The Learning Directory Classification System

Version 3: March 2006

Volume 2: Section C

The nationally approved subject classification system for Learning Information Databases

Prepared by VT Careers Management on behalf of advice-resources

LDCS Section C revision: February 2006 (version 1.0c)

This version of Section C of the Learning Directory Classification System was completed by APS Ltd for advice-resources in January 2006. It is a comprehensive restructuring of the Information Technology and Information section of version 2.2 of the LDCS. There are two main parts to this release (v1.0 of section C): (i) General Notes relevant to groups of classes; (ii) section C itself. Each class has a descriptive Term, a standard Code and a Map to the section C in LDCS version 2.2; most classes also have a Definition (except where it is obvious from the Term), Help Notes aimed at classifiers, See Also cross-references and Use For items designating synonyms. Some classes have Design Notes indicating why specific design decisions were made.

Software packages

For software packages, definitions are usually omitted, because they are all specifically about learning to use that particular package. Courses that cover both the package and general concepts on the topic should usually have be classified with the package code (usually from CC) and the concept code from CB.

Digital art

Digital art may be classified under one or more of several headings, dependent on content. Consider the following classes: computer graphics, CB.32; computer animation, CB.321; multimedia (computing), CB.35; animation software (use), CC.31; drawing / painting software (use), CC.34; graphics software (use), CC.35; multimedia software (use), CC.36; arts and crafts software, CC.661.

If there is no information in the course record, use multimedia software (use) (CC.36) as a default.

Poster-making and fun stationery using a computer

These courses generally include computer familiarisation as well as some word processing and some basic craft. Use computer appreciation / introduction (CA.3), plus word processing software (use) (CC.163) or a specific word processing package if mentioned; leave the third classification field for a non-C class, such as crafts (specific occasions / seasons) (JF.1)

Project management

Project management has been removed from section C; see project management (AG.6); PRINCE2 and other project management methodologies are sub-classes of AG.6; project management software (use) is at CC.617.

GCE A levels

At the time of writing there are three titles for GCE A levels relevant to Section C: Applied Information and Communications Technology, Computing and Information Technology. These should be classified as follows:

GCE A levels in Design and Technology should not be classified using Section C.

TITLE	SUBJECT	CLASS
A level in ...	Applied Information and Communications Technology	CA.
A level in ...	Computing	CB.
A level in ...	Information Technology	CA.

CompTIA

CompTIA is an association providing IT standards, professional competence, education and business solutions. Certifications are as follows:

It is not necessary to use other classes in addition to these, unless other certifications are also indicated.

CERTIFICATE	DESCRIPTION	CLASSIFICATION
A+	foundation level service technician	CB.541
Network+	network technician	CB.541
Server+	Mid to upper level system technician	CB.541
Security+	security technician	CB.53
HTI+	home technology integration technician	CB.541
e-Biz+	foundation eBusiness for technical and non-technical staff	CB.444
CTT+	IT instructor	GC.2
CDIA+	certified document imaging architect	CB.33
i-Net+	internet systems technician	CB.44
Linux+	Linux operating system technician	CC.531
Project+	project manager	CB.66

Oracle

Use CC.1133 as the default, if you cannot determine a more exact code. Oracle has a range of products, using the Oracle database. These products range from applications development tools, through network management, to database software and business intelligence tools. The term "Oracle" can refer to any of these products, or to groups of these products, so classification is very difficult. In addition Oracle uses version numbering, such as 9i, 10g, etc; if these are mentioned, it is likely to be classed under CC.1133, unless there is specific mention of one of the other products. There are over 1,500 courses, so classification is also important. Oracle products have been split up under the relevant section for the software (e.g. Oracle Discoverer is under the business intelligence section, CC.6112). There are many facets of the Oracle range that are used for applications development, so a new class Oracle applications development, CC.11331, has been introduced for all of these products and sub-products, rather than having a multitude of separate individual classes for each one.

Note that 'Application Server' is a type of computer NOT a reference to application development, so an Oracle application server course will be under CC.1133, while an Oracle application development course will be under CC.11331 and may refer also to PL/SQL or Oracle JDeveloper.

The Oracle classes in version 1.0 of this section C are:

Oracle (database software), CC.1133

Oracle applications development, CC.11331

Oracle Designer (CASE software), CB.6622

Oracle Financials (business intelligence software), CC.63214

Oracle Discoverer (business intelligence software), CC.63213

PL/SQL (structured query language), CC.1151

Oracle JDeveloper, CB.61221

Oracle certifications (network / systems management software), CB.5636

Specific definitions and help notes under each Oracle class are repeated here for ease of use:

Oracle (database software), CC.1133 Definition: Use only for courses specifically about the use of Oracle database software. Help note: Use CC.1133 for Oracle products, except as indicated in the General Note below. Most Oracle courses will come under CC.1133. Use CC.1133 if the course includes mention of Oracle with enterprise manager, network management, fundamentals, performance tuning, database tuning, backup and recovery, server, application server, administration, system administration, DBA, portal.

Oracle applications development, CC.11331 Definition: Courses about the creation of software using Oracle tools. Help note: May often be used in conjunction with other Oracle classes. Covers Forms, Oracle JDeveloper (in conjunction with CB.61221), Oracle Applications.

Oracle Designer (CASE software), CB.6622 Definition: Use only for courses specifically about the use of Oracle Designer CASE software. Help note: Very few courses will come under this class.

Oracle Financials (business intelligence software), CC.63214 Definition: Use only for courses specifically about the use of Oracle Financials business intelligence software.

Oracle Discoverer (business intelligence software), CC.63213 Definition: Use only for courses specifically about the use of Oracle Discoverer business intelligence software.

PL/SQL (structured query language), CC.1151 Definition: Accessing, updating and retrieving information from relational databases using the structured query language PL/SQL (structured query language) Help note: Use whenever SQL is mentioned with Oracle instead of the Oracle database class. May be used in conjunction with Oracle applications development, CC.11331.

Oracle JDeveloper, CB.61221 Definition: Use only for courses specifically about the use of Oracle JDeveloper programming language. Help note: Likely to be used in conjunction with Oracle applications development, CC.11331.

Oracle certifications (network / systems management software), CB.5636 Definition: Use only for official Oracle courses, e.g. Oracle Certified Associate (OCA), Oracle Certified Professional (OCP) or Oracle Certified Master (OCM). Help note: Oracle have their own certifications in three areas: Database Administrator, Application Developer, Web Administrator.

Adobe and Macromedia

Macromedia was taken over by Adobe in 2005 (completion December 2005). It is not clear at the moment (13 Dec 05) how the branding and product ranges will change.

INFORMATION TECHNOLOGY AND INFORMATION, C

definition: Covers all topics about computing and computer technology, including the design, development, installation, and implementation of systems and applications involving computers; also covers topics in the handling, management and use of information, with and without computer-based systems.
[note: This term is used purely to create the hierarchy and should not be used for classifying courses. Use terms below this in the hierarchy.]

INFORMATION AND COMMUNICATIONS TECHNOLOGY (GENERAL), CA.

definition: A term to cover broad courses straddling more than one of the main ICT-based second level terms.
use for: Information Communication Technology (ICT)
[note: Use this class only for courses covering both information technology and communications.]

information technology (general), CA.1

definition: Broad IT courses including computer science and using software areas.
use for: Working with computers
[note: This does not include computer appreciation/first steps courses. For more technical / systems-based general courses see computer science(CB). If communications areas are also included, use information and communications technology (general) (CA).]

business information technology, CA.2

definition: Organisation of computing and similar technical resources together with the staff needed to operate and maintain them.
use for: information technology management for business; business computing; business computer systems
[note: For courses that concentrate on information, use business information systems (CB.41). Do not just code from title! If in doubt as to content, or if course covers both information and technology organisation, use computer appreciation / introduction (CA.2) and business information systems (CB.41).]
[see also: business information systems (CB.41). business software (use) (CC.63).]

computer appreciation / introduction, CA.3

definition: Introduces the use of computers. Covers use and appreciation of computers (including PCs), but not technical subjects.
use for: computer literacy; How to Use the Mouse and Keyboard; Computers for the Terrified; Computing for the Retired; Making your own Christmas Cards / Posters using a computer.
[note: Includes computer studies where this is appreciation, rather than computer science.]

CLAIT (Computer Literacy and Information Technology), CA.31

definition: These are introductory level courses for those with little or no computer experience. They range from national framework level 1 to level 3.
[note: Use only for Computer Literacy and Information Technology (CLAIT) courses. Any CLAIT course should have this code regardless of what else the course may also be about. For full CLAIT courses no other class is needed, unless the course is a joint one, e.g. with Webwise. For CLAIT modules where the topic is known, classify with CLAIT class and topic class, eg excel spreadsheet]

ECDL (European Computer Driving Licence), CA.32

definition: These courses lead to a certificate of basic competence in the operation of a personal computer, popular personal computer software applications and the use of IT in general.
use for: International Computer Driving Licence (ICDL)
[note: Use only for European Computer Driving Licence (ECDL) and International Computer Driving Licence (ICDL) courses.]

computer file management, CA.33

definition: Creation, management, integration, retrieval and back up of files at an introductory level.
[note: For more advanced technical aspects of file management, use the specific operating system class (section CC.5) or computer security systems (CB.53).]
[see also: computer security systems (CB.53). operating systems (use) (CC.5).]

personal computer use: specific types, CA.34

definition: Use of specific types of personal computers not specified by name elsewhere.

Apple Macintosh computers, CA.341

definition: Use of Apple Macintosh computer software.
[note: Covers use of software not technical topics to do with hardware, for which use microcomputer systems (CB.212).]
[see also: Mac operating systems (CC.535).]

COMPUTER SCIENCE, CB.

definition: Technical design / study of computer hardware and software: includes planning ICT systems, installing, configuring and integrating networked hardware and software, computer programming, system testing, setting up internet systems. Includes theories for understanding computing systems and methods; design methodologies, algorithms, and tools; methods for the testing of concepts; methods of analysis and verification; and knowledge representation and implementation.
use for: computing; computer studies (where not computer appreciation)
[note: For more software-based general courses, see information technology (general) (CA.1)]

computer hardware, CB.1

definition: Computer hardware, computer peripherals, and hardware aspects of their use.
[note: Most courses that seem to be hardware, in fact include software that runs the hardware (i.e. are integrated). Use other appropriate terms in computer science (CB). Installation (computer operations (CB.52)) and maintenance (CB.51) courses should NOT use this class.]

cable installation, CB.11

definition: Installation of wiring for computer and other ICT systems.

computer firmware, CB.12

definition: How to dismantle and rebuild computers with particular reference to configuration of firmware (the coded instructions that are stored permanently in read-only memory).
[note: This should not be used for maintenance or building computers, but only for those that specify firmware.]

computer media, CB.13

definition: Hardware aspects of anything used to store machine-readable information: disks / tapes / bar codes.
use for: Courses about disk / CD / DVD drives.

computer peripherals, CB.14

definition: Installation, configuration and maintenance of any subsidiary devices attached to a computer not specified by name below.

digital cameras, CB.141

definition: How to set up, maintain and use a digital camera.
[note: This includes courses on how to download the pictures onto a computer and save them as long as they are not altered. For courses about how to alter the pictures see image processing (CB.322); consider also using digital photography (KJ.14).]
[see also: image processing (CB.322). digital photography (KJ.14).]

modems, CB.142

definition: Installation, configuration, maintenance and use of modems.

printers, CB.143

definition: Installation, configuration, maintenance and use of printers.
[note: Use for both hardware and software aspects of printers, including device drivers.]

scanners, CB.144

definition: Installation, configuration, maintenance and use of optical scanners.
[note: This refers to all commonly used scanners.]

webcams, CB.145

definition: Installation, configuration, maintenance and use of webcams.

computer systems, CB.2

definition: Understanding hardware and software components connected together for processing data for specific purposes.
use for: computer systems engineering; computer engineering; computer technology; computer design; computer systems design; applied computing
[note: Computer systems covers understanding of the systems, not the use of software to manage them, so it excludes operation and management of computer systems.]

computer architectures, CB.21

definition: The type and characteristics of the processing components of a computer (for example memory, processor), the peripherals (input, output, storage devices) and how they are connected.
use for: computer architecture
[note: British Computer Society (BCS) courses are often called architecture, rather than computer architecture. Some software development courses also use the term software architecture, which does not indicate computer architecture, but specific software technologies.]

mainframe computer systems, CB.211
definition: Configuration, maintenance and integration of mainframe computer hardware, software and human interfaces.
use for: mainframe computer design; mainframe computer engineering; IBM iSeries computers

AS/400, CB.2111
definition: Hardware aspects of setting up and operating the AS/400, an IBM minicomputer for small business and departmental users, released in 1988 and still in production in October 1998.

microcomputer systems, CB.212
definition: Microcomputer refers to the personal computer (PC) that most people are familiar with. Topics may include: how to assemble, dismantle or connect a microcomputer system; install and / or replace microcomputer hardware; maintain a microcomputer, connect and configure a microcomputer network.
use for: microcomputer design; microcomputer engineering

building your own PC, CB.2121
definition: How to construct your own desktop personal computer system
[note: Do not use for maintaining / upgrading your PC, use computer maintenance and repair (CB.51) instead.]

laptop and notebook systems, CB.2122
definition: Topics may include: how to dismantle and connect a laptop system; install and/or replace laptop hardware; maintain a laptop, connect and configure a laptop network.
[note: Often used with mobile computing (communications and networking) (CB.2243), but does not include remote access or wireless networks, see CB.226 and CB.2244 respectively.]
[see also: mobile computing (communications and networking) (CB.2243).]

personal digital assistant (PDA) systems, CB.2123
definition: Topics may include: how to maintain and configure a palmtop.

server-based systems, CB.213
definition: Computer installations that contain a number of servers linked together, usually with common architectures and / or from a single manufacturer.
[see also: distributed networks (CB.2241).]

computer communications and networking, CB.22
definition: The integration of high speed communication networks and fast processing techniques into interconnected systems of computers and telecommunications equipment.
use for: telematics; network computing; network engineering
[note: This is about understanding the technicalities of communications and networking. For technician work and management of networks, use the appropriate part of network / systems management (CB.5).]
[see also: network / systems management (CB.5).]

computer network components, CB.221
definition: Parts that make up a network, including the essential software drivers that make them work.
[note: This class is about individual network components themselves, whereas network architectures (CB.224) is about how they are fitted together into designed and configured networks. Note that it will be rare to classify courses with this class, because you will use the component sub-classes below it.]

network storage, CB.2211
use for: Storage Area Network (SAN); data replication
[note: Refers to the majority to computer storage courses, relating to servers and networks. For backing up files, use the appropriate operating system, or computer operations, CB.52]

parallel sysplex, CB.22111
definition: An IBM term for communicating Multiple Virtual Storage systems.

routers, bridges and switches, CB.2212
definition: Routers, bridges and switches are specific types of network components.
[note: 'Routing' does not necessarily refer to routers, but could be about network protocols. Ensure that the course involves one or more of routers, bridges and switches.]

local and wide area networks (LAN and WAN), CB.222
definition: Courses about both LAN and WAN networks
use for: internetworking
[note: Refer to the definitions of LAN and WAN under CB.2221 and CB.2222. Use this class for courses covering both LAN and WAN areas.]

local area networks (LAN), CB.2221
definition: A local computer network for communication between computers; especially a network connecting computers and word processors and other electronic office equipment to create a communication system between offices

wide area networks (WAN), CB.2222
definition: A computer network that spans a wider area than does a local area network, across more than one building, organisation or geographical location.

network and communications protocols, CB.223
definition: A set of standards that specify the medium (e.g. wiring), message formats (e.g. packet sizes) and rules (e.g. transmission speeds) between computers and between computers and peripherals.
use for: Open Shortest Path First (OSPF) protocol; ATM
[note: If you have courses about protocols not mentioned by name, use this class; if you have a large number of such courses, include a recommendation for a new class in your authority file.]

