delaware.

2.9 Florida

SOFTWARE ENGINEERING WITH Ada

University Offeror: Florida State University
Computer Science Department
Room 206 Love Building
Tallahassee, FL 32306
(904) 644-2296

The objective of this course is to provide a survey of software engineering with a specific project in Ada programming. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) software engineering. The concepts covered in this course are real-time programming, exception handling, generics, strong typing, tasking, packages, abstract data types, and problem solving.

The audience of this course includes programmers and engineers. There are prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text Software Engineering with Ada by Grady Booch. The SUN 3-280S computer running UNIX and the Verdix compiler are used. Students receive hands-on experience with the Ada language.

This three credit course is taught periodically. The class meets for 14 weeks for a total of 42 days and 42 hours. Undergraduate degree students and graduate degree candidates are eligible to participate in this course. This course is offered for graduate credit.

This course is taught by Greg Riccardi. For more information on this course, contact Ted Baker at the above address and phone number.

REAL-TIME PROGRAMMING

University Offeror: Florida State University
Computer Sciences Department
Room 206 Love Building
Tallahassee, FL 32306
(904) 644-2296

The objective of this course is to implement real time processes and systems. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) software engineering and design concepts. The concepts covered in this course are real-time programming, exception handling, generics, strong typing, tasking, packages, abstract data types, and problem solving. The application area emphasized is real-time systems.

The audience of this course includes programmers and engineers. There are prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text Software Engineering with Ada by Grady Booch. The SUN 3-280S computer running UNIX and the Verdix compiler are used. Students receive hands-on experience with the Ada language.

This three credit course is taught each semester or quarter. The class meets for 14 weeks for a total of 40 days and 40 hours. Undergraduate degree students and the general public are eligible to participate in this course. This course is offered for graduate credit.

This course is taught by Ted Baker. For more information on this course, contact Ted Baker at the above address and phone number.

INTRODUCTION TO Ada PROGRAMMING

2 - Year College Offeror: Brevard Community College
Business Division
1519 Clear Lake Road
Coco, FL 32926
(305) 632-1111 X360

The objective of this course is to introduce students to elementary Ada programming. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) software engineering, design concepts, management overview, technical programming, and programming support environment. The concepts covered in this course are exception handling, generics, strong typing, packages, and problem solving.

The audience of this course includes programmers, systems analysts, engineers, technical managers, and program managers. There are prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text Power Programming with Ada by Dr. John Winters. The IBM PC XT computer running MS-DOS and the JANUS/Ada compiler are used. Students receive hands-on experience with the Ada language.

This three credit course is taught periodically. The class meets for 16 weeks for a total of 32 days and 48 hours. Undergraduate degree students, the general public, and the military/DoD are eligible to participate in this course. This course is offered for graduate credit.

This course is taught by Mr. Dennis Koile and Mr. Michael Welsh. For more information on this course, contact Mr. Dennis Koile at the above address and phone number.

ADVANCED Ada

2 - Year College Offeror: Brevard Community College
Business Division
1519 Clear Lake Road
Coco, FL 32926
(305) 632-1111

The objective of this course is to give students a wide range of problem solving with an emphasis on business and scientific applications. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) software engineering, design concepts, management overview, technical programming, and programming support environment. The concepts covered in this course are exception handling, generics, strong typing, tasking, packages, and problem solving.

The audience of this course includes programmers, systems analysts, engineers, technical managers, and program managers. There are prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text Power Programming with Ada by Dr. John Winters. The IBM PC XT computer running MS-DOS and the JANUS/Ada compiler are used. Students receive hands-on experience with the Ada language.

This three credit course is taught each semester or quarter. The class meets for 17 weeks for a total of 51 days and 68 hours. Undergraduate degree students, the general public, and the military/DoD are eligible to participate in this course. This course is offered for graduate credit.

This course is taught by Mr. Dennis Koile and Mr. Michael Welsh. For more information on this course, contact Mr. Dennis Koile at the above address and phone number.

SOFTWARE ENGINEERING I

University Offeror: University of Central Florida
Department of Computer Engineering
CEBA 207
Orlando, FL 32816
(305) 275-2236

The objective of this course is to employ modern software engineering concepts and program design strategies. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) software engineering and design concepts. The concepts covered in this course are exception handling, generics, strong typing, packages, abstract data types, and problem solving.

The audience of this course includes systems analysts, engineers, and program managers. There are prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text Software Engineering Concepts by Farley. The IBM 4381 and Gould 32/6780 computers running VMS and ULTRIX and the TeleSoft compiler are used. Students receive hands-on experience with the Ada language.

This one credit course is taught each semester or quarter. The class meets for 16 weeks for a total of 16 days and 16 hours. Undergraduate degree students and graduate degree candidates are eligible to participate in this course. This course is offered for graduate credit.

This course is taught by Dr. Darrell Linton. For more information on this course, contact Dr. Darrell Linton at the above address and phone number.

Ada AND ITS PROGRAMMING ENVIRONMENT

Technical Institute Offeror: Florida Institute of Technology
150 University Ave.
Dept of Computer Science
Melbourne, FL 32901
(305) 768-8091

The objective of this course is to develop an understanding of Ada and its programming environment. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) software engineering, design concepts, technical programming, and programming support environment. The concepts covered in this course are exception handling, generics, strong typing, tasking, packages, and abstract data types. The application area emphasized is software engineering principles.

The audience of this course includes programmers, systems analysts, and program managers. There are prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text Software Engineering with Ada by Grady Booch. The Harris HCX9 computer running UNIX and the Ada/Harris Systems compiler are used. Students receive hands-on experience with the Ada language.

This four credit course is taught each semester or quarter. The class meets for 15 weeks for a total of 45 days and 45 hours. Graduate degree candidates, the general public, and the military/DoD are eligible to participate in this course. This course is offered for graduate credit.

This course is taught by Luwana Clever and Rhoda Baggs. For more information on this course, contact Richard St. Andre at the above address and phone number.

Ada PROGRAMMING

2 - Year College Offeror: St. Peter's Junior College
2465 Drew St.
Clearwater, FL 34615
(813) 791-2530

This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) programming support environment. The concepts covered in this course are real-time programming, exception handling, generics, strong typing, tasking, and packages.

The audience of this course includes programmers, systems analysts, engineers, technical managers, and program managers. There are no prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text Introductory Ada by Putnam Texel. The IBM personal computer running PC DOS and the ARTEK compiler are used. Students receive hands-on experience with the Ada language.

This two credit course is taught periodically. The class meets for 10 weeks for a total of 30 days and 30 hours. Undergraduate degree students, the general public, and the military/DoD are eligible to participate in this course. This course is offered for graduate credit.

This course is taught by Jim Hill. For more information on this course, contact Jim Hill at the above address and phone number.

INTRODUCTION TO SOFTWARE ENGINEERING

University Offeror: Embry-Riddle Aeronautical University
Computer Science Department, ERAU (PD-AAC)
Daytona Beach, FL 32014
(904) 239-6690

The objective of this course is to implement software engineering principles, processes, and goals with Ada. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) software engineering, design concepts, management overview, technical programming, and programming support environment. The concepts covered in this course are real-time programming, exception handling, generics, strong typing, tasking, packages, abstract data types, and problem solving. The application area emphasized is aviation/aerospace.

The audience of this course includes programmers, systems analysts, engineers, technical managers, and program managers. There are prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text Software Engineering with Ada by Grady Booch. The IBM AT computer running MS-DOS 3.3 and the ALSYS Ada compiler are used. Students receive hands-on experience with the Ada language.

The class meets for 1 week for a total of 5 days and 36 hours. Undergraduate degree students, graduate degree candidates, and the military/DoD are eligible to participate in this course. This course is offered for graduate credit.

This course is taught by Dr. Jagdish C. Agrawal, Dr. Thomas B. Hilburn, and Dr. Surendra Kumar. For more information on this course, contact Dr. Jagdish C. Agrawal at the above address and phone number.

SOFTWARE DEVELOPMENT WITH Ada

University Offeror: University of Miami
Electrical and Computer Engineering
Department
P.O. Box 248294
Miami, FL
(305) 284-3452

The objective of this course is to learn how to use the language with design and methodologies. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) software engineering, design concepts, technical programming, and programming support environment. The concepts covered in this course are real-time programming, exception handling, generics, strong typing, tasking, packages, abstract data types, and problem solving.

The audience of this course includes programmers, systems analysts, and engineers. There are prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text Programming in Ada by Barnes. The VAX 750 computer and the TeleSoft compiler are used. Students receive hands-on experience with the Ada language.

This three credit course is taught periodically. The class meets for 15 weeks for a total of 45 days and 45 hours. Undergraduate degree students, graduate degree candidates, the general public, and the military/DoD are eligible to participate in this course. This course is offered for graduate credit.

This course is taught by Susan D. Urban. For more information on this course, contact Susan D. Urban at the above address and phone number.

2.10 Georgia

SOFTWARE ENGINEERING

University Offeror: Georgia State University
Department of Mathematics and
Computer Science
Atlanta, GA 30303
(404) 651-2253

The objective of this course is to teach software engineering. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) software engineering, design concepts, management overview, technical programming, and programming support environment. The concepts covered in this course are strong typing, packages, abstract data types, and problem solving.

The audience of this course includes programmers and systems analysts. There are prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text Software Engineering Concepts by Richard Fairley. The IBM personal computer running MS-DOS and the JANUS/Ada compiler are used. Students receive hands-on experience with the Ada language.

This three credit course is taught periodically. The class meets for 15 weeks for a total of 30 days and 42 hours. Undergraduate degree students, graduate degree candidates, the general public, and the military/DoD are eligible to participate in this course. This course is offered for graduate credit.

This course is taught by Dr. Scott Owen. For more information on this course, contact Dr. Scott Owen at the above address and phone number.

Offeror's comments: This is a required course for computer science majors.

ABSTRACTION AND SPECIFICATION IN PROGRAM DEVELOPMENT

University Offeror: Georgia Institute of Technology
School of Information/Computer Sciences
Atlanta, GA 30332-0280
(404) 894-2592

The objective of this course is to acquaint students with program development and methodology based on abstraction. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) software engineering and design concepts. The concepts covered in this course are packages, abstract data types, generics, exception handling, strong typing, and problem solving.

The audience of this course includes programmers, systems analysts, and engineers. There are prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text Abstraction and Specification in Program Development by Barbara Liskov and John Guttag. The VAX 2000 computer running ULTRIX and the Verdix compiler are used. Students receive hands-on experience with the Ada language.

This five credit course is taught each semester or quarter. The class meets for 10 weeks for a total of 30 days and 50 hours. Undergraduate degree students and graduate degree candidates are eligible to participate in this course. This course is offered for graduate credit.

This course is taught by Richard LeBlanc. For more information on this course, contact Richard LeBlanc at the above address and phone number.

SOFTWARE ENGINEERING

University Offeror: University of Georgia
Department of Computer Science
415 Boyd Graduate Studies Center
Athens, GA 30602
(404) 542-2911

The objective of this course is to introduce Ada and general software engineering concepts, including costing, maintenance, and life cycles. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) software engineering, design concepts, and technical programming. The concepts covered in this course are exception handling, generics, strong typing, packages, abstract data types, and problem solving.

The audience of this course includes programmers, systems analysts, and engineers. There are prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text Software Engineering by Pressman. The IBM Mainframe computer running TSO and the TeleSoft compiler are used. Students receive hands-on experience with the Ada language.

This three credit course is taught each semester or quarter. The class meets for 16 weeks for a total of 30 days and 38 hours. Undergraduate degree students, graduate degree candidates, the general public, and the military/DoD are eligible to participate in this course. This course is offered for graduate credit.

This course is taught by Dr. Orville Weyrich, Jr. For more information on this course, contact Dr. Orville Weyrich, Jr. at the above address and phone number.

INTRODUCTION TO OBJECT ORIENTED DESIGN

4 - Year College Offeror: La Grange College
Computer Science Department
601 Broad St.
La Grange, GA 30240-2999
(404) 882-2911

The objective of this course is to familiarize students with modern programming practices in Ada. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) software engineering, design concepts, and programming support environment. The concepts covered in this course are exception handling, generics, strong typing, tasking, packages, abstract data types, and problem solving. The application area emphasized is large system software design.

The audience of this course includes programmers and program managers. There are no prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text Ada for Experienced Programmers by Habermann. The Harris HCX/7 computer running UNIX and the Harris compiler are used. Students receive hands-on experience with the Ada language.

This three credit course is taught each semester or quarter. The class meets for 10 weeks for a total of 20 days and 40 hours. Undergraduate degree students, the general public, and the military/DoD are eligible to participate in this course. This course is not offered for graduate credit.

This course is taught by Tony Valle. For more information on this course, contact Tony Vale at the above address and phone number.

DESIGN AND PROGRAMMING LANGUAGES

University Offeror: Atlanta University
Department of Math and Computer Science
James Brawley Dr., S.W.
Atlanta, GA 30314
(404) 681-0251

The objective of this course is to familiarize students with constructs from modern programming languages. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) software engineering and technical programming. The concepts covered in this course are exception handling, generics, tasking, packages, abstract data types, and problem solving. The application area emphasized is transaction processing.

The audience of this course includes programmers, systems analysts, technical managers, and program managers. There are prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text Software Engineering with Ada by Grady Booch. The VAX computer running VMS and the Digital compiler are used. Students receive hands-on experience with the Ada language.

This three credit course is taught each semester or quarter. The class meets for 15 weeks for a total of 45 days and 45 hours. Graduate degree candidates, the general public, and the military/DoD are eligible to participate in this course. This course is offered for graduate credit.

For more information on this course, contact Steven Ornburn at the above address and phone number.

SOFTWARE ENGINEERING

University Offeror: Atlanta University
Department of Math and Computer Science
James Brawley Dr., SW
Atlanta, GA 30314
(404) 681-0251

The objective of this course is to give students experience working in teams to develop significant software systems. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) software engineering, design concepts, technical programming, and programming support environment. The concepts covered in this course are exception handling, generics, strong typing, tasking, packages, abstract data types, and problem solving. The application area emphasized is transaction processing.

The audience of this course includes programmers, systems analysts, and program managers. There are prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text Software Engineering Concepts by Fairley. The VAX computer running VMS and the Digital compiler are used. Students receive hands-on experience with the Ada language.

This three credit course is taught periodically. The class meets for 15 weeks for a total of 30 days and 45 hours. Graduate degree candidates, the general public, and the military/DoD are eligible to participate in this course. This course is offered for graduate credit.

For more information on this course, contact Steven Ornburn at the above address and phone number.

COMPARATIVE LANGUAGES

4 - Year College Offeror: Armstrong State University
Department of Math and Computer
Science
Savannah, GA 31419
(912) 927-5317

The objective of this course is to teach the theory and design of programming languages. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) design concepts and technical programming. The concepts covered in this course are real-time programming, exception handling, generics, strong typing, tasking, packages, and abstract data types.

The audience of this course includes programmers, systems analysts, technical managers, and program managers. There are prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text Programming Language Landscapes by Marcotty and Ledgard. The VAX 11/750 computer running UNIX and the NYU Educational compiler are used. Students receive hands-on experience with the Ada language.

This three credit course is taught periodically. The class meets for 15 weeks for a total of 15 days and 45 hours. Undergraduate degree students, the general public, and the military/DoD are eligible to participate in this course. This course is offered for graduate credit.

This course is taught by Dr. Sigmund Hudson. For more information on this course, contact Dr. Sigmund Hudson at the above address and phone number.

INTRODUCTION TO Ada

4 - Year College Offeror: Morehouse College
Department of Computer Science
P.O. Box 137
Atlanta, GA 30314
(404) 525-1501

The objective of this course is to give an overview of all the basic features of the Ada language. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) software engineering, design concepts, technical programming, and programming support environment. The concepts covered in this course are real-time programming, exception handling, generics, strong typing, tasking, packages, abstract data types, and problem solving.

The audience of this course includes programmers, systems analysts, engineers, technical managers, and program managers. There are prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text Introduction to Ada: A Top-Down Approach by Caverly and Goldstein. The VAX 11/780 computer running VMS 4.5 and the VAX Ada compiler are used. Students receive hands-on experience with the Ada language.

This three credit course is taught each semester or quarter. The class meets for 15 weeks for a total of 45 days and 40 hours. Undergraduate degree students, the general public, and the military/DoD are eligible to participate in this course. This course is offered for graduate credit.

This course is taught by William McGuiver and Dr. Arthur Jones. For more information on this course, contact William McGuiver at the above address and phone number.

2.11 Hawaii

SPECIAL TOPICS: Ada

University Offeror: Chaminade University
Computer Science Department
3140 Walai
Honolulu, HI 96816
(808) 735-4805

The objective of this course is to provide a basic competency in the use of Ada. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) software engineering and design concepts. The concepts covered in this course are exception handling, generics, strong typing, tasking, abstract data types, and problem solving.

The audience of this course includes programmers, systems analysts, technical managers, and program managers. There are no prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text Software Engineering Concepts by Fairley. The VAX computer running VMS and the JANUS/Ada compiler are used. Students receive hands-on experience with the Ada language.

This three credit course is taught each semester or quarter. The class meets for 15 weeks for a total of 30 days and 45 hours. Undergraduate degree students, graduate degree candidates, the general public, and the military/DoD are eligible to participate in this course. This course is offered for graduate credit.

This course is taught by Ward Hayward. For more information on this course, contact Stephen Ornburn at the above address and phone number.

THE PROGRAMMING LANGUAGE

2 - Year College Offeror: Leeward Community College
96 045 Ala Ike
Pearl City, HI 96782
(808) 455-0273

The objective of this course is to introduce Ada to junior-level programmers. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) design concepts, technical programming, and programming support environment. The concepts covered in this course are exception handling, strong typing, packages, abstract data types, and problem solving. The application area emphasized is business and scientific.

The audience of this course includes programmers. There are prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text Programming in Ada by J.G.P. Barnes. The VAX 11/780 computer running VMS and the VAX compiler are used. Students receive hands-on experience with the Ada language.

This three credit course is taught periodically. The class meets for 15 weeks for a total of 30 days and 38 hours. Undergraduate degree students, the general public, and the military/DoD are eligible to participate in this course. This course is offered for graduate credit.

This course is taught by Le Roy C. Johnson. For more information on this course, contact Le Roy C. Johnson at the above address and phone number.

2.12 Idaho

No responses were received from academic institutions in Idaho.

2.13 Illinois

PROGRAMMING IN Ada

University Offeror: DePaul University
Computer Science and Information Systems
243 S. Wabash
Chicago, IL 60604
(312) 341-8381

The objective of this course is to teach students the beginning Ada syntax. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) technical programming. The concepts covered in this course are exception handling, generics, strong typing, packages, abstract data types, and problem solving.

The audience of this course includes programmers, engineers, and program managers. There are no prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text Software Engineering with Ada by Grady Booch. The VAX computer running VMS and the TeleSoft compiler are used. Students receive hands-on experience with the Ada language.

This three credit course is taught each semester or quarter. The class meets for 16 weeks for a total of 48 days and 48 hours. Undergraduate degree students, graduate degree candidates, the general public, and the military/DoD are eligible to participate in this course. This course is offered for graduate credit.

This course is taught by George Knafl. For more information on this course, contact George Knafl at the above address and phone number.

THE LANGUAGE Ada

University Offeror: Western Illinois University
Department of Computer Science
Macomb, IL 61455
(309) 298-1452

The objective of this course is to acquaint students with the abstractions represented by the Ada language. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) software engineering, design concepts, and technical programming. The concepts covered in this course are exception handling, generics, strong typing, tasking, packages, abstract data types, and problem solving.

The audience of this course includes programmers and engineers. There are prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text The Ada Programming Language by I.C. Pyle. The IBM PC AT computer running MS-DOS and the JANUS/Ada compiler are used. Students receive hands-on experience with the Ada language.

This three credit course is taught periodically. The class meets for 15 weeks for a total of 45 days and 45 hours. Undergraduate degree students, the general public, and the military/DoD are eligible to participate in this course. This course is offered for graduate credit.

This course is taught by Dr. David Ballew. For more information on this course, contact James Calhoun at the above address and phone number.

PROGRAMMING LANGUAGE CONCEPTS

University Offeror: Southern Illinois University at Edwardsville
Department of Computer Science
Edwardsville, IL 62026
(618) 692-2386

The objective of this course is to introduce students to programming language concepts and use them in programming exercises. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) programming support environment. The concepts covered in this course are exception handling, generics, strong typing, tasking, packages, abstract data types, and problem solving.

The audience of this course includes programmers, program managers, and computer science majors. There are prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text Programming Languages by Pratt. The DEC MicroVAX II computer running VMS and the DEC Ada compiler are used. Students receive hands-on experience with the Ada language.

This one credit course is taught periodically. The class meets for 8 weeks for a total of 16 days and 16 hours. Undergraduate degree students and graduate degree candidates are eligible to participate in this course. This course is offered for graduate credit.

This course is taught by Dr. Hattemer and Dr. Wu. For more information on this course, contact Dr. Hattemer at the above address and phone number.

TOPICS IN SOFTWARE ENGINEERING USING Ada

University Offeror: Southern Illinois University at Edwardsville
Department of Computer Science
Edwardsville, IL 62026
(618) 692-2386

The objective of this course is to teach software engineering and object-oriented design and review their application in the Ada environment. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) software engineering, design concepts, and programming support environment. The concepts covered in this course are exception handling, generics, strong typing, tasking, packages, abstract data types, and problem solving.

The audience of this course includes programmers and program managers. There are prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text Software Engineering with Ada by Grady Booch. The DEC MicroVAX II computer running VMS and the DEC Ada compiler are used. Students receive hands-on experience with the Ada language.

This four credit course is taught periodically. The class meets for 10 weeks for a total of 20 days and 40 hours. Graduate degree candidates are eligible to participate in this course. This course is offered for graduate credit.

This course is taught by Dr. Hattemer. For more information on this course, contact Dr. Hattemer at the above address and phone number.

Ada PROGRAMMING I

4 - Year College Offeror: McKendree College
Computer Science Department
701 College Road
Lebanon, IL 62254
(618) 537-4481

The objective of this course is to familiarize students with the Ada language and rudimentary constructs. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) technical programming. The concepts covered in this course are real-time programming, strong typing, abstract data types, and problem solving.

The audience of this course includes programmers. There are no prerequisites that must be satisfied before enrolling in this course. No previous computer programming experience is necessary.

The course materials include the text Ada As A Second Language by Norman H. Cohen. The Wyse 286 computer running MS-DOS and the ALSYS compiler are used. Students receive hands-on experience with the Ada language.

This one credit course is taught each semester or quarter. The class meets for 5 weeks for a total of 15 days and 15 hours. Undergraduate degree students, the general public, and the military/DoD are eligible to participate in this course. This course is offered for graduate credit.

This course is taught by Capt. Roy Rogge. For more information on this course, contact Capt. Roy Rogge at the above address and phone number.

Ada PROGRAMMING II

4 - Year College Offeror: McKendree College
Department of Computer Science
701 College Road
Lebanon, IL 62254
(618) 537-4481

The objective of this course is to familiarize students with rudimentary programming and to move toward more advance programming concepts. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) software engineering, design concepts, and technical programming. The concepts covered in this course are strong typing, abstract data types, and problem solving.

The audience of this course includes programmers. There are prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text Ada As A Second Language by Norman H. Cohen. The Wyse 286 computer running MS-DOS and the ALSYS compiler are used. Students receive hands-on experience with the Ada language.

This three credit course is taught periodically. The class meets for 4 weeks for a total of 12 days and 42 hours. Undergraduate degree students, the general public, and the military/DoD are eligible to participate in this course. This course is offered for graduate credit.

This course is taught by Capt. Roy Rogge. For more information on this course, contact Capt. Roy Rogge at the above address and phone number.

Ada PROGRAMMING III

4 - Year College Offeror: McKendree College
Department of Computer Science
701 College Road
Lebanon, IL 62254
(618) 537-4481

The objective of this course is to introduce students to a broader view of reusability issues. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) software engineering, design concepts, and technical programming. The concepts covered in this course are exception handling, generics, strong typing, packages, abstract data types, and problem solving.

The audience of this course includes programmers, systems analysts, and engineers. There are prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text Ada As A Second Language by Norman H. Cohen. The Wyse 286 computer running MS-DOS and the ALSYS compiler are used. Students receive hands-on experience with the Ada language.

This three credit course is taught periodically. The class meets for 4 weeks for a total of 12 days and 42 hours. Undergraduate degree students, the general public, and the military/DoD are eligible to participate in this course. This course is offered for graduate credit.

This course is taught by Capt. Roy Rogge. For more information on this course, contact Capt. Roy Rogge at the above address and phone number.

Ada PROGRAMMING IV

4 - Year College Offeror: McKendree College
Department of Computer Science
701 College Road
Lebanon, IL 62254
(618) 537-4481

The objective of this course is to teach students real-time programming. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) software engineering, design concepts, and technical programming. The concepts covered in this course are generics, strong typing, tasking, packages, abstract data types, and problem solving.

The audience of this course includes programmers, systems analysts, and engineers. There are prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text Ada As A Second Language by Norman H. Cohen. The Wyse 286 computer running MS-DOS and the ALSYS compiler are used. Students receive hands-on experience with the Ada language.

This three credit course is taught periodically. The class meets for 4 weeks for a total of 12 days and 42 hours. Undergraduate degree students, the general public, and the military/DoD are eligible to participate in this course. This course is offered for graduate credit.

This course is taught by Capt. Roy Rogge. For more information on this course, contact Capt. Roy Rogge at the above address and phone number.

SOFTWARE ENGINEERING WITH Ada

Technical Institute Offeror: Illinois Institute of Technology
Department of Computer Science
SP Building, IIT Central
Chicago, IL 60616
(312) 567-5142

The objective of this course is to teach software engineering principles for Ada. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) software engineering, design concepts, and technical programming. The concepts covered in this course are real-time programming, exception handling, generics, strong typing, tasking, packages, abstract data types, and problem solving.

The audience of this course includes programmers, engineers, technical managers, and program managers. There are prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text Software Engineering with Ada by Grady Booch. The TeleSoft computer running VMS and the TeleSoft compiler are used. Students receive hands-on experience with the Ada language.

This three credit course is taught each semester or quarter. The class meets for 15 weeks for a total of 30 days and 45 hours. Undergraduate degree students, graduate degree candidates, the general public, and the military/DoD are eligible to participate in this course. This course is offered for graduate credit.

This course is taught by Fred Maymir and T. Elrad. For more information on this course, contact T. Elrad at the above address and phone number.

CONCURRENT PROGRAMMING

Technical Institute Offeror: Illinois Institute of Technology
Department of Computer Science
SP Building, IIT Central
Chicago, IL 60616
(312) 567-5150

The objective of this course is to compare and use different concurrent languages. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) design concepts, technical programming, and programming support environment. The concepts covered in this course are real-time programming, exception handling, tasking, and problem solving. The application area emphasized is real-time systems.

