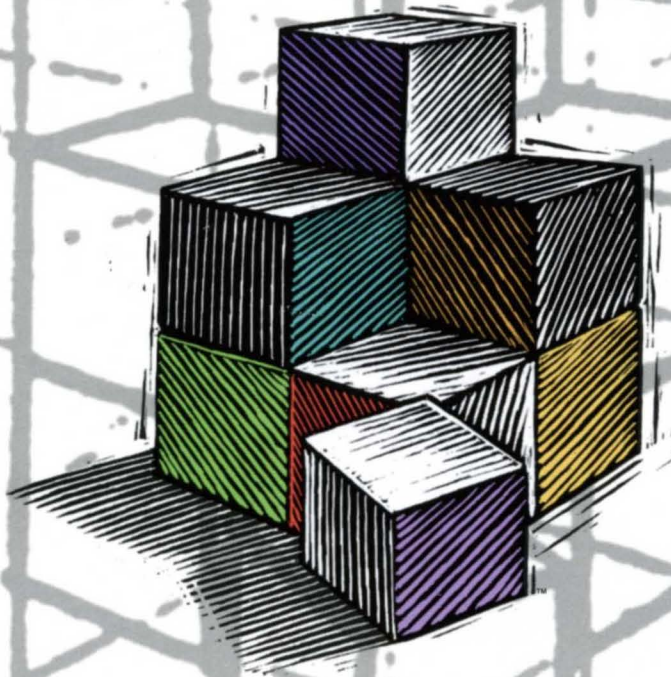


# NEXTSTEP™

*Support & Education Catalog*



FALL/WINTER 1993

**NEXTSTEP™**

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*Support & Education Catalog*

FALL/WINTER 1993



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# INTRODUCTION

The NEXTSTEP computing environment delivers a variety of new powers and capabilities to the desktop. To help you make the most of these capabilities, NeXT™ provides a wide range of support and education services for application developers, system administrators, and end users alike.

NeXT's experienced teams of support and educational professionals are dedicated to the success of all organizations using NEXTSTEP, including corporations, government agencies, commercial software developers, VARs, and system integrators.

In this catalog, you'll find support packages and classes designed to match every need, from free services such as the NeXTanswers™ document retrieval system to fully customized services such as the NEXTSTEP Mentorship Program for application developers.

Note that the information provided here applies only to locations in the U.S. For information regarding European support and education, contact your local NeXT representative.

The products and prices herein are subject to change.

# SUPPORT SERVICES

NeXT technical support is designed to help your organization stay focused on the task, not the tool. Delivered by a team of professional support engineers, NeXT technical support provides prompt, reliable telephone and e-mail responses to your system administration and application development questions—whether you're a corporate user, developer, reseller, or manager of a large systems network.

To help you attain a level of technical support that precisely suits your budget and your needs, NeXT offers three basic support packages:

- Free support through NeXTanswers: Responses to many of your technical questions are available instantly and at no cost to you—via fax or e-mail—through the NeXTanswers document retrieval system.
- Technical hotline support: Assistance with technical problems for both system administrators and application developers, available either by subscription or on a per-call basis.
- Premium support: NeXT's highest level of technical support entitles you to personal priority response for each question from your own designated NeXT technical support engineer in addition to 12 bundled on-site days.

For general information on any of these packages, call 1-800-848-NeXT (from outside North America call +1-415-424-8500). More specific registration information is included with the discussion of each individual package on the following pages.

## REACHING NeXT USERS AND DEVELOPERS

### International NeXT User Groups

International NeXT User Groups provide a forum for meeting other NEXTSTEP developers, exchanging ideas and software, seeing the latest in NEXTSTEP software development, and providing feedback to NeXT. Currently, there are over 430 NeXT user groups with over 20,000 members worldwide. For information about the NeXT User Group nearest you or information on how to start a new NeXT User Group, e-mail [user\\_groups@next.com](mailto:user_groups@next.com) or call 1-800-848-NeXT (+1-415-424-8500 from outside North America).

Special interest NeXT user groups (SIGs) also provide a resource for quick technical answers from the NeXT community and are available to any NeXT developer with e-mail access, regardless of location. Three SIGs of particular interest to developers are:

- NeXTManagers—for NeXT network and system administration. To join, e-mail: [next-managers-request@StOlaf.EDU](mailto:next-managers-request@StOlaf.EDU).
- Developers/Programmers—for NeXT Programmers. To join, e-mail: [next-prog-request@cpac.Washington.EDU](mailto:next-prog-request@cpac.Washington.EDU).
- NeXT Nugget News Electronic Digest. To subscribe, send e-mail to [user\\_groups@next.com](mailto:user_groups@next.com).

A total of over 1,200 members participate in these three SIGs. There are 28 additional NeXT SIGs, including groups for Improv™, FrameMaker®, DataPhile™, *Mathematica*®, and publishing.

For more information about NeXT SIGS, e-mail [user\\_groups@next.com](mailto:user_groups@next.com) or call 1-800-848-NeXT (+1-415-424-8500 from outside North America).

#### **NeXT Forum on CompuServe**

CompuServe® provides bulletin boards, technical materials, and electronic conferences worldwide. In most of North America and Europe, you can use a local phone number and avoid long-distance charges. On CompuServe you can leave messages, announcements, questions, answers, and general NeXT trivia in a special section. A library section (similar to an archive site) offers a place to upload and download programs and other files. There are also “live” computer conferences scheduled with NeXT users from around the world.

CompuServe offers NeXT users and developers a special free membership and \$15.00 usage credit so you can familiarize yourself with the system. There is no obligation, and you may cancel your account at any time. Call 1-800-848-8199 and ask for representative #235 for this special offer (in Europe call +49-89-66-550-111). If you’re already a CompuServe member, type **GO NEXTFORUM** at any ! prompt to access the NeXT Forum.

### **Archive Sites**

Technical papers and programming materials are often available on archive servers. If you have access to the Internet, you can submit and receive materials via anonymous **ftp** at any of several archive sites. For example, you can use **ftp** to access **sonata.cc.Purdue.EDU** or **cs.Orst.EDU**, log in as **anonymous** with any password, and **cd** to **pub/next**. You can retrieve a list of NeXT archive sites by retrieving the file **pub/next/ARCHIVES** from Purdue. More information on using **ftp** can be found in the UNIX<sup>®</sup> manual page.

Purdue also provides e-mail access to the archive server for those without FTP or Internet access. To access the server via e-mail, send an e-mail message with no text—just a subject line saying “help”—to **archive-server@cc.Purdue.EDU**. It will return instructions on how to get materials, such as an index of what’s available or a list of archive sites. If the From line in your message header won’t be in Internet format (for example, **name@site.edu**), include in your message a line of the form **pathname@site.edu** or **pathwellknownsite!yoursite!yourname@uunet.uu.net**. Note that paths of the form **name@site.bitnet** and **name@site.UUCP** won’t work.

### **Internet Net News: comp.sys.next Bulletin Board**

You can subscribe to the **comp.sys.next** bulletin board if you have access to the Internet and are set up to receive Net News. NewsGrazer, which has a user interface similar to NeXTmail™, is a public domain program for reading news on a NEXTSTEP computer. It’s available on the Purdue archive server.

Note that the Internet usage guidelines vary depending on the particular portion of the net to which you’re connected. Be sure to adhere to the guidelines specific to your Internet usage.



## NeXTanswers

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**Objective** To provide quick answers—*free of charge*—to many frequently asked technical questions about NEXTSTEP, through an on-line information retrieval system.

**Description** Using fax, e-mail, or FTP, NeXTanswers delivers responses to a wide variety of technical questions about the NEXTSTEP user and development environments.