Ethernet, CB.2231
definition: A type of networking technology for local and wide area networks. It is an international standard IEEE 802.3.
use for: 802.3

Transmission Control Protocol / Internet Protocol (TCP/IP), CB.2232
definition: The protocol used for networking on the internet, intranets and many other networks.
[note: Use only for courses specifically about the use of the Transmission Control Protocol / Internet Protocol (TCP/IP) internet protocol.]

X.25, CB.2233
definition: X.25 is an international standard for network communications that defines how connections between devices are established and maintained.
[note: Use only for courses specifically about the use of X.25 communications protocol.]

network architectures, CB.224
definition: Topology, configuration and design of the interconnection systems between computers.
[note: This class is about how networks are designed and configured, whereas computer network components (CB.221) is about the individual network components themselves. Example: Designing and Deploying a Network Solution]

distributed networks, CB.2241
definition: A collection of computers whose location and organisation are transparent to the user so that the system appears as one local machine. This is in contrast to a non-distributed network, where the user is aware that there are several machines, and their location, storage replication, load balancing and functionality are not transparent.
use for: client server systems; distributed systems
[see also: server-based systems (CB.213).]

frame relay, CB.2242
definition: A data transmission protocol used to send digital information such as voice and data traffic to many destinations from one point.

mobile computing (communications and networking), CB.2243
definition: Networking and communications specifically to support laptops, PDAs and similar mobile devices.
[note: Often used with laptop and notebook systems, CB.2122.]
[see also: laptop and notebook systems (CB.2122).]

wireless networks, CB.2244
definition: Computer systems connected using standard protocols but without the use of cables.

use for: IEEE 802.11; radio frequency wireless networking
[note: Primary usage is in wireless local area networks. Includes technologies such as infrared and radio frequency networking]
[see also: mobile computing (communications and networking) (CB.2243). remote access (CB.226).]

Bluetooth communications and networking, CB.22441
definition: A short range wireless connectivity standard for user devices to communicate with each other

open systems interconnection (OSI) reference model, CB.225
definition: A model of network architecture and a suite of protocols to implement it, developed by ISO in 1978 as a framework for international standards in computer network architecture.

remote access, CB.226
definition: Control of, or access to, a machine or apparatus from a distance.
[see also: wireless networks (CB.2244). mobile computing (communications and networking) (CB.2243).]

real time systems, CB.23
definition: A system that supports the execution of applications with time constraints on that execution. In a hard real time system no lateness can be acceptable under any circumstances.

computing methodologies, CB.3

definition: Groups of specific tools, techniques and concepts used in specific computing areas.
[note: Use the appropriate class below this one; if you believe there is another methodology not listed here, include it in your authority file.]

artificial intelligence (AI), CB.31
definition: The branch of computer science that deals with writing computer programs that can solve problems creatively.

computer cybernetics, CB.311
definition: Processes of communication and control in artificial systems. Includes aspects of artificial intelligence (AI), robotics, networks, information technology, and electronics.
use for: robotics
[note: Robotics can often be coded with this, however it is necessary to check the summary carefully as it may be an electronics/engineering course.]

expert systems, CB.312
definition: Knowledge-based software shells with which applications are developed to assist in education, processing research information etc.
use for: computer visualisation; computational vision; pervasive intelligence; intelligent systems

knowledge management systems, CB.313
definition: Software systems which analyse data and information in order to develop rules and / or generalisations from them. Knowledge in this context is the recognition of patterns within data and information, coupled with an understanding of the implications of the patterns.
use for: knowledge engineering; knowledge-based systems; data mining
[note: Courses may also commonly be classified with data warehousing (CB.421), which covers integrated storage and retrieval systems across an organisation.]

neural networks, CB.314
definition: A multiprocessor computer system with simple processing elements, a high degree of interconnection and adaptive interaction between elements.
[note: Do not use for medical courses, unless artificial neural networks are involved.]

computer graphics, CB.32
definition: Creation and / or manipulation of images with a computer.
[note: Courses will also often need to have a term from graphic arts (JB.6). For courses only about learning how to use a particular software package, use graphics software (use) (CC.35)]
[see also: graphics software (use) (CC.35).]

computer animation, CB.321
definition: Manipulation of 3D images and models to create animated sequences on film and computer, digital special effects, computer games, computer animated simulations and interactive virtual environments.

use for: computer 3D modelling; graphics modelling
[note: Includes modelling of graphics, but not statistical or event modelling. For courses that are only about using specific computer animation software, use the appropriate class in graphics and multimedia software (use) (CC.3).]

computer games design, CB.3211
definition: computer design and development, including animation and programming, specifically for production of computer games and interactive entertainments.
use for: computer interactive entertainment design

image processing, CB.322
definition: Digitising and / or translating scanned images (drawings or maps) into usable / meaningful form.
[note: Includes medical imaging and very basic photo editing. For document imaging, use CB.33.]
[see also: document and text processing (CB.33).]

pattern recognition, CB.3221
definition: Using computers to find patterns or links between apparently unrelated graphical phenomena.
[note: For pattern recognition in a knowledge management context, use knowledge management systems (CB.313).]

document and text processing, CB.33
definition: The creation, editing and other manipulation of documents using computers.
use for: document image processing; document archiving; computerised document handling
[note: Do not use this class for word processing software use.]
[see also: image processing (CB.322).]

standard generalised markup language (SGML), CB.331
definition: Standard Generalised Markup Language (SGML) is an international standard for the structuring of primarily textual information, used to prepare and manage documents.
[see also: extensible markup language (XML) (CB.44642).]

modelling / simulation systems, CB.34
definition: A computer programme that attempts to make an abstract representation of a specific thing, usually a process.
[note: Use for courses about computer modelling and simulation in a statistical, analytical or business context. For graphics modelling, use computer animation (CB.321)]
[see also: computer animation (CB.321).]

modelling systems, CB.341
definition: Representing a specific thing, for example a business structure or mechanical design, by a computer program.
use for: 3D computer modelling
[note: For use of specific software, see business modelling software (use) (CC.6111).]
[see also: business modelling software (use) (CC.6111).]

simulation systems, CB.342
definition: Representing the real world by a computer programme

multimedia (computing), CB.35
definition: The technical, as opposed to purely creative design, aspects of human-computer interaction involving text, graphics, voice and video.
[note: Consider using both multimedia (KA.4) and this class.]
[see also: multimedia (KA.4).]

sound processing (computer), CB.36
definition: Computer systems to modify sound, so that it is in a different form that is usable or meaningful.

speech / voice processing (computer), CB.361
definition: Digitising and / or translating speech or other voice recordings into a form that is usable or meaningful to IT systems and their users.
[note: Use for systems that use speech as input. For systems that output speech, use screen reading (CB.362).]

screen reading, CB.362
definition: Computer software that translates text on a screen into speech; often used by visually impaired people.

[note: Use for systems that output speech. For systems that use speech as input, use speech / voice processing (computer) (CB.361).]

information systems, CB.4

definition: A telecommunications and / or computer-based set of interconnected equipment and software used in the acquisition, storage, manipulation, movement and management of data used for specific purposes.
use for: information systems design

business information systems, CB.41

definition: Information systems in a business environment. See information systems (CB.4) for definition.
use for: business information management; management information systems
[note: Covers courses that concentrate on business information, rather than managing the information technology. It is important not to code from the title, as course titles can be very misleading in this subject area! For courses that concentrate on technical systems management, use business information technology (CA.2). If in doubt as to content, or course covers both areas, use CA.2 and CB.41.]
[see also: business information technology (CA.2). business software (use) (CC.63).]

database management, CB.42

definition: Storing, modifying, and retrieving data in a database to produce reports, answer queries, and record transactions.
use for: data management
[note: Use this class where a course is not about using specific database software. For designing database systems, use database design (CB.4541)]
[see also: database design (CB.4541).]

data warehousing, CB.421

definition: Design, implementation, population, management and retrieval of data from a combination of many different databases across an entire organisation. A data warehouse is a consolidated view of organisational data, optimised for reporting and analysis.
[note: This term may frequently be used in conjunction with knowledge management systems (CB.313), which may make use of data warehouses.]
[see also: knowledge management systems (CB.313).]

database administration, CB.422

definition: Establishing and maintaining tables of related data, ensuring their recoverability, integrity, security, availability, reliability, and performance.
use for: DBA
[note: Use for all database courses where administration is mentioned as well as software.]

information management, CB.43

definition: Organising contextualised pieces of data, so that they can be stored, controlled, retrieved and transmitted.
use for: content management
use for: records management
use for archive studies
[note: For knowledge management in the context of information technology, use knowledge management systems (CB.313). This class includes principles and concepts of content management; for content management software (usually for the web), use the appropriate class in CB.4465.]
[see also: knowledge management systems (CB.313).]

indexing and classification, CB.431

definition: Cataloguing data and information for accurate retrieval.
use for: cataloguing; abstracting; metadata

informatics, CB.432

definition: Informatics studies the representation, processing and communication of information in natural and engineered systems. It has computational, cognitive and social aspects. The central notion is the transformation of information - whether by computation or communication, whether by organisms or artifacts. [from University of Edinburgh's School of Informatics]
use for: information science

[note: Where a branch of informatics or information science is identified that is not included in the sub-classes, use the main class (CB.432) and include a reference in your authority file.]

bioinformatics, CB.4321
definition: See informatics (CB.432) for main definition. Bioinformatics refers specifically to informatics in a biological context.

geographical information systems, CB.4322
definition: Geographical information systems refers specifically to informatics and information systems in a geographical context.
use for: geographical information science, geographical informatics
[note: For specific software, use geographical information systems software (use) (CC.632).]
[see also: geographical information systems software (use) (CC.632).]

health informatics, CB.4323
definition: See informatics (CB.432) for main definition. Health informatics refers specifically to informatics in a health context.

information security, CB.433
definition: The protection of data and information and the systems containing them from unauthorized changes, deletion or access, including confidentiality, integrity and availability.
use for: data security

internet systems, CB.44
definition: Design, development and implementation of products, processes and services based on internet technologies.

email systems, CB.441
definition: For technical setting up and maintenance of electronic mail services.

internet protocols, CB.442
definition: Technical standards used to make the internet work.
[note: If you find a protocol not indicated in this section, note it in your authority file.]

Domain Name System (DNS), CB.4421
definition: The Domain Name System is the system that translates internet domain names (e.g. 'bbc.co.uk' into IP numbers, e.g. 123.456.789.123. A 'DNS Server' is a computer that performs this kind of translation.

File Transfer Protocol (FTP) services, CB.4422
definition: A standard used to govern the transfer of files to a server computer.
[note: Use only for courses specifically about the use of the File Transfer Protocol (FTP) internet protocol.]

Simple Mail Transfer Protocol (SMTP), CB.4423
definition: A standard for sending emails between server computers
[note: Use only for courses specifically about the use of the Simple Mail Transfer Protocol (SMTP) internet protocol.]

Simple Network Management Protocol (SNMP), CB.4424
definition: A standard that facilitates the exchange of management information between network devices
[note: Use only for courses specifically about the use of the Simple Network Management Protocol (SNMP) internet protocol.]

Virtual Private Networks (VPN), CB.4425
definition: Virtual Private Networks use encryption and tunnelling techniques to set up secure networks using public wires, primarily the internet.
[note: Use only for courses specifically about the use of the Virtual Private Networks (VPN) internet protocol.]

Voice Over Internet Protocol (VoIP), CB.4426
definition: Voice over Internet Protocol is a collection of technologies and protocols that permit the routing of voice conversations over the internet or any other Internet Protocol (IP) based network.
use for: VoIP; IP Telephony; internet telephony; SIP; H.323
[note: Use only for courses specifically about the use of the Voice Over Internet Protocol (VoIP) internet protocol.]

internet security systems, CB.443
definition: Implementation, deployment and management of software security solutions for internet systems.
use for: firewalls

[note: Use for all firewall software and technologies not specifically mentioned.]
[see also: computer security systems (CB.53).]

Border Manager (internet security system), CB.4431
[note: Software manufacturer: Novell]

FireWall-1 (internet security system), CB.4432
[note: Software manufacturer: Check Point]

Internet Security and Acceleration (ISA) Server (internet security system), CB.4433
[note: Software manufacturer: Microsoft]

Proxy Server (internet security system), CB.4434
[note: Software manufacturer: Microsoft]

web server management, CB.444
definition: Technical administration of computers used to provide internet services, including web.
use for: internet server management; WebSphere software that is not development
[see also: network / systems management (CB.5).]

e-commerce (technical), CB.4441
definition: For technical setting up and maintenance of internet-based commercial systems.
[note: For non-technical aspects of e-commerce, use e-commerce (BF).]
[see also: e-commerce (BF.).]

e-commerce systems software, CB.44411
definition: Computer programmes for setting up and / or maintaining internet-based commercial services

web server management software, CB.4442
definition: Computer programmes for setting up and / or maintaining services on the world wide web

Apache (web server management software), CB.44421
use for: TCL
[note: Software manufacturer: none (open source)]

BizTalk Server (web server management software), CB.44422
[note: Software manufacturer: Microsoft]

Commerce Server (web server management software), CB.44423
use for: Microsoft Site Server
[note: Software manufacturer: Microsoft]

Internet Information Server (web server management software), CB.44424
[note: This is sometimes shortened to IIS.Software manufacturer: Microsoft]

web services, CB.445
definition: A standardised way that different software applications can operate together ('interoperate'), using a variety of platforms and / or frameworks, over the Internet.
[note: Technologies involved in web services include SOAP, WSDL, UDDI, XSD and XML.]