The audience of this course includes programmers, systems analysts, technical managers, and program managers. There are prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text Ada: Concurrent Programming by Gehani. The TeleSoft computer running VMS and the TeleSoft compiler are used. Students receive hands-on experience with the Ada language.

This three credit course is taught periodically. The class meets for 15 weeks for a total of 45 days and 45 hours. Graduate degree candidates are eligible to participate in this course. This course is offered for graduate credit.

This course is taught by T. Elrad. For more information on this course, contact T. Elrad at the above address and phone number.

Offeror's comments: Students may do independent study projects.

SOFTWARE ENGINEERING

4 - Year College Offeror: Elmhurst College
Dept of Mathematics and Computer
Science
190 Prospect Ave.
Elmhurst, IL 60126
(312) 279-4100

The objective of this course is to teach students various life cycle models and to illustrate the concepts using Ada as a vehicle. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) software engineering, design concepts, and programming support environment. The concepts covered in this course are real-time programming, exception handling, generics, strong typing, tasking, packages, abstract data types, and problem solving.

The audience of this course includes programmers, systems analysts, engineers, technical managers, and program managers. There are prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text Software Engineering with Ada by Grady Booch. The Harris HCX9 computer running UNIX and the Harris Ada compiler are used. Students receive hands-on experience with the Ada language.

This three credit course is taught periodically. The class meets for 17 weeks for a total of 48 days and 48 hours. Undergraduate degree students, the general public, and the military/DoD are eligible to participate in this course. This course is offered for graduate credit.

This course is taught by John Jeffrey. For more information on this course, contact John Jeffrey at the above address and phone number.

Offeror's comments: This is project-oriented with object-oriented methodology.

SOFTWARE ENGINEERING WITH Ada

University Offeror: Parks College of Saint Louis University
Computer Science Department
Cahokia, IL 62206
(618) 337-7500

The objective of this course is to introduce software engineering concepts to non-computer science majors. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) software engineering, design concepts, and technical programming. The concepts covered in this course are exception handling, generics, strong typing, packages, abstract data types, and problem solving. The application area emphasized is general software engineering topics.

The audience of this course includes programmers, engineers, and program managers. There are prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text Programming in Ada by J.G.P. Barnes. The MicroVAX II computer running VMS and the Verdix compiler are used. Students receive hands-on experience with the Ada language.

This three credit course is taught periodically. The class meets for 10 weeks for a total of 30 days and 90 hours. Undergraduate degree students, graduate degree candidates, the general public, and the military/DoD are eligible to participate in this course. This course is offered for graduate credit.

This course is taught by Dr. C. C. Kirkpatrick. For more information on this course, contact Dr. C. C. Kirkpatrick at the above address and phone number.

2.14 Indiana

CS 539 SEMINAR IN COMPUTER SCIENCE

University Offeror: Ball State University
Computer Science Department
Muncie, IN 47306
(317) 284-4992

The objective of this course is to teach software engineering with Ada. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) software engineering. The concepts covered in this course are real-time programming, exception handling, generics, strong typing, tasking, packages, abstract data types, and problem solving. The application area emphasized is reusable software.

The audience of this course is (are) programmers, systems analysts, engineers, technical managers, program managers, and graduate students. There are prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text Ada As A First Programming Language by Milton Underkoffler. The VAX computer running VMS and the VAX Ada 1.0 compiler are used. Students receive hands-on experience with the Ada language.

This four credit course is taught periodically. The class meets for 15 weeks for a total of 60 days and 60 hours. Graduate degree candidates are eligible to participate in this course. This course is offered for graduate credit.

This course is taught by Dr. Milton Underkoffler. For more information on this course, contact Dr. Milton Underkoffler at the above address and phone number.

Ada FOR SYSTEMS PROGRAMMING

University Offeror: Indiana State University At Terre Haute
Mathematics and Computer Science Department
Holmstedt Hall
Terre Haute, IN 47809
(812) 237-2130

The objective of this course is to learn Ada syntax and its capabilities and to use the language to develop systems software. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) software engineering, design concepts, and technical programming. The concepts covered in this course are real-time programming, exception handling, generics, strong typing, tasking, packages, abstract data types, and problem solving.

The audience of this course includes programmers, systems analysts, technical managers, and program managers. There are prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text Software Engineering with Ada by Grady Booch. The VAX 8350 computer running VMS and the DEC Ada compiler are used. Students receive hands-on experience with the Ada language.

This three credit course is taught each semester or quarter. The class meets for 15 weeks for a total of 30 days and 45 hours. Undergraduate degree students and graduate degree candidates are eligible to participate in this course. This course is offered for graduate credit.

This course is taught by Dr. Guy Hale. For more information on this course, contact Dr. Guy Hale at the above address and phone number.

Ada PROGRAMMING

University Offeror: University of Evansville
Department of Computing Science
1800 Lincoln Ave.
Evansville, IN 47722
(812) 479-2652

The objective of this course is to introduce students to the unique features of Ada as a second language. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) software engineering, design concepts, and technical programming. The concepts covered in this course are real-time programming, exception handling, generics, strong typing, tasking, packages, and abstract data types.

The audience of this course includes programmers, systems analysts, engineers, technical managers, and program managers. There are prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text Principles of Programming Languages by Bruce MacLennan. Students receive hands-on experience with the Ada language.

This three credit course is taught periodically. The class meets for 15 weeks for a total of 45 days and 45 hours. Undergraduate degree students, graduate degree candidates, the general public, and the military/DoD are eligible to participate in this course. This course is offered for graduate credit.

This course is taught by Mr. Bruce Mavis. For more information on this course, contact Mr. Bruce Mavis at the above address and phone number.

INTRODUCTION TO Ada

4 - Year College Offeror: Rose-Hulman Institute of Technology
5500 Walbash Avenue
Terre Haute, IN 47803
(812) 877-1511

The objective of this course is to introduce and expose students to Ada. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) software engineering, design concepts, technical programming, and programming support environment. The concepts covered in this course are exception handling, generics, strong typing, tasking, packages, abstract data types, and problem solving.

The audience of this course includes programmers, systems analysts, and engineers. There are prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text Ada As A Second Language by Norman H. Cohen. The VAX 8530 computer running VMS and the VAX Ada compiler are used. Students receive hands-on experience with the Ada language.

This three credit course is taught periodically. The class meets for 5 weeks for a total of 25 days and 50 hours. Undergraduate degree students and graduate degree candidates are eligible to participate in this course. This course is offered for graduate credit.

This course is taught by Cary Laxer. For more information on this course, contact Cary Laxer at the above address and phone number.

DATA AND FILE STRUCTURES

University Offeror: Indiana University-Purdue University/Fort Wayne
Computer Technology Department
2101 Coliseum Boulevard E.
Fort Wayne, IN
(219) 481-6176

The objective of this course is to cover traditional data structures material with emphasis on abstract data types and good design. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) software engineering, design concepts, and technical programming. The concepts covered in this course are exception handling, strong typing, packages, abstract data types, and problem solving. The application area emphasized is data structures.

The audience of this course includes programmers. There are prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text Data Structures with Ada by Feldman. The VAX computer running VMS and the DEC Ada compiler are used. Students receive hands-on experience with the Ada language.

This four credit course is taught periodically. The class meets for 10 weeks for a total of 40 days and 40 hours. Undergraduate degree students are eligible to participate in this course. This course is not offered for graduate credit.

This course is taught by Karl Rehmer and Linda Rising. For more information on this course, contact Karl Rehmer at the above address and phone number.

OBJECT-ORIENTED SYSTEM DEVELOPMENT

University Offeror: Indiana University-Perdue University/Fort
Wayne
Computer Science Department
IPFW
Fort Wayne, IN 46805
(219) 481-6803

The objective of this course is to provide a definition and representation of objects in large software systems. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) software engineering, design concepts, technical programming, and programming support environment. The concepts covered in this course are real-time programming, exception handling, generics, strong typing, tasking, packages, abstract data types, and problem solving. The application area emphasized is object-oriented system development.

The audience of this course includes programmers, systems analysts, and technical managers. There are prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text Software Engineering with Ada by Grady Booch. The VAX computer running VMS and the DEC Ada compiler are used. Students receive hands-on experience with the Ada language.

This four credit course is taught periodically. The class meets for 10 weeks for a total of 40 days and 66 hours. Undergraduate degree students are eligible to participate in this course. This course is offered for graduate credit.

This course is taught by Mark C. Temte. For more information on this course, contact Mark C. Temte at the above address and phone number.

2.15 Iowa

SOFTWARE ENGINEERING

University Offeror: Iowa State University
Department of Computer Science
Ames, IA 50011
(515) 294-4377

The objective of this course is to teach formal specification, design, and implementation of software systems with team projects. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) software engineering, design concepts, management overview, technical programming, and programming support environment. The concepts covered in this course are generics, strong typing, packages, abstract data types, and problem solving. The application area emphasized is abstract data types.

The audience of this course includes programmers, systems analysts, and engineers. There are prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text Abstraction and Specification in Program Development by Liskov and Guttag. The HP150 computer running UNIX and the HP compiler are used. Students receive hands-on experience with the Ada language.

This three credit course is taught periodically. The class meets for 15 weeks for a total of 3 days and 45 hours. Undergraduate degree students, graduate degree candidates, the general public, and the military/DoD are eligible to participate in this course. This course is offered for graduate credit.

This course is taught by Albert L. Baker and James M. Bieman. For more information on this course, contact Albert L. Baker at the above address and phone number.

PROGRAMMING LANGUAGE CONCEPTS

University Offeror: University of Iowa
Department of Computer Science
Iowa City, IA 52242
(319) 335-0707

The objective of this course is to introduce students to the breadth of issues that distinguish programming languages from each other. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) software engineering, design concepts, technical programming, and programming support environment. The concepts covered in this course are exception handling, generics, strong typing, packages, and abstract data types.

The audience of this course includes programmers. There are prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text Programming Language Concepts by Ghezzi and Jazayeri. The Oncore Multi-Max computer running UNIX and the Verdix compiler are used. Students receive hands-on experience with the Ada language.

This three credit course is taught periodically. The class meets for 15 weeks for a total of 15 days and 45 hours. Undergraduate degree students, the general public, and the military/DoD are eligible to participate in this course. This course is offered for graduate credit.

This course is taught by Raymond Ford, Mr. Muralidharan, and Arthur Fleck. For more information on this course, contact Doug Jones at the above address and phone number.

INTRODUCTION TO PROGRAMMING Ada

4 - Year College Offeror: Simpson College
Department of Computer Science
701 N. C Street
Indianola, IA 50125
(515) 961-1586

The objective of this course is to introduce Ada. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) design concepts, technical programming, and programming support environment. The concepts covered in this course are real-time programming, exception handling, strong typing, packages, abstract data types, and problem solving.

The audience of this course includes programmers and program managers. There are prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text Introduction to Ada. The IBM Compatible AT&T computer running MS-DOS and the JANUS/Ada compiler are used. Students receive hands-on experience with the Ada language.

This two credit course is taught periodically. The class meets for 10 weeks for a total of 20 days and 20 hours. Undergraduate degree students are eligible to participate in this course. This course is offered for graduate credit.

This course is taught by Richard A. Bee Be. For more information on this course, contact Richard A. Bee Be at the above address and phone number.

PROGRAMMING LANGUAGE CONCEPTS

4 - Year College Offeror: Cornell University
Department of Computer Science
Mt. Vernon, IA 52314
(319) 895-8811

The objective of this course is to teach principles of design and implementation of high-level programming languages. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) software engineering, design concepts, and programming support environment. The concepts covered in this course are real-time programming, generics, strong typing, packages, and abstract data types.

The audience of this course includes programmers and program managers. There are prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text Programming Language Concepts by Ghezzi and Jazayeri. The IBM AT computer running MS-DOS and the JANUS/Ada compiler are used. Students receive hands-on experience with the Ada language.

This three credit course is taught periodically. The class meets for 15 weeks for a total of 15 days and 45 hours. Undergraduate degree students are eligible to participate in this course. This course is offered for graduate credit.

This course is taught by Tony De Laubenfels. For more information on this course, contact Tony De Laubenfels at the above address and phone number.

2.16 Kansas

CS 119: Ada LANGUAGE PROGRAMMING

2 - Year College Offeror: Hutchinson Community College
1300 North Plum Street
Hutchinson, KS 67501
(316) 665-3500

The objective of this course is to provide an introduction to Ada concepts, packages, abstract data types, and real-time programming. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) software engineering, design concepts, technical programming, and programming support environment. The concepts covered in this course are real-time programming, generics, strong typing, tasking, packages, abstract data types, and problem solving. The application area emphasized is business data processing.

The audience of this course includes programmers, systems analysts, engineers, technical managers, and program managers. There are prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text Software Engineering with Ada by Grady Booch. Students do not receive hands-on experience with the Ada language.

This three credit course is taught periodically. The class meets for 15 weeks for a total of 15 days and 45 hours. The general public is eligible to participate in this course. This course is offered for graduate credit.

This course is taught by John Morrell. For more information on this course, contact John Morrell at the above address and phone number.

Offeror's comments: This course was approved about 7 years ago, but has never been offered.

Ada

University Offeror: Wichita State University
Computer Science Department
Box 83
Wichita, KS 67208
(316) 689-3156

The objective of this course is to provide a broad introduction to Ada. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) software engineering, design concepts, management overview, technical programming, and programming support environment. The concepts covered in this course are exception handling, generics, strong typing, tasking, packages, abstract data types, and problem solving.

The audience of this course includes programmers, systems analysts, and program managers. There are prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text Programming in Ada by Barnes. The IBM/370 computer running VMS and the TeleSoft compiler are used. Students receive hands-on experience with the Ada language.

This three credit course is taught each semester or quarter. The class meets for 15 weeks for a total of 45 days and 45 hours. Undergraduate degree students, graduate degree candidates, the general public, and the military/DoD are eligible to participate in this course. This course is not offered for graduate credit.

This course is taught by Mark Rutter. For more information on this course, contact Mark Rutter at the above address and phone number.

GENERAL PROGRAMMING II

4 - Year College Offeror: St. Mary College
Computer Science Department
4100 South 4th Street
Leavenworth, KS 66048-5082
(913) 682-5151 x319

The objective of this course is to introduce software engineering, development, and syntax of the language. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) software engineering and design concepts. The concepts covered in this course are exception handling, generics, strong typing, packages, and problem solving. The application area emphasized is Ada syntax.

The audience of this course includes programmers and systems analysts. There are prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text Programming in Ada by Barnes. The IBM personal computer running MS-DOS and the JANUS/Ada compiler are used. Students receive hands-on experience with the Ada language.

This three credit course is taught each semester or quarter. The class meets for 16 weeks for a total of 32 days and 44 hours. Undergraduate degree students, graduate degree candidates, the general public, and the military/DoD are eligible to participate in this course. This course is offered for graduate credit.

This course is taught by Victor Meyer. For more information on this course, contact Victor Meyer at the above address and phone number.

GENERAL PROGRAMMING I

4 - Year College Offeror: St. Mary College
Computer Science Department
4100 South 4th Street
Leavenworth, KS 66048-5082
(913) 682-5151

The objective of this course is to introduce Ada and the latest in programming. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) software engineering and design concepts. The concepts covered in this course are generics, strong typing, and problem solving. The application area emphasized is elementary programming.

The audience of this course includes programmers and systems analysts. There are prerequisites that must be satisfied before enrolling in this course. No previous computer programming experience is necessary.

The course materials include the text Introduction to Ada: Packages for Programming by Putnam Texel. The IBM personal computer running MS-DOS and the JANUS/Ada compiler are used. Students receive hands-on experience with the Ada language.

This four credit course is taught periodically. The class meets for 16 weeks for a total of 48 days and 60 hours. Undergraduate degree students, graduate degree candidates, the general public, and the military/DoD are eligible to participate in this course. This course is offered for graduate credit.

This course is taught by Victor Meyer. For more information on this course, contact Victor Meyer at the above address and phone number.

Ada AND SOFTWARE ENGINEERING

University Offeror: The Wichita State University
Department of Computer Science
Wichita, KS 67208
(316) 689-3155

The objective of this course is to demonstrate how Ada supports good software engineering practices. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) software engineering, design concepts, technical programming, and programming support environment. The concepts covered in this course are real-time programming, exception handling, generics, strong typing, tasking, packages, abstract data types, and problem solving.

The audience of this course includes programmers, systems analysts, engineers, technical managers, and program managers. There are prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text Software Engineering with Ada by Grady Booch. The IBM AT computer running MS-DOS and the ALSYS compiler are used. Students receive hands-on experience with the Ada language.

This three credit course is taught periodically. The class meets for 10 weeks for a total of 30 days and 30 hours. Graduate degree candidates are eligible to participate in this course. This course is offered for graduate credit.

This course is taught by James E. Tomayko. For more information on this course, contact James E. Tomayko at the above address and phone number.

2.17 Kentucky

ADVANCED PROGRAMMING TECHNIQUES WITH Ada

University Offeror: Eastern Kentucky University
Department of Statistics/Computer Science
Wallace 402
Richmond, KY 40475
(606) 622-5942

The objective of this course is to teach advanced programming techniques. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) software engineering, design concepts, technical programming, and programming support environment. The concepts covered in this course are exception handling, generics, strong typing, tasking, packages, abstract data types, and problem solving.

The audience of this course includes programmers. There are prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text Programming in Ada by J.G.P. Barnes. The VAX/785 computer running VMS and the DEC compiler are used. Students receive hands-on experience with the Ada language.

This three credit course is taught each semester or quarter. The class meets for 14 weeks for a total of 28 days and 42 hours. Undergraduate degree students, the general public, and the military/DoD are eligible to participate in this course. This course is offered for graduate credit.

This course is taught by Don Greenwell. For more information on this course, contact Don Greenwell at the above address and phone number.

PROGRAMMING LANGUAGES

University Offeror: University of Kentucky
Department of Computer Sciences
915 Patterson Office Tower
Lexington, KY 40506
(606) 257-3961

The objective of this course is to understand the fundamental concepts of programming languages. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) software engineering, design concepts, technical programming, and programming support environment. The concepts covered in this course are real-time programming, exception handling, generics, strong typing, tasking, packages, abstract data types, and problem solving.

The audience of this course includes programmers. There are prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text Ada As A Second Language by Norman H. Cohen. The IBM 3090 computer is used. Students receive hands-on experience with the Ada language.

This three credit course is taught each semester or quarter. The class meets for 16 weeks for a total of 16 days and 47 hours. Undergraduate degree students are eligible to participate in this course. This course is offered for graduate credit.

This course is taught by Professor Harris, Professor Kubota, and Professor Goshtasby. For more information on this course, contact Anthony Baxter at the above address and phone number.

Ada PROGRAMMING

University Offeror: Western Kentucky University
Department of Computer Sciences
Bowling Green, KY 42101
(502) 745-4642

The objective of this course is to provide students with an intensive introduction to Ada principles and syntax. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) software engineering and technical programming. The concepts covered in this course are exception handling, generics, strong typing, packages, and problem solving.

The audience of this course includes programmers and systems analysts. There are prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text Software Engineering with Ada by Grady Booch. The VAX 11/785 computer running VMS and the TeleSoft compiler are used. Students receive hands-on experience with the Ada language.

This five credit course is taught each semester or quarter. The class meets for 7 weeks for a total of 21 days and 21 hours. Undergraduate degree students, the general public, and the military/DoD are eligible to participate in this course. This course is offered for graduate credit.

This course is taught by Dr. Crenshaw. For more information on this course, contact Dr. Crenshaw at the above address and phone number.

PROGRAMMING LANGUAGES

University Offeror: Northern Kentucky University
Department of Math and Computer Science
Highland Heights, KY 41076
(606) 572-5320

The objective of this course is to teach the advanced features of Ada. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) software engineering. The concepts covered in this course are exception handling, generics, strong typing, tasking, packages, abstract data types, and problem solving. The application area emphasized is packages and exception handling.

The audience of this course includes programmers and engineers. There are prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text Software Engineering with Ada by Grady Booch. The VAX 11/785 computer running VMS and the DEC compiler are used. Students receive hands-on experience with the Ada language.

This three credit course is taught each semester or quarter. The class meets for 15 weeks for a total of 45 days and 45 hours. Undergraduate degree students are eligible to participate in this course. This course is offered for graduate credit.

This course is taught by Don Galli, Gail Wells, and Charles Frank. For more information on this course, contact Dr. Frank at the above address and phone number.

Ada PROGRAMMING II

University Offeror: University of South Western Louisiana
119 Stevens Memorial Hall
Lafayette, LA 70503
(318) 231-5647

This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) software engineering, design concepts, management overview, technical programming, and programming support environment. The concepts covered in this course are exception handling, generics, strong typing, tasking, packages, abstract data types, and problem solving.

The audience of this course includes programmers, systems analysts, and engineers. There are prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text Ada As A Second Language by Norman H. Cohen. The PYRAMID computer running UNIX is used. Students receive hands-on experience with the Ada language.

This three credit course is taught periodically. The class meets for 15 weeks for a total of 15 days and 40 hours. Undergraduate degree students, the general public, and the military/DoD are eligible to participate in this course. This course is offered for graduate credit.

This course is taught by Jagadeesh Namdigan. For more information on this course, contact Jagadeesh Namdigan at the above address and phone number.

PROGRAMMING IN Ada/INTRODUCTION TO SOFTWARE ENGINEERING

University Offeror: University of South Western Louisiana
119 Stevens Memorial Hall
Lafayette, LA 70503
(318) 231-5647

The objective of this course is to develop problem solving skills in software engineering. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) software engineering, design concepts, management overview, technical programming, and programming support environment. The concepts covered in this course are exception handling, strong typing, tasking, packages, abstract data types, and problem solving.

The audience of this course includes programmers, systems analysts, and engineers. There are prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text Ada As A Second Language by Norman H. Cohen. The PYRAMID computer running UNIX is used. Students receive hands-on experience with the Ada language.

This three credit course is taught each semester or quarter. The class meets for 16 weeks for a total of 48 days and 48 hours. Undergraduate degree students, the general public, and the military/DoD are eligible to participate in this course. This course is offered for graduate credit.

This course is taught by Jagadeesh Namdigan. For more information on this course, contact Jagadeesh Namdigan at the above address and phone number.

SOFTWARE ENGINEERING

University Offeror: University of Maine/Orono
Computer Sciences Department
222 Neville Hall
Orono, ME 04469
(207) 581-3941

The objective of this course is to study good software engineering practices. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) software engineering, design concepts, technical programming, and programming support environment. The concepts covered in this course are real-time programming, exception handling, generics, strong typing, tasking, packages, abstract data types, and problem solving.

The audience of this course includes programmers, systems analysts, and engineers. There are prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text Abstraction and Specification for Program Development by Liskav. The VAX 11/780 computer running VMS and the DEC Ada compiler are used. Students receive hands-on experience with the Ada language.

This three credit course is taught periodically. The class meets for 14 weeks for a total of 40 days and 40 hours. Undergraduate degree students and graduate degree candidates are eligible to participate in this course. This course is offered for graduate credit.

This course is taught by Larry Latour. For more information on this course, contact Larry Latour at the above address and phone number.

2.20 Maryland

CS 605.429 SOFTWARE ENGINEERING WITH Ada

University Offeror: Johns Hopkins University
Continuing Professional Programs
GWC Whiting School of Engineering
Merryman Hall
Baltimore, MD 21218
(301) 338-8728

The objective of this course is to cover the syntax, semantics, and relevant software engineering methodologies of Ada. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) software engineering, design concepts, and technical programming. The concepts covered include exception handling, generics, tasking, packages, and abstract data types.

The audience of this course includes programmers, systems analysts, engineers, technical managers, and program managers. There are prerequisites that must be satisfied before enrolling in this course. Previous programming experience is advised.

The course materials include the text Software Engineering with Ada by Grady Booch. The VAX computer running VMS and the DEC compiler are used. Students receive hands-on experience with the Ada language.

This course is taught every semester or quarter. The class meets for 14 weeks for a total of 14 days and 42 hours. Graduate degree candidates are eligible to participate in this course. The course is available for graduate credit.

This course is taught by Mr. Gralia and Mr. Ferguson. For more information on this course, contact Johns Hopkins University at the above address and phone number.

CMIS 305 INTRODUCTION TO Ada

University Offeror: University of Maryland
University College
College Park, MD 20742
(301) 985-7000

The objective of this course is to introduce students to the basics of Ada programming. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) software engineering and design concepts. The concepts covered in this course are strong typing, packages, abstract data types, and problem solving.

The audience of this course includes programmers, systems analysts, and engineers. There are prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text Ada As A Second Language by Norman H. Cohen. The VAX computer running VMS and the VAX compiler are used. Students receive hands-on experience with the Ada language.

This three credit course is taught periodically. The class meets for 14 weeks for a total of 28 days and 42 hours. Undergraduate degree students, the general public, and the military/DoD are eligible to participate in this course. This course is offered for graduate credit.

This course is taught by Duane Jarc, Steve Deller, and Dan Roy. For more information on this course, contact Duan Jarc at the above address and phone number.

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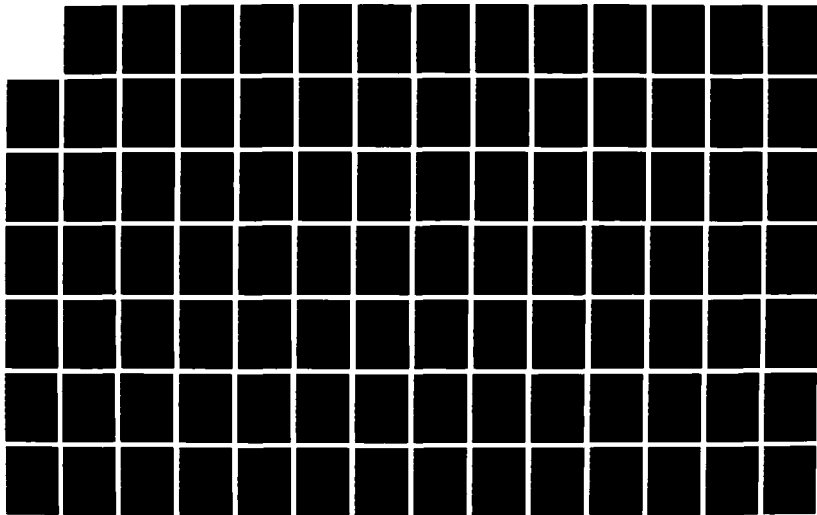
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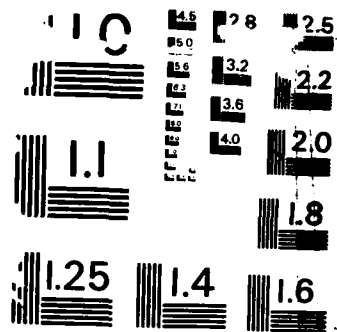
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CMIS 405 APPLYING ADVANCED FEATURES IN Ada

University Offeror: University of Maryland
University College
College Park, MD 20742
(301) 985-7000

The objective of this course is to write programs using advanced features of Ada including tasking, low-level representation, and exceptions. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) software engineering and design concepts. The concepts covered in this course are real-time programming, exception handling, generics, strong typing, tasking, packages, abstract data types, and problem solving.