Information available from NeXTanswers covers a wide variety of topics, including:

- NEXTSTEP for Intel® Processors configuration and compatibility guidelines
- NEXTSTEP installation instructions
- Lists of known bugs and workarounds
- Source code examples for developers
- Articles from *NEXTSTEP In Focus* and *NXApp*
- Commonly asked technical questions and corresponding answers

Also accessible through NeXTanswers is an index of all documents maintained by the service.

**Who should use this** All NEXTSTEP users and developers

**Subscription price** *It's FREE!*

**Access information** NeXTanswers is accessible 24 hours a day by calling (415) 780-3990. If you use the Internet, send an e-mail message to [NeXTanswers@next.com](mailto:NeXTanswers@next.com) with "help" in the Subject line for information about using the service.

**By Anonymous FTP** To use NeXTanswers by anonymous FTP, connect to [FTP.next.com](ftp://ftp.next.com) and read the help file [pub/NeXTanswers/README](ftp://pub/NeXTanswers/README).

## NeXTanswers QUARTERLY

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**Objective** To provide a quarterly CD-ROM to NEXTSTEP users and support partners that contains current technical information on NEXTSTEP and NEXTSTEP Developer. The CD-ROM provides access to all the latest technical information available on the NeXTanswers on-line information retrieval system.

**Description** A quarterly CD-ROM containing the following information:

- NEXTSTEP for Intel® Processors configuration and compatibility guidelines
- NEXTSTEP installation instructions
- Lists of known bugs and workarounds
- Source code examples for developers
- Articles from *NEXTSTEP In Focus* and *NXApp*
- Commonly asked technical questions and corresponding answers

**Who should use this** All NEXTSTEP developers, system administrators, and users interested in remaining current on NEXTSTEP technical issues.

**Subscription price** \$395 per year for an annual subscription

**Registration and Information** Call 1-800-848-NeXT (from outside North America call +1-415-424-8500) or fax (415) 780-2801.

\*Members of the Registered Developer and Registered Consultant programs receive a subscription free with their membership in the program. Sites that have Premium Support receive one annual subscription.

## SYSTEM SUPPORT HOTLINE

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**Objective** To provide system administrators and support staff with direct access to NeXT networking and system administration expertise.

**Description** The System Support Hotline offers high-end technical support for issues related to NeXT system administration, network management, and NeXT-provided system and application software.

The hotline supplements your organization's support resources by providing them with direct access to in-depth networking and system administration expertise from NeXT Customer Support engineers.

For technical assistance, support organizations can connect to the Internet and use e-mail to facilitate the exchange of messages and files. You can send questions through e-mail to [ask\\_next@next.com](mailto:ask_next@next.com). To comment on service provided by the System Support Hotline, you can send e-mail to [sysadmin\\_comments@next.com](mailto:sysadmin_comments@next.com).

To contact the System Support Hotline directly, call or fax us at the following numbers:

- Fax: Call (415) 780-2801 (add +1 from outside North America)
- Telephone: Between 6:00 am and 5:00 pm Pacific Time, call 1-800-848-NeXT (outside North America call +1-415-424-8500).

**Who should use this** NEXTSTEP system administrators, network managers, and others administering NeXT networks. Completion of either the *NEXTSTEP System Administration* class or the *Fast-track NEXTSTEP System Administration* class is strongly recommended for each system support contact.

**Options** Options available for accessing the System Support Hotline are:

- *System Support Hotline Subscription*: Each System Support Hotline subscription provides 12 months of unlimited hotline access for two designated system support contacts on your system administration team. Additional contacts from your organization can be added to the service at a reduced price.
- *System Support Pay-per-Call*: Pay-per-Call provides a flexible support option for organizations which must minimize annual support costs and need only occasional support. Through this service, the same high-quality support offered to System Support Hotline subscribers is available on an as-needed basis.

Using Pay-per-Call support, you can call or e-mail a brief problem description and include a return telephone or fax number. A Customer Support representative will call you to request credit card information. Once credit card information has been verified, a Customer Support engineer will address the problem.

### Subscription prices

- *System Support Hotline Subscription*: \$3,000 per year for two designated contacts. Additional designated contacts: \$500 per year per contact, maximum purchase of two.
- *System Support Pay per Call*: \$30 per quarter hour increment; \$120 charge per hour call. Pay-per-Call support must be charged to a credit card (sorry, no checks or purchase orders).

**Registration and information** Call 1-800-848-NeXT (from outside North America call +1-415-424-8500) or fax (415) 780-2801.

## DEVELOPER SUPPORT

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**Objective** To provide developers direct access to NEXTSTEP software development expertise

**Description** The Developer Hotline offers high-end technical support for NEXTSTEP developers in areas such as object design, user interface design, coding, debugging, and the use of NEXTSTEP development tools.

The hotline supplements your organization's development resources by providing direct access to the software development expertise of NeXT's Technical Support engineers.

For the most effective support, development organizations should forward questions through e-mail to [ask\\_next@next.com](mailto:ask_next@next.com). To comment on service provided by the Developer Hotline, you can send e-mail to [developer\\_comments@next.com](mailto:developer_comments@next.com).

While e-mail provides the fastest, most efficient means of contacting the Developer Hotline, you can also ask questions by either fax or phone.

- Fax: Call (415) 780-2801 (add +1 from outside North America)
- Telephone: Between 8:00 am and 5:00 pm Pacific Time, call 1-800-848-NeXT (outside North America call +1-415-424-8500).

**Who should use this** NEXTSTEP application developers

**Options** Options available for accessing the Developer Support Hotline are:

- *Developer Support Hotline Subscription*: Each Developer Hotline subscription provides 12 months of unlimited hotline access for two designated developer contacts on your software development team. Additional contacts from your organization can be added to the service at a reduced price.

- *Developer Support Pay-per-Call*: Pay-per-Call provides a flexible support option for developers who must minimize annual support costs and need only occasional support. Through this service, the same high-quality support offered to Developer Hotline subscribers is available on an as-needed basis.

Using Pay-per-Call support, you can call or e-mail a brief problem description and include a return telephone or fax number. A Technical Support representative will request credit card information. Once credit card information has been verified, Technical Support engineers will address the problem.

- *Portable Distributed Objects (PDO) Support*: By purchasing PDO Support you can extend the support provided under the standard Developer Support Hotline to PDO installation, platform specific code conversions, and other platform specific development areas.

### Subscription prices

- *Developer Support Hotline Subscription*: \$5,000 per year for two designated contacts. Additional designated contacts: \$500 per year per contact, maximum purchase of two.
- *Developer Support Pay-per-Call*: \$200 charge per hour with a one-hour minimum. Pay-per-Call support must be charged to a credit card (sorry, no checks or purchase orders).
- *Portable Distributed Objects (PDO) Support*: \$2,000 per year. Customer must purchase Developer Support Hotline Subscription.

**Registration and information** Call 1-800-848-NeXT (from outside North America call +1-415-424-8500) or fax (415) 780-2801.

## **BUNDLED DEVELOPER & SYSTEM SUPPORT HOTLINE**

**Objective** To provide both developers and system support staff with direct access to NEXTSTEP expertise in a single package

**Description** This hotline bundle provides unlimited 12-month access to the Developer Hotline for two developer contacts and to the System Support Hotline for two system support contacts.

See the Developer Hotline and System Support Hotline descriptions for information about these services.

**Who should use this** NEXTSTEP application developers and system support staff

### **Subscription price**

- *Support Hotline Bundle:* \$7,000 per year for two designated developer and two designated system administrator contacts
- *Portable Distributed Objects (PDO) Support:* \$2,000 per year. Customer must purchase either a Developer Support Hotline Subscription or a Bundled Developer and System Support Hotline Subscription.
- *Additional designated contacts:* \$500 per year per contact, maximum purchase of two per hotline (for either hotline)

**Registration and information** Call 1-800-848-NeXT (from outside North America call +1-415-424-8500) or fax (415) 780-2801.