.NET, CB.4451
definition: Microsoft's web services strategy to connect information, people, systems and devices through software and using Microsoft platforms.
[note: Software manufacturer: Microsoft. Courses may also need another class, for example ASP .NET will need to use Active Server Pages (ASP) (CB.4461).]

website development, CB.446
definition: Design and development of systems based on the world wide web, usually based on Hypertext Markup Language (HTML) or extensible markup language (XML).
use for: Certified Internet Webmaster (CIW); webmaster; website management

Active Server Pages (ASP), CB.4461

Common Gateway Interface (CGI), CB.4462
definition: A standard for running external programmes from a world-wide web HTTP server.

intranets, CB.4463
definition: Technical setting up and maintenance of computer systems for web site hosting of web systems with a restricted set of users, not open to the wider internet and usually within a single organisation.

markup languages for website development, CB.4464
definition: A markup language sets the syntax and grammar to be used in constructing documents, so that the structure can be separated out from content and presentation,

primarily to enable computers to read and use the documents.
[note: Use the specific markup language under this class, rather than this class itself. Standard generalised markup language (SGML) is not included here, because only sub-sets of SGML (e.g. XML, HTML) are used in website development.]
[see also: standard generalised markup language (SGML) (CB.331).]

extensible hypertext markup language (XHTML), CB.44641
definition: eXtensible HyperText Markup Language, or XHTML, is a markup language that has the same expressive possibilities as HTML, but a stricter syntax. Whereas HTML is an application of SGML, a very flexible markup language, XHTML is an application of XML, a more restrictive subset of SGML. XHTML 1.0 became a World Wide Web Consortium (W3C) Recommendation on January 26, 2000. [from Wikipedia]
[see also: hypertext markup language (HTML) (CB.44643).]

extensible markup language (XML), CB.44642
definition: eXtensible Markup Language (XML) is used for storing and / or transforming data, including publishing systems and web systems. It is an implementation of standard generalised markup language (SGML).
use for: FIX; SOAP
[see also: standard generalised markup language (SGML) (CB.331).]

hypertext markup language (HTML), CB.44643
definition: Use of Hyper Text Mark-up Language (HTML), its syntax and grammar to prepare and manage hypertext documents specifically for the creation of web pages.
use for: DHTML
[see also: extensible hypertext markup language (XHTML) (CB.44641).]

wireless markup language (WML), CB.44644
definition: A markup language specifically designed for production of internet services for mobile and wireless communications devices.

website development software, CB.4465

definition: Use of software packages for the design and development of systems on the world wide web.
[note: Includes HTML authoring software and more advanced packages.]

website development software: A-D, CB.44651
definition: Use for courses about website development software A-D not specified by name.

ColdFusion (website development software), CB.446511
[note: Software manufacturer: Macromedia (now Adobe)]

Content Management Server (web content management software), CB.446512
[note: Software manufacturer: Microsoft]

Contribute (web content management software), CB.446513
[note: Software manufacturer: Macromedia (now Adobe). Macromedia was taken over by Adobe in 2005 (completion December 2005). It is not clear at the moment (13 Dec 05) how the branding and product ranges will change.]

Dreamweaver (website development software), CB.446514
use for: Ultradev; MX web pages; Macromedia (unspecified)
[note: Software manufacturer: Macromedia (now Adobe). Macromedia was taken over by Adobe in 2005 (completion December 2005). It is not clear at the moment (13 Dec 05) how the branding and product ranges will change.]

website development software: E-K, CB.44652
definition: Use for courses about website development software E-K not specified by name.

FrontPage (website development software), CB.446521
[note: Software manufacturer: Microsoft]

GoLive (website development software), CB.446522
[note: Software manufacturer: Adobe]

HoTMetaL Pro (website development software), CB.446523
[note: Software manufacturer: SoftQuad]

website development software: L-R, CB.44653
definition: Use for courses about website development software L-R not specified by name.

PageMill (website development software), CB.446531
[note: Software manufacturer: Adobe]

website development software: S-Z, CB.44654
definition: Use for courses about website development software S-Z not specified by name.

wireless application protocol (WAP) site development, CB.4466

systems analysis and design, CB.45
definition: The process of breaking down components and data to gain an understanding of how they work together, so that new interconnected groups of components can be recommended with a view to improving processes.

data analysis, CB.451
definition: The process of using statistical and logical methods to describe numbers and text.

requirements engineering, CB.452
definition: The process of gathering information about user needs, analysing them and transforming them into specific required actions that can be used as the basis of a new or refined system.

systems analysis, CB.453
definition: An explicit formal inquiry into a complex problem (usually in information systems) to identify a suitable course of action, usually having some combination of the following: identification of objective, constraints and alternative courses of action examination of possible consequences of the alternatives in terms of costs, benefits, and risks presentation of the results of the investigation, so that a decision maker can make an informed choice from among the alternatives.

systems design, CB.454
definition: Defining the hardware and software architecture, components, modules, interfaces, and data for a system to satisfy specified requirements.

database design, CB.4541
definition: Data analysis and systems design specifically for database usage.
[note: Use for courses about database design which are not solely about using a specific database package, i.e. that cover database design principles, not just using software.]

Unified Modelling Language (UML), CB.455
definition: A modelling language for specifying, visualizing, constructing and documenting the components of a software or business system

network / systems management, CB.5
definition: Planning, coordinating and implementing the installation, testing, operation, troubleshooting, and maintenance of hardware and software systems or networks.
use for: systems administration; systems management; network management; network administration; computer administration; designing/implementing a network infrastructure
[note: Use this term for 'hands on' courses (mainly training); for theoretical courses (mainly education), use appropriate section of computer systems (e.g. CB.22)]
[see also: computer communications and networking (CB.22). computer operations (CB.52). network / systems management software (CB.56).]

computer maintenance and repair, CB.51
definition: Maintenance, repair and servicing of computer hardware and peripherals.
use for: computer servicing
[note: If a maintenance and repair role includes support to office software or OS configuration, then also use CB.54.]
[see also: computer support operations (CB.54).]

computer operations, CB.52
definition: Tasking of computer systems, e.g. running back-end processes for printing or backups. Tasks include prioritising jobs to optimise computer system use, entering jobs into computer systems according to a schedule, co-coordinating jobs on a computer system, reviewing outputs, liaising with users and technical staff to resolve processing problems.
use for: computer backups
[note: This is not the same as general systems or network administration (CB.5), but is specifically about job scheduling, including optimising jobs on a system.]

Job Control Language (JCL), CB.521
definition: Use for courses about the IBM JCL system.
use for: JES2, Job Entry Subsystem 2

computer security systems, CB.53

definition: All aspects of access to, availability and protection of computers and networks.
use for: BS7799; ISO 17799
use for: computer forensics
[note: Covers courses for security professionals, e.g. Security Certified Network Architect (SCNA).]
[see also: internet security systems (CB.443). penetration testing (computer systems) (CB.4654).]

computer virus protection, CB.531
definition: Deployment and use of anti-virus software.

computer support operations, CB.54
definition: Managing computer services, including the provision of support with hardware or software usage problems.
use for: computer services management
[note: If a support role includes computer maintenance and repair (as well as for instance support to office software or operating system configuration), then also use CB.51.]
[see also: computer maintenance and repair (CB.51).]

CompTIA certifications (support technicians), CB.541
definition: Computer support operations that lead to CompTIA A+, Network+, Server+ and HTI+ certifications.
[note: This class is for CompTIA support technician topics. For other CompTIA certifications, select an appropriate alternative class. See general note on CompTIA.]

computer help desk operations, CB.542
definition: First line support to computer users. Includes capacity management (help desk operations), in which human and computer resources are optimised, usually by the use of specific software, for the efficient operation of the help desk.

systems support, CB.543
definition: Courses for support technicians, i.e. people who provide technical support and second line support, but are not usually manning help desks themselves.

disaster / contingency planning (computer operations), CB.55
definition: Emergency response, back-up operations, and disaster recovery for information technology systems and installations in the event normal operations are interrupted. Deals with methods to ensure minimal impact upon computer operations in the event the information technology system or facility is damaged or destroyed.
[note: For normal backup operations, use computer operations (CB.52).]
[see also: computer operations (CB.52).]

network / systems management software, CB.56
definition: Computer programmes to administer and manage computer systems and networks, including optimisation of computer resources, adding and maintaining user accounts, installing and configuring hardware, operating system software and application system software, allocating storage space.
use for: systems software; communications software; network software
[note: Where a specific operating system is mentioned (e.g. Solaris), classify under the appropriate class in this section and also use the operating system class. Example: For Solaris system administration, use Solaris (operating system), CC.54213 and network / systems management software: S-Z, CB.564.]

network / systems management software: A-D, CB.561

Active Directory (network / systems management software), CB.5611
use for: Directory services, Directory infrastructure
[note: Software manufacturer: Microsoft]

ARCserve (network / systems management software), CB.5612
[note: Software manufacturer: Computer Associates]

BackOffice (network / systems management software), CB.5613
[note: Software manufacturer: Microsoft]

CICS (network / systems management software), CB.5614
definition: Customer Information Control System (CICS) is a family of application servers and connectors that provides industrial-strength, online transaction management and connectivity for mission-critical applications.
[note: Software manufacturer: IBM]

CISCO certifications (network / systems management software), CB.5615

definition: Courses leading to computing awards by CISCO Systems
use for: Cisco Certified Design Associate; Aironet wireless courses
[note: Use only for courses leading to official CISCO awards, a supplier of networking equipment.]

Citrix certifications (network / systems management software), CB.5616
definition: Courses leading to computing awards by Citrix Systems
use for: Citrix Core Technologies and Architecture;Citrix Metaframe
[note: Use only for courses leading to official Citrix awards, a supplier of IT applications, particularly for control of access to computers.]

Director (network / systems management software), CB.5617
[note: Software manufacturer: IBM]
[see also: Director (multimedia software) (CC.351).]

network / systems management software: E-K, CB.562

Exchange Server (network / systems management software), CB.5621
[note: Software manufacturer: Microsoft]

Hewlett Packard certifications, CB.5622
definition: Courses leading to computing awards by Hewlett Packard
use for: HP Certified Systems Engineer
[note: Use only for courses leading to official Hewlett Packard awards, a supplier of IT equipment, primarily computer hardware.]

network / systems management software: L-R, CB.563

Microsoft certifications (network / systems management software), CB.5631
definition: Courses leading to computing awards by Microsoft
use for: MCSE; MCSA; MCP; MCAD; MCDST
[note: Use only for courses leading to computing awards by Microsoft, a supplier of computer software. If it refers to an operating system or other software, also use the appropriate Microsoft class, e.g. Windows 2000 (operating system) (CC.54416) or SQL Server (CC.1141).]

NetWare (network / systems management software), CB.5632
[note: Software manufacturer: Novell. Courses specifically about NetWare, not other Novell products. May or may not lead to Novell certification; if so, use both this class and Novell certifications (network / systems management software) (CB.56.33).]
[see also: Novell certifications (network / systems management software) (CB.5633).]

Novell certifications (network / systems management software), CB.5633
definition: Courses leading to computing awards by Novell
use for: Certified Novell Administrator (CNA); Master Certified Novell Engineer (MCNE)
[note: Use only for courses leading to computing awards by Novell, a supplier of computer software.]
[see also: NetWare (network / systems management software) (CB.5632).]

OpenView (network / systems management software), CB.5634
[note: Software manufacturer: Hewlett Packard]

Operations Manager (server management software), CB.5635
[note: Software manufacturer: Microsoft]

Oracle certifications (network / systems management software), CB.5636
definition: Courses leading to computing awards by Oracle
use for: OCA; OCP; OCM; OCPD
[note: Use only for courses leading to computing awards by Oracle, a supplier of computer software, e.g. Oracle Certified Associate (OCA), Oracle Certified Professional (OCP) or Oracle Certified Master (OCM). Oracle have their own certifications in three areas: Database Administrator, Application Developer, Web Administrator.]
[see also: Oracle (database software) (CC.1133). Oracle Designer (CASE software) (CB.6622). Oracle Financials (business intelligence software) (CC.63214). Oracle Discoverer (business intelligence software) (CC.63213). PL/SQL (structured query language) (CC.1151). Oracle JDeveloper (CB.61221).]

Replication Server (network / systems management software), CB.5637
[note: Software manufacturer: SyBase]

network / systems management software: S-Z, CB.564

Samba (network / systems management software), CB.5641
definition: Free open source software implementing Microsoft's networking systems for other operating systems (e.g. Linux).
[note: Software manufacturer: none (open source)]

SharePoint (network / systems management software), CB.5642

use for: Portal Server
[note: Software manufacturer: Microsoft]

Small Business Server (network / systems management software), CB.5643
[note: Software manufacturer: Microsoft]

Systems Management Server (network / systems management software), CB.5644
definition: Use only for courses specifically about the use of Microsoft's Systems Management Server software.
[note: Software manufacturer: Microsoft. Systems Management Server is often shortened to SMS, but should not be confused with SMS texting, which stands for 'Short Message Service'.]

Tivoli (network / systems management software), CB.5645
[note: Software manufacturer: IBM]

ZENworks (network / systems management software), CB.5646
definition: Novell's ZENworks Suite automates and enforces business and IT management processes across the lifecycle of desktops, laptops, servers and handhelds to control costs, ensure security and compliance, optimise the value of IT assets across diverse server and client platforms. [from Novell's website]
[note: Software manufacturer: Novell]

client and middleware software, CB.565
definition: Software that enables different operating system platforms to communicate on the same network.
use for: systems integration software; data integration software
[note: This class can be added to courses that refer to the integration of systems on different platforms.]
[see also: client and middleware software applications development (CB.661).]

MQ Series (client and middleware software), CB.5651
[note: Software manufacturer: IBM]
use for: MQ Integrator

software development, CB.6

definition: Application of computer programming skills to the creation of software. May include programming techniques, creating and testing software components and applications, requirements analysis and systems specification.
use for: Application development
[note: Project management has been removed from section C; see project management (AG.6); PRINCE2 and other project management methodologies are sub-classes of AG.6; project management software (use) is at CC.617.]

computer programming languages, CB.61

computer programming languages: A-D, CB.611

computer programming languages: A, CB.6111
definition: Use for courses about computer languages starting with the letter A but not specified by name.