The audience of this course includes programmers, systems analysts, and engineers. There are prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text Ada As A Second Language by Norman H. Cohen. The VAX computer running VMS and the VAX compiler are used. Students receive hands-on experience with the Ada language.

This three credit course is taught each semester or quarter. The class meets for 16 weeks for a total of 16 days and 47 hours. Undergraduate degree students, the general public, and the military/DoD are eligible to participate in this course. This course is offered for graduate credit.

This course is taught by Duane Jarc, Steve Deller, and Dan Roy. For more information on this course, contact Duane Jarc at the above address and phone number.

PROGRAMMING IN Ada

University Offeror: University of Maryland At College Park
Department of Computer Science
College Park, MD 20742
(301) 454-2002

The objective of this course is to familiarize students with all Ada features so they can use them effectively in solving problems. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) technical programming and programming support environment. The concepts covered in this course are real-time programming, exception handling, generics, strong typing, tasking, packages, abstract data types, and problem solving.

The audience of this course includes programmers, engineers, technical managers, and program managers. There are no prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text Programming in Ada by J.G.P. Barnes. The VAX computer running UNIX and the Verdix compiler are used. Students receive hands-on experience with the Ada language.

This three credit course is taught each semester or quarter. The class meets for 16 weeks for a total of 40 days and 48 hours. Graduate degree candidates are eligible to participate in this course. This course is offered for graduate credit.

This course is taught by Dr. Rombach. For more information on this course, contact Dr. Rombach at the above address and phone number.

Offeror's comments: This course is not offered on a regular basis.

SOFTWARE DEVELOPMENT IN Ada

University Offeror: University of Maryland At College Park
Department of Computer Science
College Park, MD 20742
(301) 454-2002

The objective of this course is to introduce different design approaches and make students aware of their implications on using Ada effectively. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) software engineering and design concepts. The concepts covered in this course are generics, strong typing, tasking, packages, abstract data types, and problem solving.

The audience of this course includes systems analysts, engineers, technical managers, and program managers. There are prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text System Design with Ada by Buhr. The VAX computer running UNIX and the Verdix Ada compiler are used. Students receive hands-on experience with the Ada language.

This three credit course is taught periodically. The class meets for 15 weeks for a total of 30 days and 60 hours. Graduate degree candidates are eligible to participate in this course. This course is offered for graduate credit.

This course is taught by Dr. Rombach. For more information on this course, contact Dr. Rombach at the above address and phone number.

Offeror's comments: Students develop a large system through team projects. This course is not offered on a regular basis.

SOFTWARE ENGINEERING USING Ada

University Offeror: Towson State University
Department of Computer and Information
Sciences
Towson, MD 21204
(301) 321-2633

The objective of this course is to attain fluency in Ada and software engineering principles for designing and writing fairly complex programs. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) software engineering, design concepts, and management overview. The concepts covered in this course are real-time programming, exception handling, generics, strong typing, tasking, packages, abstract data types, and problem solving.

The audience of this course includes programmers, systems analysts, engineers, and program managers. There are prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text Ada Language and Methodology by Watt, Wichmann, and Findley. The VAX 8700 computer running VMS and the TeleSoft compiler are used. Students receive hands-on experience with the Ada language.

This three credit course is taught periodically. The class meets for 15 weeks for a total of 30 days and 60 hours. Undergraduate degree students and graduate degree candidates are eligible to participate in this course. This course is offered for graduate credit.

This course is taught by Mr. Helmut Theiss. For more information on this course, contact Mr. Helmut Theiss at the above address and phone number.

CMIS 401: CONCEPTS IN Ada

University Offeror: University of Maryland/University College
College Park, MD 20742
(301) 985-7000

The objective of this course is to introduce students to the basics of Ada programming at an accelerated pace. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) software engineering, design concepts, and management overview. The concepts covered in this course are exception handling, strong typing, packages, abstract data types, and problem solving.

The audience of this course includes programmers, systems analysts, engineers, and program managers. There are prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text Ada As A Second Language by Norman H. Cohen. The VAX 8500 computer running VMS and the DEC compiler are used. Students receive hands-on experience with the Ada language.

This four credit course is taught each semester or quarter. The class meets for 16 weeks for a total of 16 days and 64 hours. Undergraduate degree students are eligible to participate in this course. This course is offered for graduate credit.

This course is taught by Helmut Theiss. For more information on this course, contact Helmut Theiss at the above address and phone number.

TOPICS IN PROGRAMMING LANGUAGES: Ada

University Offeror: University of Maryland/Eastern Shore
Department of Mathematics and Computer
Science
Princess Anne, MD 21853
(301) 651-2200

The objective of this course is to help students develop a proficiency in Ada through extensive experience in design and programming. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) software engineering, design concepts, technical programming, and programming support environment. The concepts covered in this course are real-time programming, exception handling, generics, strong typing, abstract data types, and problem solving.

The audience of this course includes programmers, systems analysts, engineers, and program managers. There are prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text Software Engineering with Ada by Grady Booch. The IBM 43/41 computer running MS-DOS is used. Students receive hands-on experience with the Ada language.

This four credit course is taught periodically. The class meets for 10 weeks for a total of 4 days and 40 hours. Undergraduate degree students, graduate degree candidates, the general public, and the military/DoD are eligible to participate in this course. This course is offered for graduate credit.

This course is taught by Edward Chapin. For more information on this course, contact Edward Chapin at the above address and phone number.

2.21 Massachusetts

SC 465 SYSTEM DESIGN

University Offeror: Boston University
College of Engineering
110 Cummington Street
Boston, MA 02215
(617) 353-2808

The objective of this course is to provide extensive coverage of Ada design issues. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) software engineering, design concepts, and technical programming. The concepts covered in this course are real-time programming, exception handling, generics, strong typing, tasking, packages, abstract data types, and problem solving. The application area emphasized is embedded systems.

The audience of this course includes engineers. There are prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text Programming in Ada by Barnes. The Encore Multi-Max computer running UNIX and the Verdix 5.1 compiler are used. Students receive hands-on experience with the Ada language.

This course is taught by Dr. Richard F. Vidale. For more information on this course, contact Dr. Richard F. Vidale.

Offeror's comments: The other textbook used in the course is System Design with Ada by Buhr.

SC 525 EMBEDDED COMPUTER SOFTWARE DESIGN

University Offeror: Boston University
College of Engineering
110 Cummington Street
Boston, MA 02215
(617) 353-2808

The objective of this course is to study performance issues in Ada. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) software engineering and technical programming. The concept covered in this course is real-time programming. The application area emphasized is embedded systems software.

The audience of this course includes engineers. There are prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text Structured Development for Real-Time Systems by P.T. Ward and S.J. Mellor. The Encore Multi-Max computer running UNIX and the Verdix 5.1 compiler are used. Students receive hands-on experience with the Ada language.

This two credit course is taught periodically. The class meets for 14 weeks for a total of 28 days and 28 hours. Undergraduate degree students and graduate degree candidates are eligible to participate in this course. This course is offered for graduate credit.

This course is taught by Dr. Richard F. Vidale. For more information on this course, contact Dr. Richard F. Vidale at the above address and phone number.

EK 215 INTRODUCTION TO Ada

University Offeror: Boston University
College of Engineering
110 Cummington Street
Boston, MA 02215
(617) 353-2808

The objective of this course is to provide an introduction to all features of the Ada language. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) technical programming. The concepts covered in this course are exception handling, generics, strong typing, tasking, packages, abstract data types, and problem solving. The application area emphasized is programming.

The audience of this course includes engineers. There are prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text Ada As A Second Language by Norman H. Cohen. The Data General MV/10,000 computer running AOS/VS and the Data General ADE Version 2.3 compiler are used. Students receive hands-on experience with the Ada language.

This three credit course is taught each semester or quarter. The class meets for 10 weeks for a total of 50 days and 50 hours. Undergraduate degree students are eligible to participate in this course. This course is offered for graduate credit.

This course is taught by Richard F. Vidale. For more information on this course, contact Richard F. Vidale at the above address and phone number.

SOFTWARE ENGINEERING

University Offeror: University of Massachusetts/Amherst
Department of Computer and Information
Sciences
Amherst, MA 01003
(413) 545-2744

The objective of this course is to teach modern software engineering principles. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) software engineering, design concepts, and programming support environment. The concepts covered in this course are strong typing, packages, and abstract data types.

The audience of this course includes programmers and systems analysts. There are prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text Software Engineering in Modula 2 and Ada by Wiener and Smith. The VAX 2000 computer running VMS and the VAX Ada compiler are used. Students receive hands-on experience with the Ada language.

This three credit course is taught periodically. The class meets for 10 weeks for a total of 30 days and 30 hours. Undergraduate degree students are eligible to participate in this course. This course is offered for graduate credit.

This course is taught by Eliot Moss and Jack Wileden. For more information on this course, contact Eliot Moss at the above address and phone number.

DATA STRUCTURES

4 - Year College Offeror: Western New England College
Department of Math and Computer
Science
Springfield, MA 01119
(413) 782-3111

The objective of this course is to study data structures and their applications. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) software engineering, design concepts, and technical programming. The concepts covered in this course are exception handling, generics, strong typing, packages, abstract data types, and problem solving.

The audience of this course includes programmers. There are prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text Data Structures with Ada by Feldman. The Data General computer running AOS and the Data General Ada compiler are used. Students receive hands-on experience with the Ada language.

This five credit course is taught periodically. The class meets for 10 weeks for a total of 50 days and 50 hours. Undergraduate degree students, the general public, and the military/DoD are eligible to participate in this course. This course is offered for graduate credit.

This course is taught by Professor L. S. Tang. For more information on this course, contact Professor L. S. Tang at the above address and phone number.

ORGANIZATION OF PROGRAMMING LANGUAGES

4 - Year College Offeror: Western New England College
Department of Math and Computer
Science
Springfield, MA 01119
(413) 782-3111

This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) design concepts and technical programming. The concepts covered in this course are exception handling, strong typing, tasking, packages, abstract data types, and problem solving.

The audience of this course includes programmers and engineers. There are prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text Fundamentals of Programming Language by Horowitz. The Data General MV/8000 computer running AOS VS are used. Students receive hands-on experience with the Ada language.

This three credit course is taught periodically. The class meets for 15 weeks for a total of 30 days and 30 hours. Undergraduate degree students, the general public, and the military/DoD are eligible to participate in this course. This course is offered for graduate credit.

This course is taught by Professor Lloyd Emerson. For more information on this course, contact Professor Lloyd Emerson at the above address and phone number.

ADVANCED PROGRAMMING LANGUAGES

4 - Year College Offeror: North Adams State College
Department of Computer Science
North Adams, MA 01247
(413) 664-4511

The objective of this course is to examine the control and data constructs in high-level programming languages. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) design concepts and programming support environment. The concepts covered in this course are real-time programming, exception handling, generics, strong typing, tasking, packages, abstract data types, and problem solving. The application area emphasized is design of programming languages.

The audience of this course includes programmers, technical managers, and program managers. There are prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text Programming Languages by Terrence Pratt. The AT&T 6300 computer running MS-DOS and the JANUS/Ada compiler are used. Students receive hands-on experience with the Ada language.

This three credit course is taught periodically. The class meets for 15 weeks for a total of 45 days and 45 hours. Undergraduate degree students, the general public, and the military/DoD are eligible to participate in this course. This course is offered for graduate credit.

This course is taught by Ernie Giangrande. For more information on this course, contact Ernie Giangrade at the above address and phone number.

SYSTEMS SOFTWARE DESIGN

4 - Year College Offeror: North Adams State College
Department of Computer Science
North Adams, MA 01247
(413) 664-4511

The objective of this course is to design and implement a large software system. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) software engineering, design concepts, and programming support environment. The concepts covered in this course are real-time programming, exception handling, generics, strong typing, packages, abstract data types, and problem solving.

The audience of this course includes programmers, systems analysts, engineers, technical managers, and program managers. There are prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text Programming Languages by Terrence Pratt. The AT&T 6300 computer running MS-DOS and the JANUS/Ada compiler are used. Students receive hands-on experience with the Ada language.

This three credit course is taught periodically. The class meets for 14 weeks for a total of 42 days and 42 hours. Undergraduate degree students, the general public, and the military/DoD are eligible to participate in this course. This course is offered for graduate credit.

This course is taught by Ernie Giangrande. For more information on this course, contact Ernie Giangrande at the above address and phone number.

SOFTWARE SYSTEM DESIGN WITH Ada

University Offeror: Southeast Massachusetts University
Computer Science Department
N. Dartmouth, MA 02747
(617) 994-8293

The objective of this course is to cover methodologies of system design in a multi-tasking environment, including real-time systems. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) software engineering, design concepts, technical programming, and programming support environment. The concepts covered in this course are real-time programming, exception handling, generics, strong typing, tasking, packages, abstract data types, and problem solving.

The audience of this course includes programmers, systems analysts, engineers, and program managers. There are prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text Software Components with Ada by Grady Booch. The APOLLO computer running AEGIS and the ALSYS compiler are used. Students receive hands-on experience with the Ada language.

This four credit course is taught periodically. The class meets for 16 weeks for a total of 48 days and 60 hours. Undergraduate degree students, graduate degree candidates, the general public, and the military/DoD are eligible to participate in this course. This course is offered for graduate credit.

This course is taught by Jan Burgandy. For more information on this course, contact Jan Burgandy at the above address and phone number.

PROCESS BASED DESIGN

University Offeror: Southeast Massachusetts University
Computer Science Department
N. Dartmouth, MA 02747
(617) 999-8293

The objective of this course is to give students exposure to a multi-tasking environment. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) software engineering, design concepts, technical programming, and programming support environment. The concepts covered in this course are exception handling, generics, strong typing, tasking, packages, abstract data types, and problem solving. The application area emphasized is tasking.

The audience of this course includes programmers, systems analysts, engineers, and program managers. There are prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text System Design with Data by Buhr. The APOLLO computer running AEGIS and the ALSYS compiler are used. Students receive hands-on experience with the Ada language.

This three credit course is taught periodically. The class meets for 16 weeks for a total of 32 days and 48 hours. Undergraduate degree students, graduate degree candidates, the general public, and the military/DoD are eligible to participate in this course. This course is offered for graduate credit.

This course is taught by Jan Bergandy. For more information on this course, contact Jan Burgundy at the above address and phone number.

COMPARATIVE PROGRAMMING LANGUAGES

4 - Year College Offeror: North Adams State College
Department of Computer Science
North Adams, MA 01247
(413) 664-4511

The objective of this course is to compare and contrast major concepts of various programming languages. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) software engineering, technical programming, and programming support environment. The concepts covered in this course are exception handling, strong typing, tasking, packages, abstract data types, and problem solving.

The audience of this course includes programmers and systems analysts. There are prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text Principles of Programming Languages by MacLennan. The AT&T 6300 computer running MS-DOS and the JANUS/Ada compiler are used. Students receive hands-on experience with the Ada language.

This three credit course is taught periodically. The class meets for 17 weeks for a total of 51 days and 150 hours. Undergraduate degree students, the general public, and the military/DoD are eligible to participate in this course. This course is offered for graduate credit.

This course is taught by Beverly Smith. For more information on this course, contact Beverly Smith at the above address and phone number.

2.22 Michigan

SOFTWARE ENGINEERING

University Offeror: Eastern Michigan University
Computer Science Department
620 Pray-Harrold Building
Ypsilante, MI 48197
(313) 487-1063

The objective of this course is to teach students the entire software life cycle. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) software engineering and design concepts. The concepts covered in this course are strong typing, packages, and problem solving. The application area emphasized is modularity of program design.

The audience of this course includes programmers, systems analysts, engineers, technical managers, and program managers. There are prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text Software Engineering by R.S. Pressman. The VAX computer running VMS is used. Students receive hands-on experience with the Ada language.

This four credit course is taught periodically. The class meets for 16 weeks for a total of 30 days and 105 hours. Undergraduate degree students are eligible to participate in this course. This course is offered for graduate credit.

This course is taught by Dr. William McMillan. For more information on this course, contact George Hayman at the above address and phone number.

Offeror's comments: Approximately one third of the course is devoted to Ada programming.

PROGRAMMING LANGUAGES

University Offeror: Western Michigan University
Department of Computer Science
Kalamazoo, MI 49008
(616) 383-6151

The objective of this course is to introduce new programming language concepts and to gain experience using a variety of languages. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) software engineering, design concepts, and programming support environment. The concepts covered in this course are exception handling, generics, strong typing, packages, abstract data types, and problem solving. The application area emphasized is language interpretation.

The audience of this course includes programmers and systems analysts. There are prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text Programming Language Concepts by Ghezzi and Jazayeri. The VAX computer running VMS and the DEC Ada compiler are used. Students receive hands-on experience with the Ada language.

This two credit course is taught periodically. The class meets for 10 weeks for a total of 30 days and 30 hours. Undergraduate degree students are eligible to participate in this course. This course is offered for graduate credit.

This course is taught by Dr. Kenneth Williams. For more information on this course, contact Dr. Kenneth Williams at the above address and phone number.

SHORT COURSE IN Ada PROGRAMMING

University Offeror: Oakland University
Department of Computer Science and
Engineering
Dodge Hall of Engineering
Rochester, MI 48063
(313) 370-2200

The objective of this course is to teach experienced programmers how to program in Ada. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) software engineering, design concepts, and technical programming. The concepts covered in this course are generics, strong typing, packages, abstract data types, and problem solving.

The audience of this course includes programmers and engineers. There are prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text Programming in Ada by J.G.P. Barnes. The VAX computer running VMS and the VAX Ada compiler are used. Students receive hands-on experience with the Ada language.

This three credit course is taught periodically. The class meets for 15 weeks for a total of 45 days and 45 hours. Undergraduate degree students, the general public, and the military/DoD are eligible to participate in this course. This course is offered for graduate credit.

This course is taught by Dr. Frank Cioch. For more information on this course, contact Dr. Frank Cioch at the above address and phone number.

ALTERNATIVE PROGRAMMING LANGUAGES

University Offeror: Central Michigan University
Department of Computer Sciences
Pearce Hall
Mt. Pleasant, MI 48859
(517) 774-3774

The objective of this course is to study one or more selected programming languages. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) software engineering and management overview. The concepts covered in this course are exception handling, generics, strong typing, tasking, packages, abstract data types, and problem solving.

The audience of this course includes programmers, systems analysts, and engineers. There are prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text Software Engineering with Ada by Grady Booch. The VAX 8530 computer running VMS and the VAX compiler are used. Students receive hands-on experience with the Ada language.

This three credit course is taught periodically. The class meets for 15 weeks for a total of 30 days and 45 hours. Undergraduate degree students, the general public, and the military/DoD are eligible to participate in this course. This course is offered for graduate credit.

This course is taught by Ms. Cindy Burt and Dr. Jerry Kabel. For more information on this course, contact Ms. Cindy Burt at the above address and phone number.

Ada: AN INTRODUCTION

University Offeror: Michigan State
2244 Lansing Avenue
Detroit, MI 44657
(800) 778-9009

The objective of this course is to provide a basic comprehension of the Ada language. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) software engineering, design concepts, management overview, technical programming, and programming support environment. The concepts covered in this course are real-time programming and packages. The application area emphasized is management.

The audience of this course includes technical managers. There are prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text An Introduction to Ada by John Forbes. Students receive hands-on experience with the Ada language.

This four credit course is taught each semester or quarter. The class meets for 15 weeks for a total of 30 days and 23 hours. Graduate degree candidates are eligible to participate in this course. This course is offered for graduate credit.

This course is taught by Malcolm Davis. For more information on this course, contact Jack Teagarden at the above address and phone number.

Ada BASED SOFTWARE ENGINEERING

University Offeror: University of Michigan
Computer Science Department
3314 EACS Building
Ann Arbor, MI 48109-2122
(313) 763-0035

The objective of this course is to teach software design concepts using Ada. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) software engineering, design concepts, and technical programming. The concepts covered in this course are real-time programming, exception handling, generics, strong typing, tasking, packages, abstract data types, and problem solving.

The audience of this course includes . There are prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text Programming in Ada by Barnes. The VAX computer running VMS is used. Students receive hands-on experience with the Ada language.

This four credit course is taught periodically. The class meets for 11 weeks for a total of 44 days and 40 hours. Undergraduate degree students and graduate degree candidates are eligible to participate in this course. This course is offered for graduate credit.

This course is taught by Dr. Richard Volz. For more information on this course, contact Steve Rawson at the above address and phone number.

SOFTWARE DESIGN AND DEVELOPMENT

University Offeror: Saginaw University
Science 357
2250 Pierce Road
University Center, MI 48710

The objective of this course is to learn concepts of software engineering through a project-oriented approach. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) software engineering, design concepts, management overview, and programming support environment. The concepts covered in this course are real-time programming, exception handling, generics, strong typing, packages, abstract data types, and problem solving.

The audience of this course includes programmers, systems analysts, technical managers, and program managers. There are prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text Software Engineering with Ada by Grady Booch. The MicroVAX II computer running VMS is used. Students receive hands-on experience with the Ada language.

This three credit course is taught each semester or quarter. The class meets for 13 weeks for a total of 26 days and 32 hours. Undergraduate degree students, the general public, and the military/DoD are eligible to participate in this course. This course is offered for graduate credit.

This course is taught by Katherine Kerr. For more information on this course, contact Katherine Kerr at the above address and phone number.

2.23 Minnesota

SOFTWARE ENGINEERING II

University Offeror: University of Minnesota
Department of Computer Science
Minneapolis, MN 55455
(612) 625-4002

The objective of this course is to apply the software engineering theories. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) software engineering, design concepts, management overview, and programming support environment. The concepts covered in this course are real-time programming and exception handling.

The audience of this course includes programmers, systems analysts, engineers, technical managers, and program managers. There are prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text Practical Handbook of Software Development, by Birrell and Old. The SUN computer running UNIX and the Verdix compiler are used. Students receive hands-on experience with the Ada language.

This four credit course is taught each semester or quarter. The class meets for 10 weeks for a total of 30 days and 40 hours. Undergraduate degree students and graduate degree candidates are eligible to participate in this course. This course is offered for graduate credit.

This course is taught by Dr. Wie-Tak-Sai. For more information on this course, contact Dr. Wie-Tak-Sai at the above address and phone number.

SOFTWARE ENGINEERING III

University Offeror: University of Minnesota
Department of Computer Science
Minneapolis, MN 55455
(612) 625-4002

The objective of this course is to apply the software engineering theories. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) software engineering, design concepts, management overview, and programming support environment. The concepts covered in this course are real-time programming and exception handling.

The audience of this course includes programmers, systems analysts, engineers, technical managers, and program managers. There are prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text The Art of Software Testing by Myers. The SUN computer running UNIX and the Verdix compiler are used. Students receive hands-on experience with the Ada language.

This four credit course is taught periodically. The class meets for 10 weeks for a total of 20 days and 30 hours. Undergraduate degree students and graduate degree candidates are eligible to participate in this course. This course is offered for graduate credit.

This course is taught by Dr. Wei-Tak-Sai. For more information on this course, contact Dr. Wei-Tak-Sai at the above address and phone number.

INTRODUCTION TO Ada

4 - Year College Offeror: Winona State University
Department of Computer Science
Winona, MN 55987
(507) 457-5385

The objective of this course is to give students a familiarity with the Ada language. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) software engineering and technical programming. The concepts covered in this course are exception handling, generics, strong typing, tasking, packages, abstract data types, and problem solving.

The audience of this course includes programmers, systems analysts, and program managers. There are prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text Software Engineering with Ada by Grady Booch. The VAX 11/785 computer running VMS and the TeleSoft compiler are used. Students receive hands-on experience with the Ada language.

This three credit course is taught periodically. The class meets for 15 weeks for a total of 60 days and 60 hours. Undergraduate degree students, the general public, and the military/DoD are eligible to participate in this course. This course is offered for graduate credit.

This course is taught by Mr. Daryl Henderson. For more information on this course, contact Mr. Daryl Henderson at the above address and phone number.

2.24 Mississippi

SOFTWARE ENGINEERING USING Ada

University Offeror: University of Mississippi at Oxford
Computer and Information Sciences
Farley Hall, Room 331
University, MS 38677
(601) 232-7396

The objective of this course is to teach the principles of software engineering in a team environment using Ada. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) software engineering, design concepts, technical programming, and programming support environment. The concepts covered in this course are exception handling, generics, strong typing, tasking, packages, abstract data types, and problem solving. The application area emphasized is team project-oriented.

The audience of this course includes systems analysts and software engineers. There are prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text Programming in Ada by J.G.P. Barnes. The IBM 370 computer running CMS and the ALSYS 370 and TeleGen II compilers are used. Students receive hands-on experience with the Ada language.

This three credit course is taught periodically. The class meets for 4 weeks for a total of 12 days and 42 hours. Undergraduate degree students, graduate degree candidates, the general public, and the military/DoD are eligible to participate in this course. This course is offered for graduate credit.

This course is taught by Pam Lawhead. For more information on this course, contact Pam Lawhead at the above address and phone number.

Offeror's comments: This course is applications-oriented with team projects.

PROGRAMMING IN Ada

4 - Year College Offeror: University of Mississippi at Oxford
Department of Computer and Information
Sciences
Farley Hall, Room 331
University, MS 38677
(601) 232-7396

The objective of this course is to teach Ada syntax. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) technical programming and programming support environment. The concepts covered in this course are exception handling, generics, strong typing, tasking, packages, abstract data types, and problem solving.

The audience of this course includes programmers, engineers, and program managers. There are prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text Ada: An Advanced Introduction by Gehani. The IBM 370 computer running CMS and the ALSYS compiler are used. Students receive hands-on experience with the Ada language.

This three credit course is taught periodically. The class meets for 15 weeks for a total of 45 days and 45 hours. Undergraduate degree students, the general public, and the military/DoD are eligible to participate in this course. This course is offered for graduate credit.

This course is taught by Pam Lawhead. For more information on this course, contact Pam Lawhead at the above address and phone number.

OPERATING SYSTEMS AND COMPUTER ARCHITECTURES II

University Offeror: University of Southern Mississippi
Department of Computer Science
Box 5106
Hattiesburg, MS 39406
(601) 266-4958

The objective of this course is to use Ada as a tool to develop a theoretical and practical understanding of concurrent processing. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) design concepts and technical programming. The concepts covered in this course are real-time programming, exception handling, generics, tasking, packages, abstract data types, and problem solving. The application area emphasized is concurrent processing.

The audience of this course includes undergraduates. There are prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text Algorithm for Mutual Exclusion by Raymal. The APOLLO work station running AEGIS and the ALSYS compiler are used. Students receive hands-on experience with the Ada language.

This three credit course is taught periodically. The class meets for 15 weeks for a total of 30 days and 45 hours. Undergraduate degree students and graduate degree candidates are eligible to participate in this course. This course is offered for graduate credit.

This course is taught by Cliff Burgess. For more information on this course, contact Dr. Cliff Burgess at the above address and phone number.