## PREMIUM SYSTEM SOFTWARE SUPPORT

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**Objective** To provide you with a comprehensive technical support program that focuses on the special operating system support needs of NEXTSTEP users in large, heterogeneous networks

**Description** For many customers, the size, complexity, and mission-critical importance of their NEXTSTEP environment dictate the need for a more comprehensive technical support program than that provided by the System Support Hotline. Through the Premium System Software Support program, NeXT works closely with you throughout your NEXTSTEP system deployment to provide highly personalized technical consultation and support in NEXTSTEP system configuration and installation, integration of NEXTSTEP systems into heterogeneous networks, bundled NEXTSTEP applications, and ongoing NEXTSTEP system administration.

The program includes the following advanced support services:

- A designated System Software Support engineer who's assigned as your primary technical support provider and is accessible via telephone and e-mail
- First-priority call handling when you require urgent technical support
- Up to six authorized support contacts in your technical support and systems engineering organizations who have direct access to your NeXT System Software Support engineer
- Twelve days of on-site support by your designated System Software Support engineer, scheduled at the mutual convenience of you and NeXT, to provide direct consultation on NEXTSTEP software and network configuration design, NEXTSTEP installation, system administration practices and procedures, and resolution of current technical issues
- Emergency on-site problem response for serious, disabling NEXTSTEP operating system problems that can't quickly be resolved through remote support (subject to certain conditions)
- Monthly support status reports and periodic technical information updates

**Who should use this** Systems engineering and technical support teams responsible for implementation planning, operating system installation, and networking and system administration of NEXTSTEP computers. Note that completion of the *NEXTSTEP System Administration* class by your system administration team is highly recommended.

**Subscription price** \$35,000 per year plus expenses. Additional on-site support days can be purchased for \$1,500 per day plus expenses.

**Registration and information** Contact your NeXT sales representative or call NeXT at 1-800-848-NeXT.

## PREMIUM DEVELOPER SOFTWARE SUPPORT

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**Objective** To provide you with a comprehensive support program that strengthens the technical knowledge of your NEXTSTEP developers, assisting them in the accelerated delivery of successful application development

**Description** If your organization is new to NEXTSTEP development, you may find you want a more comprehensive support program than that provided by the Developer Support Hotline. Through the Premium Developer Software Support program, NeXT works closely with you through the development cycle to provide highly personalized technical consultation and support in the optimal use of the NEXTSTEP development environment.

Supplementing the formal education offered in NeXT's extensive *NEXTSTEP Developer Curriculum*, Premium Developer Software Support provides a vital resource for new NEXTSTEP developers making the transition to object-oriented application development.

The program includes the following advanced support services:

- A designated Developer Support engineer who's assigned as your primary technical support provider and is accessible via telephone and e-mail
- First-priority call handling when you require urgent technical support
- Up to six authorized support contacts in your development group who have direct access to your NeXT Developer Support engineer
- Twelve days of on-site support from a NEXTSTEP Developer Consultant, scheduled at the mutual convenience of you and NeXT; this consultation is intended to provide your development team with additional insights into NEXTSTEP application development issues, including program architecture, object design and reusability, user interface design, optimal use of the development environment, coding structure and practices, and specific technical issues
- Monthly support status reports and periodic technical updates to provide you with additional information of interest to NEXTSTEP developers

**Who should use this** Application development teams responsible for designing and programming NEXTSTEP-based applications.

Note that completion of all core classes in the *NEXTSTEP Developer Curriculum* by your application development team is highly recommended.

**Subscription price** \$40,000 per year plus expenses. Additional on-site support days can be purchased for \$1,500 per day plus expenses.

**Registration and information** Contact your NeXT sales representative or call NeXT at 1-800-848-NeXT.

**NEXTSTEP IN FOCUS  
NEXTSTEP SYSTEM SUPPORT BULLETIN**

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**Objective** To provide regular communication on technical topics and help users and system administrators understand and benefit most from the NEXTSTEP environment.

**Description** Published quarterly by NeXT, *NEXTSTEP In Focus* is a technical support bulletin that focuses on system support and networking issues, and covers additional topics of interest to all users.

**Who should use this** Support staff responsible for maintaining the NEXTSTEP environment; users who want to acquire more technical information about their work environment.

**Subscription price** \$100 per year, \$150 outside the U.S.

**Registration and information** Call 1-800-848-NeXT (from outside North America call +1-415-424-8500) or fax (415) 780-2801.

**NXApp  
NEXTSTEP DEVELOPER JOURNAL**

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**Objective** To provide regular communication to the NEXTSTEP development community and assist customers on how to make the most of the NEXTSTEP development environment.

**Description** Published quarterly by NeXT, *NXApp* is a technical journal that provides timely information to programmers who develop NEXTSTEP applications. *NXApp* provides high-level overviews of NEXTSTEP architecture, including guidance in their intended use, as well as details about particular kits and tools. It includes object-oriented application and user interface design guidance, and it covers compliance with NEXTSTEP interface guidelines. Articles that describe code or examples are accompanied by well-written and commented sample code, which is included on a disk with each issue.

**Who should use this** *NXApp* is intended for all developers who program for NEXTSTEP. This includes third-party product developers, consultants, and corporate developers.

**\*Subscription price** \$150 per year, \$200 outside the U.S.

**Registration and information** Call 1-800-848-NeXT (from outside North America call +1-415-424-8500) or fax (415) 780-2801.

\*Members of the Registered Developer and Registered Consultant programs receive a subscription free with their membership in the program. Sites that have Premium Support receive two subscriptions yearly.

# EDUCATION

The goal of the NEXTSTEP environment is to make your organization more efficient—and the goal of the NEXTSTEP curriculum is to efficiently transfer expertise from NeXT to your organization. With recent updates to our course offerings—motivated in large part by feedback from customers like you—NeXT’s education group now offers both a larger selection of classes and the ability to create custom classes that meet the specific needs of your organization.

We understand that NEXTSTEP is a tool that you need to learn to use quickly—and our classes are designed to help you do so, by providing substantial technical information as well as the opportunity to explore and discover NEXTSTEP on your own. In both lectures and labs, students are encouraged to ask questions and try new approaches to problem solving.

## CURRICULUM

NeXT Education offers two separate learning paths, one for developers, the other for system support staff:

- Developer curriculum provides both fundamental courses for application developers migrating to NEXTSTEP from other environments, and advanced courses for those familiar with NEXTSTEP programming fundamentals.
- System administration curriculum provides familiarization with the NEXTSTEP platform, practical experience with installation and configuration issues, and specific classes on network management and system administration.

In addition, productivity classes for NEXTSTEP end users are offered through certified third party trainers. For your convenience, this catalog provides a list of those trainers.



**OPEN ENROLLMENT AND ON-SITE CLASSES**

You can participate in a NEXSTEP class at one of our training locations or at your own site. Open enrollment classes are scheduled in Redwood City, California, and Chicago, Illinois. On-site classes can be arranged through your NeXT representative or by calling NeXT Education registration at 1-800-848-NeXT.

**THE MENTORSHIP PROGRAM**

The Mentorship Program is a focused educational tool intended to bring expertise in designing and implementing critical applications to your organization. The Mentorship Program intensifies the learning experience by teaming your application developers with an individual NeXT mentor.

These NeXT training professionals bring individual attention to the specific needs of your site to ensure that, upon completion of the program, your developers understand the issues involved in successfully designing and implementing their mission-critical custom applications.

**REGISTRATION**

To register for a class or to obtain more information about any training topic, call 1-800-848-NeXT and select option 2 for Training. If you're calling from outside the U.S. or don't have access to a touch-tone phone, call (+1) (415) 424-8500.

**CLASS CONFIRMATION**

Although we try to meet all published commitments, class dates and locations are subject to change. After you register for a class, you will be notified of any changes 10 business days prior to the class.

**CANCELLATION POLICY**

Class fees are fully refundable if you notify NeXT of the cancellation at least 10 business days before the class begins. Cancellations received after the 10-day deadline aren't refundable, but the tuition may be applied to other NeXT classes.