Assembler (computer programming language), CB.61111

computer programming languages: B, CB.6112
definition: Use for courses about computer languages starting with the letter B but not specified by name.

Basic (computer programming language), CB.61121

computer programming languages: C, CB.6113
definition: Use for courses about computer languages starting with the letter C but not specified by name.

C (computer programming language), CB.61131

C++ (computer programming language), CB.61132
[see also: Visual C++ (computer programming language) (CB.6442).]

C# (computer programming language), CB.61133

CL (computer programming language), CB.61134

Cobol (computer programming language), CB.61135

computer programming languages: D, CB.6114
definition: Use for courses about computer languages starting with the letter D but not specified by name.

computer programming languages: E-K, CB.612

definition: Use for courses about computer languages E-K not specified by name.

Fortran (computer programming language), CB.6121

Java (computer programming language), CB.6122

use for: Struts Programming; JavaBeans; EJB; JSP (Java Server Pages);J2EE

[note: Includes Struts programming.]

Oracle JDeveloper (computer programming language), CB.61221

[note: Use only for courses specifically about the use of Oracle's JDeveloper programming language. Likely to be used in conjunction with Oracle applications development, CC.11331.]

[see also: Oracle (database software) (CC.1133). Oracle applications development (CC.11331). Oracle Designer (CASE software) (CB.6622). Oracle Financials (business intelligence software) (CC.63214). Oracle Discoverer (business intelligence software) (CC.63213). PL/SQL (structured query language) (CC.1151). Oracle certifications (network / systems management software) (CB.5636).]

Javascript (computer programming language), CB.6123

[note: Scripting language used in website development]

computer programming languages: L-R, CB.613

definition: This term is used purely to create the hierarchy and should not be used for classifying courses. Use terms below this in the hierarchy.

computer programming languages: L, CB.6131

definition: Use for courses about computer languages starting with the letter L but not specified by name.

Lingo (computer programming language), CB.61311

LotusScript (computer programming language), CB.61312

computer programming languages: M, CB.6132

definition: Use for courses about computer languages starting with the letter M but not specified by name.

computer programming languages: O, CB.6133

definition: Use for courses about computer languages starting with the letter O but not specified by name.

computer programming languages: P, CB.6134

definition: Use for courses about computer languages starting with the letter P but not specified by name.

Pascal (computer programming language), CB.61341

definition: Includes TurboPascal and Object Pascal

Perl (computer programming language), CB.61342

PHP (computer programming language), CB.61343

definition: PHP Hypertext Preprocessor (PHP), an open source, server-side, HTML embedded scripting language used to create dynamic web pages.

PL/1 (computer programming language), CB.61344

Python (computer programming language), CB.61345

computer programming languages: Q, CB.6135

computer programming languages: R, CB.6136

definition: Use for courses about computer languages starting with the letter R but not specified by name.

Rexx (computer programming language), CB.61361

RPG (computer programming language), CB.61362

computer programming languages: S-Z, CB.614

definition: Use for courses about computer languages S-Z not specified by name.

WML Script (computer programming language), CB.6141

VB Script (computer programming language), CB.6142

definition: Scripting language used in website development

[see also: Visual Basic (CB.6441).]

computer programming techniques, CB.62

definition: General concepts and methods for writing instruction sets for computers.

computer programming using fourth generation languages, CB.63

definition: Command system (usually natural language based) used for development of applications run in other computer languages.

Focus 4GL (computer programming language), CB.631

computer programming using visual development environments, CB.64

definition: Visual environments for the development of software.

computer programming using visual development environments: A-D, CB.641
definition: Use for courses about visual development environments (programming) starting with the letters A-D but not specified by name.

Delphi (visual development environment), CB.6411

computer programming using visual development environments: E-K, CB.642
definition: Use for courses about visual development environments (programming) starting with the letters E-K but not specified by name.

computer programming using visual development environments: L-R, CB.643
definition: Use for courses about visual development environments (programming) starting with the letters L-R but not specified by name.

PowerBuilder (integrated development environment), CB.6431

computer programming using visual development environments: S-Z, CB.644
definition: Use for courses about visual development environments (programming) starting with the letters S-Z but not specified by name.

Visual Basic (visual development environment), CB.6441
[note: Includes Visual Basic for Applications, but not VB Script. Includes beginning, intermediate and advanced skills.]
[see also: VB Script (computer programming language) (CB.6142).]

Visual C++ (visual development environment), CB.6442
[see also: C++ (computer programming language) (CB.61132).]

Visual C# (visual development environment), CB.6443

Visual FoxPro (visual development environment), CB.6444

Visual Studio (visual development environment), CB.6446
use for: Visual Interdev
[note: Latest version (Visual Studio .NET) should also be classified with .NET (Microsoft) (CB.4451).]
[see also: .NET (Microsoft) (CB.4451).]

WebSphere Application Developer (WSAD) (visual development environment), CB.6447
use for: Websphere Studio

operating systems (general), CB.65
definition: Learning about operating systems (OS) and OS technology, rather than how to use a specific OS.
[note: Often suitable courses for this class involve comparing a variety of types of operating systems, e.g. DOS, Windows and Macintosh. For specific operating system usage, see operating systems (use), CC.5.]

software engineering, CB.66
definition: Application of computing skills to the production of computer programmes and systems using engineering principles.
[note: Project management has been removed from section C; see project management (AG.6); PRINCE2 and other project management methodologies are sub-classes of AG.6; project management software (use) is at CC.617.]

client and middleware software applications development, CB.661
[see also: client and middleware software (CB.565).]

Computer Aided Software Engineering (CASE), CB.662
definition: Use of graphical and analytical computer-based tools to assist in the development and maintenance of computer programmes.
use for: CASE; Rational Rose

HPS/AppBuilder, CB.6621
definition: Computer Aided Software Engineering tool.

Oracle Designer (CASE software), CB.6622
definition: Use only for courses specifically about the use of Oracle Designer CASE software.
[note: Very few courses will come under this class.]
[see also: Oracle (database software) (CC.1133). Oracle applications development (CC.11331). Oracle Financials (business intelligence software) (CC.63214). Oracle

Discoverer (business intelligence software) (CC.63213). PL/SQL (structured query language) (CC.1151). Oracle JDeveloper (CB.61221). Oracle certifications (network / systems management software) (CB.5636).]

Rational ClearCase, CB.6623

definition: IBM tool for life cycle management and control of software development assets.

human computer interface (HCI) development, CB.663

definition: Applies ergonomics and human factors to the design of keyboards, screens, screen layouts and other means of using computers, including all aspects of an IT system's appearance and usability.

use for: Interactive computing; interactive systems.

[note: Read summaries carefully. Not all courses using the word 'interactive' involve human-computer interface, but it can be used as a default if no other explanation is forthcoming.]

virtual reality systems design, CB.6631

definition: Design of systems that attempt to mimic direct inputs to the human senses.

software design methodologies, CB.664

object oriented design, CB.6641

definition: A software design approach that uses components containing both data and functionality (methods), characterised by the ability to re-use components and to develop new components based on old ones (inheritance).

use for: object oriented analysis; object oriented programming

rapid application development, CB.6642

definition: A set of techniques to help systems developers to build systems (particularly graphical user interfaces) quickly.

use for: RAD

software quality assurance, CB.665

definition: All aspects of ensuring that appropriate defined standards are reached, relating to software development, including planning and methods, customer expectations, metrics, and software testing.

software testing, CB.6651

definition: Technical and non-technical trialling of computer systems to check that they meet acceptance criteria for functionality, performance, requirements, etc.

load testing (computer systems), CB.66511

definition: Trialling of software systems to check that loading and response time criteria have been met.

use for: performance testing; stress testing

penetration testing (computer systems), CB.66512

definition: Trialling of computer systems to test security sub-systems.

[see also: computer security systems (CB.53).]

system testing, CB.66513

definition: Technical trials of software to check that functionality has been produced correctly.

user acceptance testing, CB.66514

definition: Trialling of software by users to check that functionality and operation of systems meets quality criteria.

use for: operational acceptance testing

USING SOFTWARE, CC.

definition: Learning how to carry out processes with specific computer programmes.

[note: Some software packages of a technical nature are included in CB, because it is difficult to separate out the concepts from the software usage. These include: network / systems management software computer programming languages Computer Aided Software Engineering (CASE) tools web server management internet security systems website development software]

common office software (use), CC.1

[note: This is never for use if there is class for the specifically named software.]

database software (use), CC.11

definition: Using database software where the software is not specified by name; includes courses for users and those for professional database developers or managers, where those subjects are not separately identified elsewhere.

[note: Use this part of the hierarchy for courses covering usage of specific database software packages. For learning about databases and the principles of designing and managing them,

use database management, CB.42.]
[see also: database management (CB.42).]

database software (use): A-D, CC.111
definition: This term is used purely to create the hierarchy and should not be used for classifying courses. Use terms below this in the hierarchy.

database software (use): A, CC.1111
definition: Use for courses about database software A not specified by name.

Access (database software), CC.11111
[note: Software manufacturer: Microsoft. The succeeding classes specify the difficulty of the course.]

Access (database software)(introductory), CC.111111
[note: Use only for courses specifically about the use of Microsoft Access database software aimed at inexperienced or foundation users.]

Access (database software)(intermediate), CC.111112
[note: Use only for courses specifically about the use of Microsoft Access database software aimed at intermediate users.]

Access (database software)(advanced), CC.111113
[note: Use only for courses specifically about the use of Microsoft Access database software aimed at professional or expert users.]

Adabas (database software), CC.11112

Adaptive Server (database software), CC.11113
use for: ASE; Adaptive Server Anywhere; Adaptive Server Enterprise
[note: Software manufacturer: Sybase. Includes Adaptive Server Anywhere, Adaptive Server Enterprise]

Approach (database software), CC.11114
[note: Software manufacturer: Lotus (now owned by IBM)]

database software (use): B, CC.1112
definition: Use for courses about database software B not specified by name.

database software (use): C, CC.1113
definition: Use for courses about database software C not specified by name.

database software (use): D, CC.1114
definition: Use for courses about database software D not specified by name.

DB2 (database software), CC.11141
[note: Software manufacturer: IBM]

database software (use): E-K, CC.112
definition: Use for courses about database software E-K not specified by name.

FileMaker Pro (database software), CC.1121
[note: Software manufacturer: FileMaker]

FoxBase / FoxPro (database software), CC.1122

IMS/DB (database software), CC.1123
[note: Software manufacturer: IBM]

Informix (database software), CC.1124
[note: Software manufacturer: Oracle]

Interbase (database software), CC.1125

database software (use): L-R, CC.113
definition: Use for courses about database software L-R not specified by name.

MySQL (database software), CC.1131

Omnis (database software), CC.1132

Oracle (database software), CC.1133
use for: Oracle 9i; Oracle 10g
[note: Software manufacturer: Oracle. Use CC.1133 for Oracle products, except as indicated in the General Note below. Most Oracle courses will come under CC.1133. Use CC.1133 if the course includes mention of Oracle with enterprise manager, network management, fundamentals, performance tuning, database tuning, backup and recovery, server, application server, administration, system administration, DBA, portal. See general note on Oracle.]
[see also: Oracle applications development (CC.11331). Oracle Designer (CASE software) (CB.6622). Oracle Financials (business intelligence software) (CC.63214). Oracle Discoverer (business intelligence software) (CC.63213). PL/SQL (structured query language) (CC.1151). Oracle JDeveloper (CB.61221). Oracle certifications (network / systems management software) (CB.5636).]

Oracle applications development, CC.11331

definition: Courses about the creation of software using Oracle tools.
use for: Oracle Forms; Oracle Applications
[note: May often be used in conjunction with other Oracle classes. Covers Forms, Oracle JDeveloper (in conjunction with CB.61221), Oracle Applications. See general Oracle help note with Oracle (database software), CC.1133.]
[see also: Oracle (database software) (CC.1133). Oracle Designer (CASE software) (CB.6622). Oracle Financials (business intelligence software) (CC.63214). Oracle Discoverer (business intelligence software) (CC.63213). PL/SQL (structured query language) (CC.1151). Oracle JDeveloper (CB.61221). Oracle certifications (network / systems management software) (CB.5636).]

Paradox (database software), CC.1134

database software (use): S-Z, CC.114

definition: Use for courses about database software S-Z not specified by name.

SQL Server (Microsoft) (database software), CC.1141

[note: Use this code for SQL Server courses where the make is not specified. Use also for Microsoft SQL courses where SQL Server is no specified. See also SQL Server (Sybase) (CC.1142).]

SQL Server (Sybase) (database software), CC.1142

definition: Use only for courses specifically about the use of SyBase SQL Server database software.
[note: There will be very few of these. For SQL Server courses which do not specify a make use CC.1141 (SQL Server (Microsoft)).]

structured query languages (SQLs), CC.115

definition: Accessing, updating and retrieving information from relational databases using structured query languages (SQL).

PL/SQL (structured query language), CC.1151

definition: Accessing, updating and retrieving information from relational databases using the structured query language PL/SQL (structured query language)
[note: Use whenever SQL is mentioned with Oracle instead of the Oracle database class. May be used in conjunction with Oracle applications development, CC.11331.]
[see also: Oracle (database software) (CC.1133). Oracle applications development (CC.11331). Oracle Designer (CASE software) (CB.6622). Oracle Financials (business intelligence software) (CC.63214). Oracle Discoverer (business intelligence software) (CC.63213). Oracle JDeveloper (CB.61221). Oracle certifications (network / systems management software) (CB.5636).]

Quest (structured query language), CC.1152

Transact-SQL (structured query language), CC.1153

definition: Accessing, updating and retrieving information from relational databases using the structured query language Transact-SQL.

integrated packages (use), CC.12

definition: Software packages that combine word processing / spreadsheet / database and sometimes presentation software and utilities. Use this term only if no software package is specified at all, otherwise, use specific terms below for named packages or alphabetic codes, e.g. integrated packages (use): A-D

integrated packages (use): A-D, CC.121

definition: Courses about using integrated packages A-D not specified by name elsewhere in the LDCS.

integrated packages (use): E-K, CC.122

definition: Courses about using integrated packages E-K not specified by name elsewhere in the LDCS.

Framework (integrated package), CC.1221

integrated packages (use): L-R, CC.123

definition: Courses about using integrated packages L-R not specified by name elsewhere in the LDCS.

Office (Corel) (integrated package), CC.1231

Office (Microsoft) (integrated package), CC.1232

use for: MOS, MOUS
[note: This class is not necessary if a piece of software within the package is specified, e.g. Word, Excel, Access, PowerPoint, Outlook.]