SOFTWARE ENGINEERING II

University Offeror: University of Southern Mississippi
Box 5106, Southern Station
Hattiesburg, MS 39406
(601) 266-4949

The objective of this course is to give student a strong applications-oriented understanding of the concepts of software engineering. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) software engineering, design concepts, management overview, technical programming, and programming support environment. The concepts covered in this course are real-time programming, exception handling, generics, strong typing, tasking, packages, abstract data types, and problem solving.

The audience of this course includes programmers and systems analysts. There are prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text Software Engineering with Ada by Grady Booch. The VAX 11/780 computer running VMS and the VAX Ada compiler are used. Students receive hands-on experience with the Ada language.

This three credit course is taught periodically. The class meets for 15 weeks for a total of 45 days and 38 hours. Undergraduate degree students and graduate degree candidates are eligible to participate in this course. This course is offered for graduate credit.

This course is taught by Ralph B. Bisland, Jr.. For more information on this course, contact Ralph B. Bisland, Jr. at the above address and phone number.

MANAGERS ORIENTATION TO Ada

Military Institution Offeror: Software Engineering
Advanced Communication and
Computers
Training Division 3390 TCHTG/TTMKP
Keesler AFB, MS 39534-5000
(601) 377-3728

The objective of this course is to introduce the history of Ada, language concepts, and current activities in the Ada community. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) management overview. The concepts covered in this course are real-time programming, exception handling, generics, strong typing, tasking, packages, abstract data types, and problem solving. The application area emphasized is generic embedded systems.

The audience of this course includes technical managers and program managers. There are no prerequisites that must be satisfied before enrolling in this course. No previous computer programming experience is necessary.

The course materials include the text Software Engineering With Ada by Grady Booch. Students receive hands-on experience with the Ada language.

This course is taught periodically. The class meets for 1 week for a total of 3 days and 30 hours. The general public and the military/DoD are eligible to participate in this course. This course is offered for graduate credit.

This course is taught by William Frey, Jr. For more information on this course, contact Capt. Presley at the above address and phone number.

ORIENTATION TO Ada SOFTWARE ENGINEERING

Military Institution Offeror: Software Engineering
Advanced Communication and
Computers
Training Division 3390 TCHTG/TTMKP
Keesler AFB, MS 39534-5000

The objective of this course is to introduce Ada software engineering. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) software engineering, design concepts, management overview, technical programming, and programming support environment. The concepts covered in this course are real-time programming, exception handling, generics, strong typing, tasking, packages, abstract data types, and problem solving.

The audience of this course includes technical managers and program managers. There are no prerequisites that must be satisfied before enrolling in this course. No previous computer programming experience is necessary.

The course materials include the text Software Engineering with Ada by Grady Booch. Students receive hands-on experience with the Ada language.

The class meets for one, eight-hour day. The general public and the military/DoD are eligible to participate in this course. This course is offered for graduate credit.

This course is taught by Capt. Presley. For more information on this course, contact Capt. Presley at the above address.

FUNDAMENTALS OF Ada PROGRAMMING/SOFTWARE ENGINEERING

Military Institution Offeror: Software Engineering
Advanced Communication and
Computers
Training Division 3390 TCHTG/TTMKP
Keesler AFB, MS 39534-5000

The objective of this course is to introduce basic Ada and basic software engineering. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) software engineering, design concepts, management overview, and technical programming. The concepts covered in this course are real-time programming, exception handling, generics, strong typing, tasking, packages, abstract data types, and problem solving.

The audience of this course includes programmers. There are prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text Software Engineering With Ada by Grady Booch. Students receive hands-on experience with the Ada language.

The class meets for a total of 3 days and 24 hours. The general public and the military/DoD are eligible to participate in this course. This course is offered for graduate credit.

This course is taught by Capt. Presley. For more information on this course, contact Capt. Presley at the above address.

Ada APPLICATIONS PROGRAMMER COURSE

Military Institution Offeror: Software Engineering
Advanced Communication and
Computers
Training Division 3390 TCHTG/TTMKP
Keesler AFB, MS 39534-5000

The objective of this course is to achieve a good working knowledge of Ada. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) software engineering, design concepts, management overview, technical programming, and programming support environment. The concepts covered in this course are real-time programming, exception handling, generics, strong typing, tasking, packages, abstract data types, and problem solving.

The audience of this course includes programmers, systems analysts, engineers, technical managers, and program managers. There are prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text Software Engineering with Ada by Grady Booch. Students receive hands-on experience with the Ada language.

This three credit course is taught periodically. The class meets for 2 weeks for a total of 9 days and 72 hours. The general public and the military/DoD are eligible to participate in this course. This course is offered for graduate credit.

This course is taught by Capt. Presley. For more information on this course, contact Capt. Presley at the above address.

PROGRAMMING LANGUAGES

University Offeror: University of Missouri At Columbia
Department of Computer Science
Mathematical Science Building
Columbia, MO 65211
(314) 882-3842

The objective of this course is to survey the features of Ada and to give students hands-on experience. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) design concepts and technical programming. The concepts covered in this course are exception handling, generics, strong typing, packages, abstract data types, and problem solving.

The audience of this course includes programmers, systems analysts, and engineers. There are prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text Ada As A Second Language by Norman H. Cohen. The MicroVAX computer running MICRO VMS and the VAX Ada compiler are used. Students receive hands-on experience with the Ada language.

This three credit course is taught each semester or quarter. The class meets for 17 weeks for a total of 51 days and 68 hours. Undergraduate degree students, the general public, and the military/DoD are eligible to participate in this course. This course is offered for graduate credit.

This course is taught by William Slough. For more information on this course, contact William Slough at the above address and phone number.

Offeror's comments: This course is being offered for the first time.

SPECIALIZED LANGUAGES: Ada

University Offeror: Northwest Missouri State University
Computer Science Department
Northwest Missouri State University
Maryville, MO 64468
(816) 562-1187

The objective of this course is to acquaint experienced programmers with syntax and application of Ada. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) software engineering, design concepts, technical programming, and programming support environment. The concepts covered in this course are real-time programming, exception handling, generics, strong typing, tasking, packages, abstract data types, and problem solving.

The audience of this course includes programmers and engineers. There are prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text Introduction to Ada by Kaberly and Goldstein. The VAX computer running VMS and the VAX compiler are used. Students receive hands-on experience with the Ada language.

This three credit course is taught periodically. The class meets for 13 weeks for a total of 39 days and 39 hours. Undergraduate degree students, graduate degree candidates, the general public, and the military/DoD are eligible to participate in this course. This course is offered for graduate credit.

This course is taught by Richard Detmer. For more information on this course, contact Richard Detmer at the above address and phone number.

Ada PROGRAMMING

2 - Year College Offeror: St. Louis Community College Meramec
11333 Big Bend
St. Louis, MO 63122
(314) 966-7526

The objective of this course is to introduce programming using the Ada language. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) design concepts, technical programming, and programming support environment. The concepts covered in this course are real-time programming, exception handling, strong typing, tasking, packages, abstract data types, and problem solving. The application area emphasized is programming.

The audience of this course includes programmers, systems analysts, engineers, technical managers, and program managers. There are prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text Ada Language and Methodology by David A. Watt. The IBM PC/AT compatible computer running MS-DOS 3.1 and the Meridian compiler are used. Students receive hands-on experience with the Ada language.

This three credit course is taught each semester or quarter. The class meets for 14 weeks for a total of 30 days and 48 hours. Undergraduate degree students, graduate degree candidates, the general public, and the military/DoD are eligible to participate in this course. This course is offered for graduate credit.

This course is taught by Robert L. Monsees. For more information on this course, contact Robert L. Monsees at the above address and phone number.

Ada PROGRAMMING

4 - Year College Offeror: Southeast Missouri State University
Computer Science Department
Cape Girardeau, MO 63701
(314) 651-2525

The objective of this course is to teach software engineering with proper tools. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) software engineering and design concepts. The concepts covered in this course are exception handling, generics, strong typing, tasking, packages, abstract data types, and problem solving.

The audience of this course includes programmers and systems analysts. There are prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text JANUS/Ada Pamphlet by Software Corporation. The IBM personal computer running MS-DOS and the JANUS/Ada compiler are used. Students receive hands-on experience with the Ada language.

This three credit course is taught periodically. The class meets for 16 weeks for a total of 32 days and 48 hours. Undergraduate degree students and graduate degree candidates are eligible to participate in this course. This course is offered for graduate credit.

This course is taught by Michael Britt. For more information on this course, contact Bill Weber at the above address and phone number.

2.26 Montana

No responses were received from academic institutions in Montana.

2.27 Nebraska

No responses were received from academic institutions in Nebraska.

2.28 Nevada

No responses were received from academic institutions in Nevada.

2.29 New Hampshire

No responses were received from academic institutions in New Hampshire.

2.30 New Jersey

PROGRAMMING LANGUAGES

University Offeror: Montclair State College
Department of Mathematics/Computer Science
Upper Montclair, NJ 07043
(201) 893-4263

The objective of this course is to study the design of a modern procedurally oriented programming language in context with other languages. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) technical programming. The concepts covered in this course are exception handling, generics, strong typing, tasking, packages, and abstract data types.

The audience of this course includes programmers and engineers. There are prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text Programming Languages by Terrence Pratt. The VAX computer running VMS and the TeleSoft compiler are used. Students receive hands-on experience with the Ada language.

This three credit course is taught periodically. The class
Montclair State College

meets for 15 weeks for a total of 45 days and 45 hours. Undergraduate degree students are eligible to participate in this course. This course is offered for graduate credit.

This course is taught by Carl Bredlau. For more information on this course, contact Carl Bredlau at the above address and phone number.

Offeror's comments: Approximately 35% to 40% of this course is devoted to Ada programming.

PROGRAMMING LANGUAGES DESIGN

University Offeror: Montclair State College
Department of Mathematics/Computer Science
Upper Montclair, NJ 07043
(201) 893-4263

The objective of this course is to study the design of a modern procedurally oriented programming language in context with other languages. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) technical programming. The concepts covered in this course are exception handling, generics, strong typing, tasking, packages, and abstract data types.

The audience of this course includes programmers and engineers. There are prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text Programming Languages by Terrence Pratt. The VAX computer running VMS and the TeleSoft compiler are used. Students receive hands-on experience with the Ada language.

This three credit course is taught periodically. The class meets for 15 weeks for a total of 45 days and 45 hours. Graduate degree candidates are eligible to participate in this course. This course is offered for graduate credit.

This course is taught by Carl Bredlau. For more information on this course, contact Carl Bredlau at the above address and phone number.

Offeror's comments: Approximately 35% to 40% of this course is devoted to Ada programming.

INTRODUCTORY Ada

2 - Year College Offeror: Jersey City State College
Ada Technology Center
2039 Kennedy Blvd.
Jersey City, NJ 07305
(201) 547-3291

The objective of this course is to introduce the package concept with a top-down approach while emphasizing the Ada mindset. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) software engineering, design concepts, and programming support environment. The concepts covered in this course are real-time programming, exception handling, generics, strong typing, tasking, packages, abstract data types, and problem solving. The application area emphasized is broad range programming.

The audience of this course includes programmers, systems analysts, and engineers. There are prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text Introduction to Ada: A Top-Down Approach by Phillip Caverly. The VAX computer running VMS and the DEC and TeleSoft compiler are used. Students receive hands-on experience with the Ada language.

Undergraduate degree students, graduate degree candidates, the general public, and the military/DoD are eligible to participate in this course. This course is not offered for graduate credit.

This course is taught by Kevin Cogan, Phillip Goldstein, and Phillip Caverly. For more information on this course, contact Phillip Caverly at the above address and phone number.

Offeror's comments: The college has an Ada simulation compiler and code generator.

SOFTWARE ENGINEERING

4 - Year College Offeror: Jersey City State College
Ada Technology Center
Jersey City, NJ 07305
(201) 547-3291

The objective of this course is to cover real world software engineering concepts/issues with students. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) software engineering, design concepts, management overview, technical programming, and programming support environment. The concepts covered in this course are real-time programming, exception handling, generics, strong typing, tasking, packages, abstract data types, and problem solving. The application area emphasized is managing across the life cycle.

The audience of this course includes programmers, systems analysts, engineers, technical managers, and program managers. There are prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text Introduction to Ada: A Top-Down Approach by Phillip Caverly. The VAX computer running VMS and the DEC and TeleSoft compiler are used. Students receive hands-on experience with the Ada language.

This three credit course is taught each semester or quarter. The class meets for 15 weeks for a total of 45 days and 45 hours. Undergraduate degree students, graduate degree candidates, the general public, and the military/DoD are eligible to participate in this course. This course is offered for graduate credit.

This course is taught by Phillip Caverly and Phillip Goldstein. For more information on this course, contact Dr. Phillip W. Caverly at the above address and phone number.

Offeror's comments: The college has an Ada simulation compiler and code generator.

ADVANCED PROGRAMMING LANGUAGE CONSTRUCTS USING Ada

University Offeror: Fairleigh Dickinson University
Department of Computer Science
1000 River Road
Teaneck, NJ 07666
(201) 692-2020/2261

This course is taught via independent study resources such as textbooks, libraries, and other publications. The thrust(s) of the course is (are) software engineering and design concepts. The concepts covered in this course are exception handling, generics, strong typing, tasking, packages, abstract data types, and problem solving. The application area emphasized is software engineering.

The audience of this course includes programmers and systems analysts. There are prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text Programming in Ada by Barnes. The MicroVAX III computer running Micro VMS V4.6 and the TeleSoft 3.13 compiler are used. Students receive hands-on experience with the Ada language.

This three credit course is taught periodically. The class meets for 15 weeks for a total of 45 days and 45 hours. Undergraduate degree students, graduate degree candidates, the general public, and the military/DoD are eligible to participate in this course. This course is offered for graduate credit.

This course is taught by Gertrude Neuman Levine. For more information on this course, contact Gertrude Neuman Levine at the above address and phone number.

CONCEPTS OF PROGRAMMING LANGUAGES

University Offeror: Fairleigh Dickinson University
Computer Science Department
1000 River Road
Teaneck, NJ 07666
(201) 692-2020

This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) software engineering and design concepts. The concepts covered in this course are exception handling, strong typing, tasking, packages, abstract data types, and problem solving.

The audience of this course includes programmers, systems analysts, and engineers. There are prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text Programming Language by Pratt. The MicroVAX III computer running Micro VMS V4.6 and the TeleSoft 3.13 compiler are used. Students receive hands-on experience with the Ada language.

This three credit course is taught each semester or quarter. The class meets for 15 weeks for a total of 45 hours. Undergraduate degree students, the general public, and the military/DoD are eligible to participate in this course. This course is offered for graduate credit.

This course is taught by Dr. Gertrude N. Levine. For more information on this course, contact Dr. Gertrude N. Levine at the above address and phone number.

PROGRAMMING LANGUAGE CONCEPTS

University Offeror: Fairleigh Dickinson University
Department of Computer Science
1000 River Road
Teaneck, NJ 07666
(201) 692-2020/2261

This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) software engineering and design concepts. The concepts covered in this course are exception handling, generics, strong typing, tasking, packages, abstract data types, and problem solving.

The audience of this course includes programmers, systems analysts, engineers, technical managers, and program managers. There are prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text Programming Language Landscapes by Marcotty and Ledgard. The MicroVAX III computer running Micro VMS V4.6 and the TeleSoft 3.13 compiler are used. Students receive hands-on experience with the Ada language.

This three credit course is taught periodically. The class meets for 15 weeks for a total of 45 days and 45 hours. Undergraduate degree students, graduate degree candidates, the general public, and the military/DoD are eligible to participate in this course. This course is offered for graduate credit.

This course is taught by Dr. Gertrude Neuman Levine. For more information on this course, contact Dr. Gertrude N. Levine at the above address and phone number.

2.31 New Mexico

SOFTWARE ENGINEERING WITH Ada

University Offeror: University of New Mexico/Albuquerque
Computer Science Department
Albuquerque, NM 87131
(505) 277-3112

The objective of this course is to understand the impact of Ada on software engineering. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) software engineering, design concepts, technical programming, and programming support environment. The concepts covered in this course are real-time programming, exception handling, generics, strong typing, tasking, packages, and abstract data types.

The audience of this course includes programmers, systems analysts, and engineers. There are prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text Software Components with Ada by Grady Booch. The SEQUENT computer running DYNIX and the Verdix compiler are used. Students receive hands-on experience with the Ada language.

This three credit course is taught each semester or quarter. The class meets for 15 weeks for a total of 45 days and 45 hours. Undergraduate degree students, graduate degree candidates, the general public, and the military/DoD are eligible to participate in this course. This course is offered for graduate credit.

This course is taught by Charles Crowley. For more information on this course, contact Charles Crowley at the above address and phone number.

Ada PROGRAMMING

University Offeror: New Mexico State University/Las Cruces
Department of Computer Science
Box 3CU
Las Cruces, NM 88003
(505) 646-3723

The objective of this course is to understand data structures, constructs, and abstracts and to introduce software design using Ada. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) software engineering, design concepts, technical programming, and programming support environment. The concepts covered in this course are real-time programming, strong typing, abstract data types, and problem solving.

The audience of this course includes programmers, systems analysts, engineers, technical managers, and program managers. There are prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text Programming with Ada by Wienear and Sincovec. The SUN IV/SEQUENT computer running UNIX are used. Students receive hands-on experience with the Ada language.

This three credit course is taught periodically. The class meets for 11 weeks for a total of 33 days and 33 hours. Undergraduate degree students, graduate degree candidates, the general public, and the military/DoD are eligible to participate in this course. This course is offered for graduate credit.

For more information on this course, contact Don Dearholt at the above address and phone number.

ALGORITHMS AND DATA STRUCTURES

University Offeror: Rochester Institute of Technology
Graduate Computer Science Department
One Lomb Memorial Drive
Rochester, NY 14623-0887
(716) 475-2529

The objective of this course is to introduce and gain experience in programming data structures such as linked lists and binary trees. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) software engineering, design concepts, and technical programming. The concepts covered in this course are exception handling, generics, strong typing, tasking, packages, abstract data types, and problem solving.

The audience of this course includes programmers, systems analysts, engineers, and beginning graduate students. There are prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text Software Components with Ada by Grady Booch. The VAX computer running VMS and the DEC Ada compiler are used. Students receive hands-on experience with the Ada language.

This four credit course is taught periodically. The class meets for 10 weeks for a total of 20 days and 35 hours. Graduate degree candidates, the general public, and the military/DoD are eligible to participate in this course. This course is offered for graduate credit.

This course is taught by Dr. Peter Anderson. For more information on this course, contact Dr. Peter Anderson at the above address and phone number.

Ada FOR PL/I, PASCAL, OR FORTRAN USERS

University Offeror: Hofstra University
Department of Computer Science
Hempstead, NY 11550
(516) 560-5555

The objective of this course is to teach the Ada language in a quick manner for those who already know at least one procedural language. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) software engineering and design concepts. The concepts covered in this course are exception handling, generics, strong typing, tasking, and packages.

The audience of this course includes programmers and systems analysts. There are prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text Ada As A Second Language by Norman H. Cohen. The VAX 11/780 computer running VMS and the VAX compiler are used. Students receive hands-on experience with the Ada language.

This one credit course is taught periodically. The class meets for 7 weeks for a total of 14 days and 18 hours. Undergraduate degree students, graduate degree candidates, and the general public are eligible to participate in this course. This course is offered for graduate credit.

This course is taught by Dr. Philip J. Panzeca. For more information on this course, contact Dr. Philip J. Panzeca at the above address and phone number.

Offeror's comments: Upper-class status is strongly encouraged and preferred.

PROGRAMMING LANGUAGES

4 - Year College Offeror: Canisius College
Department of Computer Science
2001 Main Street
Buffalo, NY 14208
(716) 883-7000

The objective of this course is to teach programming languages concepts with laboratory projects required in C, LISP, and Ada. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) software engineering, design concepts, technical programming, and programming support environment. The concepts covered in this course are generics, strong typing, tasking, packages, abstract data types, and problem solving.

The audience of this course includes programmers, systems analysts, engineers, technical managers, and program managers. There are prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text Programming in Ada by Barnes. The VAX 11/750 computer running UNIX 4.3 BSD and the NYU compiler are used. Students receive hands-on experience with the Ada language.

This four credit course is taught periodically. The class meets for 10 weeks for a total of 30 days and 30 hours. Undergraduate degree students, the general public, and the military/DoD are eligible to participate in this course. This course is offered for graduate credit.

This course is taught by Dr. Patricia Van Verth. For more information on this course, contact Jim Leone at the above address and phone number.

ADVANCED PROGRAMMING TECHNIQUES FOR BUSINESS APPLICATIONS

University Offeror: Hofstra University
Business Computer Information Systems
1000 Fulton Avenue
Hempstead, NY 11550
(516) 560-5716

The objective of this course is to teach and expose students to the use of Ada in programming and design for business applications. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) software engineering, design concepts, and technical programming. The concepts covered in this course are strong typing, abstract data types, problem solving, and packages. The application area emphasized is information systems.

The audience of this course includes systems analysts, program managers, and business majors. There are prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text Ada Programming with Applications by Vasilescu. The VAX computer running VMS is used. Students receive hands-on experience with the Ada language.

This four credit course is taught periodically. The class meets for 13 weeks for a total of 39 days and 39 hours. Undergraduate degree students are eligible to participate in this course. This course is offered for graduate credit.

This course is taught by Dr. Vasiliscu. For more information on this course, contact Dr. Vasiliscu at the above address and phone number.

EMBEDDED AND SCIENTIFIC SYSTEMS USING Ada

University Offeror: Long Island University/CW Post Campus
Computer Science Department
Brookville, NY 11548
(516)299-2293

The objective of this course is to introduce students to embedded system design with Ada as the emphasized language. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) software engineering, design concepts, and technical programming. The concepts covered in this course are real-time programming, exception handling, generics, strong typing, tasking, packages, abstract data types, and problem solving. The application area emphasized is small embedded systems.

The audience of this course includes programmers, systems analysts, and program managers. There are prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text Programming in Ada by J.G.P. Barnes. The VAX computer running VMS and the VAX Ada compiler are used. Students receive hands-on experience with the Ada language.

This three credit course is taught periodically. Undergraduate degree students are eligible to participate in this course. This course is offered for graduate credit.

This course is taught by Ms. Susan Dorchak. For more information on this course, contact Ms. Susan Dorchak at the above address and phone number.

SOFTWARE ENGINEERING WITH Ada

University Offeror: Long Island University/CW Post Campus
Computer Science Department
Brookville, NY 11548
(516) 299-2293

The objective of this course is to utilize software engineering techniques using Ada as the principle language. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) software engineering, design concepts, management overview, technical programming, and programming support environment. The concepts covered in this course are real-time programming, exception handling, generics, strong typing, tasking, packages, abstract data types, and problem solving.

The audience of this course includes programmers, systems analysts, engineers, technical managers, and program managers. There are prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text Ada As A Second Language by Norman H. Cohen. The VAX computer running VMS and the VAX Ada compiler are used. Students receive hands-on experience with the Ada language.

This three credit course is taught periodically. The class meets for 15 weeks for a total of 45 days and 45 hours. Graduate degree candidates are eligible to participate in this course. This course is offered for graduate credit.

This course is taught by Ms. Susan Dorchak. For more information on this course, contact Ms. Susan Dorchak at the above address and phone number.

CS 320: INTRODUCTION TO Ada

4 - Year College Offeror: State University of New York/Fredonia
Department of Math and Computer
Science
Fredonia, NY 14063
(716) 673-3459

The objective of this course is to give an overview of Ada and its features. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) software engineering, design concepts, management overview, and technical programming. The concepts covered in this course are real-time programming, exception handling, generics, strong typing, tasking, packages, abstract data types, and problem solving. The application area emphasized is computer science/math.

The audience of this course includes programmers. There are prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text Ada As A Second Language by Norman H. Cohen. The VAX 11/750 computer running UNIX and the Verdix compiler are used. Students receive hands-on experience with the Ada language.

This three credit course is taught periodically. The class meets for 15 weeks for a total of 30 days and 45 hours. Undergraduate degree students, graduate degree candidates, the general public, and the military/DoD are eligible to participate in this course. This course is offered for graduate credit.

This course is taught by Dr. Joseph Straight. For more information on this course, contact Dr. Joseph Straight at the above address and phone number.

Ada: A SEMINAR FOR FACULTY

4 - Year College Offeror: State University of New York/Fredonia
Department of Math and Computer
Science
Fredonia, NY
(716) 673-3459

The objective of this course is to give an overview of Ada and its features. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) software engineering, design concepts, management overview, and technical programming. The concepts covered in this course are real-time programming, exception handling, generics, strong typing, tasking, packages, abstract data types, and problem solving. The application area emphasized is computer science/math.

The audience of this course includes programmers. There are prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text Ada As A Second Language by Norman H. Cohen. The VAX 11/750 computer running UNIX and the Verdix compiler are used. Students receive hands-on experience with the Ada language.

This three credit course is taught periodically. The class meets for 16 weeks for a total of 32 days and 48 hours. Undergraduate degree students, graduate degree candidates, the general public, and the military/DoD are eligible to participate in this course. This course is offered for graduate credit.

This course is taught by Dr. Joseph Straight. For more information on this course, contact Dr. Joseph Straight at the above address and phone number.

SELECTED LANGUAGE OF Ada

University Offeror: State University of New York/Potsdam
Department of Computer Science
Potsdam, NY 13676
(315) 267-2073

The objective of this course is to introduce Ada as a high-level language. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) software engineering, design concepts, technical programming, and programming support environment. The concepts covered in this course are real-time programming, generics, strong typing, tasking, packages, abstract data types, and problem solving.

The audience of this course includes programmers, systems analysts, engineers, and program managers. There are prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text Introduction to Ada: A Top-Down Approach by Phillip Caverly. The IBM compatible computer and the JANUS/Ada compiler are used. Students receive hands-on experience with the Ada language.

The class meets for 13 weeks for a total of 13 days and 13 hours. Undergraduate degree students, graduate degree candidates, the general public, and the military/DoD are eligible to participate in this course. This course is offered for graduate credit.

This course is taught by David Rokh. For more information on this course, contact David Rokh at the above address and phone number.

PROGRAMMING LANGUAGES

University Offeror: Niagara University
Department of Computer and Information
Sciences
Niagara University, NY 14109
(716) 285-1212

The objective of this course is to survey the programming languages for undergraduate students. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) design concepts and technical programming. The concepts covered in this course are exception handling, generics, strong typing, packages, abstract data types, and problem solving.

The audience of this course includes programmers, engineers, technical managers, and program managers. There are prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text Programming Languages by Jayceri and Ghezzi. The IBM computer running MS-DOS and the Meridian compiler are used. Students receive hands-on experience with the Ada language.

This three credit course is taught periodically. The class meets for 15 weeks for a total of 30 days and 45 hours. Undergraduate degree students, the general public, and the military/DoD are eligible to participate in this course. This course is offered for graduate credit.

This course is taught by Dr. Hubbard. For more information on this course, contact Dr. Hubbard at the above address and phone number.