# DEVELOPER CURRICULUM

## Open Enrollment

Introducing  
NEXTSTEP

Programming  
NEXTSTEP

Programming  
Database Kit™ or Advanced  
NEXTSTEP

## On-Site

*Introductory  
Classes*

Introducing  
NEXTSTEP

Migrating from Cobol or Migrating from Windows or Migrating from UNIX® or Migrating from C++

*Core Classes*

NEXTSTEP  
Basics

Application Kit™ or Cooperating Applications or Forms-Based Applications or Designer's Introduction to NEXTSTEP or Drawing

*Advanced  
Classes*

Programming  
Database Kit™ or Advanced  
NEXTSTEP

## **INTRODUCING NEXTSTEP**

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**Goal** To provide a technical entry point to the NEXTSTEP environment, enabling students to use NEXTSTEP and the development tools; to provide an introduction to the C programming language and its object-oriented extension Objective C

**Who should attend** Technical evaluators and programmers new to NEXTSTEP, and programmers new to C and Objective C

**Prerequisites** Programming experience in a high-level language

**Length** Five days

**Price** \$1,500 per person

### **Class syllabus**

*Getting Comfortable with NEXTSTEP:* A look at the features and benefits with attention to both the user interface and the development aspects of NEXTSTEP

*User Interface and Tools:* An overview of the NEXTSTEP user interface; introduction to techniques for managing multiple applications; hands-on use of the basic tools of the user

*Understanding NEXTSTEP Capabilities:* An overview of NEXTSTEP features and the Application Kit; presentation of cooperating applications using services, rich pasteboard support, links, drag & drop, and working with foreign file systems; introduces drawing, Distributed Objects, the Database Kit™, and the Indexing Kit™

*Introducing NEXTSTEP Development Skills:* Exploring the development cycle; a look at rapid prototyping and user interface construction; an introduction to and exercises with C and Objective C

## PROGRAMMING NEXTSTEP

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**Goal** To teach the NEXTSTEP development environment, programming tools, and techniques used to write NEXTSTEP software applications; to gain the ability to write an application from scratch

**Who should attend** Application software developers, commercial and noncommercial

**Prerequisites** *Introducing NEXTSTEP* or equivalent experience, and prior C programming experience; familiarity with object-oriented programming is helpful.

**Length** Five days

**Price** \$1,800 per person

### Class syllabus

*NEXTSTEP:* An overview of the language, libraries and tools

*Object-Oriented Programming:* General concepts

*Objective C Language:* The three simple additions made to C to create the Objective C language

*Objective C Classes:* Creating new types of objects

*Program Structure:* Organizing and managing user interfaces and logical models; how NEXTSTEP's kits of objects simplify the creation of new applications

*Application Kit:* The generic application framework provided by NeXT to which your custom objects are added; a high-level look at the core classes of the Application Kit

*Interfaces, Instances, and Custom Classes:* Building interfaces; creating and adding custom objects to them

*Events:* Overview of the NEXTSTEP event-driven system

*Notification:* How receiving objects notify other objects to handle events

*Controls and Cells:* The objects that connect the user to your application's logic

*The Text Object:* Getting and interacting with text

*Matrices:* Dealing with smart collections of user interface elements

*Multiwindow Applications:* Building applications with reusable components

*Panels and Supporting Objects:* Taking advantage of built-in functionality

*From Scratch Lab:* Lab experience to build independence in working with the NEXTSTEP environment

## PROGRAMMING DATABASE KIT

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**Goal** To introduce the architecture and features of the Database Kit, and how to write applications that retrieve and display information from databases

**Who should attend** Experienced programmers with at least one month of experience working with NEXTSTEP

**Prerequisites** *Programming NEXTSTEP* or equivalent; knowledge of NEXTSTEP Release 3, Interface Builder™, and Project Builder; relational database experience is helpful.

**Length** Two days

**Price** \$1,100 per person

### Class syllabus

*Note: This class does not cover how to write adaptors.*

*Database Kit Overview:* The application architecture and the relational data model

*DBModeler:* Designing a database model

*User Interface and Database Kit:* Accessing databases in Interface Builder

*DBModeler, DBFetchGroups and DBRecordLists:* Writing data access applications and retrieving data using properties and DBRecordLists

*DBQualifiers:* Limiting data selected from the database

*Entities and Properties:* Overview and explanations of both

*DBValue:* Uses of the DBValue object

*DBExpressions:* Fetching derived information from a datasource

*Datasource Values:* Modifying values in a datasource

*Sorting:* Sorting information in a query

*DBDatabase:* Using DBDatabase objects to connect to a datasource

*DBBinder:* Fetching data into custom objects

## ADVANCED NEXTSTEP

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**Objective** To present and explore advanced NEXTSTEP programming techniques

**Who should attend** Experienced NEXTSTEP programmers with at least three months experience working with NEXTSTEP

**Prerequisites** *Programming NEXTSTEP* or equivalent

**Length** Five days

**Price** \$1,800 per person

### Class syllabus

*Building Better Objects:* Discusses palettes, delegates, class variables, and categories

*Performance and Portability:* Describes performance tuning techniques, zones, and threads and thread-safety; presents portability issues

*Advanced Features:* Discusses filters, Undo, timers, and modal loops

## INTRODUCING NEXTSTEP

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**Goal** To provide a technical entry point to the NEXTSTEP environment, giving students the ability to use NEXTSTEP and the development tools; to provide an introduction to the C programming language and its object-oriented extension Objective C

**Who should attend** Technical evaluators and programmers new to NEXTSTEP; programmers new to C and Objective C

**Prerequisites** Programming experience in a high-level language

**Length** Five days

**Price** \$15,000 per class

### Class syllabus

*Getting Comfortable with NEXTSTEP:* A look at features and benefits with attention to both the user interface and the development aspects of NEXTSTEP

*User Interface and Tools:* An overview of the NEXTSTEP user interface; introduction to techniques for managing multiple applications; hands-on use of the basic tools of the user

*Understanding NEXTSTEP's Capabilities:* An overview of NEXTSTEP features and the Application Kit; presentation of cooperating applications using services, rich pasteboard support, links, drag & drop, and working with foreign file systems; introduces drawing, Distributed Objects, the Database Kit, and the Indexing Kit

*Introducing NEXTSTEP Development Skills:* Exploring the development cycle; a look at rapid prototyping and user interface construction; an introduction to and exercises with C and Objective C

## MIGRATING FROM COBOL

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**Goal** To provide a logical and comfortable transition from a mainframe, COBOL programming environment to the NEXTSTEP programming environment

**Who should attend** Application developers who understand COBOL program development well, are moving to the NEXTSTEP development environment, and need to acquire the NEXTSTEP skill set

**Prerequisites** Programming experience in COBOL

**Length** Two days

**Price** \$6,000 per class

### Class syllabus

*Terms and Concepts:* Mapping terms and concepts familiar to the audience to those used in NEXTSTEP

*Tools and Techniques:* Exploring similarities and differences in tools and techniques with a focus on common programming tasks

*Mainframe vs. Client/Server:* Structuring solutions in a client/server or distributed environment

## MIGRATING FROM WINDOWS

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**Goal** To provide a logical and comfortable transition from a Windows programming environment to the NEXTSTEP programming paradigm

**Who should attend** Application developers who understand the Windows environment well, are moving to the NEXTSTEP development environment, and need an overview of the NEXTSTEP skill set

**Prerequisites** Experience in programming in Windows™

**Length** Two days

**Price** \$6,000 per class

### Class syllabus

*Terms and Concepts:* Mapping terms and concepts familiar to the audience to those used in NEXTSTEP

*Tools and Techniques:* Exploring similarities and differences in tools and techniques with a focus on common programming tasks