Office Manager (integrated package), CC.1233

integrated packages (use): S-Z, CC.124

definition: Courses about using integrated packages S-Z not specified by name elsewhere in the LDCS.

SmartSuite (integrated package), CC.1241
use for: Lotus office software packages, unless specifically for Lotus 1-2-3, for which use CC.1531.
[note: Software manufacturer: Lotus (now IBM)]

StarOffice (integrated package), CC.1242
[note: Software manufacturer: Sun]

WordPerfect Executive (integrated package), CC.1243

Works (Apple) (integrated package), CC.1244
definition: Use only for courses specifically about the use of Apple Works integrated package.

Works (Lotus) (integrated package), CC.1245

Works (Microsoft) (integrated package), CC.1246

personal organisation software (use), CC.13

definition: Courses about using personal organisation software not specified by name elsewhere in the LDCS.

Organiser (personal organisation software), CC.131
[note: Software manufacturer: Lotus (now IBM)]

Outlook (personal organisation software), CC.132
[note: Software manufacturer: Microsoft]

Schedule+ (personal organisation software), CC.133
[note: Software manufacturer: Microsoft]

presentation software (use), CC.14

Freelance (presentation software), CC.141
[note: Software manufacturer: Lotus (now IBM)]

PowerPoint (presentation software), CC.142
use for: Microsoft Producer
[note: Software manufacturer: Microsoft. Also use this class for Microsoft Producer, an add-on to Powerpoint.]

Presentation (presentation software), CC.143
[note: Software manufacturer: Corel]

spreadsheet software (use), CC.15

definition: Use of spreadsheet software where the software package is unspecified.

spreadsheet software (use): A-D, CC.151
definition: Use for courses about spreadsheet software (use) starting with the letters A-D but not specified by name.

spreadsheet software (use): E-K, CC.152
definition: Use for courses about spreadsheet software (use) starting with the letters E-K but not specified by name.

Excel (spreadsheet software), CC.1521
[note: Software manufacturer: Microsoft. The following sub-classes specify the difficulty of the course.]

Excel (spreadsheet software) (introductory), CC.15211
[note: Use only for courses aimed at inexperienced or foundation users. Sometimes expressed as Core, Basic, Beginners.]

Excel (spreadsheet software) (intermediate), CC.15212
[note: Use only for courses aimed at intermediate users. Sometimes expressed as Proficient.]

Excel (spreadsheet software) (advanced), CC.15213
[note: Use only for courses aimed at professional or expert users.]

spreadsheet software (use): L-R, CC.153
definition: Use for courses about spreadsheet software (use) starting with the letters L-R but not specified by name.

Lotus 1-2-3 (spreadsheet software), CC.1531
[note: Software manufacturer: Lotus (now IBM)]

Quattro (spreadsheet software), CC.1532
use for: Quattro Pro

spreadsheet software (use): S-Z, CC.154

definition: Use for courses about spreadsheet software (use) starting with the letters S-Z but not specified by name.

SuperCalc (spreadsheet software), CC.1541

text and document processing software (use), CC.16

desktop publishing software (use), CC.161

definition: Courses in using desktop publishing software where no software is specified.
use for: DTP software use
[note: For these courses, consider also using desktop publishing (KH.33).]
[see also: desktop publishing (KH.33).]

desktop publishing software (use): A-D, CC.1611
definition: Courses about using desktop publishing software A-D not specified by name elsewhere in the LDCS.

desktop publishing software (use): E-K, CC.1612
definition: Courses about using desktop publishing software E-K not specified by name elsewhere in the LDCS.

FrameMaker (desktop publishing software), CC.16121

InDesign (desktop publishing software), CC.16122
[note: Software manufacturer: Adobe]

desktop publishing software (use): L-R, CC.1613
definition: Courses about using desktop publishing software L-R not specified by name elsewhere in the LDCS.

PageMaker (desktop publishing software), CC.16131

Publisher (desktop publishing software), CC.16132
[note: Software manufacturer: Microsoft]

desktop publishing software (use): S-Z, CC.1614
definition: Courses about using desktop publishing software S-Z not specified by name elsewhere in the LDCS.

Ventura (desktop publishing software), CC.16141
[note: Software manufacturer: Corel]

WordPerfect (desktop publishing software), CC.16142
[note: WordPerfect is also the name of a word processing software package (CC.16142). Check the summary.]

Xpress (desktop publishing software), CC.16143
use for: CopyDesk
[note: Software manufacturer: Quark]

hypertext / hypermedia software (use), CC.162

definition: General courses in using hypertext / hypermedia software where no software is specified.

Acrobat (hypertext / hypermedia software), CC.1621
[note: Software manufacturer: Adobe]

word processing software (use), CC.163

definition: General courses in creation and editing of textual documents using computer systems.
use for: Mailmerge
[note: For specific software packages, use the appropriate word processing software (use) class. For courses about text or word processing that are not learning how to use a specific package (e.g. automated text processing), use document and text processing, CB.33.]

word processing software (use): A-D, CC.1631
definition: Courses about using word processing software A-D not specified by name elsewhere in the LDCS.

word processing software (use): E-K, CC.1632
definition: Courses about using word processing software E-K not specified by name elsewhere in the LDCS.

word processing software (use): L-R, CC.1633
definition: Courses about using word processing software L-R not specified by name elsewhere in the LDCS.

word processing software (use): S-Z, CC.1634
definition: Courses about using word processing software S-Z not specified by name elsewhere in the LDCS.

Word (word processing software), CC.16341

[note: Software manufacturer: Microsoft. The sub-classes specify the difficulty of the course.]

Word (word processing software) (introductory), CC.163411
[note: Use only for courses aimed at inexperienced or foundation users. Also called Core, Basic, Beginners]

Word (word processing software) (intermediate), CC.163412
[note: Use only for courses aimed at intermediate users. Also called Proficient]

Word (word processing software) (advanced), CC.163413
[note: Use only for courses aimed at professional or expert users. Also called Expert, Master]

WordPerfect (word processing software), CC.16342
[note: WordPerfect is also the name of some desktop publishing software (CC.16141). Check the summary.]

WordPro (word processing software), CC.16343
definition: Use only for courses specifically about the use of Lotus WordPro word processing software.

data processing applications (use), CC.2

definition: Learning to use software for entering text or numbers into a computer, or for systems that automatically input data from forms.

graphics and multimedia software (use), CC.3

animation software (use), CC.31

definition: General courses in using animation software where no software is specified or where software is not specified by name elsewhere in the LDCS.

animation software (use): A-D, CC.311

definition: Use for courses about animation software (use) starting with the letters A-D but not specified by name.

3D Studio (animation software), CC.3111
use for: 3DS Max
[note: Software manufacturer: Autodesk]

After Effects (animation software), CC.3112
[note: Software manufacturer: Adobe. This software is for motion graphics and visual effects for film, video, DVD, and the Web.]

Cinema 4D (animation software), CC.3113

animation software (use): E-K, CC.312

definition: Use for courses about animation software (use) starting with the letters E-K but not specified by name.

Fireworks (animation software), CC.3121
[note: Software manufacturer: Macromedia (now Adobe)]

Flash (animation software), CC.3122
use for: ActionScript
[note: Software manufacturer: Macromedia (now Adobe)]

animation software (use): L-R, CC.313

definition: Use for courses about animation software (use) starting with the letters L-R but not specified by name.

LightWave 3D (animation software), CC.3131

Maya (animation software), CC.3132
[note: Software manufacturer: Alias]

animation software (use): S-Z, CC.314

definition: Use for courses about animation software (use) starting with the letters S-K but not specified by name.

computer aided design (CAD) software (use), CC.32

definition: Courses in using Computer Aided Design (CAD) software where no software is specified.
[note: For these courses, consider also using computer aided design (CAD) (VF.12). 'MCAD' refers to a Microsoft Certified course not a CAD software. See CB.5631.]

CAD software (use): A-D, CC.321

definition: Courses about using Computer Aided Design (CAD) software A-D not specified by name elsewhere in the LDCS.

AutoCAD (CAD software), CC.3211

AutoLisp (CAD software), CC.3212

CAD 3D (CAD software), CC.3214

CAD software (use): E-K, CC.322

definition: Courses about using Computer Aided Design (CAD) software E-K not specified by name elsewhere in the LDCS.

InVentor (CAD software), CC.3221

CAD software (use): L-R, CC.323

definition: Courses about using Computer Aided Design (CAD) software L-R not specified by name elsewhere in the LDCS.

[note: MCAD refers to a Microsoft Certified course not a CAD software. See CB.5631.]

Mechanical Desktop (CAD software), CC.3231

[note: Software manufacturer: Autodesk]

Microstation (CAD software), CC.3232

Pro/Engineer (CAD software), CC.3233

[note: Software manufacturer: Parametric Technology]

CAD software (use): S-Z, CC.324

definition: Courses about using Computer Aided Design (CAD) software S-Z not specified by name elsewhere in the LDCS.

VectorWorks (CAD software), CC.3241

diagramming software (use), CC.33

definition: Use of software for drawing diagrams such as flow charts and organisation charts.

FlowCharter (diagramming software), CC.331

[note: Software manufacturer: iGrafix]

Visio (diagramming software), CC.332

[note: Software manufacturer: Microsoft]

drawing / painting software (use), CC.34

definition: General courses in using drawing / painting software where no software is specified. Includes creative art packages

drawing / painting software (use): A-D, CC.341

definition: Use for courses about drawing / painting software (use) starting with the letters A-D but not specified by name.

CorelDraw (painting / drawing software), CC.3411

[note: Software manufacturer: Corel]

drawing / painting software (use): E-K, CC.342

definition: Use for courses about drawing / painting software (use) starting with the letters E-K but not specified by name.

drawing / painting software (use): L-R, CC.343

definition: Use for courses about drawing / painting software (use) starting with the letters L-R but not specified by name.

Painter (painting / drawing software), CC.3431

[note: Software manufacturer: Corel]

Picture-Publisher (painting / drawing software), CC.3432

drawing / painting software (use): S-Z, CC.344

definition: Use for courses about drawing / painting software (use) starting with the letters S-Z but not specified by name.

graphics software (use), CC.35

definition: General courses in using graphics software where no software is specified.
[note: For general courses about computer graphics, but not only about learning to use specific software, use computer graphics(CB.32).]
[see also: computer graphics (CB.32).]

graphics software (use): A-D, CC.351

definition: Courses about using graphics software A-D not specified by name elsewhere in the LDCS.

Creative Suite (graphics software), CC.3511

[note: Software manufacturer: Adobe. This is a suite of Adobe software, including Photoshop, Illustrator, InDesign, GoLive, Acrobat, Version Cue, Bridge and Stock Photos. Use this class for anything which is titled 'Adobe' without any further information.]

graphics software (use): E-K, CC.352

definition: Courses about using graphics software E-K not specified by name elsewhere in the LDCS.

Freehand (graphics software), CC.3521
[note: Software manufacturer: Macromedia (now Adobe)]
Illustrator (graphics software), CC.3522
[note: Software manufacturer: Adobe]
Image Ready (graphics software), CC.3523
[note: Software manufacturer: Adobe]
KnockOut (graphics software), CC.3524
[note: Software manufacturer: Corel. Used for masking images of photographic quality.]

graphics software (use): L-R, CC.353
definition: Courses about using graphics software L-R not specified by name elsewhere in the LDCS.

PaintShop Pro (graphics software), CC.3531
Photodraw (graphics software), CC.3532
[note: Software manufacturer: Microsoft]
PhotoPaint (graphics software), CC.3533
PhotoShop (graphics software), CC.3534
use for: Adobe (unspecified)
[note: Software manufacturer: Adobe]
Picture It! (graphics software), CC.3535
[note: Software manufacturer: Microsoft]

graphics software (use): S-Z, CC.354
definition: Courses about using graphics software S-Z not specified by name elsewhere in the LDCS.

Studio Pro (graphics software), CC.3541

multimedia software (use), CC.36
definition: General courses in using multimedia software where no software is specified or where software is not specified by name elsewhere in the LDCS. Includes film, video and DVD editing and authoring software.

multimedia software (use): A-D, CC.361
definition: Courses about using multimedia software A-D not specified by name elsewhere in the LDCS.

Director (Macromedia) (multimedia software), CC.3611
[see also: Director (IBM) (network / systems management software) (CB.5617).]
DVD Studio Pro (Apple) (multimedia software), CC.3612
use for: Final Cut Pro
[note: Software manufacturer: Apple]

multimedia software (use): E-K, CC.362
definition: Courses about using multimedia software E-K not specified by name elsewhere in the LDCS.

Encore DVD (DVD authoring software), CC.3621
definition: Use only for courses specifically about the use of Adobe's Encore DVD authoring software.
iMovie (video editing software), CC.3622
[note: Software manufacturer: Apple]

multimedia software (use): L-R, CC.363
definition: Courses about using multimedia software L-R not specified by name elsewhere in the LDCS.

Media 100 (film and video editing software), CC.3631
Movie Maker, CC.3632
definition: Software manufacturer: Microsoft
Premiere (video editing software), CC.3633
[note: Software manufacturer: Adobe]

multimedia software (use): S-Z, CC.364
definition: Courses about using multimedia software S-Z not specified by name elsewhere in the LDCS.

Studio (video editing software), CC.3641
use for: Pinnacle; Pinnacle Studio
[note: Software manufacturer: Pinnacle]

scanning / OCR software (use), CC.37

definition: General courses in using scanning and Optical Character Reading (OCR) software where no software is specified or where software is not specified by name elsewhere in the LDCS.

internet software (use), CC.4

definition: Use of computer programmes on the internet.

email software (use), CC.41

definition: Using email software on the internet other than a specific named software product. [note: Microsoft Outlook/Outlook Express is under organiser software, CC.132.]

cc:mail (email software), CC.411

MIMESweeper (email software), CC.412

SendMail (email software), CC.413

File Transfer Protocol (FTP) software (use), CC.42

definition: Courses about uploading and downloading web pages. May cover FTP clients, FTP servers, modes of transfer, FTP session types, and viruses.

integrated internet software (use), CC.43

definition: Courses about using integrated internet software not specified by name elsewhere in the LDCS.

Collaboration Server (integrated internet software), CC.431

[note: Software manufacturer: CISCO]

Communicator (integrated internet software), CC.432

[note: Software manufacturer: Netscape]

internet conferencing software (use), CC.44

definition: Courses about learning to use internet conferencing software.