TOPICS IN COMPUTER SCIENCE

University Offeror: Niagara University
Department of Computer and Information
Sciences
Niagara University, NY 14109
(716) 285-1212

The objective of this course is to discuss Ada and Modular II with special emphasis on the Ada language. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) software engineering, design concepts, technical programming, and programming support environment. The concepts covered in this course are real-time programming, exception handling, generics, strong typing, tasking, packages, abstract data types, and problem solving.

The audience of this course includes programmers, systems analysts, engineers, technical managers, and program managers. There are prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text Software Engineering with Ada by Grady Booch. The IBM Vantage computer running MS-DOS and the Meridian compiler are used. Students receive hands-on experience with the Ada language.

This three credit course is taught periodically. The class meets for 15 weeks for a total of 30 days and 45 hours. Undergraduate degree students, the general public, and the military/DoD are eligible to participate in this course. This course is offered for graduate credit.

This course is taught by Dr. Hubbard. For more information on this course, contact Dr. Hubbard at the above address and phone number.

SOFTWARE ENGINEERING WITH Ada

Military Institution Offeror: US Military Academy
Dept of Geography and Computer
Science
Attn: MAJ Willis
West Point, NY 10996
(914)938-3348

The objective of this course is to teach active Ada in a lab. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) software engineering, design concepts, technical programming, and programming support environment. The concepts covered in this course are real-time programming, exception handling, generics, strong typing, tasking, packages, and abstract data types.

The audience of this course includes programmers, systems analysts, and engineers. There are prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text Software Engineering with Ada by Grady Booch. The Zenith 248 and VAX 11/780 computers running VMS and the Meridian Ada and DEC Ada compilers are used. Students receive hands-on experience with the Ada language.

This three credit course is taught periodically. The class meets for 10 weeks for a total of 30 days and 30 hours. Undergraduate degree students and the military/DoD are eligible to participate in this course. This course is offered for graduate credit.

This course is taught by MAJ Colen Willis. For more information on this course, contact MAJ Colen Willis at the above address and phone number.

SOFTWARE ENGINEERING PROJECT

4 - Year College Offeror: Le Moyne College
Syracuse, NY 13214
(315) 445-4544

The objective of this course is to carry out a semester-long project employing the principles and methods of software engineering. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) software engineering and design concepts. The concepts covered in this course are exception handling, strong typing, packages, abstract data types, and problem solving.

The audience of this course includes programmers, systems analysts, technical managers, and program managers. There are prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text Software Engineering with Ada by Grady Booch. The VAX 11/780 computer running VMS and the VAX compiler are used. Students receive hands-on experience with the Ada language.

This course is taught periodically. The class meets for one, eight-hour days. Undergraduate degree students and the general public are eligible to participate in this course. This course is offered for graduate credit.

This course is taught by James F. Smith.

Offeror's comments: This course is intended to provide undergraduates with a modest exposure to software engineering.

INTRODUCTION TO PROGRAMMING METHODOLOGY

4 - Year College Offeror: Le Moyne College
Syracuse, NY 13214
(315) 445-4544

The objective of this course is to implement concepts, principles, and methods of computer programming in Ada programs. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) software engineering and design concepts. The concepts covered in this course are exception handling, strong typing, packages, and problem solving.

The audience of this course includes programmers, systems analysts, technical managers, and program managers. There are no prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text Software Engineering with Ada by Grady Booch. The VAX 11/780 computer running VMS and the VAX compiler are used. Students receive hands-on experience with the Ada language.

This three credit course is taught periodically. The class meets for 14 weeks for a total of 27 days and 41 hours. Undergraduate degree students and the general public are eligible to participate in this course. This course is offered for graduate credit.

This course is taught by James F. Smith and Thomas S. Frank.

Offeror's comments: This course is the first computer science course in the current ACM curriculum for undergraduate computer science majors.

DATA STRUCTURES AND PROGRAM DEVELOPMENT

4 - Year College Offeror: Le Moyne College
Syracuse, NY 13214
(315) 445-4544

The objective of this course is to cover Ada abstract data types, concepts, searching and sorting, and algorithm analysis. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) software engineering, design concepts, and technical programming. The concepts covered in this course are exception handling, generics, strong typing, packages, abstract data types, and problem solving. The application area emphasized is general data structures.

The audience of this course includes programmers, systems analysts, technical managers, and program managers. There are prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text Data Structures with Ada by Michael B. Feldman. The VAX 11/780 computer running VMS and the VAX compiler are used. Students receive hands-on experience with the Ada language.

This four credit course is taught each semester or quarter. The class meets for 14 weeks for a total of 51 days and 51 hours. Undergraduate degree students and the general public are eligible to participate in this course. This course is offered for graduate credit.

This course is taught by James F. Smith.

Offeror's comments: This course is the second course in the current ACM curriculum for undergraduate computer science majors.

2.33 North Carolina

ORGANIZATION OF PROGRAMMING LANGUAGE

University Offeror: East Carolina University
Greenville, NC 27834
(919) 757-6461

The objective of this course is to provide a comparison of a few programming languages including Ada. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) software engineering. The concepts covered in this course are exception handling, generics, tasking, packages, and problem solving. The application area emphasized is programming.

The audience of this course includes programmers, systems analysts, engineers, technical managers, and program managers. There are prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text Programming Languages by Allen B. Tucker. The IBM personal computer running MS-DOS and the Meridian compiler are used. Students receive hands-on experience with the Ada language.

This three credit course is taught periodically. The class meets for 15 weeks for a total of 30 days and 45 hours. Undergraduate degree students are eligible to participate in this course. This course is offered for graduate credit.

This course is taught by Dr. Masao Kishore.

2.34 North Dakota

Ada

University Offeror: University of North Dakota
Department of Computer Science
Grand Forks, ND 58202
(701) 777-4107

The objective of this course is to give students an introduction to the important concepts of the Ada language. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) software engineering and design concepts. The concepts covered in this course are exception handling, generics, strong typing, packages, abstract data types, and problem solving.

The audience of this course includes programmers, systems analysts, engineers, and program managers. There are prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text Programming in Ada by J.G.P. Barnes. The VAX 11/785 computer running VMS and the VAX Ada compiler are used. Students receive hands-on experience with the Ada language.

This five credit course is taught periodically. The class meets for 8 weeks for a total of 20 days and 20 hours. Undergraduate degree students, the general public, and the military/DoD are eligible to participate in this course. This course is offered for graduate credit.

This course is taught by Randy Molmen. For more information on this course, contact Randy Molmen at the above address and phone number.

SOFTWARE ENGINEERING WITH Ada

University Offeror: University of North Dakota
Department of Computer Science
Grand Forks, ND 58202
(701) 777-4107

The objective of this course is to provide realistic experience in the development of large software projects. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) software engineering, design concepts, management overview, and programming support environment. The concepts covered in this course are real-time programming, exception handling, generics, strong typing, tasking, packages, abstract data types, and problem solving.

The audience of this course includes programmers, systems analysts, technical managers, and program managers. There are prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text Programming in Ada by J.G.P. Barnes. The VAX 11/785 computer running VMS and the VAX Ada compiler are used. Students receive hands-on experience with the Ada language.

This three credit course is taught each semester or quarter. The class meets for 14 weeks for a total of 28 days and 42 hours. Undergraduate degree students, graduate degree candidates, the general public, and the military/DoD are eligible to participate in this course. This course is offered for graduate credit.

This course is taught by Dr. Lonny Winrich. For more information on this course, contact Randy Molmen at the above address and phone number.

NEW DEVELOPMENTS IN PROGRAMMING LANGUAGES

University Offeror: North Dakota State University
Box 5075
Fargo, ND 58105
(701) 237-8189

The objective of this course is to introduce students to Ada programming. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) software engineering. The concepts covered in this course are exception handling, generics, strong typing, tasking, packages, and abstract data types.

The audience of this course includes programmers. There are prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text Ada As A Second Language by Norman H. Cohen. The IBM 3081 computer running VM/CMS and the Telecom compiler are used. Students receive hands-on experience with the Ada language.

This three credit course is taught each semester or quarter. The class meets for 15 weeks for a total of 15 days and 45 hours. Undergraduate degree students and graduate degree candidates are eligible to participate in this course. This course is offered for graduate credit.

This course is taught by Ken Magel. For more information on this course, contact Ken Magel at the above address and phone number.

2.35 Ohio

DEVELOPMENT OF LARGE PROGRAMMING SYSTEMS

University Offeror: Cleveland State University
Computer Science Department
Euclid At 24th Street
Cleveland, OH 44115
(216) 687-4760

The objective of this course is to develop Ada as a programming language with capability for large programming systems. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) software engineering, technical programming, and programming support environment. The concepts covered in this course are real-time programming, strong typing, tasking, packages, abstract data types, and problem solving.

The audience of this course includes programmers and systems analysts. There are prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text Software Engineering with Ada by Grady Brooch. The VAX computer running VMS is used. Students receive hands-on experience with the Ada language.

This three credit course is taught periodically. The class meets for 15 weeks for a total of 15 days and 45 hours. Graduate degree candidates are eligible to participate in this course. This course is offered for graduate credit.

This course is taught by Paul Jalick. For more information on this course, contact Thomas Heines at the above address and phone number.

Offeror's comments: This course are offered for the first time in the fall of 1988.

Cleveland State University

Ada PROGRAMMING

University Offeror: Kent State University
Department of Mathematical Sciences
Kent, OH 44242-0001
(216) 672-2209

The objective of this course is to teach software engineering with Ada. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) software engineering, design concepts, and technical programming. The concepts covered in this course are generics, strong typing, tasking, packages, abstract data types, and problem solving.

The audience of this course includes programmers, systems analysts, and engineers. There are prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text Programming in Ada by Barnes. The VAX 11/780 computer running VMS and the TeleSoft compiler are used. Students receive hands-on experience with the Ada language.

This three credit course is taught periodically. The class meets for 15 weeks for a total of 38 days and 38 hours. Undergraduate degree students, graduate degree candidates, the general public, and the military/DoD are eligible to participate in this course. This course is offered for graduate credit.

This course is taught by Keith Yerian. For more information on this course, contact Keith Yerian at the above address and phone number.

ADVANCED Ada

University Offeror: Kent State University
Department of Mathematical Sciences
Kent, OH 44242-0001
(216) 672-2209

The objective of this course is to cover advanced detail topics of the language. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) software engineering, design concepts, technical programming, and programming support environment. The concepts covered in this course are real-time programming, exception handling, generics, strong typing, tasking, packages, abstract data types, and problem solving.

The audience of this course includes programmers, systems analysts, engineers, and program managers. There are prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text Software Engineering with Ada by Grady Booch. The VAX 11/780 computer running VMS and the TeleSoft compiler are used. Students receive hands-on experience with the Ada language.

This three credit course is taught each semester or quarter. The class meets for 15 weeks for a total of 30 days and 42 hours. Undergraduate degree students, graduate degree candidates, the general public, and the military/DoD are eligible to participate in this course. This course is offered for graduate credit.

This course is taught by Keith Yerian. For more information on this course, contact Keith Yerian at the above address and phone number.

SURVEY OF HIGH LEVEL PROGRAMMING LANGUAGES

University Offeror: University of Toledo
Department of Computer Science and
Engineering
Toledo, OH 43606
(419) 537-2303

The objective of this course is to introduce a variety of approaches to high-level language programming including Pascal, LISP, and Ada. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) design concepts and programming support environment. The concepts covered in this course are exception handling, generics, strong typing, packages, and abstract data types.

The audience of this course includes programmers, systems analysts, technical managers, and program managers. There are prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text Software Engineering with Ada by Grady Booch. The VAX 11/785 computer running VMS and the Digital DEC compiler are used. Students receive hands-on experience with the Ada language.

This three credit course is taught each semester or quarter. The class meets for 15 weeks for a total of 44 days and 44 hours. Undergraduate degree students, graduate degree candidates, the general public, and the military/DoD are eligible to participate in this course. This course is offered for graduate credit.

This course is taught by Dr. Hilda Standley. For more information on this course, contact Dr. Hilda Stanley at the above address and phone number.

CONCURRENT PROGRAMMING

University Offeror: University of Toledo
Department of Computer Science and
Engineering
Toledo, OH 43606
(419) 537-2303

The objective of this course is to introduce the motivation, historical development and evolution of concurrent programming principles. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) design concepts, technical programming, and programming support environment. The concepts covered in this course are real-time programming, tasking, packages, and problem solving.

The audience of this course includes programmers, systems analysts, technical managers, and program managers. There are prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text Software Engineering with Ada by Grady Booch. The VAX 11/785 computer running VMS and the Digital DEC compiler are used. Students receive hands-on experience with the Ada language.

This four credit course is taught periodically. The class meets for 10 weeks for a total of 20 days and 35 hours. Undergraduate degree students, graduate degree candidates, the general public, and the military/DoD are eligible to participate in this course. This course is offered for graduate credit.

This course is taught by Dr. Hilda Standley. For more information on this course, contact Dr. Hilda Standley at the above address and phone number.

ALGORITHMS AND PROGRAMMING II

University Offeror: University of Dayton
300 College Park
CMSC Department
Dayton, OH 45469
(513) 229-3831

The objective of this course is to teach how to design algorithms and write programs with competence. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) software engineering and design concepts. The concepts covered in this course are generics, strong typing, packages, abstract data types, and problem solving.

The audience of this course includes programmers, systems analysts, engineers, technical managers, and program managers. There are no prerequisites that must be satisfied before enrolling in this course. No previous computer programming experience is necessary.

The course materials include the text CS II, Using Ada by Maruiama and Stoehr. The NCR PC8 computer running PC DOS and the JANUS/Ada compiler are used. Students receive hands-on experience with the Ada language.

This three credit course is taught each semester or quarter. The class meets for 15 weeks for a total of 30 days and 45 hours. Undergraduate degree students, graduate degree candidates, and the military/DoD are eligible to participate in this course. This course is not offered for graduate credit.

This course is taught by Robert Maruiama, Joseph Lang, and Thomas Schoen. For more information on this course, contact Robert Maruiama at the above address and phone number.

Offeror's comments: Instructors use unpublished textbooks.

DATA STRUCTURES

University Offeror: University of Dayton
CMSC Department
300 College Park
Dayton, OH 45469
(513) 229-2192

The objective of this course is to teach the implementation of data structures using Ada packages. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) software engineering, design concepts, and technical programming. The concepts covered in this course are generics, strong typing, packages, abstract data types, and problem solving. The application area emphasized is data structures.

The audience of this course includes programmers and program managers. There are prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text Data Structures with Ada by Michael Feldman. The VAX computer running PC DOS and the VAX compiler are used. Students receive hands-on experience with the Ada language.

This three credit course is taught each semester or quarter. The class meets for 10 weeks for a total of 30 days and 30 hours. Undergraduate degree students, the general public, and the military/DoD are eligible to participate in this course. This course is not offered for graduate credit.

This course is taught by Joseph Lang, Thomas Schoen, and Lee Winslow. For more information on this course, contact Lee Winslow at the above address and phone number.

Offeror's comments: Ada is the best language for data structures.

SPECIAL TOPICS: PROGRAMMING IN Ada

University Offeror: University of Cincinnati
Department of Computer Science
Cincinnati, OH 45221-0008
(513) 475-6964

The objective of this course is to teach Ada with an emphasis on object-oriented programming and software engineering. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) software engineering and technical programming. The concepts covered in this course are exception handling, generics, strong typing, tasking, packages, and abstract data types. The application area emphasized is scientific programming.

The audience of this course includes programmers and engineers. There are prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text Ada: An Advanced Introduction by Gehani. The VAX 11/780 computer running VMS and the NYU compiler are used. Students receive hands-on experience with the Ada language.

This five credit course is taught periodically. The class meets for 10 weeks for a total of 50 days and 50 hours. Undergraduate degree students, graduate degree candidates, the general public, and the military/DoD are eligible to participate in this course. This course is offered for graduate credit.

This course is taught by Dieter Schmidt. For more information on this course, contact Dieter Schmidt at the above address and phone number.

SOFTWARE ENGINEERING

University Offeror: Ohio Northern University
Department of Math and Computer Science
Ada, OH 45810
(419) 772-2346

The objective of this course is to teach Ada to experienced programmers and to teach concepts of software engineering methods. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) software engineering, design concepts, technical programming, and programming support environment. The concepts covered in this course are exception handling, generics, strong typing, tasking, packages, abstract data types, and problem solving. The application area emphasized is tasks and software engineering.

The audience of this course includes programmers, systems analysts, and engineers. There are prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text Ada As A Second Language by Norman H. Cohen. The Data General MV/10000 computer running AOS/VS and the Rolm and Data General compilers are used. Students receive hands-on experience with the Ada language.

This three credit course is taught periodically. The class meets for 13 weeks for a total of 13 days and 39 hours. Undergraduate degree students are eligible to participate in this course. This course is not offered for graduate credit.

This course is taught by David A. Retterer. For more information on this course, contact David A. Retterer at the above address and phone number.

ORGANIZATION OF PROGRAMMING LANGUAGES

University Offeror: Franklin University
Department of Computer Science
201 S. Grand Ave.
Columbus, OH 43215
(614) 224-6237

The objective of this course is to demonstrate how various programming languages can support software engineering principles and varying applications. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) software engineering and technical programming. The concepts covered in this course are exception handling, generics, strong typing, tasking, packages, abstract data types, and problem solving.

The audience of this course includes programmers, engineers, and Electrical Engineering students. There are prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text Principles of Programming Languages by MacIennan. The VAX 11/780 computer running VMS and the VAX Ada compiler are used. Students receive hands-on experience with the Ada language.

This three credit course is taught periodically. The class meets for 15 weeks for a total of 15 days and 38 hours. Undergraduate degree students, graduate degree candidates, the general public, and the military/DoD are eligible to participate in this course. This course is offered for graduate credit.

This course is taught by Bob Vermilyer. For more information on this course, contact Bob Vermilyer at the above address and phone number.

THE Ada PROGRAMMING LANGUAGE

University Offeror: Miami University of Ohio
Systems Analysis Department
Kreger Hall
Oxford, OH 45056
(513) 529-1252

The objective of this course is to teach the syntax of Ada and its primary purposes. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) technical programming. The concepts covered in this course are strong typing, packages, abstract data types, and problem solving.

The audience of this course includes programmers and systems analysts. There are prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text JANUS/Ada-Ada Extended Tutorial by Gilpen. The VAX 8250 computer running VMS and the VAX Ada compiler are used. Students receive hands-on experience with the Ada language.

This three credit course is taught periodically. The class meets for 15 weeks for a total of 30 days and 45 hours. Undergraduate degree students are eligible to participate in this course. This course is not offered for graduate credit.

This course is taught by Jim Kiper. For more information on this course, contact Jim Kiper at the above address and phone number.

CONCURRENT SOFTWARE SYSTEMS

Military Institution Offeror: Air Force Institute of Technology
School of Engineering
Department of Mathematics and
Computer Science
Wright-Patterson AFB, OH 45433
(513) 255-3098

The objective of this course is to introduce students to the principles of concurrent software systems design and implementation. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) software engineering, design concepts, and technical programming. The concepts covered in this course are real-time programming, exception handling, generics, strong typing, tasking, packages, abstract data types, and problem solving. The application area emphasized is engineering.

The audience of this course includes programmers, systems analysts, engineers, technical managers, and program managers. There are prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text Software Engineering with Ada by Grady Booch. The VAX 11/785 computer running UNIX and the Verdix compiler are used. Students receive hands-on experience with the Ada language.

This four credit course is taught periodically. The class meets for 15 weeks for a total of 30 days and 50 hours. Graduate degree candidates and the military/DoD are eligible to participate in this course. This course is offered for graduate credit.

This course is taught by Dr. Henry Potczny, Capt. David A. Umphress, and Capt. William A. Bralick, Jr.. For more information on this course, contact Capt. David A. Umphress at the above address and phone number.

Offeror's comments: Students include military officers and Department of Defense civilian employees.

ADVANCED SOFTWARE ENVIRONMENTS

Military Institution Offeror: Air Force Institute of Technology
School of Engineering
Department of Mathematics and
Computer Science
Wright-Patterson AFB, OH 45433
(513) 255-3098

The objective of this course is to understand issues involved with the emerging concepts of software development environments. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) software engineering, design concepts, technical programming, and programming support environment. The concepts covered in this course are real-time programming, exception handling, generics, strong typing, tasking, packages, abstract data types, and problem solving. The application area emphasized is engineering.

The audience of this course includes programmers, systems analysts, engineers, technical managers, and program managers. There are prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text Programming with APSE Software Tools by Freedman. The VAX 11/785 computer running UNIX and the Verdix compiler are used. Students receive hands-on experience with the Ada language.

This four credit course is taught periodically. The class meets for 10 weeks for a total of 40 days and 40 hours. Graduate degree candidates and the military/DoD are eligible to participate in this course. This course is offered for graduate credit.

This course is taught by Lt. Col. Richard R. Gross, Capt. David A. Umphress, and Capt. William A. Bralick, Jr. For more information on this course, contact Capt. David A. Umphress at the above address and phone number.

Offeror's comments: Students include military officers and Department of Defense civilian employees.

INTRODUCTION TO SOFTWARE ENGINEERING WITH Ada

Military Institution Offeror: Air Force Institute of Technology
School of Engineering
Department of Mathematics and
Computer Science
Wright-Patterson AFB, OH 45433
(513) 255-3098

The objective of this course is to provide an in depth experience with algorithmic problem solving, data structures, and software engineering. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) software engineering, design concepts, and technical programming. The concepts covered in this course are exception handling, generics, strong typing, tasking, packages, abstract data types, and problem solving. The application area emphasized is software engineering.

The audience of this course includes programmers, systems analysts, engineers, technical managers, and program managers. There are no prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text Software Engineering with Ada by Grady Booch. The VAX 11/785 computer running UNIX and the Verdix Ada compiler are used. Students receive hands-on experience with the Ada language.

This four credit course is taught periodically. The class meets for 10 weeks for a total of 40 days and 40 hours. Graduate degree candidates and the military/DoD are eligible to participate in this course. This course is offered for graduate credit.

This course is taught by Lt. Col. Richard R. Gross, Capt. David A. Umphress, and Capt. William A. Bralick, Jr. For more information on this course, contact Capt. David A. Umphress at the above address and phone number.

Offeror's comments: Students include officers of USAF, USN, USA, USCG, and USMC.

INTRODUCTION TO COMPUTER SCIENCE

Military Institution Offeror: Air Force Institute of Technology
School of Engineering
Department of Mathematics and
Computer Science
Wright-Patterson AFB, OH 45433
(513) 255-3098

The objective of this course is to provide experience with basic algorithmic problem solving, data structure, and software engineering issues. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) software engineering, design concepts, and technical programming. The concepts covered in this course are exception handling, generics, strong typing, packages, abstract data types, and problem solving. The application area emphasized is engineering.

The audience of this course includes programmers, systems analysts, engineers, technical managers, and program managers. There are no prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text Software Engineering with Ada by Grady Booch. The VAX 11/785 computer running UNIX and the VERDIX compiler are used. Students receive hands-on experience with the Ada language.

This five credit course is taught each semester or quarter. The class meets for 10 weeks for a total of 40 days and 77 hours. Graduate degree candidates and the military/DoD are eligible to participate in this course. This course is offered for graduate credit.

This course is taught by Capt. David A. Umphress and Capt. William A. Bralick, Jr. For more information on this course, contact Capt. David A. Umphress at the above address and phone number.

Offeror's comments: Students include officers of USAF, USN, USA, USCG, and USMC.

DATA STRUCTURES IN ALGORITHM ANALYSIS

4 - Year College Offeror: Marietta College
Computer Science Department
Marietta, OH 45750
(614) 374-4600

The objective of this course is to be able to represent and transform abstract data types using efficient algorithms. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) software engineering, design concepts, technical programming, and programming support environment. The concepts covered in this course are exception handling, generics, strong typing, packages, abstract data types, and problem solving.

The audience of this course includes programmers, systems analysts, engineers, technical managers, and program managers. There are prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text Algorithm for Mutual Exclusion by Raymal. The SUN computer running UNIX and the SUN Ada compiler are used. Students receive hands-on experience with the Ada language.

This three credit course is taught each semester or quarter. The class meets for 16 weeks for a total of 32 days and 48 hours. Undergraduate degree students, the general public, and the military/DoD are eligible to participate in this course. This course is offered for graduate credit.

This course is taught by E. Robert Anderson. For more information on this course, contact E. Robert Anderson at the above address and phone number.

Offeror's comments: This course are offered for the first time in the fall of 1988.

2.36 Oklahoma

Ada PROGRAMMING LANGUAGE

University Offeror: Oklahoma State University
Department of Computing and Information
Sciences, MS-219
Stillwater, OK 74078
(405) 624-5668

The objective of this course is to teach Ada for problem solving purposes with emphasis on software engineering principles. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) technical programming and programming support environment. The concepts covered in this course are real-time programming, exception handling, generics, strong typing, tasking, packages, abstract data types, and problem solving.

The audience of this course includes programmers, systems analysts, and engineers. There are prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text Understanding Ada by Bray and Pokrass. The VAX 11/780 computer running VMS and the DEC Ada compiler are used. Students receive hands-on experience with the Ada language.

This three credit course is taught periodically. The class meets for 14 weeks for a total of 28 days and 42 hours. Undergraduate degree students, graduate degree candidates, the general public, and the military/DoD are eligible to participate in this course. This course is offered for graduate credit.

This course is taught by Dr. K. M. George. For more information on this course, contact Dr. K. M. George at the above address and phone number.

INTERMEDIATE PROGRAMMING WITH Ada

University Offeror: Cameron University
Department of Mathematical Sciences
West Gore
Lawton, OK 73505
(405) 581-2481

The objective of this course is to teach the basic principles of Ada programming and to introduce the advanced features of Ada. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) design concepts and programming support environment. The concepts covered in this course are real-time programming, exception handling, generics, strong typing, tasking, packages, and problem solving.

The audience of this course includes programmers, technical managers, and program managers. There are prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text Introductory Ada: Packages for Programmers by Putnam Texel. The VAX 11/750 computer running VMS and the DEC compiler are used. Students receive hands-on experience with the Ada language.

This two credit course is taught each semester or quarter. The class meets for 15 weeks for a total of 30 days and 30 hours. Undergraduate degree students, the general public, and the military/DoD are eligible to participate in this course. This course is offered for graduate credit.

This course is taught by Feridoon Moinian. For more information on this course, contact Feridoon Moinian at the above address and phone number.

COMPARATIVE PROGRAMMING LANGUAGES

University Offeror: University of Tulsa
Department of Mathematics and Computer
Science
600 South College
Tulsa, OK 74104
(918) 542-6000 x2228

The objective of this course is to provide elementary theory and also provide breadth in programming languages beyond Pascal and C. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) design concepts, technical programming, and programming support environment. The concepts covered in this course are exception handling, generics, strong typing, tasking, packages, abstract data types, and problem solving.