*Alternatives:* The options presented by NEXTSTEP

## MIGRATING FROM UNIX

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**Goal** To provide a logical and comfortable transition from a UNIX programming environment to the NEXTSTEP programming environment

**Who should attend** Application developers who understand the UNIX environment well, are moving to the NEXTSTEP development environment, and need an overview of the NEXTSTEP skill set

**Prerequisites** Experience in programming in C under UNIX

**Length** One day

**Price** \$3,000 per class

### Class syllabus

*Terms and Concepts:* Mapping terms and concepts familiar to the audience to those used in NEXTSTEP

*Tools and Techniques:* Exploring similarities and differences in tools and techniques with a focus on common programming tasks

*UNIX and Mach:* Taking advantage of the “UNIX inside NEXTSTEP”; techniques for quick productivity on the NEXTSTEP platform

## **MIGRATING FROM C++**

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**Goal** To provide a logical and comfortable transition from a C++ programming environment to the NEXTSTEP programming environment

**Who should attend** Application developers who understand C++ programming well, are moving to the NEXTSTEP development environment, and need an overview of the NEXTSTEP skill set

**Prerequisites** Experience in programming in C++

**Length** One day

**Price** \$3,000 per class

### **Class syllabus**

*Terms and Concepts:* Mapping terms and concepts familiar to the audience to those used in NEXTSTEP

*Tools and Techniques:* Exploring similarities and differences in tools and techniques with a focus on common programming tasks

*C++ and Objective C:* Porting a simple C++ application



## NEXTSTEP BASICS

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**Goal** To present the core elements of NEXTSTEP programming and to provide a foundation for acquiring additional skills

**Who should attend** Programmers with some introduction to or familiarity with the NEXTSTEP environment

**Prerequisites** *Introducing NEXTSTEP* or equivalent

**Length** Three days

**Price** \$9,000 per class

### Class syllabus

*NEXTSTEP:* An overview of the language, libraries, and tools of NEXTSTEP

*Object-Oriented Programming:* General concepts

*Objective C Language:* The three simple additions made to C to create the Objective C language

*Objective C Classes:* Creating new types of objects

*Program Structure:* Organizing and managing user interfaces and logical models; how NEXTSTEP's kits of objects simplify the creation of new applications

*Application Kit:* The generic application framework provided by NeXT to which your custom objects are added; a high-level look at the core classes of the Application Kit

*Interfaces, Instances, and Custom Classes:* Building interfaces; creating and adding custom objects to them

*Events:* Overview of the NEXTSTEP event-driven system

*Notification:* How receiving objects notify other objects to handle certain events

*From Scratch Lab:* Lab experience to build independence in working with the NEXTSTEP environment

## APPLICATION KIT

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**Goal** To present the fundamentals of the Application Kit

**Who should attend** NEXTSTEP programmers

**Prerequisites** *NEXTSTEP Basics*

**Length** Two days

**Price** \$6,000 per class

### Class syllabus

*Controls and Cells:* The objects that connect your application's logic with the user

*The Text Object:* Getting and interacting with text

*Matrices:* Dealing with smart collections of user interface elements

*Multwindow Applications:* Building applications with reusable components

*Panels and Supporting Objects:* Taking advantage of built-in functionality

## COOPERATING APPLICATIONS

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**Goal** To present the issues inherent in communications among applications and solutions provided by NEXTSTEP

**Who should attend** NEXTSTEP programmers

**Prerequisites** *Programming NEXTSTEP* or *NEXTSTEP Basics*

**Length** Two days

**Price** \$6,000 per class

### Class syllabus

*Interprocess Communication:* Understanding the Mach kernel and communication issues

*Protocols:* Looking at Objective C's support for designers to describe inter-application communication

*Distributed Objects:* Using the simple messaging syntax of Objective C to send network messages; building client/server and distributed systems

*Pasteboard and Services:* Moving complex data within and between applications providing transparent, NEXTSTEP-managed inter-application services as a basic feature of your application

*Advanced Communications:* How to support drag-and-drop interfaces; how to provide "hot links" between the documents and selections of applications

## FORMS-BASED APPLICATIONS

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**Goal** To teach user-interface techniques for programmers who are building form-based interfaces or database front-end applications

**Who should attend** NEXTSTEP programmers, especially those interested in database applications; programmers planning on attending the *Programming Database Kit* class

**Prerequisites** *Programming NEXTSTEP* or *NEXTSTEP Basics*

**Length** Two days

**Price** \$6,000 per class

### Class syllabus

*Elements of a Form:* Building a simple data-gathering interface; an introduction to data validation

*Container Classes:* Using the rich set of container classes in NEXTSTEP to hold data gathered by your application

*Browsers and Selection Lists:* Using built-in NEXTSTEP functionality to allow for selection from wide sets of data

*Database Kit Elements:* An introduction to elements of the Database Kit that provide display and selection of complex data sets, especially database-style row and column data

*Introducing Indexing Kit and Database Kit:* An introduction to two powerful frameworks: the Indexing Kit for storing and retrieving simple data or complex objects by index and the Database Kit for accessing and displaying data from industry-standard data servers

## DESIGNER'S INTRODUCTION TO NEXTSTEP

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**Goal** To present the major issues of object-oriented program design, structure, and analysis

**Who should attend** Application architects, designers, and developers

**Prerequisites** *Programming NEXTSTEP* class or *NEXTSTEP Basics* class

**Length** Two days

**Price** \$6,000 per class

### Class syllabus

*Object-Oriented Analysis:* Identifying classes, objects, attributes, and relationships

*Object-Oriented Design:* Working with the application model and the user interface; saving data and handling multiple tasks; issues involving Objective C and NEXTSTEP

*Rapid Prototyping:* Using the tools of NEXTSTEP to build interfaces and simple models that explore and validate a design; how to take advantage of user-driven interface design

*Software Product Management:* Managing all the pieces of a software project; tools and techniques

*Building an Application:* Looping from an analysis to a design to an implementation; looking at the major landmarks

## DRAWING

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**Goal** To teach device-independent drawing and printing for NEXTSTEP

**Who should attend** NEXTSTEP programmers

**Prerequisites** *Programming NEXTSTEP* class or *NEXTSTEP Basics* class; experience with the PostScript® language and Renderman® is helpful.

**Length** Two days

**Price** \$6,000 per class

### Class syllabus

*PostScript:* An introduction to the unified imaging language of NEXTSTEP

*The View Class:* The View, the fundamental class used for drawing and managing coordinate systems, and its methods for static and dynamic drawing

*The NXImage Class:* Working with bitmaps of all types; presenting images customized to a particular device or resolution

*Printing:* Overriding default printing behavior; pagination, headers, footers, and reports

*3D Graphics Kit:* An introduction to the 3D Graphics Kit™ and Renderman

## PROGRAMMING DATABASE KIT

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**Goal** To introduce the architecture and features of Database Kit, and how to write applications that retrieve and display information from databases

**Who should attend** Experienced NEXTSTEP programmers with at least one month of experience working with NEXTSTEP

**Prerequisites** *Programming NEXTSTEP* class or equivalent; knowledge of NEXTSTEP Release 3, Interface Builder, and Project Builder; relational database experience is helpful.