NetMeeting (internet conferencing software), CC.441

using the world wide web, CC.45

definition: Use for web browsing where the software package is unspecified and for general use of web site facilities. The following topics are likely to be included: navigating the web, searching for information on the web, accessing favourite websites, working with web-based email.

Becoming Webwise, CC.451

definition: Courses for beginners in the safe use of the internet, covering topics such as search engines, web page navigation and using the world wide web in general.

Internet Explorer (web browser), CC.452

use for: IE4; IE5; IE6

[note: Software manufacturer: Microsoft]

Mosaic (web browser), CC.453

Navigator (web browser), CC.454

[note: Software manufacturer: Netscape]

operating systems (use), CC.5

definition: Topics include an overview of computing and operating system structures: process management and storage management; a comparison of modern operating systems; aspects of security; evaluation of a variety of user interfaces (UIs)

[note: This refers to the use of operating systems, not the technology behind them and so should not include comparing types of operating system. For more technical aspects of operating systems see operating systems (general) (CB.65).]

operating systems (use): A-D, CC.51

definition: Use for courses about operating systems A-D not specified.

AIX (operating system), CC.511

definition: Use only for courses specifically about the operating system AIX; Installing, using and administering AIX systems; AIX shell environments.

DOS systems for personal computers, CC.512

definition: Use only for courses specifically about Disk Operating System (e.g. MS-DOS, DR-DOS). Installing, using and administering DOS systems; command line environment. Includes all flavours of personal computer DOS systems.

operating systems (use): E-K, CC.52

definition: Use for courses about operating systems E-K not specified.

operating systems (use): L-R, CC.53

definition: Use for courses about operating systems L-R not specified.

Linux (operating system), CC.531

definition: Use only for courses specifically about the open source operating system Linux and associated software. Installing, using and administering Linux systems. Linux is used in web server and office environments.

[note: Linux is related to Unix and so courses that mention both can often be coded just under Linux, but it is necessary to check the summary.]

[see also: Red Hat Linux (operating system) (CC.5311).]

Red Hat Linux (operating system), CC.5311

definition: Use only for courses specifically about the Red Hat version of the Linux operating system.

Mac operating systems, CC.532

definition: Use only for courses specifically about Mac operating systems. Installing, using and administering Mac systems. May also include network-based services.

[note: For Mac use which is not specifically about the operating system see CA.351 (Apple Macintosh computers).]

MVS (operating system), CC.533

definition: Use only for courses specifically about the operating system MVS. Installing, using and administering MVS systems.

OS/390 (operating system), CC.534

definition: Use only for courses specifically about the operating system OS/390. Installing, using and administering OS/390 systems.

use for: QMF; Query Management Facility;RACF

OS/400 (operating system), CC.535

definition: Use only for courses specifically about the OS/400 operating system. Installing, using and administering OS/400 systems.

use for: v5r2

operating systems (use): S-Z, CC.54

definition: This term is used purely to create the hierarchy and should not be used for classifying courses. Use terms below this in the hierarchy.

operating systems (use): S-T, CC.541

definition: Use for courses about operating systems S-T not specified.

operating systems (use): U, CC.542

definition: Use for courses about operating systems U not specified.

Unix (operating system), CC.5421

definition: Use only for courses specifically about the operating system Unix. Installing, using and administering Unix systems.

HP-UX (operating system), CC.54211

definition: Use only for courses specifically about the operating system HP-UX. Installing, using and administering HP-UX systems.

Solaris (operating system), CC.54212

definition: Use only for courses specifically about the operating system Solaris. Installing, using and administering Solaris systems.

shell systems (Unix), CC.54213

definition: Reading, writing, debugging and using UNIX Shell Scripts.

Bourne Shell (Unix), CC.542131

definition: Reading, writing, debugging and using UNIX Bourne Shell Scripts.

Korn Shell (Unix), CC.542132

definition: Reading, writing, debugging and using UNIX Korn Shell Scripts.

operating systems (use): V, CC.543

definition: Use for courses about operating systems V not specified.

VM (operating system), CC.5431

definition: Use only for courses specifically about IBM's VM family of operating systems. Installing, using and administering VM systems.

use for: z/VM

VMS (operating system), CC.5432

definition: Use only for courses specifically about Hewlett Packard's operating system VMS. Installing, using and administering VMS systems.

operating systems (use): W-Z, CC.544

definition: Use for courses about operating systems W-Z not specified.

Windows (general) (operating system), CC.5441
definition: Use of Windows operating systems. For the beginner, courses introduce operating system skills for Windows, including file and folder management in a Windows environment, simple customisation of the user environment and navigation. For the professional, courses might include adding and troubleshooting software; maintaining and recovering the system; providing personalised user environment; implementing local security and backup; hosting shared resources.
use for: Windows 95; Windows 98

Windows 2000 (operating system), CC.54411
definition: Use of the Windows 2000 operating system for all levels of user. For the beginner, courses introduce operating system skills for Windows 2000, including file and folder management in a Windows 2000 environment, simple customisation of the user environment and navigation. For the professional, courses might include adding and troubleshooting software; maintaining and recovering the system; providing personalised user environment; implementing local security and backup; hosting shared resources.

Windows CE (operating system), CC.54412
definition: Use of the Windows CE operating system for all levels of user. For the beginner, courses introduce operating system skills for Windows CE, including file and folder management in a Windows CE environment, simple customisation of the user environment and navigation. For the professional, courses might include adding and troubleshooting software; maintaining and recovering the system; providing personalised user environment; implementing local security and backup; hosting shared resources.

Windows ME (operating system), CC.54413
definition: Use of the Windows ME operating system for all levels of user.

Windows NT (operating system), CC.54414
definition: Use of the Windows NT operating system for all levels of user. For the beginner, courses introduce operating system skills for Windows NT, including file and folder management in a Windows NT environment, simple customisation of the user environment and navigation. For the professional, courses might include adding and troubleshooting software; maintaining and recovering the system; providing personalised user environment; implementing local security and backup; hosting shared resources.

Windows Server 2003 (operating system), CC.54415
definition: Use of the Windows Server 2003 operating system family for all levels of user.
use for: Windows 2003; Windows Server
[note: Windows Server 2003 is an operating system family which includes a lot of network / systems management functionality.]

Windows XP (operating system), CC.54416
definition: Use of the Windows XP operating system for all levels of user. For the beginner, courses introduce operating system skills for Windows XP, including file and folder management in a Windows XP environment, simple customisation of the user environment and navigation. For the professional, courses might include adding and troubleshooting software; maintaining and recovering the system; providing personalised user environment; implementing local security and backup; hosting shared resources.

Z/OS (operating system), CC.5442
definition: Use only for courses specifically about the operating system Z/OS. Installing, using and administering Z/OS systems.

software for specific subjects and industries (use), CC.6

definition: Use of applications software primarily designed for use within particular industries or specific academic areas. This term is used purely to create the hierarchy and should not be used for classifying courses. Use terms below this in the hierarchy.

agriculture / catering / leisure services software, CC.61

definition: Courses about using agriculture / catering / leisure services software.

ticketing software, CC.611
definition: Courses about using ticketing software not specified by name elsewhere in the LDCS.

Amadeus (ticketing software), CC.6111
Galileo (ticketing software), CC.6112
Sabre (ticketing software), CC.6113

Worldspan (ticketing software), CC.6114

architecture, engineering, construction or transport software, CC.62

definition: Courses about using architecture, engineering, construction or transport software.

engineering and manufacturing software, CC.621

definition: Courses about using engineering and manufacturing software.
use for: Computer Aided Manufacturing (CAM) / Computer Aided Engineering (CAE) software

transport software, CC.622

use for: route planning software

Autoroute (route planning software), CC.6221
use for: Autoroute Express

business software (use), CC.63

definition: Software specifically designed for use in a business environment.
[see also: business information technology (CA.2). business information systems (CB.41).]

accounting and payroll software (use), CC.631

definition: A general term for courses about use of accounting and payroll software where the individual software package is not specified.
use for: financial management software (use)
[note: Use for all accounting software where the package is not mentioned, but for payroll where the package is not mentioned use CC.6151 (payroll software). Use this part of section C for financial management software.]

accounting software (use), CC.6311

definition: A general term for courses about use of accounting software where the individual software package is not specified.

accounting software (use): A-D, CC.63111
definition: Courses about using accounting software A-D not specified by name elsewhere in the LDCS.

AccountsMaster (accounts software), CC.631111

accounting software (use): E-K, CC.63112
definition: Courses about using accounting software E-K not specified by name elsewhere in the LDCS.

Financial Control (accounts software), CC.631121
Great Plains (accounts software), CC.631122

accounting software (use): L-R, CC.63113
definition: Courses about using accounting software L-R not specified by name elsewhere in the LDCS.

Money (accounts software), CC.631131
[note: Software manufacturer: Microsoft]
Pastel (accounts software), CC.631132
[note: Software manufacturer: Softline]
Pegasus (accounts software), CC.631133
QuickBooks (accounts software), CC.631134
Quicken (accounts software), CC.631135

accounting software (use): S-Z, CC.63114
definition: Courses about using accounting software S-Z not specified by name elsewhere in the LDCS.

Sage (accounts software), CC.631141
[note: For Sage courses which do not specify accounts or payroll use this code and CC.63122 (Payroll (Sage)).]
TAS Books (accounts software), CC.631142
Viztopia Accounts (accounts software), CC.631143

payroll software (use), CC.6312

definition: A general term for courses about use of payroll software where the individual software package is not specified.

Payroll (Pegasus) (payroll software), CC.63121
Payroll (Sage) (payroll software), CC.63122
[note: For Sage software where payroll or accounting is not specified use this code and CC.631141 (Sage (accounts software).]

business analysis software (use), CC.632

definition: Covers business intelligence, business modelling and other analytical statistical business packages

business intelligence software (use), CC.6321

definition: Courses about using business intelligence software (software for business design, planning, implementation and deployment) not specified by name elsewhere in the LDCS.

Business Objects (business intelligence software), CC.63211

Crystal Reports (business intelligence software), CC.63212

use for: Crystal Enterprise

Oracle Discoverer (business intelligence software), CC.63213

[see also: Oracle (database software) (CC.1133). Oracle applications development (CC.11331). Oracle Designer (CASE software) (CB.6622). Oracle Financials (business intelligence software) (CC.63214). PL/SQL (structured query language) (CC.1151). Oracle JDeveloper (CB.61221). Oracle certifications (network / systems management software) (CB.5636).]

Oracle Financials (business intelligence software), CC.63214

definition: Use only for courses specifically about the use of Oracle Financials business intelligence software.

[see also: Oracle (database software) (CC.1133). Oracle applications development (CC.11331). Oracle Designer (CASE software) (CB.6622). Oracle Discoverer (business intelligence software) (CC.63213). PL/SQL (structured query language) (CC.1151). Oracle JDeveloper (CB.61221). Oracle certifications (network / systems management software) (CB.5636).]

Power Play (business intelligence software), CC.63215

SAP (business intelligence software), CC.63216

business modelling software (use), CC.6322

definition: Software used to create models of business processes and structure.

business management software (use), CC.633

definition: Courses about using business management software.

use for: enterprise resource planning (ERP) software (use);document management software (use)

Axapta (enterprise resource management software), CC.6331

Meridian (document management software), CC.6332

[note: Software manufacturer: Cyco]

Navision (business management software), CC.6333

customer relationship management software (use), CC.634

definition: Courses about using contact management software not specified by name elsewhere in the LDCS.

use for: contact management software; CRM

ACT (customer relationship management software), CC.6341

Goldmine (customer relationship management software), CC.6342

[note: Software manufacturer: FrontRange Solutions]

Maximizer (customer relationship management software), CC.6343

group working software (use), CC.635

definition: Applications that allow users to integrate their working documents and processes, including on the web. Courses about using group working software not specified by name elsewhere in the LDCS.

Domino (group working software), CC.6351

[note: Software manufacturer: Lotus (now IBM)]

GroupWise (group working software), CC.6352

Notes (group working software), CC.6353

[note: Software manufacturer: Lotus (now IBM)]

QuickPlace (group working software), CC.6354

[note: Software manufacturer: Lotus (now IBM)]

management information systems software (use), CC.636

definition: Courses about using management information systems software.

project management software (use), CC.637

definition: Courses about using project management software not specified by name elsewhere in the LDCS.

[note: For project management not using a specific software package see project management (AG.6) and sub-classes.]

Project (project management software), CC.6371

use for: MS Project

[note: Software manufacturer: Microsoft]

Project Manager Workbench (project management software), CC.6372
SuperProject (project management software), CC.6373

education / careers / schools software, CC.64

definition: Courses about using education / careers / schools software.

Authorware (elearning software), CC.641
[note: Software manufacturer: Macromedia (now Adobe)]
Encarta (online encyclopedia software), CC.642
[note: Software manufacturer: Microsoft]
Moodle (course management software), CC.643
definition: Course management system (CMS) - a free, Open Source software package designed using sound pedagogical principles, to help educators create effective online learning communities.

health / sciences / environment software, CC.65

definition: Courses about using health / sciences / environment software not specified by name elsewhere in the LDCS.

sciences software, CC.651
definition: Courses about using software for sciences not specified beneath this term in the hierarchy.
mathematics software, CC.652
statistics software, CC.6521
definition: Courses about using statistics software not specified by name.
Statistical Analysis System (SAS), CC.65211
definition: Statistical Analysis System (SAS) programming language may be used for: data manipulation; DATA step programming; results; display manager system; data libraries; inputting data and PROC SQL and combining and updating data sets.
Statistical Package for the Social Sciences (SPSS), CC.65212

social sciences / humanities / arts and crafts software, CC.66

arts and crafts software, CC.661
music software, CC.6611
Logic Pro (music software), CC.66111
[note: Software manufacturer: Apple]
Reason (music software), CC.66112
[note: Software manufacturer: Propellerhead Software]
recording software (audio-visual), CC.6612
geographical information systems software (use), CC.662
[see also: geographical information systems (CB.4322).]
Map Info (geographical information systems software), CC.6621
[note: Software manufacturer: MapInfo Corporation]
library software, CC.663
software for film/video industry, CC.664
Shake (image compositing software), CC.6641
[note: Software manufacturer: Apple]

telephony applications, CC.67

definition: Software to run telephone equipment, e.g. an organisation's exchange.
use for: Nortel
use for: Meridian telephony applications
Communication Server (telephony software), CC.671
Optivity Telephony Manager (OTM), CC.672
definition: Software application for configuration and management of telephone system.
use for: OTM

INFORMATION WORK / INFORMATION USE, CD.

definition: Using or working with different information sources. This term is used purely to create the hierarchy and should not be used for classifying courses. Use terms below this in the hierarchy.

arts / humanities information services, CD.1

definition: Courses in the use of information systems in arts and humanities environments.

business information services, CD.2

definition: Courses in the use of information systems in business and commerce.

current affairs / news information services, CD.3

definition: Courses in the use of information systems in current affairs, news and information services.

information / data collection and handling, CD.4

definition: Courses about methods of data collection and handling.

questionnaire design, CD.41

definition: Courses about questionnaire design including topics such as the market research process, types of question and questionnaire format.

information sources: use/searching, CD.5

definition: Courses about techniques and methods in researching, selecting and evaluating information sources.

information work / services, CD.6

definition: Courses in the use of information systems in service environments.

scientific / technical information services, CD.7

definition: Courses in the use of information systems in technical, scientific or medical environments.