The audience of this course includes programmers, systems analysts, and engineers. There are prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text Ada As A Second Language by Norman H. Cohen. The VAX SUN computer running UNIX VMS and the VMS Ada/SUN Ada compiler are used. Students receive hands-on experience with the Ada language.

This three credit course is taught each semester or quarter. The class meets for 16 weeks for a total of 48 days and 48 hours. Undergraduate degree students, graduate degree candidates, the general public, and the military/DoD are eligible to participate in this course. This course is offered for graduate credit.

This course is taught by Travis Tull. For more information on this course, contact Bill Coberly at the above address and phone number.

PROGRAMMING IN Ada

University Offeror: Central State University
Department of Computer Science
100 N. University
Edmond, OK 73034
(405) 341-2980

The objective of this course is to teach Ada programming and problem solving. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) design concepts and technical programming. The concepts covered in this course are real-time programming, exception handling, generics, strong typing, tasking, packages, abstract data types, and problem solving.

The audience of this course includes programmers, systems analysts, and engineers. There are no prerequisites that must be satisfied before enrolling in this course. No previous computer programming experience is necessary.

The course materials include the text Ada for Programmers by Olsen. The VAX computer running VMS and the DEC compiler are used. Students receive hands-on experience with the Ada language.

This one credit course is taught periodically. The class meets for 8 weeks for a total of 16 days and 16 hours. Undergraduate degree students, graduate degree candidates, the general public, and the military/DoD are eligible to participate in this course. This course is offered for graduate credit.

This course is taught by Bill McDaniel. For more information on this course, contact Bill McDaniel at the above address and phone number.

University Offeror: Central State University
Department of Computer Science
100 N. University
Edmond, OK 73034
(405) 341-2980

The objective of this course is to survey computer networks. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) design concepts, management overview, and technical programming. The concepts covered in this course are real-time programming, tasking, and problem solving.

The audience of this course includes programmers, systems analysts, and engineers. There are prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text Computer Networks by Tanendaum. The VAX computer running VMS and the DEC compiler are used. Students receive hands-on experience with the Ada language.

This two credit course is taught each semester or quarter. The class meets for 18 weeks for a total of 36 days and 36 hours. Undergraduate degree students, graduate degree candidates, the general public, and the military/DoD are eligible to participate in this course. This course is offered for graduate credit.

This course is taught by Bill McDaniel. For more information on this course, contact Bill McDaniel at the above address and phone number.

CSC 454: SPECIAL TOPICS: SOFTWARE ENGINEERING

University Offeror: Oral Roberts University
Department of Mathematical/Computer Sciences
7777 S. Lewis
Tulsa, OK 74171
(918) 495-6701

The objective of this course is to introduce students to Ada and software engineering in preparation for software development tasks. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) software engineering, design concepts, and technical programming. The concepts covered in this course are exception handling, generics, strong typing, packages, abstract data types, and problem solving. The application area emphasized is computer science.

The audience of this course includes programmers, systems analysts, and engineers. There are prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text Programming in Ada by J.G.P. Barnes. The AT&T 6300 computer running MS-DOS 2.11 and the Meridian Ada Vantage 2.0 compiler are used. Students receive hands-on experience with the Ada language.

This three credit course is taught periodically. The class meets for 14 weeks for a total of 42 days and 42 hours. Undergraduate degree students, the general public, and the military/DoD are eligible to participate in this course. This course is offered for graduate credit.

This course is taught by Jeffrey C. Jackson. For more information on this course, contact Jeffrey C. Jackson at the above address and phone number.

2.37 Oregon

No responses were received from academic institutions in Oregon.

2.38 Pennsylvania

THE LINGUISTICS OF PROGRAMMING LANGUAGES

University Offeror: Villanova University
Computer Science Program
Villanova, PA 19085
(215) 645-7307

The objective of this course is to study the definition, structure, and design principles of programming languages as represented by semantics. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) software engineering, design concepts, and technical programming. The concepts covered in this course are strong typing, tasking, packages, and abstract data types.

The audience of this course includes programmers, systems analysts, and engineers. There are prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text Formal Specification of Programming Language by Frank Pagan. The VAX computer running VMS and the DEC Ada compiler are used. Students receive hands-on experience with the Ada language.

This five credit course is taught periodically. The class meets for 10 weeks for a total of 20 days and 30 hours. Graduate degree candidates are eligible to participate in this course. This course is offered for graduate credit.

This course is taught by Robert Beck and Norman Soong. For more information on this course, contact Dr. Robert Beck at the above address and phone number.

ORGANIZATION OF PROGRAMMING LANGUAGES

University Offeror: Villanova University
Computer Science Program
Villanova, PA 19085
(215) 645-7307

The objective of this course is to examine the definition, structure, and design principles of programming languages. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) design concepts and technical programming. The concepts covered in this course are strong typing, tasking, packages, and abstract data types.

The audience of this course includes programmers and systems analysts. There are prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text The Programming Language Landscape by Marcotty and Ledgard. The VAX computer running VMS and the DEC Ada compiler are used. Students receive hands-on experience with the Ada language.

This three credit course is taught each semester or quarter. The class meets for 15 weeks for a total of 15 days and 37 hours. Undergraduate degree students are eligible to participate in this course. This course is offered for graduate credit.

This course is taught by Lillian Cassell. For more information on this course, contact Dr. Robert Beck at the above address and phone number.

MODERN PROGRAMMING LANGUAGES: Ada

4 - Year College Offeror: Beaver College
Department of Computer Science and
Mathematics
Glenside, PA 19038
(215) 572-2984

The objective of this course is to introduce students to software engineering and object-oriented programming using the Ada language. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) software engineering, design concepts, and technical programming. The concepts covered in this course are exception handling, generics, strong typing, tasking, packages, abstract data types, and problem solving.

The audience of this course includes programmers, systems analysts, engineers, technical managers, and program managers. There are prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text Software Engineering with Ada by Grady Booch. The VAX 8250 computer running VMS and the Irvine compiler are used. Students receive hands-on experience with the Ada language.

This three credit course is taught periodically. The class meets for 15 weeks for a total of 45 days and 45 hours. Undergraduate degree students, the general public, and the military/DoD are eligible to participate in this course. This course is offered for graduate credit.

This course is taught by Mark Balcer and Michael Gonzales. For more information on this course, contact Mark Balcer at the above address and phone number.

SOFTWARE ENGINEERING USING Ada

University Offeror: Cheyney University of Pennsylvania
Department of Mathematics and Computer
Science
Cheyney, PA 19319
(215) 399-2435

The objective of this course is to teach software engineering concepts using the Ada programming language. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) software engineering, design concepts, technical programming, and programming support environment. The concepts covered in this course are real-time programming, exception handling, strong typing, tasking, packages, abstract data types, and problem solving.

The audience of this course includes programmers, systems analysts, engineers, and senior-level students. There are prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text Programming in Ada by J.G.P. Barnes. The IBM personal computer running MS-DOS 3.2 is used. Students receive hands-on experience with the Ada language.

This three credit course is taught periodically. The class meets for 15 weeks for a total of 45 days and 45 hours. Undergraduate degree students, graduate degree candidates, the general public, and the military/DoD are eligible to participate in this course. This course is offered for graduate credit.

This course is taught by Jesse Williams and Ralph Peterson. For more information on this course, contact Jesse Williams at the above address and phone number.

PROGRAMMING LANGUAGES

University Offeror: University of Pittsburgh
Department of Computer Science
Alumni Hall
Pittsburgh, PA 15260
(412) 624-8490

The objective of this course is to acquire the skills of programming in three diverse languages and to compare and contrast their features. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) technical programming and programming support environment. The concepts covered in this course are real-time programming, exception handling, generics, strong typing, tasking, packages, abstract data types, and problem solving.

The audience of this course includes programmers and systems analysts. There are prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text Ada: An Advanced Introduction by Gehani. The VAX ULTRIX computer running VMS and the DEC Ada compiler are used. Students receive hands-on experience with the Ada language.

This three credit course is taught each semester or quarter. The class meets for 15 weeks for a total of 30 days and 42 hours. Undergraduate degree students, graduate degree candidates, the general public, and the military/DoD are eligible to participate in this course. This course is offered for graduate credit.

This course is taught by Dr. George Novacky and Dr. Lawrence Rose. For more information on this course, contact Dr. George Novacky at the above address and phone number.

COMPARISON OF PROGRAMMING LANGUAGES

4 - Year College Offeror: Elizabethtown College
Department of Computer Science
1 Alpha Drive
Elizabethtown, PA 17022
(717) 367-1151

The objective of this course is to give students an appreciation for the similarities and strengths of various programming languages. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) design concepts, technical programming, and programming support environment. The concepts covered in this course are real-time programming, exception handling, strong typing, packages, abstract data types, and problem solving.

The audience of this course includes programmers and systems analysts. There are prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text Principles of Programming Languages by Bruce MacLennan. The IBM XT computer running MS-DOS and the JANUS/Ada compiler are used. Students receive hands-on experience with the Ada language.

This three credit course is taught periodically. The class meets for 16 weeks for a total of 48 days and 48 hours. Undergraduate degree students, the general public, and the military/DoD are eligible to participate in this course. This course is offered for graduate credit.

This course is taught by Ms. Barbara Tulley. For more information on this course, contact Ms. Barbara Tulley at the above address and phone number.

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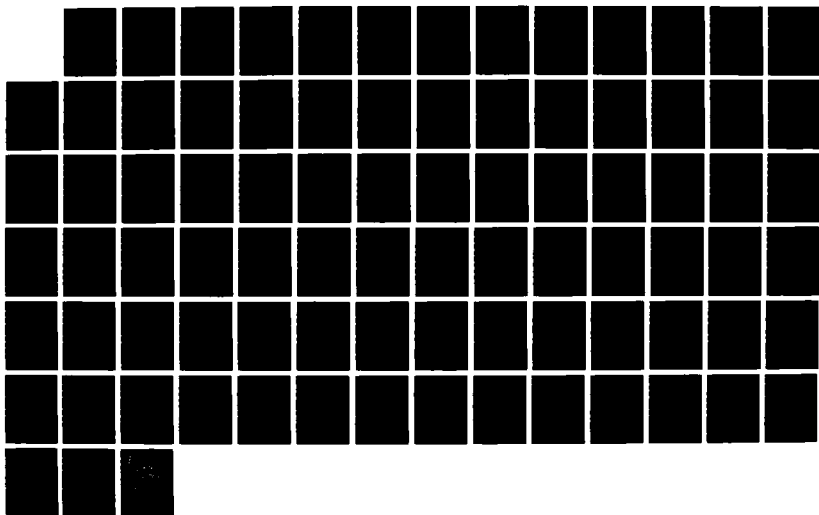
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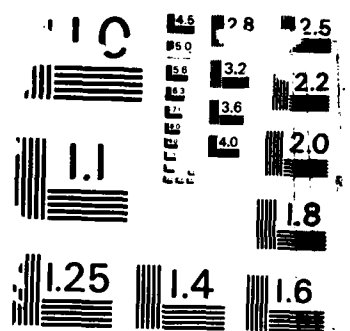
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PROGRAMMING LANGUAGES

4 - Year College Offeror: University of Scranton
Computer Science Department
Scranton, PA 18510
(717) 961-6115

The objective of this course is to teach software engineering principles and methodology. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) software engineering, design concepts, and programming support environment. The concepts covered in this course are exception handling, packages, abstract data types, and problem solving.

The audience of this course includes programmers and systems analysts. There are prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text Programming Languages - Second Edition by Terrence Pratt. The VAX 11/785 computer running VMS and the VAX Ada compiler are used. Students receive hands-on experience with the Ada language.

This two credit course is taught periodically. The class meets for 10 weeks for a total of 20 days and 40 hours. Undergraduate degree students, the general public, and the military/DoD are eligible to participate in this course. This course is offered for graduate credit.

This course is taught by Dennis Martin. For more information on this course, contact Dennis Martin at the above address and phone number.

Ada

2 - Year College Offeror: Gwynedd-Mercy College
Computer Science Department
Sumneytown Pike
Gwynedd Valley, PA 19437
(215) 641-5547

The objective of this course is to survey language syntax and write programs in Ada. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) technical programming and programming support environment. The concepts covered in this course are real-time programming, exception handling, generics, strong typing, tasking, packages, abstract data types, and problem solving.

The audience of this course includes programmers, systems analysts, engineers, technical managers, and program managers. There are prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text Software Engineering Concepts by Fairley. The IBM personal computer running MS-DOS and the Ada Vantage/Meridian compiler are used. Students receive hands-on experience with the Ada language.

This three credit course is taught periodically. The class meets for 06 weeks for a total of 30 days and 42 hours. Undergraduate degree students, graduate degree candidates, the general public, and the military/DoD are eligible to participate in this course. This course is not offered for graduate credit.

This course is taught by Micheal G. Gonzales. For more information on this course, contact Michael G. Gonzales at the above address and phone number.

SOFTWARE ENGINEERING USING Ada

2 - Year College Offeror: Gwynedd-Mercy College
Department of Computer Science
Sumneytown Pike
Gwynedd Valley, PA 19437
(215) 641-5547

The objective of this course is to teach design, development, management concepts, and quality and reliability metrics. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) software engineering and design concepts. The concepts covered in this course are real-time programming, exception handling, generics, strong typing, tasking, packages, abstract data types, and problem solving. The application area emphasized is software engineering with Ada.

The audience of this course includes programmers, systems analysts, engineers, technical managers, and program managers. There are prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text Software Engineering Concepts by Fairley. The IBM personal computer running MS-DOS are used. Students receive hands-on experience with the Ada language.

This three credit course is taught periodically. The class meets for 15 weeks for a total of 15 days and 40 hours. Undergraduate degree students, graduate degree candidates, the general public, and the military/DoD are eligible to participate in this course. This course is not offered for graduate credit.

This course is taught by Michael G. Gonzales. For more information on this course, contact Michael G. Gonzales at the above address and phone number.

PROGRAMMING IN Ada

4 - Year College Offeror: Lebanon Valley College
Department of Mathematical Science
Annville, PA 17003
(717) 867-6188

The objective of this course is to introduce students to major aspects of the Ada programming language. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) design concepts and technical programming. The concepts covered in this course are real-time programming, generics, strong typing, tasking, abstract data types, and problem solving. The application area emphasized is database generation.

The audience of this course includes programmers, systems analysts, and program managers. There are prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text Principles of Programming Languages by MacLennan. The IBM computer running MS-DOS and the JANUS/Ada compiler are used. Students receive hands-on experience with the Ada language.

This three credit course is taught each semester or quarter. The class meets for 14 weeks for a total of 56 days and 56 hours. Undergraduate degree students, the general public, and the military/DoD are eligible to participate in this course. This course is offered for graduate credit.

This course is taught by Mike Fry and J. Mayer. For more information on this course, contact J. Mayer at the above address and phone number.

PROGRAMMING LANGUAGES

University Offeror: Widener University
Department of Computer Science
Science Division
Chester, PA 19013
(215) 499-4002

The objective of this course is to teach the design and implementation of programming languages. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) design concepts, technical programming, and programming support environment. The concepts covered in this course are generics, strong typing, tasking, packages, and abstract data types.

The audience of this course includes programmers and program managers. There are prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text Design and Implementation of Programming Language by MacLellen. The VAX 11/750 computer running VMS and the NYU compiler are used. Students receive hands-on experience with the Ada language.

This two credit course is taught periodically. The class meets for 5 weeks for a total of 25 days and 25 hours. Undergraduate degree students are eligible to participate in this course. This course is offered for graduate credit.

This course is taught by Dr. Norman Adams. For more information on this course, contact Dr. Norman Adams at the above address and phone number.

SOFTWARE DESIGN METHODS

University Offeror: Penn State University
220 Whitmore Lab
University Park, PA 16802
(814) 863-1241

The objective of this course is to apply engineering methods to the development of software systems using Ada. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) software engineering, design concepts, and technical programming. The concepts covered in this course are real-time programming, strong typing, tasking, abstract data types, and problem solving.

The audience of this course includes programmers, systems analysts, and engineers. There are prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text Software Engineering Concepts by Fairley. The IBM 3090 computer running VM/CMS and the IBM compiler are used. Students receive hands-on experience with the Ada language.

This three credit course is taught periodically. The class meets for 16 weeks for a total of 46 days and 47 hours. Undergraduate degree students and graduate degree candidates are eligible to participate in this course. This course is offered for graduate credit.

This course is taught by Fred L. Bierly. For more information on this course, contact Fred L. Bierly at the above address and phone number.

SOFTWARE ENGINEERING USING Ada

2 - Year College Offeror: Gwynedd-Mercy College
Sumneytown Pike
Gwynedd Valley, PA 19437
(215) 641-5547

The objective of this course is to acquire design, development, and management concepts, and quality and reliability metrics. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) software engineering and design concepts. The concepts covered in this course are real-time programming, exception handling, generics, strong typing, tasking, packages, abstract data types, and problem solving. The application area emphasized is Ada software engineering concepts.

The audience of this course includes programmers, systems analysts, engineers, technical managers, and program managers. There are prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text Programming Languages by Allen B. Tucker. The IBM PS/2 computer running MS-DOS and the Ada VANTAGE compiler are used. Students receive hands-on experience with the Ada language.

This three credit course is taught each semester or quarter. The class meets for 15 weeks for a total of 45 days and 45 hours. Undergraduate degree students, graduate degree candidates, the general public, and the military/DoD are eligible to participate in this course. This course is offered for graduate credit.

This course is taught by Michael G. Gonzales. For more information on this course, contact Michael G. Gonzales at the above address and phone number.

Ada

4 - Year College Offeror: Gwynedd-Mercy College
Sumneytown Pike
Gwynedd Valley, PA 19437
(215) 641-5547

The objective of this course is to teach language syntax, advanced language features, and applications in embedded systems. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) technical programming. The concepts covered in this course are exception handling, generics, strong typing, tasking, packages, abstract data types, and problem solving. The application area emphasized is general programming.

The audience of this course includes programmers, systems analysts, engineers, technical managers, and program managers. There are prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text Programming Languages by Allen B. Tucker. The IBM PS/2 computer running MS-DOS and the Ada VANTAGE compiler are used. Students receive hands-on experience with the Ada language.

This three credit course is taught periodically. The class meets for 15 weeks for a total of 15 days and 40 hours. Undergraduate degree students, graduate degree candidates, the general public, and the military/DoD are eligible to participate in this course. This course is offered for graduate credit.

This course is taught by Michael G. Gonzales. For more information on this course, contact Michael G. Gonzales at the above address and phone number.

Offeror's comments: The course is geared to those with a high-level language.

PROGRAMMING IN Ada

4 - Year College Offeror: Lebanon Valley College
Annville, PA 17003
(717) 867-6190

The objective of this course is to familiarize students with Ada and structured problem solving using Ada. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) software engineering, design concepts, technical programming, and programming support environment. The concepts covered in this course are real-time programming, exception handling, generics, strong typing, tasking, packages, abstract data types, and problem solving.

The audience of this course includes programmers, systems analysts, engineers, technical managers, and program managers. There are prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text Software Engineering with Ada by Grady Booch. The IBM computer running MS-DOS is used. Students receive hands-on experience with the Ada language.

This three credit course is taught periodically. The class meets for 15 weeks for a total of 30 days and 45 hours. Undergraduate degree students, graduate degree candidates, the general public, and the military/DoD are eligible to participate in this course. This course is offered for graduate credit.

This course is taught by Joerg Mayer and Michael D. Fry. For more information on this course, contact Horace W. Tousley at the above address and phone number.

Offeror's comments: Pascal or another structured language is a pre-requisite.

CPSC 174: Ada

University Offeror: Slippery Rock University
Department of Computer Science
Slippery Rock University
Slippery Rock, PA 16057
(412) 794-7133

The objective of this course is to teach Ada as a second language and to train students for careers in the Department of Defense. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) software engineering. The concepts covered in this course are exception handling, generics, strong typing, tasking, packages, abstract data types, and problem solving. The application area emphasized is software engineering.

The audience of this course includes programmers. There are no prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text Ada As A Second Language by Norman H. Cohen. The IBM 4381 computer running VM/CMS and the TeleSoft compiler are used. Students receive hands-on experience with the Ada language.

This three credit course is taught each semester or quarter. The class meets for 15 weeks for a total of 45 days and 45 hours. Undergraduate degree students are eligible to participate in this course. This course is offered for graduate credit.

This course is taught by Richard Hunkler. For more information on this course, contact Dr. Richard Hunkler at the above address and phone number.

2.39 Rhode Island

SOFTWARE ENGINEERING

University Offeror: University of Rhode Island
Department of Computer Science and
Statistics
Tyler Hall
Kingston, RI 02881
(401) 792-2701

The objective of this course is to study tools and methodology for design, development, testing, and maintenance of large software systems. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) software engineering and design concepts. The concepts covered in this course are exception handling, generics, strong typing, tasking, packages, abstract data types, and problem solving.

The audience of this course includes programmers, systems analysts, technical managers, and program managers. There are prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text Software Engineering by Pressman. The VAX 11/750 computer running MS-DOS and the DEC compiler are used. Students receive hands-on experience with the Ada language.

This one credit course is taught each semester or quarter. The class meets for 15 weeks for a total of 15 days and 15 hours. Undergraduate degree students and graduate degree candidates are eligible to participate in this course. This course is offered for graduate credit.

This course is taught by Jan Prichard, Michael Hayde, and Charles Arnold. For more information on this course, contact Ms. Jan Prichard at the above address and phone number.

200

2.40 South Carolina

PROGRAMMING SYSTEMS

University Offeror: Clemson University
Department of Electrical/Computer
Engineering
Clemson, SC 29634
(803) 656-5930

The objective of this course is to survey modern programming systems and their semantics. This course is taught as a class lecture/seminar. The concepts covered in this course are real-time programming, exception handling, generics, strong typing, tasking, packages, and abstract data types.

The audience of this course includes engineers. There are prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text Principles of Programming Languages by Tennent. The McIntosh computer running Toolbox and the STC compiler are used. Students receive hands-on experience with the Ada language.

This three credit course is taught periodically. The class meets for 16 weeks for a total of 32 days and 32 hours. Undergraduate degree students are eligible to participate in this course. This course is offered for graduate credit.

This course is taught by Dr. James Leathrum. For more information on this course, contact Dr. James Leathrum at the above address and phone number.

2.41 South Dakota

No responses were received from academic institutions in South Dakota.

2.42 Tennessee

ADVANCED PROGRAMMING TECHNIQUES

University Offeror: East Tennessee State University
Computer Science Department
Box 23830A
Johnson City, TN 37614-0002
(615) 929-6963

The objective of this course is to introduce Ada and use it from the design phase throughout the life cycle. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) software engineering, design concepts, and technical programming. The concepts covered in this course are exception handling, generics, strong typing, tasking, packages, abstract data types, and problem solving. The application area emphasized is object-oriented design.

The audience of this course includes programmers and systems analysts. There are prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text Introductory Ada by Texel. The IBM personal computer running Motel and the TeleSoft compiler are used. Students receive hands-on experience with the Ada language.

This four credit course is taught periodically. The class meets for 10 weeks for a total of 20 days and 40 hours. Undergraduate degree students are eligible to participate in this course. This course is offered for graduate credit.

This course is taught by Suzanne Smith. For more information on this course, contact Suzanne Smith at the above address and phone number.

Ada PROGRAMMING

University Offeror: Memphis State University
Department of Mathematical Sciences
Memphis, TN 38152
(901) 454-2482

The objective of this course is to teach people who already know a structured language how to program in Ada. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) software engineering and technical programming. The concepts covered in this course are exception handling, generics, strong typing, tasking, packages, abstract data types, and problem solving.

The audience of this course includes programmers and systems analysts. There are prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text Ada As A Second Language by Norman H. Cohen. The IBM PC AT computer running MS-DOS and the ALSYS compiler are used. Students receive hands-on experience with the Ada language.

This three credit course is taught each semester or quarter. The class meets for 15 weeks for a total of 45 days and 39 hours. Undergraduate degree students and graduate degree candidates are eligible to participate in this course. This course is offered for graduate credit.

This course is taught by David Vaught. For more information on this course, contact David Vaught at the above address and phone number.

OPERATING SYSTEMS

University Offeror: Memphis State University
Department of Mathematical Sciences
Memphis, TN 38152
(901) 454-2482

The objective of this course is to teach advanced operating systems concepts. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) design concepts. The concepts covered in this course are exception handling, generics, strong typing, tasking, packages, abstract data types, and problem solving.

The audience of this course includes programmers and systems analysts. There are prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text Advanced Operating Systems Concepts by Maekawa, Oldehoeft, and Oldehoeft. The IBM PC AT computer running MS-DOS and the ALSYS compiler are used. Students receive hands-on experience with the Ada language.

This two credit course is taught periodically. The class meets for 4 weeks for a total of 20 days and 40 hours. Undergraduate degree students and graduate degree candidates are eligible to participate in this course. This course is offered for graduate credit.

This course is taught by David Vaught. For more information on this course, contact David Vaught at the above address and phone number.

PROGRAMMING LANGUAGES

University Offeror: Middle Tennessee State University
Computer Information Systems
Box 50
Murfreesboro, TN 37132
(615) 898-2362

The objective of this course is to acquire minimal competence in three programming languages. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) design concepts and technical programming. The concepts covered in this course are real-time programming, exception handling, strong typing, tasking, packages, and problem solving.

The audience of this course includes systems analysts and computer information systems majors. There are prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text GE Software Engineering Handbook by General Electric. The MICRO Zenith 159 computer running MS-DOS and the JANUS/Ada compiler are used. Students receive hands-on experience with the Ada language.

This three credit course is taught each semester or quarter. The class meets for 15 weeks for a total of 15 days and 37 hours. Undergraduate degree students are eligible to participate in this course. This course is offered for graduate credit.

This course is taught by Dr. Nathan Adams and Vicky Olsen. For more information on this course, contact Dr. Nathan Adams at the above address and phone number.

ADVANCED PROGRAMMING - Ada

University Offeror: Tennessee Technical University
Computer Science Department
Box 5101
Cookeville, TN 38505
(615) 372-3691

The objective of this course is to teach software engineering concepts in Ada. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) software engineering. The concepts covered in this course are exception handling, generics, strong typing, tasking, packages, abstract data types, and problem solving. The application area emphasized is data structures.

The audience of this course includes programmers, systems analysts, engineers, technical managers, and program managers. There are prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text Ada As A Second Language by Norman H. Cohen. The VAX 8800 computer running VMS and the DEC compiler are used. Students receive hands-on experience with the Ada language.

This three credit course is taught periodically. The class meets for 14 weeks for a total of 42 days and 42 hours. Undergraduate degree students, graduate degree candidates, the general public, and the military/DoD are eligible to participate in this course. This course is offered for graduate credit.

This course is taught by Donald C. Ramsey. For more information on this course, contact Donald C. Ramsey at the above address and phone number.

Offeror's comments: Prerequisites for this course are a working knowledge of Pascal and data structures.