**Length** Two days

**Price** \$6,000 per class

### Class syllabus

*Note: This class does not cover how to write adaptors.*

*Database Kit Overview:* The application architecture and the relational data model

*DBModeler:* Designing a database model

*User Interface and Database Kit:* Accessing databases in Interface Builder

*DBModeler, DBFetchGroups and DBRecordLists:* Writing data access applications and retrieving data using properties and DBRecordLists

*DBQualifiers:* Limiting data selected from the database

*Entities and Properties:* Overview and explanations

*DBValue:* Uses of the DBValue object

*DBExpressions:* Fetching derived information from a datasource

*Datasource Values:* Modifying values in a datasource

*Sorting:* Sorting information in a query

*DBDatabase:* Using DBDatabase objects to connect to a datasource

*DBBinder:* Fetching data into custom objects

## ADVANCED NEXTSTEP

---

**Objective** To present and explore advanced NEXTSTEP programming techniques

**Who should attend** Experienced NEXTSTEP programmers with at least three months experience working with NEXTSTEP

**Prerequisites** *Programming NEXTSTEP* class or equivalent

**Length** Five days

**Price** \$15,000 per class

### Class syllabus

*Building Better Objects:* Discusses palettes, delegates, class variables, and categories

*Performance and Portability:* Describes performance tuning techniques, zones, and threads and thread-safety; presents portability issues

*Advanced Features:* Discusses filters, Undo, timers, and modal loops

# SYSTEM ADMINISTRATION CURRICULUM

Open Enrollment or On-Site

**Configuring NEXTSTEP  
Systems**

**NEXTSTEP System  
Administration**

*or*

**Fast-Track NEXTSTEP  
System Administration**

## **CONFIGURING NEXTSTEP SYSTEMS**

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**Goal** To introduce computer hardware assembly and configuration techniques, and provide technical information and experience in installing and configuring NEXTSTEP on various hardware configurations

**Who should attend** Users who need specific setup knowledge and a NEXTSTEP overview

**Prerequisites** None

**Length** Two days

**Price** \$500 per person

### **Class syllabus**

*Computer Assembly:* Assembling and configuring computer hardware components, including memory systems, device controllers, disk drives, and other devices; ISA, EISA, and local bus structure

*Installing and Starting NEXTSTEP:* Disk format and partitioning; NEXTSTEP installation and startup commands; troubleshooting hardware-related startup problems

*Configuring Devices for NEXTSTEP:* Using Configure to specify and inspect device configurations; procedures for changing configurations; error recovery techniques

## NEXTSTEP SYSTEM ADMINISTRATION

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**Goal** To provide technical information and experience in planning, configuring, and managing the software systems in a NEXTSTEP network

**Who should attend** Experienced computer users who are responsible for NEXTSTEP network and system support

**Prerequisites** The *Configuring NEXTSTEP Systems* class is recommended for people who will be assembling and managing computer hardware.

**Length** Four and one-half days

**Price** \$1,500 per person

### Class syllabus

*System Overview:* An overview of the components and relationships of NEXTSTEP, including the operating system, device drivers, UNIX processes, Workspace Manager™, shell processes, and client/server resource systems

*User Interface:* Interacting with NEXTSTEP using Workspace and UNIX shells; managing files and application programs

*UNIX Processes:* Monitoring and controlling processes; UNIX process internals, including process ID, user ID inheritance, and set-UID processes

*The File System:* The file and directory hierarchy, including plain files, directories, links, and device files; multiple file systems and file system types; UNIX file system internals

*The NetInfo System:* The structure, use, and administration of NetInfo™ domain hierarchies, including information lookup and binding in multi-level hierarchies; NetInfo database structures

*Network Configuration:* Configuring NetInfo, resource sharing, and communications systems for a network of NEXTSTEP systems

*User Accounts:* Creating and deleting user accounts; managing user account changes; customizing user account creation

*Network File Sharing:* Configuring file servers and clients; managing file system security and reliability

*Network E-mail:* E-mail server and client configuration and troubleshooting; configuring e-mail aliases and mailing lists

*Printer Configuration:* Printer and fax modem configuration; printer access controls

*System Startup and Shutdown:* The startup sequence, startup commands and script files, and shutdown commands

*Resource Monitoring:* Monitoring CPU usage, logins, memory, disk, and printer usage; accounting commands and log files

*Security:* Implementing good security; understanding security threats

*Backup:* Backup commands, including **tar**, **dump**, and **restore**; considerations for reliable backups

*Disaster Recovery:* Creating disaster plans; troubleshooting system failures; tools and techniques for system disaster recovery

## FAST-TRACK NEXTSTEP SYSTEM ADMINISTRATION

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**Goal** To provide technical information and experience in managing a NEXTSTEP network, focusing on NEXTSTEP-specific system software

**Note:** This course is a condensed version of the *NEXTSTEP System Administration* class. UNIX-related administrative concepts and procedures are omitted from this course. It is expected that some topics will be explored beyond the scope of the class syllabus.

**Who should attend** Experienced UNIX network and system administrators with some exposure to NEXTSTEP

**Prerequisites** The *Configuring NEXTSTEP Systems* class is recommended for people who will be assembling and managing computer hardware; the course assumes a basic familiarity with the NEXTSTEP user interface.

**Length** Three days

**Price** \$1100 per person

### Class syllabus

**The NetInfo System:** The structure, use, and administration of NetInfo domain hierarchies, including information lookup and binding in multi-level hierarchies; NetInfo database structures

**Network Configuration:** Configuring NetInfo, resource sharing, and communications systems for a network of NEXTSTEP systems

**User Accounts:** Creating and deleting user accounts; managing user account changes; customizing user account creation

**Network File Sharing:** Configuring file servers and clients; managing file system security and reliability

**Network E-mail:** E-mail server and client configuration and troubleshooting; configuring e-mail aliases and mailing lists

**Printer Configuration:** Printer and fax modem configuration; printer access controls

**System Startup and Shutdown:** The startup sequence, startup commands and script files, and shutdown commands

**Disaster Recovery:** Creating disaster plans; troubleshooting system failures; tools and techniques for system disaster recovery



# NEXTSTEP MENTORSHIP PROGRAM

## Week 1-2: Project Specification and Requirements Analysis

By evaluating the student's current abilities and the company's requirements, the Mentorship Project Leader is able to present a reasonable set of expectations for the program. This allows the client to accurately plan for development efforts following the Mentorship Program.

## Week 3-4: Introductory Classes and Exercises

This course provides a comprehensive and integrated introduction to NEXTSTEP and Objective C. Stressing the tools early and using them repeatedly insures that there is a real adoption of necessary skills.

## Week 5-7: Developer Classes

These courses provide a strong introduction to the NEXTSTEP programming environment. The students write several applications, while the Mentorship Project Leader creates custom exercises relevant to the project.

## Week 8-9: Object-Oriented Analysis and Design Class and Lab

The Mentorship Project Leader teaches object-oriented analysis and design philosophy. Class participates in object-oriented analysis and design of business object models.

## Week 10: Prototype Implementation

This week gives the students a chance to solidify their understanding of the concepts they have learned and used throughout the program. By completing a project and reviewing it, the students are able to experience a complete development cycle and see where the problems and successes are.

## Results

The Mentorship Project Leader provides clients with individual student evaluations, project evaluation, further training recommendations, and third-party consulting recommendations. The students create a focused proof-of-concept application, which promotes skilled developers who understand object-oriented technology.

## **MENTORSHIP PROGRAM**

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**Goal** To provide a customized learning experience that takes your development team through the entire development cycle—from design to implementation—of a proof-of-concept application. Education is customized to maintain relevance to customer's business needs.

NeXT's Mentorship Program will help educate your development team so that with experience they may become strong contributors to the analysis, design and implementation of your mission critical custom applications.

By having the NeXT Project Leader in the program focus on reusability of code issues in the analysis and design phase of the program, students will learn how to leverage completed work by creating reusable objects.

The NEXTSTEP Mentorship program is designed for companies interested in:

- Object-oriented development cycles
- Mission-critical application development
- Programming in NEXTSTEP

**Who should participate** Development teams who want expert assistance understanding object-oriented analysis, design, and development techniques by applying NEXTSTEP to part of your business model.

While development expertise of any sort requires experience in addition to education, the Mentorship Program provides a solid foundation to begin practical object-oriented and NEXTSTEP development.