LIBRARIES / LIBRARIANSHIP, CE.

definition: General courses about libraries and librarianship.

librarianship and library management, CE.1

definition: Courses providing skills and knowledge for professional librarians and library managers.

libraries: specific types, CE.2

definition: Library work in specialist areas.

scientific or technical libraries, CE.21

definition: Courses providing skills and knowledge for working in, using or researching in a scientific or technical library.

library assistants' work, CE.3

definition: Courses providing skills and knowledge for working in a library.

library services, CE.4

definition: The following topics may be covered: Identify and provide information and material required by users; Maintain the arrangement of material to facilitate retrieval; Issue and recover loan material; Enable the use of Information technology.

Index to the Learning Directory Classification System Section C
This index is intended to assist in the location of classes in the schedule, or to assist with non-database searching. It should not be used directly for classification.
= indicates a term that is not a class title, usually a 'use for'.

.NET, CB.4451
3D computer modelling, CB.341=
3D Studio (animation software), CC.3111
3DS Max, CC.3111=
802.11 (IEEE standard), CB.2244=
802.3 (international standard), CB.2231=

A
abstracting, CB.431=
access, remote, CB.226
Access (database software), CC.11111
    advanced, CC.111113
    intermediate, CC.111112
    introductory, CC.111111
accounting and payroll software (use), CC.631
accounting software (use), CC.6311
AccountsMaster (accounts software), CC.631111
Acrobat (hypertext / hypermedia software), CC.1621
ACT (customer relationship management software), CC.6341
ActionScript, CC.3122=
Active Directory (network / systems management software), CB.5611
Active Server Pages (ASP), CB.4461
Adabas (database software), CC.11112
Adaptive Server
    (database software), CC.11113
    Anywhere, CC.11113=
    Enterprise, CC.11113=
Adobe (unspecified), CC.3534
Adobe:
    Acrobat (hypertext / hypermedia software), CC.1621
    Creative Suite (graphics software), CC.3511
        see also: Acrobat (CC.1621)
        see also: Illustrator (CC.3522)
        see also: InDesign (CC.16122)
        see also: Photoshop (CC.3534)
    InDesign (desktop publishing software), CC.16122
    After Effects (animation software), CC.3112
    Encore DVD (DVD authoring software), CC.3621
    GoLive (website development software), CB.446522

Illustrator (graphics software), CC.3522
Image Ready (graphics software), CC.3523
PageMill (website development software), CB.446531
PhotoShop (graphics software), CC.3534
Premiere (video editing software), CC.3633
After Effects (animation software), CC.3112
agriculture / catering / leisure services software, CC.61
Aironet wireless courses, CB.5615=
AIX (operating system), CC.511
Alias: Maya (animation software), CC.3132
Amadeus (ticketing software), CC.6111
animation software (use), CC.31
Apache (web server management software), CB.44421
Apple Macintosh computers, CA.341
see also: Mac operating systems (CC.535)
Apple:
DVD Studio Pro (Apple) (multimedia software), CC.3612
Logic Pro (music software), CC.66111
Shake (image compositing software), CC.6641
Works (integrated package), CC.1244
application development, CB.6=
Applied Information and Communications Technology (A-level), CA.=
Approach (database software), CC.11114
architecture, computer, CB.21
archive studies, CB.43=
ARCserve (network / systems management software), CB.5612
artificial intelligence (AI), CB.31
arts and crafts software, CC.661
arts / humanities information services, CD.1
AS/400, CB.2111
ASE, CC.11113=
ASP (Active Server Pages), CB.4461
Assembler (computer programming language), CB.61111
ATM, CB.223=
Authorware (elearning software), CC.641
AutoCAD (CAD software), CC.3211
Autodesk:
3D Studio (animation software), CC.3111
Mechanical Desktop (CAD software), CC.3231
AutoLisp (CAD software), CC.3212
Autoroute
(route planning software), CC.6221
Express, CC.6221=
Axapta (enterprise resource management software), CC.6331

B

BackOffice (network / systems management software), CB.5613
Basic (computer programming language), CB.61121
Becoming Webwise, CC.451
bioinformatics, CB.4321
BizTalk Server (web server management software), CB.44422
Bluetooth communications and networking, CB.22441

Border Manager (internet security system), CB.4431
Bourne Shell (Unix), CC.542131
bridges and switches, routers, CB.2212
BS7799, CB.53=
building your own PC, CB.2121
business
    analysis software (use), CC.632
    computing, CA.2=
    computer systems, CA.2=
    information
        management, CB.41=
        services, CD.2
        systems, CB.41
        technology, CA.2
    intelligence software (use), CC.6321
    management software (use), CC.633
    modelling software (use), CC.6322
    software (use), CC.63
    see also: business information systems (CB.41)
    see also: business information technology (CA.2)
Business Objects (business intelligence software), CC.63211

C

C (computer programming language), CB.61131
C++ (computer programming language), CB.61132
    see also: Visual C++ (computer programming language) (CB.6442)
C# (computer programming language), CB.61133
cable installation, CB.11
CAD 3D (CAD software), CC.3214
CAE (Computer Aided Engineering) software, CC.621=
CAM (Computer Aided Manufacturing) software, CC.621=
careers software, CC.64
CASE (Computer Aided Software Engineering), CB.662
cataloguing, CB.431=
catering services software, CC.61
cc:mail (email software), CC.411
CD drives, CB.13=
Certified Internet Webmaster (CIW), CB.446=
Certified Novell Administrator (CNA), CB.5633=
CGI (Common Gateway Interface), CB.4462
Check Point: FireWall-1 (internet security system), CB.4432
CICS (network / systems management software), CB.5614
Cinema 4D (animation software), CC.3113
CISCO
    Certified Design Associate, CB.5615=
    certifications (network / systems management software), CB.5615
    Collaboration Server (integrated internet software), CC.431
Citrix
    certifications (network / systems management software), CB.5616
    Core Technologies and Architecture, CB.5616=
    Metaframe, CB.5616=
CL (computer programming language), CB.61134

CLAIT (Computer Literacy and Information Technology), CA.31
classification, CB.431
client and middleware software, CB.565
    applications development, CB.661
client server systems, CB.2241=
CNA (Certified Novell Administrator), CB.5633=
Cobol (computer programming language), CB.61135
ColdFusion (website development software), CB.446511
Collaboration Server (integrated internet software), CC.431
Commerce Server (web server management software), CB.44423
common office software (use), CC.1
Common Gateway Interface (CGI), CB.4462
Communication Server (telephony software), CC.671
communications protocols, CB.223
communications software, CB.56=
Communicator (integrated internet software), CC.432
CompTIA certifications (support technicians), CB.541
CompTIA certifications: specific *(see notes at beginning of this document)*
    A+ (foundation level service technician), CB.541=
    CDIA+ (certified document imaging architect), CB.33=
    CTT+ (IT instructor) (see GC.2 in other LDCS schedule)
    e-Biz+ (foundation eBusiness for technical and non-technical staff), CB.444=
    HTI+ (home technology integration technician), CB.541=
    i-Net+ (internet systems technician), CB.44=
    Linux+ (Linux operating system technician), CC.531=
    Network+ (network technician), CB.541=
    Project+ (project manager), CB.66=
    Security+ (security technician), CB.53=
    Server+ (mid to upper level system technician), CB.541=
computational vision, CB.312=
computer
    3D modelling, CB.321=
    administration, CB.5=
    aided design (CAD) software (use), CC.32
        see also: computer aided design (CAD) (VF.12)
    animation, CB.321
    appreciation / introduction, CA.3
    architecture, CB.21
    architectures, CB.21
    backups, CB.52=
    communications and networking, CB.22
        see also: network / systems management (CB.5)
    cybernetics, CB.311
    file management, CA.33
        see also: computer security systems (CB.53)
        see also: operating systems (use) (CC.5)
    firmware, CB.12
    games design, CB.3211
    graphics, CB.32
        see also: graphics software (use) (CC.35)

hardware, CB.1
help desk operations, CB.542
interactive entertainment design, CB.3211=
introduction, CA.3=
literacy, CA.3=
maintenance and repair, CB.51
see also: computer support operations (CB.54)
media, CB.13
network components, CB.221
operations, CB.52
peripherals, CB.14
programming
languages, CB.61
techniques, CB.62
using fourth generation languages, CB.63
using visual development environments, CB.64
science, CB.
see also: information technology (general) (CA.1)
security systems, CB.53
see also: internet security systems (CB.443)
see also: penetration testing (computer systems) (CB.4654)
services management, CB.54=
servicing, CB.51=
studies (where not computer appreciation), CB.=
support operations, CB.54
see also: computer maintenance and repair (CB.51)
systems, CB.2
virus protection, CB.531
visualisation, CB.312=
working with, CA.1=
Computer Aided Software Engineering (CASE), CB.662
Computer Associates: ARCserve (network / systems management software), CB.5612
Computer Driving Licence
European, CA.32=
International, CA.32=
computerised document handling, CB.33=
computing, CB.=
computing methodologies, CB.3
confidentiality of data, CB.433=
contact management software, CC.634=
content management, CB.43=
Content Management Server (web content management software), CB.446512
contingency planning (computer operations), CB.55
see also: computer operations (CB.52)
Contribute (web content management software), CB.446513
CopyDesk, CC.16143=
Corel:
CorelDraw (painting / drawing software), CC.3411
KnockOut (graphics software), CC.3524
Office (Corel) (integrated package), CC.1231

Painter (painting / drawing software), CC.3431
Presentation (presentation software), CC.143
Ventura (desktop publishing software), CC.16141
CorelDraw (painting / drawing software), CC.3411
Creative Suite (graphics software), CC.3511
CRM, CC.634=
Crystal
Enterprise, CC.63212=
Reports (business intelligence software), CC.63212
current affairs / news information services, CD.3
customer relationship management software (use), CC.634
Customer Information Control System (CICS) (network / systems management software), CB.5614
Cyco: Meridian (document management software), CC.6332

D

data
analysis, CB.451
collection and handling, CD.4
confidentiality of, CB.433=
integration software, CB.565=
integrity of, CB.433=
management, CB.42=
mining, CB.313=
processing applications (use), CC.2
replication, CB.2211=
security, CB.433=
warehousing, CB.421
see also: knowledge management systems (CB.313)
database
administration, CB.422
design, CB.4541
management, CB.42
software (use), CC.11
DB2 (database software), CC.11141
DBA, CB.422=
Delphi (visual development environment), CB.6411
designing / implementing a network infrastructure, CB.5=
desktop publishing software (use), CC.161
see also: desktop publishing (KH.33)
DHTML, CB.44643=
diagramming software (use), CC.33
digital art *[Note: a generic term which may indicate a course about one or more of the following:]*
animation software (use), CC.31
arts and crafts software, CC.661
computer animation, CB.321
computer graphics, CB.32
drawing / painting software (use), CC.34
graphics software (use), CC.35
see also: computer graphics (CB.32)
multimedia (computing), CB.35

multimedia software (use), CC.36 [default to this class if unsure]
digital cameras, CB.141
see also: digital photography (KJ.14)
see also: image processing (CB.322)
Director (Macromedia) (multimedia software), CC.3611
see also: Director (IBM) (network / systems management software) (CB.5617)
Director (network / systems management software), CB.5617
see also: Director (multimedia software) (CC.351)
Directory
infrastructure, CB.5611=
services, CB.5611=
disaster / contingency planning (computer operations), CB.55
disk drives, CB.13=
distributed networks, CB.2241
see also: server-based systems (CB.213)
distributed systems, CB.2241=
DNS (Domain Name System), CB.4421
document / text processing, CB.33
software (use), CC.16
see also: image processing (CB.322)
document
archiving, CB.33=
image processing, CB.33=
management software (use), CC.633=
Domain Name System (DNS), CB.4421
Domino (group working software), CC.6351
DOS systems for personal computers, CC.512
drawing / painting software (use), CC.34
Dreamweaver (website development software), CB.446514
DTP software use, CC.161=
DVD drives, CB.13=
DVD Studio Pro (Apple) (multimedia software), CC.3612

E

e-commerce (technical), CB.4441
see also: e-commerce (BF.)
e-commerce systems software, CB.44411
ECDL (European Computer Driving Licence), CA.32
education / careers / schools software, CC.64
EJB, CB.6122=
electronic mail services, CB.441=
email
software (use), CC.41
systems, CB.441
Encarta (online encyclopedia software), CC.642
Encore DVD (DVD authoring software), CC.3621
engineering / manufacturing software, CC.621
enterprise resource planning (ERP) software (use), CC.633=
environment software, CC.65
Ethernet, CB.2231
European Computer Driving Licence, CA.32=

Excel (spreadsheet software), CC.1521
advanced, CC.15213
intermediate, CC.15212
introductory, CC.15211
Exchange Server (network / systems management software), CB.5621
expert systems, CB.312
extensible hypertext markup language (XHTML), CB.44641
see also: hypertext markup language (HTML) (CB.44643)
extensible markup language (XML), CB.44642
see also: standard generalised markup language (SGML) (CB.331)

F

File Transfer Protocol (FTP)
services, CB.4422
software (use), CC.42
FileMaker Pro (database software), CC.1121
Final Cut Pro, CC.3612=
financial management software (use), CC.631=
Financial Control (accounts software), CC.631121
FireWall-1 (internet security system), CB.4432
firewalls, CB.443=
Fireworks (animation software), CC.3121
FIX, CB.44642=
Flash (animation software), CC.3122
FlowCharter (diagramming software), CC.331
Focus 4GL (computer programming language), CB.631
Fortran (computer programming language), CB.6121
FoxBase / FoxPro (database software), CC.1122
FoxPro (database software), CC.1122
frame relay, CB.2242
FrameMaker (desktop publishing software), CC.16121
Framework (integrated package), CC.1221
Freehand (graphics software), CC.3521
Freelance (presentation software), CC.141
FrontPage (website development software), CB.446521
FrontRange Solutions: Goldmine (customer relationship management software), CC.6342
FTP (File Transfer Protocol)
services, CB.4422
software (use), CC.42