Ada

Technical Institute Offeror: State Technical Institute at
Knoxville
Hardin Valley Rd., Box 22990
Attn: CST DEPT, Greg Walters
Knoxville, TN 37933
(615) 694-6468

The objective of this course is to teach fundamentals of Ada usage. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) design concepts, management overview, and technical programming. The concepts covered in this course are real-time programming, exception handling, generics, strong typing, tasking, and problem solving. The application area emphasized is industry/DoD contracts.

The audience of this course includes programmers, systems analysts, and program managers. There are prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text Introduction to Ada: A Top-Down Approach by Phillip Caverly. The IBM AT computer running MS-DOS is used. Students receive hands-on experience with the Ada language.

This course is taught each semester or quarter. The class meets for 15 weeks for a total of 45 days and 45 hours. Undergraduate degree students, graduate degree candidates, the general public, and the military/DoD are eligible to participate in this course. This course is not offered for graduate credit.

This course is taught by Gerald Walker and Rick Barber. For more information on this course, contact Gregory M. Walters at the above address and phone number.

ADVANCED PROGRAMMING IN Ada

University Offeror: Tennessee Technological University
Box 5101, Computer Science Department
Cookeville, TN 38505
(615) 372-3448

The objective of this course is to teach software design and advanced data structures in Ada. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) software engineering. The concepts covered in this course are exception handling, generics, strong typing, tasking, packages, abstract data types, and problem solving. The application area emphasized is data structures.

The audience of this course includes programmers, systems analysts, and engineers. There are prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text Ada As A Second Language by Norman H. Cohen. The VAX 8800 computer running VMS and the DEC Ada compiler are used. Students receive hands-on experience with the Ada language.

This three credit course is taught each semester or quarter. The class meets for 18 weeks for a total of 54 days and 54 hours. Undergraduate degree students and graduate degree candidates are eligible to participate in this course. This course is offered for graduate credit.

This course is taught by Donald Ramsay. For more information on this course, contact Donald Ramsay at the above address and phone number.

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2.43 Texas

INTRODUCTION TO SOFTWARE ENGINEERING

University Offeror: The University of North Texas
Department of Computer Sciences
P.O. Box 13886
Denton, TX 76203
(817) 565-2801

The objective of this course is to learn software engineering concepts with Ada as the primary vehicle. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) software engineering, design concepts, management overview, technical programming, and programming support environment. The concepts covered in this course are exception handling, generics, strong typing, packages, abstract data types, and problem solving.

The audience of this course includes programmers, systems analysts, and program managers. There are prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text GE Software Engineering Handbook by General Electric. The VAX computer running VMS and the DEC Ada and Verdix Ada compilers are used. Students receive hands-on experience with the Ada language.

This three credit course is taught periodically. The class meets for 15 weeks for a total of 45 days and 45 hours. Undergraduate degree students and graduate degree candidates are eligible to participate in this course. This course is offered for graduate credit.

This course is taught by Dr. Jeff Harris. For more information on this course, contact Dr. Jeff Harris at the above address and phone number.

STRUCTURED PROGRAMMING AND SOFTWARE ENGINEERING

University Offeror: Texas Technical University
Department of Computer Science
Mail Stop 3102
Lubbock, TX 79409
(806) 742-3527

The objective of this course is to provide an in-depth study of issues, problems, and alternative approaches to modern software engineering. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) software engineering, design concepts, and technical programming. The concepts covered in this course are exception handling, generics, strong typing, tasking, packages, abstract data types, and problem solving.

The audience of this course includes systems analysts and engineers. There are prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text Software Engineering with Ada by Grady Booch. The VAX computer running VMS and the DEC compiler are used. Students receive hands-on experience with the Ada language.

This four credit course is taught periodically. The class meets for 4 weeks for a total of 20 days and 55 hours. Graduate degree candidates are eligible to participate in this course. This course is offered for graduate credit.

This course is taught by Dr. James Archer. For more information on this course, contact Dr. James Archer at the above address and phone number.

Ada PROGRAMMING

University Offeror: University of Houston/Clear Lake
Department of Computer Science
Houston, TX 77058
(713) 488-9480

The objective of this course is to teach Ada as a language with some emphasis on object-oriented design. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) technical programming. The concepts covered in this course are exception handling, generics, strong typing, packages, abstract data types, and problem solving.

The audience of this course includes programmers, systems analysts, and engineers. There are prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text Ada As A Second Language by Norman H. Cohen. The VAX 11/780 computer running VMS and the DEC compiler are used. Students receive hands-on experience with the Ada language.

This three credit course is taught periodically. The class meets for 10 weeks for a total of 30 days and 30 hours. Undergraduate degree students, graduate degree candidates, the general public, and the military/DoD are eligible to participate in this course. This course is not offered for graduate credit.

This course is taught by Theodore Liebfried and Saddegh Davarai. For more information on this course, contact Rod Bown at the above address and phone number.

SOFTWARE DESIGN

University Offeror: University of Houston/Clear Lake
Department of Computer Science
Houston, TX 77058
(713) 488-9480

The objective of this course is to introduce graphics design methods that support development of a realistic real-time system. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) software engineering, design concepts, technical programming, and programming support environment. The concepts covered in this course are real-time programming, exception handling, strong typing, tasking, packages, abstract data types, and problem solving. The application area emphasized is real-time programming.

The audience of this course includes programmers, systems analysts, technical managers, and program managers. There are prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text Real-Time Ada by Cherry. The VAX 11/780 computer running VMS and the DEC compiler are used. Students receive hands-on experience with the Ada language.

This three credit course is taught each semester or quarter. The class meets for 15 weeks for a total of 30 days and 45 hours. Undergraduate degree students, graduate degree candidates, the general public, and the military/DoD are eligible to participate in this course. This course is offered for graduate credit.

This course is taught by Dr. Charles McKay. For more information on this course, contact Rod Bown at the above address and phone number.

DEVELOPMENT OF SOFTWARE TOOLS

University Offeror: University of Houston/Clear Lake
Department of Computer Science
Houston, TX 77058
(713) 488-9480

The objective of this course is to emphasize design and development of software environment tools while designing actual prototype tools. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) software engineering, design concepts, technical programming, and programming support environment. The concepts covered in this course are exception handling, generics, strong typing, tasking, packages, abstract data types, and problem solving. The application area emphasized is software engineering.

The audience of this course includes programmers, systems analysts, technical managers, and program managers. There are prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text Real-Time Ada by Cherry. The VAX 11/780 computer running VMS and the DEC compiler are used. Students receive hands-on experience with the Ada language.

This three credit course is taught each semester or quarter. The class meets for 15 weeks for a total of 45 days and 45 hours. Undergraduate degree students, graduate degree candidates, the general public, and the military/DoD are eligible to participate in this course. This course is offered for graduate credit.

This course is taught by Dr. Anthony Lakkos. For more information on this course, contact Rod Bown at the above address and phone number.

SEMINARS IN SOFTWARE ENGINEERING

University Offeror: University of Houston/Clear Lake
Department of Computer Science
Houston, TX 77058
(713) 488-9480

The objective of this course is to increase technical and management awareness of software engineering and Ada. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) management overview and technical programming.

The audience of this course includes technical managers and program managers. There are no prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text Real-Time Ada by Cherry. The VAX 11/780 computer running VMS and the DEC compiler are used. Students receive hands-on experience with the Ada language.

This three credit course is taught periodically. The class meets for 15 weeks for a total of 45 days and 45 hours. Undergraduate degree students, graduate degree candidates, the general public, and the military/DoD are eligible to participate in this course. This course is not offered for graduate credit.

This course is taught by Dr. Charles McKay. For more information on this course, contact Rod Bown at the above address and phone number.

Offeror's comments: Weekly software engineering seminars are sponsored by the University of Houston at Clear Lake.

SURVEY OF PROGRAMMING LANGUAGES

University Offeror: East Texas State University
Computer Science Department
Commerce, TX 75428
(214) 886-5409

The objective of this course is to expose student to a variety of high-level languages and their applications, uses, and special features. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) software engineering, design concepts, and programming support environment. The concepts covered in this course are real-time programming, exception handling, generics, strong typing, and packages.

The audience of this course includes programmers, systems analysts, engineers, technical managers, and program managers. There are prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text Programming Languages by Tucker. The IBM computer running MS-DOS and the JANUS/Ada compiler are used. Students receive hands-on experience with the Ada language.

This three credit course is taught periodically. The class meets for 15 weeks for a total of 15 days and 45 hours. Undergraduate degree students, graduate degree candidates, the general public, and the military/DoD are eligible to participate in this course. This course is offered for graduate credit.

This course is taught by Sandra Huerter. For more information on this course, contact Sandra Huerter at the above address and phone number.

INTRODUCTION TO Ada

University Offeror: Prairie View A & M
Department of Computer Science
Prairie View, TX 77446
(409) 857-2715

The objective of this course is to introduce Ada, its syntax, applications, and implementation. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) software engineering and technical programming. The concepts covered in this course are real-time programming, exception handling, generics, strong typing, tasking, packages, abstract data types, and problem solving.

The audience of this course includes programmers, engineers, technical managers, and program managers. There are prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text Ada: An Introduction by Sabina Saib. The VAX 11/780 computer running VMS and the NYU 1.5 compiler are used. Students receive hands-on experience with the Ada language.

This three credit course is taught periodically. The class meets for 15 weeks for a total of 45 days and 45 hours. Undergraduate degree students, graduate degree candidates, the general public, and the military/DoD are eligible to participate in this course. This course is not offered for graduate credit.

This course is taught by N. Ravindran. For more information on this course, contact N. Ravindran at the above address and phone number.

ADVANCED Ada

University Offeror: Prairie View A & M
Department of Computer Science
Prairie View, TX 77446
(409) 857-2715

The objective of this course is to study Ada with a top-down approach. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) software engineering, design concepts, and technical programming. The concepts covered in this course are real-time programming, exception handling, generics, strong typing, tasking, packages, abstract data types, and problem solving.

The audience of this course includes programmers, systems analysts, technical managers, and program managers. There are prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text Ada: An Introduction by Sabina Saib. The VAX 11/780 computer running VMS and the NYU 1.5 compiler are used. Students receive hands-on experience with the Ada language.

This three credit course is taught periodically. The class meets for 16 weeks for a total of 45 days and 48 hours. Undergraduate degree students, graduate degree candidates, the general public, and the military/DoD are eligible to participate in this course. This course is not offered for graduate credit.

This course is taught by N. Ravindran. For more information on this course, contact N. Ravindran at the above address and phone number.

Ada PROGRAMMING WITH APPLICATIONS

4 - Year College Offeror: McMurry College
Computer Science Department
Abilene, TX 79697
(915) 691-6393

The objective of this course is to introduce students to the Ada language and its ability to handle programming techniques. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) software engineering, design concepts, technical programming, and programming support environment. The concepts covered in this course are real-time programming, exception handling, generics, strong typing, tasking, packages, abstract data types, and problem solving. The application area emphasized is Students create their own.

The audience of this course includes programmers, systems analysts, engineers, and military. There are prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text JANUS/Ada Extended Tutorial by Gilpen. The AT&T 6300 computer running MS-DOS and the JANUS/Ada compiler are used. Students receive hands-on experience with the Ada language.

This three credit course is taught periodically. The class meets for 15 weeks for a total of 30 days and 45 hours. Undergraduate degree students and the military/DoD are eligible to participate in this course. This course is not offered for graduate credit.

This course is taught by Louis Voit. For more information on this course, contact Louis Voit at the above address and phone number.

CS 378: SOFTWARE ENGINEERING

University Offeror: University of Texas
Department of Computer Science
Austin, TX 78712
(512) 471-9535

The objective of this course is to use Ada to implement class projects. Language aspects are illustrated with Ada. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) software engineering, design concepts, technical programming, and programming support environment. The concepts covered in this course are exception handling, generics, strong typing, tasking, packages, abstract data types, and problem solving.

The audience of this course includes programmers and industry. There are prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text Software Engineering with Ada by Grady Booch. The VAX computer running VMS and the VMS compiler are used. Students receive hands-on experience with the Ada language.

This three credit course is taught each semester or quarter. The class meets for 14 weeks for a total of 28 days and 35 hours. Undergraduate degree students are eligible to participate in this course. This course is offered for graduate credit.

This course is taught by Laurie H. Werth. For more information on this course, contact Laurie H. Werth at the above address and phone number.

Offeror's comments: Ada is also taught in the Programming Language course.

INTRODUCTION TO SOFTWARE ENGINEERING IN Ada

University Offeror: University of Texas at Arlington
Computer Science Engineering Department
P.O. Box 19015
Arlington, TX 76019
(817) 273-2348

The objective of this course is to teach the concepts and philosophy of Ada. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) software engineering, design concepts, management overview, and technical programming. The concepts covered in this course are real-time programming, exception handling, generics, strong typing, tasking, packages, abstract data types, and problem solving.

The audience of this course includes programmers, systems analysts, engineers, technical managers, and program managers. There are no prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text Software Engineering with Ada by Grady Booch. The VAX computer running VMS and the DEC Ada compiler are used. Students receive hands-on experience with the Ada language.

This three credit course is taught each semester or quarter. The class meets for 16 weeks for a total of 48 days and 48 hours. Undergraduate degree students, graduate degree candidates, the general public, and the military/DoD are eligible to participate in this course. This course is offered for graduate credit.

This course is taught by Dr. Paul C. Grabow and Dr. Pei Shia. For more information on this course, contact Dr. Paul C. Grabow at the above address and phone number.

Offeror's comments: This gives hands-on experience with compiler/library systems.

SOFTWARE ENGINEERING IN Ada

University Offeror: University of Texas at Arlington
Computer Science And Engineering Department
P.O. Box 19015
Arlington, TX 76019
(817) 273-2348

The objective of this course is to help students properly exploit object-oriented aspects of Ada. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) software engineering, design concepts, and technical programming. The concepts covered in this course are real-time programming, exception handling, generics, strong typing, tasking, packages, abstract data types, and problem solving.

The audience of this course includes programmers, systems analysts, engineers, technical managers, and program managers. There are prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text Software Engineering with Ada by Grady Booch. The VAX computer running VMS and the DEC compiler are used. Students receive hands-on experience with the Ada language.

This course is taught periodically. Graduate degree candidates are eligible to participate in this course. This course is offered for graduate credit.

This course is taught by Dr. Paul C. Grabow. For more information on this course, contact Dr. Paul C. Grabow at the above address and phone number.

Ada

University Offeror: Sam Houston State University
P.O. Box 2206
Huntsville, TX 77341
(409) 294-1568

The objective of this course is to introduce object-oriented programming and software engineering with Ada as a vehicle. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) software engineering, design concepts, technical programming, and programming support environment. The concepts covered in this course are real-time programming, exception handling, generics, strong typing, tasking, packages, abstract data types, and problem solving. The application area emphasized is syntax/language features.

The audience of this course includes programmers, systems analysts, and engineers. There are prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text Programming In Ada by J.G.P. Barnes. The IBM PC/VAX 8600 computer running MS-DOS/VMS and the JANUS/Ada compiler are used. Students receive hands-on experience with the Ada language.

This three credit course is taught periodically. The class meets for 10 weeks for a total of 30 days and 30 hours. Undergraduate degree students, graduate degree candidates, the general public, and the military/DoD are eligible to participate in this course. This course is offered for graduate credit.

This course is taught by Dr. Burris. For more information on this course, contact Dr. Burris at the above address and phone number.

Ada: OBJECT-ORIENTED PROGRAMMING

University Offeror: Sam Houston State University
P.O. Box 2206
Huntsville, TX 77341
(409) 294-1837

The objective of this course is to emphasize object-oriented programming and software engineering with Ada as a vehicle. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) software engineering, design concepts, technical programming, and programming support environment. The concepts covered in this course are real-time programming, exception handling, generics, strong typing, tasking, packages, abstract data types, and problem solving. The application area emphasized is syntax/language features.

The audience of this course includes programmers, systems analysts, and engineers. There are prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text Programming in Ada by J.G.P. Barnes. The IBM PC/ VAX 8600 computer running MS-DOS and VMS and the JANUS/Ada compiler are used. Students receive hands-on experience with the Ada language.

This three credit course is taught each semester or quarter. The class meets for 16 weeks for a total of 32 days and 44 hours. Undergraduate degree students, graduate degree candidates, the general public, and the military/DoD are eligible to participate in this course. This course is offered for graduate credit.

This course is taught by Wuhsiung Lu. For more information on this course, contact Wuhsiung Lu at the above address and phone number.

Ada SOFTWARE DEVELOPMENT AND PROGRAMMING

University Offeror: Texas Christian University
Computer Science Department
PO Box 32886
Fort Worth, TX 76129
(817)921-7166

The objective of this course is to give students a working knowledge of the Ada programming language. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) software engineering. The concepts covered in this course are real-time programming, exception handling, generics, strong typing, packages, abstract data types, and problem solving. The application area emphasized is pursuit tracking.

The audience of this course includes programmers. There are prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text Ada: An Advanced Introduction by Gehani. The VAX 11/780 computer running VMS and the DEC compiler are used. Students receive hands-on experience with the Ada language.

This one credit course is taught periodically. The class meets for 7 weeks for a total of 14 days and 22 hours. Undergraduate degree students and graduate degree candidates are eligible to participate in this course. This course is offered for graduate credit.

This course is taught by Ted Tenny. For more information on this course, contact Ted Tenny at the above address and phone number.

Offeror's comments: The application area of this course, pursuit tracking, is particularly beneficial to the student.

Ada SOFTWARE DEVELOPMENT AND PROGRAMMING

University Offeror: Texas Christian University
P.O. Box 32886
Computer Science Department
Fort Worth, TX 76129
(817) 921-7166

The objective of this course is to teach the Ada language as both a programming tool and a design tool. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) software engineering, design concepts, and technical programming. The concepts covered in this course are real-time programming, exception handling, generics, strong typing, tasking, packages, abstract data types, and problem solving. The application area emphasized is software engineering.

The audience of this course includes programmers, systems analysts, engineers, technical managers, and program managers. There are prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text Software Components with Ada by Grady Booch. The VAX 11/780 computer running VMS and the DEC Ada compiler are used. Students receive hands-on experience with the Ada language.

This three credit course is taught periodically. The class meets for 13 weeks for a total of 36 days and 36 hours. Undergraduate degree students and graduate degree candidates are eligible to participate in this course. This course is offered for graduate credit.

This course is taught by Tom Nute, Ted Tenny, and James Comer. For more information on this course, contact Ted Tenny at the above address and phone number.

2.44 Utah

EMERGING TECHNIQUES IN COMPUTING

4 - Year College Offeror: Weber State College
Computer Science Department
Ogden, UT 84408-2401
(801) 626-7093

The objective of this course is to familiarize students with Ada and give experience in problem solving. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) software engineering, technical programming, and programming support environment. The concepts covered in this course are real-time programming, generics, strong typing, tasking, abstract data types, and problem solving. The application area emphasized is scientific engineering.

The audience of this course includes programmers, systems analysts, engineers, technical managers, and Air Force personnel. There are prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text Programming in Ada by Weiner. The VAX 8700 computer running VMS and the DEC compiler are used. Students receive hands-on experience with the Ada language.

This three credit course is taught periodically. The class meets for 16 weeks for a total of 48 days and 48 hours. Undergraduate degree students, graduate degree candidates, the general public, and the military/DoD are eligible to participate in this course. This course is not offered for graduate credit.

This course is taught by David Hart and Dr. Charles Crittenden. For more information on this course, contact R. Kenneth Walter at the above address and phone number.

Ada: A FIRST LANGUAGE

2 - Year College Offeror: Utah Valley Community College
800 West 1200 South
Orem, UT 84057
(801) 226-5000

The objective of this course is to remove the mystique from Ada programming. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) design concepts. The concepts covered in this course are exception handling, strong typing, packages, abstract data types, and problem solving. The application area emphasized is business applications.

The audience of this course includes programmers. There are no prerequisites that must be satisfied before enrolling in this course. No previous computer programming experience is necessary.

The course materials include the text Ada: A First Programming Language by Kenny. The IBM personal computer running MS-DOS and the JANUS/Ada 1.62 compiler are used. Students receive hands-on experience with the Ada language.

This three credit course is taught periodically. The class meets for 16 weeks for a total of 32 days and 48 hours. Undergraduate degree students, graduate degree candidates, and the general public are eligible to participate in this course. This course is offered for graduate credit.

This course is taught by Harrington.

Offeror's comments: This course is an attempt to make a difficult subject more easily understood.

2.45 Vermont

INTRODUCTORY Ada PROGRAMMING

2 - Year College Offeror: Vermont Technical College
Electrical and Electronic Engineering
Technology Department
Randolph Center, VT 05061
(802) 728-3391

The objective of this course is to teach programming development with Ada. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) software engineering, design concepts, and technical programming. The concepts covered in this course are exception handling, strong typing, packages, abstract data types, and problem solving.

The audience of this course includes programmers. There are prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text Software Engineering Concepts by Farley. The Zenith 159 computer running MS-DOS and the JANUS/Ada compiler are used. Students receive hands-on experience with the Ada language.

This three credit course is taught periodically. The class meets for 16 weeks for a total of 32 days and 45 hours. Undergraduate degree students are eligible to participate in this course. This course is offered for graduate credit.

This course is taught by Dr. Carl Brandon and Donald Nevin. For more information on this course, contact Dr. Carl Brandon at the above address and phone number.

ADVANCED Ada PROGRAMMING

2 - Year College Offeror: Vermont Technical College
Electrical and Electronic Engineering
Technology Department
Randolph Center, VT 05061
(802) 728-3391

The objective of this course is to teach the advanced features of Ada with emphasis on real-time applications. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) software engineering, design concepts, technical programming, and programming support environment. The concepts covered in this course are real-time programming, exception handling, generics, strong typing, tasking, packages, abstract data types, and problem solving. The application area emphasized is real-time and graphics.

The audience of this course includes programmers and engineers. There are prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text Programming in Ada by Wiener and Sincovec. The Zenith 159 computer running MS-DOS and the JANUS/Ada compiler are used. Students receive hands-on experience with the Ada language.

This three credit course is taught periodically. The class meets for 15 weeks for a total of 45 days and 45 hours. Undergraduate degree students are eligible to participate in this course. This course is offered for graduate credit.

This course is taught by Dr. Carl Brandon. For more information on this course, contact Dr. Carl Brandon at the above address and phone number.

2.46 Virginia

REAL-TIME SYSTEMS DESIGN AND DEVELOPMENT

University Offeror: George Mason University
School of Information Technology and
Engineering
4400 University Drive
Fairfax, VA 22030
(703) 323-2713

The objective of this course is to expose students to concepts for real-time systems and to use Ada Programming to support those concepts. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) software engineering, design concepts, and technical programming. The concepts covered in this course are real-time programming, exception handling, tasking, packages, and problem solving. The application area emphasized is flight control systems.

The audience of this course includes programmers, systems analysts, and engineers. There are prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text Systems Design with Ada by R.J.A. Buhr. The VAX computer running VMS and the Verdix compiler are used. Students receive hands-on experience with the Ada language.

This four credit course is taught periodically. The class meets for 10 weeks for a total of 10 days and 30 hours. Graduate degree candidates, the general public, and the military/DoD are eligible to participate in this course. This course is offered for graduate credit.

This course is taught by Dr. Jorge Diaz-Herrera. For more information on this course, contact Dr. Jorge Diaz-Herrera at the above address and phone number.

CS306: Ada PROGRAMMING

University Offeror: Old Dominion University
Department of Computer Science
Norfolk, VA 23508
(804) 440-3915

The objective of this course is to study Ada packages, tasks, concurrence, exceptions, generics, and data types. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) software engineering, design concepts, management overview, and technical programming. The concepts covered in this course are exception handling, generics, strong typing, tasking, packages, abstract data types, and problem solving.

The audience of this course includes programmers, systems analysts, engineers, and program managers. There are prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text UNIX Ada by Gehani. The VAX 11/785 computer running UNIX Berkeley 4.3 and the Verdix compiler are used. Students receive hands-on experience with the Ada language.

This four credit course is taught periodically. The class meets for 10 weeks for a total of 10 days and 40 hours. Undergraduate degree students, graduate degree candidates, the general public, and the military/DoD are eligible to participate in this course. This course is offered for graduate credit.

This course is taught by Hill Price. For more information on this course, contact Hill Price at the above address and phone number.

Ada PROGRAMMING LANGUAGE

4 - Year College Offeror: Christopher Newport College
Department of Computer Science
50 Shoe Lane
Newport News, VA 23606
(804) 599-7065

The objective of this course is to understand packages, tasking, concurrence control, and generic packages. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) software engineering and design concepts. The concepts covered in this course are real-time programming, exception handling, generics, strong typing, tasking, packages, abstract data types, and problem solving.

The audience of this course includes programmers and program managers. There are prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text Ada As A Second Language by Norman H. Cohen. The Prime computer is used. Students receive hands-on experience with the Ada language.

This three credit course is taught each semester or quarter. The class meets for 15 weeks for a total of 45 days and 45 hours. Undergraduate degree students, the general public, and the military/DoD are eligible to participate in this course. This course is offered for graduate credit.

This course is taught by Professor Tean-Quay Lee. For more information on this course, contact Professor Tean-Quay Lee at the above address and phone number.

TECHNICAL FOUNDATIONS

Military Institution Offeror: Defense Systems Management College
SE-T
Fort Belvoir, VA 22060-5426
(703) 664-3474

The objective of this course is to give program managers the benefits of Ada and how to deal with transition. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) management overview. The concepts covered in this course are real-time programming, generics, strong typing, packages, abstract data types, and problem solving. The application area emphasized is mission-critical computer resources.

The audience of this course includes engineers, technical managers, program managers, configuration managers, and contract administrators. There are prerequisites that must be satisfied before enrolling in this course. No previous computer programming experience is necessary.

The course materials include the text JANUS/Ada Extended Tutorial by Gilpen. Students receive hands-on experience with the Ada language.

This two credit course is taught periodically. The class meets for 15 weeks for a total of 30 days and 45 hours. The military/DoD is eligible to participate in this course. This course is offered for graduate credit.

This course is taught by Ronald P. Higuera, Izzy Caro, and Frank Kockler. For more information on this course, contact Ronald P. Higuera at the above address and phone number.

Offeror's comments: DSMC prepares future DOD program managers to acquire systems.

MANAGEMENT OF SOFTWARE ACQUISITION

Military Institution Offeror: Defense Systems Management College
SE-T
Fort Belvoir, VA 22060-5426
(703) 664-3474

The objective of this course is to give future program managers an appreciation for Ada and how to deal with its transition. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) management overview. The concepts covered in this course are real-time programming, generics, strong typing, packages, abstract data types, and problem solving. The application area emphasized is mission-critical computer resources.

The audience of this course includes engineers, technical managers, and program managers. There are prerequisites that must be satisfied before enrolling in this course. No previous computer programming experience is necessary.

The course materials include the text JANUS/Ada Extended Tutorial by Gilpen. Students receive hands-on experience with the Ada language.

The class meets for 20 weeks for a total of 17 hours. The military/DoD is eligible to participate in this course. This course is offered for graduate credit.

This course is taught by Ronald P. Higuera. For more information on this course, contact Ronald P. Higuera at the above address and phone number.