By providing a dedicated Project Leader for the duration of this course a customer benefits in several ways:

- *A Project Leader manages your education:* The Project Leader addresses the individual learning needs of each student and provides remediation during the course while keeping the overall objectives of the customer in focus.
- *One point of contact familiar with customer's objectives:* Your development team has one point of contact at NeXT for education. This person is involved in their planning and understands the company's unique needs.
- *Reports on the progress of individual students:* The Project Leader provides the customer with progress reports on each student. This allows the customer to track the success of each student and helps the Project Leader make individual recommendations at the end of the course.

**Program description** The Mentorship Program combines focused training courses including, but not limited to:

- Introducing NEXTSTEP
- Introduction to C and Objective C
- Basic NEXTSTEP
- Application Kit
- Rapid Prototyping
- Object-Oriented Analysis and Design
- Implementation of Example Prototype

**Price** \$100,000 plus travel expenses with 4-10 attendees per program.

# NeXT OPEN ENROLLMENT CLASSES

Q1 and Q2 of 1994

## DEVELOPER CLASSES

<b>INTRODUCING NEXTSTEP</b>	
Date	Location
Jan 10 - 15	Redwood City, CA
Mar 21 - 25	Redwood City, CA
May 2 - 6	Redwood City, CA
<b>PROGRAMMING NEXTSTEP</b>	
Date	Location
Jan 17 - 21	Redwood City, CA
Feb 7 - 11	Redwood City, CA
Feb 21 - 25	Chicago, IL
Mar 28 - Apr 1	Redwood City, CA
Apr 18 - 22	Redwood City, CA
Apr 25 - 29	Chicago, IL
May 30 - Jun 3	Redwood City, CA
Jun 6 - 10	Chicago, IL
Jun 20 - 24	Redwood City, CA
<b>PROGRAMMING WITH DATABASE KIT</b>	
Date	Location
Jan 3 - 4	Redwood City, CA
Jan 31 - Feb 1	Chicago, IL
Mar 14 - 15	Redwood City, CA
Apr 11 - 12	Chicago, IL
May 23 - 24	Redwood City, CA
Jun 13 - 14	Chicago, IL

## SYSTEM ADMINISTRATION CLASSES

<b>ADVANCED NEXTSTEP</b>	
Date	Location
Feb 28 - Mar 4	Redwood City, CA
May 16 - 20	Redwood City, CA
<b>CONFIGURING NEXTSTEP</b>	
Date	Location
Feb 7 - 8	Redwood City, CA
Apr 4 - 5	Redwood City, CA
Jun 13 - 14	Redwood City, CA
<b>NEXTSTEP SYSTEM ADMINISTRATION</b>	
Date	Location
Jan 17 - 21	Chicago, IL
Feb 21 - 25	Redwood City, CA
Mar 7 - 9	Redwood City, CA
Mar 28 - Apr 1	Chicago, IL
Apr 11 - 15	Redwood City, CA
May 30 - Jun 3	Redwood City, CA
May 23 - 27	Chicago, IL
Jun 27 - Jul 1	Redwood City, CA
<b>FAST-TRACK NEXTSTEP SYSTEM ADMINISTRATION</b>	
Date	Location
Jan 10 - 12	Chicago, IL
Feb 14 - 16	Redwood City, CA
Apr 25 - 27	Redwood City, CA
May 9 - 11	Chicago, IL

# RECOMMENDED READING

## GENERAL PROGRAMMING TOPICS

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**Programming the Display PostScript System with NeXTstep**  
Adobe Systems Incorporated: Addison Wesley, 1992.

**Object-Oriented Design with Applications**  
Booch, Grady: Benjamin/Cummings, 1991.

**Object Oriented Programming  
An Evolutionary Approach 2nd Edition**  
Cox, Brad, and Andy Novobilski: Addison Wesley, 1991.

**NeXTSTEP Programming STEP ONE:  
Object-Oriented Applications**  
Garfinkel and Mahoney: Springer Verlag, 1992.

**The Art of Human Computer Interface Design**  
Laurel, Brenda, ed.: Addison Wesley, 1990.

**Rapid Prototyping**  
Mullin, Mark: Addison Wesley, 1992.

**NeXTSTEP Developer's Library**  
NeXT Computer: Addison Wesley, 1993.

**Objective C Object Oriented Programming Techniques**  
Pinson and Weine: Addison Wesley, 1991.

## DATABASE TOPICS

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**acm Transactions on Database Systems**  
acm PRESS.

**Relational Database Writings 1985–1989**  
Date, C. J.: Addison Wesley, 1990.

**The Practical SQL Handbook  
(Using Structured Query Language)**  
Emerson, Darnovsky, and Bowman: Addison Wesley.

**SQL & Its Applications**  
Lorie, Raymond A., and Jean-Jacques Daudenarde:  
Prentice Hall, 1991.

**Intelligent Databases—Object-oriented, Deductive  
Hypermedia Technologies**  
Parsave, Chignell, Khoshafian, and Wong: John Wiley &  
Sons, Inc.

**Database Modeling and Design—  
The Entity Relationship Approach**  
Teorey, Tobey: University of Michigan.

**Principles of Database and Knowledge Base Systems—Vol. I**  
Ullman, Jeffery D.: Computer Science Press, 1988.

## **SYSTEM ADMINISTRATION TOPICS**

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### **DNs and BIND**

Albitz, Paul, and Cricket Liu: O'Reilly & Associates, 1992.

### **The Design of the UNIX Operating System**

Bach, M.J.: Prentice-Hall, 1986.

### **Internetworking with TCP/IP, Volume I.**

Comer, Douglas: Prentice-Hall, 1991.

### **Essential System Administration**

Frisch, Aeleen: O'Reilly & Associates, 1991.

### **Practical UNIX Security**

Garfinkel, Simpson, and Gene Spafford: O'Reilly & Associates, 1991.

### **UNIX Shell Programming**

Kochan, Stephen G., and Patrick H. Wood: Hayden Books, 1988.

### **The Design and Implementation of the**

#### **4.3 BSD UNIX Operating System**

Leffler, Samuel J., Marshall Kirk McKusick, Michael J. Karels, John S. Quaterman: Addison-Wesley, 1990.

### **UNIX System Administration Handbook**

Nemeth, Evi, Garth Snyder, and Scott Seebas: Prentice-Hall, 1989.

### **The Simple Book: An Introduction to Management of TCP/IP - based internets**

Rose, Marshall T.: Prentice-Hall, 1991.

### **Managing NFS and NIS**

Stern, Hal: O'Reilly & Associates, 1991.

### **UNIX System Manager's Manual.**

#### **4.3 Berkeley Software Distribution**

University of California Computer Systems Research Group, 1986.

### **An Introduction to Berkeley Unix**

Wang, Paul: Wadsworth Publishing Company, 1988.

# NeXT CERTIFIED TRAINING PARTNERS

## TRAINING PARTNERS

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### **BESEMER & ASSOCIATES**

1630 30th St., Suite 240  
Boulder, CO 80301

**Contact** David Besemer

**Phone** (303) 449-3844

**Fax** (303) 449-3845

### **INTEGRITY SOLUTIONS INC**

23 Empire Drive  
St. Paul, MN 55103

**Contact** Dan McCreary

**Phone** (612) 223-8474

**Fax** (612) 223-8481

### **RDR, INC.**

10600 Arrowhead Drive  
Suite 350  
Fairfax, VA 22030

**Contact** Denise Britti

**Phone** (703) 591-8713

**Fax** (703) 273-8170

### **PENCOM**

9050 Capital of Texas Hwy N.  
Austin, TX 78759

**Contact** Ginger Blankenship

**Phone** (512) 343-1111

**Fax** (512) 343-9650

### **SYSTEMHOUSE, INC.**

885 Third Ave.  
25th Fl., Suite 2540  
New York, NY 10022-4834

**Contact** John Coyne

**Phone** (212) 303-5500

**Fax** (212) 303-5599

### **SYSTEMHOUSE, INC.**

4900 Pearl East Circle  
Suite 200W  
Boulder, CO 80301

**Contact** Vince Jordan

**Phone** (303) 449-2874, ext. 181

**Fax** (303) 449-2876

### **ALEMBIC SYSTEMS INT.**

14 Inverness Drive East  
Building G, Suite 228  
Englewood, CO 80112

**Contact** Dale Pratt

**Phone** (303) 799-6223

**Fax** (303) 799-1435

### **IT SOLUTIONS**

400 W. Erie, Suite 301  
Chicago, IL 60610

**Contact** Ted Sheldon

**Phone** (312) 587-2000

**Fax** (312) 587-2012

## **PRODUCTIVITY TRAINING**

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### **ELECTRONIC DIRECTIONS**

220 East 23rd St., Suite 503  
New York, NY 10010

**Contact** Barbara Friedland

**Phone** (212) 213-6500

**Fax** (212) 213-0599

### **TS TRAINING SERVICES**

Lynne Fitzpatrick  
1394 Willow Rd.  
Menlo Park, CA 94025

**Contact** Lynne Fitzpatrick

**Phone** (415) 325-4888

**Fax** (415) 324-2348

### **LOGICON ULTRA SYSTEMS**

525 S. Douglas St.  
El Segundo, CA 90245

**Contact** Tim Flaherty

**Phone** (310) 643-5111

**Fax** (310) 643-5369

### **IT SOLUTIONS**

400 W. Erie, Suite 301  
Chicago, IL 60610

**Contact** Ted Sheldon

**Phone** (312) 587-2000

**Fax** (312) 587-2012

## **EUROPEAN TRAINING PARTNERS**

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### **SOCIETE IMPROVE SA**

41-41 bis Avenue de l'Europe  
78140 Velizy  
France

**Note** Courses held in French

**Phone** +33 1 30 70 60 56

**Fax** + 33 1 30 70 89 36

### **D'ART COMPUTER GMBH**

Virchowstrasse 17-19  
2000 Hamburg 50  
Germany

**Note** Courses held in German

**Phone** +49 40 380 23 0

**Fax** +49 40 380 23 290

### **OBJECTIVE PARTNERS**

P.O.Box 566  
1420 Uithoorn  
Holland

**Note** Courses held in English/Dutch

**Phone** +31 2975 3 16 58

**Fax** +31 2975 3 16 68

### **INITIERA SYSTEM DESIGN AB**

Karlsbodavagen 9-11  
S 161 02 Bromma  
Sweden

**Note** Courses held in Swedish

**Phone** +46 8 6353083

**Fax** +46 8 987067

**EUROPEAN TRAINING PARTNERS (CONTINUED)**

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**WORKSTATION AG**

Rohrstrasse 36-38  
CH - 8152 Glattbrugg  
Switzerland

**Note** Courses held in German

**Phone** +41 1 828 95 55

**Fax** +41 1 828 95 70

**ANDES INFORMATIQUE**

Côtes de Montbenon 8  
CH-1003 Lausanne  
Switzerland

**Note** Courses held in French

**Phone** +41 21 311 57 57

**Fax** +41 21 312 91 95

**TOWER EDUCATION**

DG Tower, Great West Road  
Brentford, Middlesex TW8 9AN

**Note** Courses held in English

**Phone** +44 81 758 6607

**Fax** +44 81 758 6758

**CONSULTING PARTNERS**

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**LOGICON ULTRA SYSTEMS**

525 S. Douglas St.  
El Segundo, CA 90245

**Contact** Tim Flaherty

**Phone** (310) 643-5111

**Fax** (310) 643-5369

**CONSULTING PARTNERS (CONTINUED)**

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**TRIDENT DATA SYSTEMS**

5933 W. Century Blvd., Suite 700  
Los Angeles, CA 90045

**Contact** Michael Christiansen

**Phone** (310) 338-3506

**Fax** (310) 670-5121

**SYSTEMHOUSE, INC.**

885 Third Ave., 25th Fl.  
New York, NY 10022-4834

**Contact** John Coyne

**Phone** (212) 303-5521

**Fax** (212) 303-5599

**SYSTEMHOUSE, INC.**

Object Technology Center  
4900 Pearl East Circle  
Boulder, CO 80301

**Contact** Vince Jordan

**Phone** (303) 449-2874, ext. 181

**Fax** (303) 449-2876

**PENCOM**

9050 Capital of Texas Hwy N.  
Austin, TX 78759

**Contact** Scott Abel

**Phone** (512) 343-1111

**Fax** (512) 343-9650

**RDR, INC.**

10600 Arrowhead Drive  
Suite 350  
Fairfax, VA 22030

**Contact** Denise Britti

**Phone** (703) 591-8713

**Fax** (703) 273-8170



# NeXT SUPPORT PRICE LIST

Q3 and Q4 of 1993

<b>HOTLINE PRODUCTS</b>			
Service Type	Description	Product Number	List Price
NeXTanswers Quarterly	Annual subscription	E2020	\$395
System Support	System Pay-per-Call	E1061	\$120/hr
	System Support Hotline Subscription	E1034	\$3,000
	Additional contact for System Support Hotline Subscription	E1070	\$500
Developer Support	Developer Pay-per-Call	E1068	\$200/hr
	Developer Hotline Subscription	E1064	\$5,000
	Additional contact for Developer Hotline Subscription	E1069	\$500
	Portable Distributed Objects (PDO) Support	E2021	\$2,000
<b>*PREMIUM SUPPORT</b>			
Service Type	Description	Product Number	List Price
System Software Support	Premium System Support	E2017	\$35,000
Developer Software Support	Premium Developer Support	E2018	\$40,000
	Bundle, Developer and System Hotline Subscription	E1065	\$7,000
<b>NEXTSTEP IN FOCUS</b>			
Service Type	Description	Product Number	List Price
User and System Administration	Annual subscription	E1035	\$100**
<b>NXApp</b>			
Service Type	Description	Product Number	List Price
NEXTSTEP Developer Journal	Annual subscription	E2019	\$150**

\*All travel-related expenses will be assumed by customer.

\*\*U.S. only.

# NeXT EDUCATION PRICE LIST

Q3 and Q4 of 1993

<b>OPEN ENROLLMENT CLASSES</b>				
Class Section	Description		Product Number	List Price
Developer	Introducing NEXTSTEP		E2001	\$1,500
	Programming NEXTSTEP		E1038	\$1,800
	Programming Database Kit		E1073	\$1,100
	Advanced NEXTSTEP		E2002	\$1,800
System Administration	Configuring NEXTSTEP Systems		E2000	\$500
	NEXTSTEP System Administration		E1002	\$1,500
	Fast-Track NEXTSTEP System Administration		E1045	\$1,100
<b>*ON-SITE CLASSES</b>				
Class Section	Class Level	Description	Product Number	List Price
System Administration	Introductory	Configuring NEXTSTEP Systems	E2000-1	\$6,000
	Core	NEXTSTEP System Administration	E1002-1	\$10,500
		Fast-Track NEXTSTEP System Administration	E1045-1	\$9,000
Developer	Introductory	Introducing NEXTSTEP	E2001-1	\$15,000
		Migrating from COBOL	E2003-1	\$6,000
		Migrating from Windows	E2004-1	\$6,000
		Migrating from C++	E2005-1	\$3,000
		Migrating from UNIX	E2006-1	\$3,000
	Core	NEXTSTEP Basics	E2007-1	\$9,000
		Application Kit	E2008-1	\$6,000
		Cooperating Applications	E2009-1	\$6,000
		Forms-based Applications	E2010-1	\$6,000
		Designer's Introduction to NEXTSTEP	E2011-1	\$6,000
		Drawing	E2012-1	\$6,000
	Advanced	Programming Database Kit	E1073-1	\$6,000
Advanced NEXTSTEP		E2002-1	\$15,000	
*Mentorship Program	Customized	Customized on-site education package for development teams	E2014-1	\$100,000

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