Ada PROGRAMMING I

University Offeror: Norfolk State University
Department of Mathematics and Computer
Science
2401 Corprew Avenue
Norfolk, VA 23504
(804) 623-8654

The objective of this course is to cover the basic syntax of the language while emphasizing Ada applications. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) software engineering. The concept covered in this course is problem solving. The application area emphasized is syntax.

The audience of this course includes programmers, systems analysts, engineers, technical managers, and program managers. There are prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text Ada: An Introduction by Sabina Saib. The VAX 8350 computer running VMS and the VAX Ada compiler are used. Students receive hands-on experience with the Ada language.

This three credit course is taught each semester or quarter. The class meets for 15 weeks for a total of 28 days and 45 hours. Undergraduate degree students, the general public, and the military/DoD are eligible to participate in this course. This course is offered for graduate credit.

This course is taught by George C. Harrison. For more information on this course, contact George C. Harrison at the above address and phone number.

Ada PROGRAMMING II

University Offeror: Norfolk State University
Department of Mathematics and Computer
Science
2401 Corprew Ave.
Norfolk, VA 23504
(804) 623-8654

The objective of this course is to study Ada in the realm of software engineering. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) software engineering. The concepts covered in this course are real-time programming, exception handling, generics, strong typing, tasking, packages, abstract data types, and problem solving. The application area emphasized is software engineering.

The audience of this course includes programmers, systems analysts, engineers, technical managers, and program managers. There are prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text Software Engineering with Ada by Grady Booch. The VAX 8350 computer running VMS and the VAX compiler are used. Students receive hands-on experience with the Ada language.

This three credit course is taught each semester or quarter. The class meets for 15 weeks for a total of 45 days and 45 hours. Undergraduate degree students, the general public, and the military/DoD are eligible to participate in this course. This course is offered for graduate credit.

This course is taught by George C. Harrison. For more information on this course, contact George C. Harrison at the above address and phone number.

CS 213: INTRODUCTION TO Ada

University Offeror: Hampton University
Department of Computer Science
Hampton, VA 23668
(804) 727-5552

The objective of this course is to teach concepts of Ada programming, including data types, branching, loops, linked lists, trees. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) software engineering, design concepts, and technical programming. The concepts covered in this course are strong typing, packages, and problem solving. The application area emphasized is programming.

The audience of this course includes programmers, systems analysts, engineers, technical managers, and program managers. There are prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text Software Engineering with Ada by Grady Booch. The VAX 11/780 computer running VMS and the VAX Ada compiler are used. Students receive hands-on experience with the Ada language.

This three credit course is taught periodically. The class meets for 16 weeks for a total of 48 hours. Undergraduate degree students, graduate degree candidates, the general public, and the military/DoD are eligible to participate in this course. This course is offered for graduate credit.

This course is taught by Robert A. Willis, Jr. and Reginald L. Walker.

CSC 324: ADVANCED Ada PROGRAMMING

University Offeror: Hampton University
Department of Computer Science
Hampton, VA 23668
(804) 727-5552

The objective of this course is to teach advanced Ada topics, such as generics, encapsulation, exceptions, and data abstraction. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) software engineering, design concepts, technical programming, and programming support environment. The concepts covered in this course are exception handling, generics, strong typing, tasking, packages, abstract data types, and problem solving.

The audience of this course includes programmers, engineers, and technical managers. There are prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text Software Engineering with Ada by Grady Booch. The VAX 11/780 computer running VMS and the VAX Ada compiler are used. Students receive hands-on experience with the Ada language.

This three credit course is taught each semester or quarter. The class meets for 13 weeks for a total of 36 days and 36 hours. Undergraduate degree students, graduate degree candidates, the general public, and the military/DoD are eligible to participate in this course. This course is offered for graduate credit.

This course is taught by Reginald L. Walker and Robert A. Willis, Jr.

SOFTWARE ENGINEERING CONCEPTS: Ada

Military Institution Offeror: US Army Information Systems
Software Center
Commander , Building 1465,
ASB-PET-I
Stop H-18, Professional
Development Center
Ft. Belvoir, VA 22060-5456
(703) 756-5863

The objective of this course is to teach students how to write basic programs in the Ada programming language. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) technical programming and management overview. The concepts covered in this course are real-time programming, exception handling, generics, strong typing, tasking, packages, abstract data types, and problem solving. The application area emphasized is management information systems.

The audience of this course includes programmers. There are prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the DoD's MIL-STD-1815A. The Zenith Z248 computer running MS-DOS and the Meridian compiler are used. Students receive hands-on experience with the Ada language.

The military/DoD is eligible to participate in this course. This course is offered for graduate credit.

For more information on this course, contact Mr. John Hovell at the above address and phone number.

Ada ORIENTATION

Military Institution Offeror: US Army Information Systems
Software Center
COMMANDER, Professional
Development Center
STOP H-18, Building 1465
Fort Belvoir, VA 22060-5456
(703) 756-5863

The objective of this course is to give students an overview of the development and features of the Ada programming language. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) management overview and technical programming. The concepts covered in this course are real-time programming, exception handling, generics, strong typing, tasking, packages, abstract data types, and problem solving. The application area emphasized is management information systems.

The audience of this course includes programmers, technical managers, and program managers. There are prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text the DoD's MIL-STD-1815A. The Zenith Z248 computer running MS-DOS and the Meridian compiler are used. Students receive hands-on experience with the Ada language.

This course is taught periodically. The class meets for 4 weeks for a total of 20 days and 160 hours. The military/DoD is eligible to participate in this course. This course is offered for graduate credit.

For more information on this course, contact Mr. John Hovell at the above address and phone number.

Ada OVERVIEW

Military Institution Offeror: US Army Information Systems
Software Center
COMMANDER, Professional
Development Center
Stop H-18, Building 1465
Fort Belvoir, VA 22060-5456
(703) 756-5863

The objective of this course is to provide an introduction to the Ada programming language. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) management overview. The concepts covered in this course are real-time programming, exception handling, generics, strong typing, tasking, packages, abstract data types, and problem solving.

The audience of this course includes programmers, systems analysts, engineers, technical managers, and program managers. There are no prerequisites that must be satisfied before enrolling in this course. No previous computer programming experience is necessary.

The course materials include the Department of Defense MIL-STD-1815A. Students receive hands-on experience with the Ada language.

This course is taught periodically. The class meets for total of 3 days and 24 hours. The military/DoD is eligible to participate in this course. This course is offered for graduate credit.

For more information on this course, contact Mr. John Hovell at the above address and phone number.

2.47 Washington

PROGRAMMING LANGUAGES

University Offeror: Gonzaga University
Department of Mathematics and Computer
Science
509 E. Boone
Spokane, WA 99258
(509) 328-4220

The objective of this course is to teach different programming styles. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) design concepts, technical programming, and programming support environment. The concepts covered in this course are real-time programming, exception handling, generics, strong typing, tasking, packages, and abstract data types.

The audience of this course includes programmers and systems analysts. There are prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text Programming Languages by Terrence Pratt. The IBM AT computer running MS-DOS and the ALSYS compiler are used. Students receive hands-on experience with the Ada language.

This three credit course is taught periodically. The class meets for 12 weeks for a total of 36 days and 36 hours. Undergraduate degree students, graduate degree candidates, the general public, and the military/DoD are eligible to participate in this course. This course is offered for graduate credit.

This course is taught by Brian Carlson. For more information on this course, contact Brian Carlson at the above address and phone number.

ADVANCED PROGRAMMING IN Ada

University Offeror: Eastern Washington University
Computer Science Department
Cheney, WA 99004
(509) 458-6260

The objective of this course is to cover software engineering methodologies using Ada. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) software engineering, design concepts, technical programming, and programming support environment. The concepts covered in this course are real-time programming, exception handling, generics, strong typing, tasking, packages, abstract data types, and problem solving. The application area emphasized is computer algebra.

The audience of this course includes programmers, systems analysts, engineers, and educators. There are prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text Software Engineering with Ada by Grady Booch. The VAX 11/780 computer running VMS and the TeleSoft Telegen II compiler are used. Students receive hands-on experience with the Ada language.

This three credit course is taught periodically. The class meets for 15 weeks for a total of 45 days and 45 hours. Undergraduate degree students and graduate degree candidates are eligible to participate in this course. This course is offered for graduate credit.

This course is taught by Dr. Ray Hamel and Dr. Roland Keefer. For more information on this course, contact Gary Schubert at the above address and phone number.

Offeror's comments: A team project is required.

2.48 West Virginia

Ada AND OBJECT-ORIENTED DESIGN

University Offeror: West Virginia University
Department of Statistics and Computer
Science
Knapp Hall
Morgantown, WV 26506
(304) 293-3607

The objective of this course is to emphasize object oriented design and programming. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) software engineering, design concepts, and technical programming. The concepts covered in this course are exception handling, generics, strong typing, tasking, packages, abstract data types, and problem solving.

The audience of this course includes programmers and systems analysts. There are prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text Software Engineering with Ada by Grady Booch. The VAX computer running VMS and the Digital compiler are used. Students receive hands-on experience with the Ada language.

This four credit course is taught periodically. The class meets for 14 weeks for a total of 28 days and 56 hours. Undergraduate degree students and graduate degree candidates are eligible to participate in this course. This course is offered for graduate credit.

This course is taught by Dr. Frances VanScoy. For more information on this course, contact Dr. Frances VanScoy at the above address and phone number.

ARTIFICIAL INTELLIGENCE APPLICATIONS OF Ada

University Offeror: West Virginia University
Department of Statistics and Computer
Science
Knapp Hall
Morgantowr, WV 26506
(304) 293-3607

The objective of this course is to provide an understanding of Ada in the Artificial Intelligence community. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) design concepts and technical programming. The concepts covered in this course are exception handling, generics, strong typing, tasking, packages, abstract data types, and problem solving. The application area emphasized is Artificial Intelligence.

The audience of this course includes programmers and systems analysts. There are prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text Software Engineering with Ada by Grady Booch. The VAX computer running VMS and the Digital compiler are used. Students receive hands-on experience with the Ada language.

This three credit course is taught periodically. The class meets for 15 weeks for a total of 30 days and 45 hours. Graduate degree candidates are eligible to participate in this course. This course is offered for graduate credit.

This course is taught by Sumitra Reddy. For more information on this course, contact Dr. Frances VanScoy at the above address and phone number.

Offeror's comments: Students read several Ada texts and current journal articles.

INTRODUCTION TO COMPUTING

University Offeror: West Virginia University
Department of Statistics and Computer
Science
Knapp Hall
Morgantown, WV 26506
(304) 293-3607

The objective of this course is to introduce computer science and Ada programming. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) software engineering and technical programming. The concepts covered in this course are exception handling, generics, strong typing, packages, abstract data types, and problem solving.

The audience of this course includes programmers, engineers, and typical mix of undergraduates. There are no prerequisites that must be satisfied before enrolling in this course. No previous computer programming experience is necessary.

The Zenith personal computer running MS-DOS and the ALSYS compiler are used. Students receive hands-on experience with the Ada language.

This three credit course is taught periodically. The class meets for 15 weeks for a total of 30 days and 45 hours. Undergraduate degree students are eligible to participate in this course. This course is offered for graduate credit.

This course is taught by Dr. Frances VanScoy. For more information on this course, contact Dr. Frances VanScoy at the above address and phone number.

Ada PROGRAMMING

4 - Year College Offeror: West Virginia Wesleyan College
Department of Mathematics and Computer
Science
Buckhannon, WV 26201
(304) 473-8000

The objective of this course is to teach students Ada to a demonstrable level of programming skills. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) software engineering, design concepts, technical programming, and programming support environment. The concepts covered in this course are real-time programming, exception handling, generics, strong typing, tasking, packages, abstract data types, and problem solving.

The audience of this course includes programmers, systems analysts, engineers, technical managers, and program managers. There are prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text Advanced Operating Systems Concepts by Maekawa, Oldehoeft, and Oldehoeft. The VAX computer running VMS and the TeleSoft compiler are used. Students receive hands-on experience with the Ada language.

This three credit course is taught periodically. The class meets for 15 weeks for a total of 45 days and 45 hours. Undergraduate degree students, the general public, and the military/DoD are eligible to participate in this course. This course is offered for graduate credit.

This course is taught by Ron Klausewitz and Rich Clemens. For more information on this course, contact Ron Klausewitz at the above address and phone number.

CIS479/579 SOFTWARE ENGINEERING WITH Ada

University Offeror: Marshall University
Department of Computer and Information
Sciences
Huntington, WV 25701
(304) 696-5424

The objective of this course is to present a formal approach to current techniques in software design and development using the Ada language. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) software engineering and programming support environment. The concepts covered in this course are exception handling, generics, strong typing, tasking, packages, abstract data types, and problem solving.

The audience of this course includes programmers and systems analysts. There are prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text Software Engineering with Ada by Grady Booch. The VAX 8600 computer running VMS are used. Students receive hands-on experience with the Ada language.

This four credit course is taught periodically. The class meets for 10 weeks for a total of 20 days and 40 hours. Undergraduate degree students and graduate degree candidates are eligible to participate in this course. This course is offered for graduate credit.

This course is taught by Kathleen Warner and Dr. Robert Johnson. For more information on this course, contact Kathleen Warner at the above address and phone number.

Offeror's comments: This course deals with data-oriented and objected-oriented design.

INTRODUCTION TO Ada PROGRAMMING

2 - Year College Offeror: Beckley College
Department of Computer Science
P.O. Box AG
Beckley, WV 25802
(304) 253-7351 X14

The objective of this course is to introduce students to the fundamental aspects of Ada programming. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) software engineering and design concepts. The concepts covered in this course are exception handling, generics, strong typing, packages, abstract data types, and problem solving.

The audience of this course includes programmers and systems analysts. There are prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text Introduction to Ada: Packages for Programming by Putnam Texel. The Data General MV/8000 computer running AOS/VS and the ROLM/DATA GENERAL ADE Ada compiler are used. Students receive hands-on experience with the Ada language.

This three credit course is taught each semester or quarter. The class meets for 15 weeks for a total of 30 days and 45 hours. Undergraduate degree students are eligible to participate in this course. This course is offered for graduate credit.

This course is taught by Ms. Stephanie Ketz and Mr. Robin Deal. For more information on this course, contact Ms. Stephanie Ketz at the above address and phone number.

IS 625: SOFTWARE ENGINEERING WITH Ada

University Offeror: West Virginia College of Graduate
Studies
Institute, WV 25112
(304) 768-9711

The objective of this course is to learn and apply software engineering principles through Ada programming. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) software engineering and technical programming. The concepts covered in this course are real-time programming, exception handling, generics, strong typing, tasking, packages, abstract data types, and problem solving. The application area emphasized is software engineering concepts.

The audience of this course includes programmers and systems analysts. There are prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text Software Engineering with Ada by Grady Booch. The VAX 11/780 computer running VMS and the VAX Ada compiler are used. Students receive hands-on experience with the Ada language.

This three credit course is taught each semester or quarter. The class meets for 10 weeks for a total of 30 days and 30 hours. Graduate degree candidates are eligible to participate in this course. This course is offered for graduate credit.

This course is taught by Robert N. Hutton. For more information on this course, contact Robert N. Hutton at the above address and phone number.

Offeror's comments: This is one of two Ada courses intended for programmers who wish to engage in defense work.

IS 525: INTRODUCTION TO Ada PROGRAMMING

2 - Year College Offeror: West Virginia College of Graduate
Studies
Institute, WV 25112
(304) 768-9711

The objective of this course is to gain familiarity with Ada concepts and to use Ada in solving problems. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) technical programming and software engineering. The concepts covered in this course are exception handling, generics, strong typing, tasking, packages, abstract data types, and problem solving.

The audience of this course includes programmers. There are no prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text Programming in Ada by J.G.P. Barnes. The VAX 11/780 computer running VMS and the VAX Ada compiler are used. Students receive hands-on experience with the Ada language.

This three credit course is taught periodically. The class meets for 16 weeks for a total of 32 days and 32 hours. Graduate degree candidates are eligible to participate in this course. This course is offered for graduate credit.

This course is taught by Robert N. Hutton. For more information on this course, contact Robert N. Hutton at the above address and phone number.

Offeror's comments: This is one of two Ada courses intended for programmers who wish to engage in defense work.

COMPUTER LANGUAGE: Ada

4 - Year College Offeror: Alderson Braddice College
Department of Natural Sciences
Department of Computer Science
Philippi, WV 26416
(304) 457-1700

The objective of this course is to familiarize students with Ada programming. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) software engineering and technical programming. The concepts covered in this course are exception handling, generics, strong typing, tasking, packages, abstract data types, and problem solving.

The audience of this course includes programmers and systems analysts. There are prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text Programming in Ada by J.G.P. Barnes. The VAX 11/780 computer running VMS and the DEC compiler are used. Students receive hands-on experience with the Ada language.

This three credit course is taught each semester or quarter. The class meets for 15 weeks for a total of 45 days and 45 hours. Undergraduate degree students, the general public, and the military/DoD are eligible to participate in this course. This course is offered for graduate credit.

This course is taught by Alicia Kime. For more information on this course, contact Alicia Kime at the above address and phone number.

SOFTWARE ENGINEERING

4 - Year College Offeror: Alderson Braddice College
Division of Natural Sciences
Department of Computer Science
Phillipi, WV 26416
(304) 457-1700

The objective of this course is to teach the principles of software engineering with emphasis on a group project. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) software engineering, design concepts, management overview, technical programming, and programming support environment. The concepts covered in this course are exception handling, generics, strong typing, tasking, packages, abstract data types, and problem solving.

The audience of this course includes programmers, systems analysts, engineers, and software engineers. There are prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text Software Engineering with Ada by Grady Booch. The VAX 11/780 computer running VMS and the DEC compiler are used. Students receive hands-on experience with the Ada language.

This three credit course is taught periodically. The class meets for 15 weeks for a total of 45 days and 45 hours. Undergraduate degree students, the general public, and the military/DoD are eligible to participate in this course. This course is offered for graduate credit.

This course is taught by Gary Schubert. For more information on this course, contact Alicia Kime at the above address and phone number.

SPECIAL TOPICS-Ada PROGRAMMING

4 - Year College Offeror: West Virginia Institute of Technology
Department of Computer Science
Montgomery, WV 25136
(304) 442-3361

The objective of this course is to familiarize students with the syntax of Ada including packages, generics, and tasking. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) software engineering and design concepts. The concepts covered in this course are exception handling, generics, strong typing, tasking, packages, abstract data types, and problem solving.

The audience of this course includes programmers and systems analysts. There are prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text Ada: An Introduction by Sabina Saib. The VAX computer running VMS and the DEC compiler are used. Students receive hands-on experience with the Ada language.

This three credit course is taught periodically. The class meets for 15 weeks for a total of 48 days and 45 hours. Undergraduate degree students, the general public, and the military/DoD are eligible to participate in this course. This course is offered for graduate credit.

This course is taught by Don Smith. For more information on this course, contact Don Smith at the above address and phone number.

PROGRAMMING LANGUAGES

University Offeror: Marquette University
Department of Mathematics, Statistics, and
Computer Science
Milwaukee, WI 53233
(414) 224-7573

The objective of this course is to survey features and design of programming languages. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) design concepts, technical programming, and programming support environment. The concepts covered in this course are exception handling, generics, strong typing, packages, abstract data types, and problem solving.

The audience of this course includes programmers and systems analysts. There are prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text Software Engineering with Ada by Grady Booch. The VAX computer running VMS and the NYU Ada/ED compiler are used. Students receive hands-on experience with the Ada language.

This three credit course is taught periodically. The class meets for 15 weeks for a total of 15 days and 40 hours. Undergraduate degree students, graduate degree candidates, the general public, and the military/DoD are eligible to participate in this course. This course is offered for graduate credit.

This course is taught by Dr. George Corliss, Brook Shear, and Dr. Ruitenburg. For more information on this course, contact Dr. George Corliss at the above address and phone number.

Offeror's comments: Approximately 15% of this course is devoted to Ada.

Ada PROGRAMMING LANGUAGE

University Offeror: Marquette University
Department of Mathematics, Statistics, and
Computer Science
Milwaukee, WI 53233
(414) 224-7573

The objective of this course is to achieve programming proficiency in the Ada programming language. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) software engineering, management overview, and technical programming. The concepts covered in this course are real-time programming, exception handling, strong typing, tasking, and packages.

The audience of this course includes programmers and systems analysts. There are prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text Programming Languages by Terrence Pratt. The VAX computer running VMS and the NYU Ada/ED compiler are used. Students receive hands-on experience with the Ada language.

This three credit course is taught each semester or quarter. The class meets for 15 weeks for a total of 45 days and 45 hours. Undergraduate degree students, graduate degree candidates, the general public, and the military/DoD are eligible to participate in this course. This course is offered for graduate credit.

This course is taught by Dr. George Corliss. For more information on this course, contact Dr. George Corliss at the above address and phone number.

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2.50 Wyoming

No responses were received from academic institutions in Wyoming.

2.51 Canal Zone

No responses were received from academic institutions in the Canal Zone.

2.52 District of Columbia

ADVANCED PROGRAMMING LANGUAGES

University Offeror: Howard University
Systems and Computer Sciences
School of Engineering
Washington, DC 20059
(202) 636-6595

The objective of this course is to acquaint students with some of the problems of implementation and design of higher programming languages. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) software engineering and technical programming. The concepts covered in this course are strong typing, packages, abstract data types, and problem solving.

The audience of this course includes programmers, systems analysts, engineers, and first year graduate students. There are prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text Ada Programming by Gehani. The 3B2 computer running UNIX and the Verdix compiler are used. Students receive hands-on experience with the Ada language.

This three credit course is taught each semester or quarter. The class meets for 14 weeks for a total of 28 days and 35 hours. Undergraduate degree students, graduate degree candidates, the general public, and the military/DoD are eligible to participate in this course. This course is offered for graduate credit.

This course is taught by Don Coleman. For more information on this course, contact Don Coleman at the above address and phone number.

Howard University

REAL-TIME SYSTEMS

University Offeror: Howard University
Systems and Computer Sciences
School of Engineering
Washington, DC 20059
(202) 636-6595

The objective of this course is to study the problems of design and development of real-time systems. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) software engineering, design concepts, and technical programming. The concepts covered in this course are real-time programming, exception handling, generics, strong typing, tasking, and problem solving.

The audience of this course includes programmers, systems analysts, and engineers. There are prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text Parallel Programming in ANSI Standard Ada by Cherry. The 3B2 computer running UNIX and the Verdix compiler are used. Students receive hands-on experience with the Ada language.

This three credit course is taught periodically. The class meets for 14 weeks for a total of 42 days and 42 hours. Graduate degree candidates are eligible to participate in this course. This course is offered for graduate credit.

This course is taught by Don Coleman. For more information on this course, contact Don Coleman at the above address and phone number.

DATA STRUCTURES

University Offeror: American University
Department of Computer Science and
Information Sciences
Washington, DC 20016
(202) 885-1470

The objective of this course is to use abstract data structures in software design. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) software engineering, design concepts, and technical programming. The concepts covered in this course are generics, strong typing, packages, abstract data types, and problem solving. The application area emphasized is algorithm/program design.

The audience of this course includes programmers, systems analysts, program managers, and computer science teachers/researchers. There are prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text Data Structures with Ada by Michael Feldman. The IBM 4381 computer running CMS and the TeleSoft compiler are used. Students receive hands-on experience with the Ada language.

This three credit course is taught each semester or quarter. The class meets for 15 weeks for a total of 45 days and 45 hours. Undergraduate degree students are eligible to participate in this course. This course is offered for graduate credit.

This course is taught by Richard A. Holzsager. For more information on this course, contact Richard A. Holzsager at the above address and phone number.

DATA STRUCTURES USING Ada

University Offeror: Gallaudet University
Department of Math/Computer Science
Washington, DC 20002
(202) 651-5315

The objective of this course is to introduce students to Ada at the same time they learn data structures. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) software engineering, design concepts, technical programming, and programming support environment. The concepts covered in this course are exception handling, generics, strong typing, packages, abstract data types, and problem solving. The application area emphasized is data structure design.

The audience of this course includes programmers. There are prerequisites that must be satisfied before enrolling in this course. Previous computer programming experience is advised.

The course materials include the text Data Structures With Ada by M.B. Feldman. The VAX 11/8600 computer running VMS and the DEC compiler are used. Students receive hands-on experience with the Ada language.

This four credit course is taught periodically. The class meets for 10 weeks for a total of 40 days and 40 hours. Undergraduate degree students are eligible to participate in this course. This course is offered for graduate credit.

This course is taught by Howard L. Egan.

Ada LANGUAGE SYSTEM/NAVY COMMON Ada BASELINE

Military Institution Offeror: US Navy
 NAVSEA
 PMS 408
 Washington, DC 20362-5101
 (202) 692-8204

The objective of this course is to familiarize students with the use of the ALS/N Common Ada Baseline Database, and Command Language. This course is taught as a class lecture/seminar. The thrust(s) of the course is (are) programming support environment. The application area emphasized is ALS/N.

The course materials include the text Software Engineering with Ada by Grady Booch. Students do not receive hands-on experience with the Ada language.

This five credit course is taught periodically. The class meets for 4 weeks for a total of 20 days and 160 hours.

For more information on this course, contact CDR Dave Endicott at the above address and phone number.

2.53 Guam

No responses were received from academic institutions in Guam.

2.54 Puerto Rico

No responses were received from academic institutions in Puerto Rico.

2.55 Virgin Islands

No responses were received from academic institutions in the Virgin Islands.

3. Textbooks

There are several textbooks available on the Ada language. For a listing of Ada textbooks, contact the AdaIC.

4. Other Information

4.1 How to be Included in Future CREASE Editions

If you did not receive a questionnaire for CREASE Version 5.0 and would like to provide information for future CREASE editions, please complete the following form and return it to the AdaIC. Your name will be added to the AdaIC mailing list and you will automatically receive a questionnaire before the next publication of CREASE.

ORGANIZATION: _____

ADDRESS: _____

CITY: _____

STATE: _____

ZIP: _____

TELEPHONE: _____

RETURN TO:

Ada Information Clearinghouse
3D139 (1211 Fern, C-107)
The Pentagon
Washington, DC 20301-3081
(703) 685-1477

4.2 CREASE Version 5.0 Ordering Information

CREASE is available from the Defense Technical Information Center (DTIC) and from the National Technical Information Service (NTIS). DTIC distributes documents only to military, government, or defense contractors who are registered users of DTIC. All documents that are input to DTIC and are marked UNCLASSIFIED/UNLIMITED are automatically forwarded to NTIS. NTIS distributes documents to the general public at a cost. Each document is referenced by an accession number, which is the same for both DTIC and NTIS. Contact the AdaIC to obtain the accession number for CREASE Version 5.0.

DTIC
Defense Technical Information Center
Cameron Station
Alexandria, VA 22314
(703) 274-7633

NTIS
National Technical Information Service
U.S. Department of Commerce
5285 Port Royal Road
Springfield, VA 22161
(703) 487-4650

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