G

Galileo (ticketing software), CC.6112
games design, CB.3211
geographical
informatics, CB.4322=
information science, CB.4322=
systems, CB.4322
software (use), CC.662
Goldmine (customer relationship management software), CC.6342
GoLive (website development software), CB.446522
graphics
and multimedia software (use), CC.3

modelling, CB.321=
software (use), CC.35
Great Plains (accounts software), CC.631122
group working software (use), CC.635
GroupWise (group working software), CC.6352

H
H.323, CB.4426=
HCI (human computer interface) development, CB.663
health informatics, CB.4323
health / sciences / environment software, CC.65
Hewlett Packard certifications, CB.5622
Hewlett Packard: OpenView (network / systems management software), CB.5634
HoTMetaL Pro (website development software), CB.446523
HP Certified Systems Engineer, CB.5622=
HP-UX (operating system), CC.54211
HPS/AppBuilder, CB.6621
human computer interface (HCI) development, CB.663
humanities information services, CD.1
humanities software, CC.66
hypermedia software (use), CC.162
hypertext / hypermedia software (use), CC.162
hypertext markup language (HTML), CB.44643
see also: extensible hypertext markup language (XHTML) (CB.44641)

I
IBM:
CICS (network / systems management software), CB.5614
DB2 (database software), CC.11141
Director (network / systems management software), CB.5617
IMS/DB (database software), CC.1123
iSeries computers, CB.211=
JCL (Job Control Language), CB.521=
MQ Integrator (client and middleware software), CB.5651
Tivoli (network / systems management software), CB.5645
VM (operating system), CC.5431
Websphere Studio, CB.6447=
WebSphere Application Developer (WSAD) (visual development environment), CB.6447
ICDL (International Computer Driving Licence), CA.32=
IE4, CC.452=
IE5, CC.452=
IE6, CC.452=
IEEE 802.11, CB.2244=
iGrafix: FlowCharter (diagramming software), CC.331
IIS (web server management software), CB.44424
Illustrator (graphics software), CC.3522
image processing, CB.322
see also: document and text processing (CB.33)
Image Ready (graphics software), CC.3523

iMovie (video editing software), CC.3622
IMS/DB (database software), CC.1123
InDesign (desktop publishing software), CC.16122
indexing / classification, CB.431
informatics, CB.432
information and communications technology (general), CA.
information / data collection and handling, CD.4
information
management, CB.43
see also: knowledge management systems (CB.313)
science, CB.432
security, CB.433
sources: use/searching, CD.5
systems, CB.4
design, CB.4=
technology (general), CA.1
management for business, CA.2=
use, CD.
information work / information use, CD.
information work / services, CD.6
Information Communication Technology (ICT), CA.=
Information Technology (A-level), CA.
Informix (database software), CC.1124
integrated
internet software (use), CC.43
packages (use), CC.12
integrity of data, CB.433=
intelligent systems, CB.312=
interactive
computing, CB.663=
systems, CB.663=
Interbase (database software), CC.1125
international standard, 802.3, CB.2231=
International Computer Driving Licence, CA.32=
internet
conferencing software (use), CC.44
protocols, CB.442
security systems, CB.443
see also: computer security systems (CB.53)
server management, CB.444=
software (use), CC.4
systems, CB.44
telephony, CB.4426=
Internet Explorer (web browser), CC.452
Internet Information Server (web server management software), CB.44424
Internet Protocol (TCP/IP), CB.2232
Internet Security and Acceleration (ISA) Server (internet security system), CB.4433
internetworking, CB.222=
intranets, CB.4463
introduction to computers, CA.3=

InVentor (CAD software), CC.3221
IP, CB.2232
IP Telephony, CB.4426=
ISA Server (internet security system), CB.4433
ISO 17799, CB.53=

J
J2EE, CB.6122=
Java (computer programming language), CB.6122
Java Server Pages (JSP), CB.6122=
JavaBeans, CB.6122=
Javascript (computer programming language), CB.6123
JCL (Job Control Language), CB.521
JES2, CB.521=
Job Control Language (JCL), CB.521
Job Entry Subsystem 2, CB.521=

K
KnockOut (graphics software), CC.3524
knowledge
    engineering, CB.313=
    management systems, CB.313
knowledge-based
    software shells, CB.312
    systems, CB.313=
Korn Shell (Unix), CC.5421323

L
laptop and notebook systems, CB.2122
    see also: mobile computing (communications and networking) (CB.2243)
leisure services software, CC.61
librarianship and library management, CE.1
libraries / librarianship, CE.
libraries: specific types, CE.2
library
    assistants' work, CE.3
    services, CE.4
    software, CC.663
LightWave 3D (animation software), CC.3131
Lingo (computer programming language), CB.61311
Linux (operating system), CC.531
    see also: Red Hat Linux (operating system) (CC.5311)
load testing (computer systems), CB.66511
local and wide area networks (LAN and WAN), CB.222
local area networks (LAN), CB.2221
Logic Pro (music software), CC.66111
Lotus 1-2-3 (spreadsheet software), CC.1531
Lotus/IBM:
    Approach (database software), CC.11114
    Domino (group working software), CC.6351
    Freelance (presentation software), CC.141

Notes (group working software), CC.6353
Organiser (personal organisation software), CC.131
QuickPlace (group working software), CC.6353
SmartSuite (integrated package), CC.1241
see also: Lotus 1-2-3, CC.1531
WordPro (word processing software), CC.16343
Works (integrated package), CC.1245
LotusScript (computer programming language), CB.61312

M

Mac operating systems, CC.532
Macromedia (unspecified program), CB.446514=
Macromedia/Adobe:
Authorware (elearning software), CC.641
ColdFusion (website development software), CB.446511
Contribute (web content management software), CB.446513
Director (Macromedia) (multimedia software), CC.3611
Dreamweaver (website development software), CB.446514
Fireworks (animation software), CC.3121
Flash (animation software), CC.3122
Freehand (graphics software), CC.3521
Ultradev, CB.446514=
Mailmerge, CC.163=
mainframe computer
design, CB.211=
engineering, CB.211=
systems, CB.211
management information systems, CB.41
software (use), CC.636
see also: business information technology (CA.2)
see also: business software (use) (CC.63)
manufacturing software, CC.621
Map Info (geographical information systems software), CC.6621
markup languages for website development, CB.4464
see also: standard generalised markup language (SGML) (CB.331)
Master Certified Novell Engineer (MCNE), CB.5633=
mathematics software, CC.652
Maximizer (customer relationship management software), CC.6343
Maya (animation software), CC.3132
MCAD, CB.5631=
MCDST, CB.5631=
MCNE (Master Certified Novell Engineer), CB.5633=
MCP, CB.5631=
MCSA, CB.5631=
MCSE, CB.5631=
Mechanical Desktop (CAD software), CC.3231
Media 100 (film and video editing software), CC.3631
medical image processing, CB.322=
Meridian (document management software), CC.6332
Meridian telephony applications, CC.67=
metadata, CB.431=
microcomputer

design, CB.212=
engineering, CB.212=
systems, CB.212
Microsoft certifications (network / systems management software), CB.5631
Microsoft
Producer, CC.142=
Publisher (desktop publishing software), CC.16132
Site Server, CB.44423=
Works (integrated package), CC.1246
[Note: These are programs which are usually known by the full title e.g. Microsoft Works]
Microsoft:
.NET, CB.4451
Access (database software), CC.11111
Active Directory (network / systems management software), CB.5611
BackOffice (network / systems management software), CB.5613
BizTalk Server (web server management software), CB.44422
Commerce Server (web server management software), CB.44423
Content Management Server (web content management software), CB.446512
Encarta (online encyclopedia software), CC.642
Excel (spreadsheet software), CC.1521
Exchange Server (network / systems management software), CB.5621
FrontPage (website development software), CB.446521
IIS (web server management software), CB.44424
Internet Explorer (web browser), CC.452
Internet Information Server (web server management software), CB.44424
Internet Security and Acceleration (ISA) Server (internet security system), CB.4433
Money (accounts software), CC.631131
Movie Maker, CC.3632
Office (Microsoft) (integrated package), CC.1232
Outlook (personal organisation software), CC.132
Photodraw (graphics software), CC.3532
Picture It! (graphics software), CC.3535
PowerPoint (presentation software), CC.142
Project (project management software), CC.6371
Proxy Server (internet security system), CB.4434
Schedule+ (personal organisation software), CC.133
SharePoint (network / systems management software), CB.5642
Small Business Server (network / systems management software), CB.5643
Systems Management Server (network / systems management software), CB.5644
Visio (diagramming software), CC.332
Word (word processing software), CC.16341

Microstation (CAD software), CC.3232
MIMESweeper (email software), CC.412
mobile computing (communications and networking), CB.2243
see also: laptop and notebook systems (CB.2122)
modelling / simulation systems, CB.34
see also: computer animation (CB.321)
modelling systems, CB.341
see also: business modelling software (use) (CC.6111)
modems, CB.142
Money (accounts software), CC.631131
Moodle (course management software), CC.643
MOS, CC.1232=
Mosaic (web browser), CC.453
MOUS, CC.1232=
Movie Maker, CC.3632
MQ Integrator, CB.5651=
MQ Series (client and middleware software), CB.5651
MS Project, CC.6371=
multimedia (computing), CB.35
see also: multimedia (KA.4)
multimedia software (use), CC.36
Multiple Virtual Storage systems, CB.2211=
music software, CC.6611
MVS (operating system), CC.533
MX web pages, CB.446514=
MySQL (database software), CC.1131

N

Navigator (web browser), CC.454
Navision (business management software), CC.6333
NetMeeting (internet conferencing software), CC.441
Netscape:
Communicator (integrated internet software), CC.432
Navigator (web browser), CC.454
NetWare (network / systems management software), CB.5632
see also: Novell certifications (network / systems management software) (CB.5633)
network administration, CB.5=
network
architectures, CB.224
components, computer, CB.221
computing, CB.22=
engineering, CB.22=
management, CB.5
see also: computer communications and networking (CB.22)
see also: computer operations (CB.52)
software, CB.56=
storage, CB.2211
network / communications protocols, CB.223
network / systems management, CB.5
software, CB.56
networks, distributed, CB.2241

neural networks, CB.314
news information services, CD.3
Nortel, CC.67=
Notes (group working software), CC.6353
Novell certifications (network / systems management software), CB.5633
see also: NetWare (network / systems management software) (CB.5632)
Novell:
Border Manager (internet security system), CB.4431
Certified Novell Administrator (CNA), CB.5633=
CNA (Certified Novell Administrator), CB.5633=
Master Certified Novell Engineer (MCNE), CB.5633=
MCNE (Master Certified Novell Engineer), CB.5633=
NetWare (network / systems management software), CB.5632
ZENworks (network / systems management software), CB.5646

O

object
oriented analysis, CB.6641=
oriented design, CB.6641
oriented programming, CB.6641=
Object Pascal, CB.61341=
OCA (Oracle certification), CB.5636=
OCM (Oracle certification), CB.5636=
OCP (Oracle certification), CB.5636=
OCPD (Oracle certification), CB.5636=
OCR software (use), CC.37
office software (use), common, CC.1
Office (Corel) (integrated package), CC.1231
Office (Microsoft) (integrated package), CC.1232
Office Manager (integrated package), CC.1233
Omnis (database software), CC.1132
open source:
Apache (web server management software), CB.44421
Samba (network / systems management software), CB.5641
open systems interconnection (OSI) reference model, CB.225
Open Shortest Path First (OSPF) protocol, CB.223=
OpenView (network / systems management software), CB.5634
operating systems
general, CB.65
use, CC.5
operational acceptance testing, CB.66514=
Operations Manager (server management software), CB.5635
Optivity Telephony Manager (OTM), CC.672
Oracle, CC.1133
see also: Oracle applications development (CC.11331)
see also: Oracle certifications (network / systems management software) (CB.5636)
see also: Oracle Designer (CASE software) (CB.6622)
see also: Oracle Discoverer (business intelligence software) (CC.63213)

see also: Oracle Financials (business intelligence software) (CC.63214)
see also: Oracle JDeveloper (CB.61221)
see also: PL/SQL (structured query language) (CC.1151)
Oracle (database software), CC.1133
Oracle
10g, CC.1133
9i, CC.1133=
Applications, CC.11331=
applications development, CC.11331
certifications (network / systems management software), CB.5636
Designer (CASE software), CB.6622
Discoverer (business intelligence software), CC.63213
Financials (business intelligence software), CC.63214
Forms, CC.11331=
Informix (database software), CC.1124
JDeveloper (computer programming language), CB.61221
Organiser (personal organisation software), CC.131
OS/390 (operating system), CC.534
OS/400 (operating system), CC.535
OSI (open systems interconnection) reference model, CB.225
OSPF protoc0l (Open Shortest Path First protocol), CB.223=
OTM (Optivity Telephony Manager), CC.672
Outlook (personal organisation software), CC.132

P

PageMaker (desktop publishing software), CC.16131
PageMill (website development software), CB.446531
Painter (painting / drawing software), CC.3431
painting software (use), CC.34
PaintShop Pro (graphics software), CC.3531
Paradox (database software), CC.1134
parallel sysplex, CB.22111
Parametric Technology: Pro/Engineer (CAD software), CC.3233
Pascal (computer programming language), CB.61341
Pastel (accounts software), CC.631132
pattern recognition, CB.3221
payroll software (use), CC.6312
Payroll (Pegasus) (payroll software), CC.63121
Payroll (Sage) (payroll software), CC.63122
PC building, CB.2121
Pegasus (accounts software), CC.631133
penetration testing (computer systems), CB.66512
see also: computer security systems (CB.53)
performance testing, CB.66511=
Perl (computer programming language), CB.61342
personal
computer use: specific types, CA.34
digital assistant (PDA) systems, CB.2123
organisation software (use), CC.13
pervasive intelligence, CB.312=

Photodraw (graphics software), CC.3532
PhotoPaint (graphics software), CC.3533
PhotoShop (graphics software), CC.3534
PHP (computer programming language), CB.61343
Picture It! (graphics software), CC.3535
Picture-Publisher (painting / drawing software), CC.3432
Pinnacle, CC.3641=
Pinnacle Studio, CC.3641=
PL/1 (computer programming language), CB.61344
PL/SQL (structured query language), CC.1151
see also: Oracle (database software) (CC.1133)
see also: Oracle applications development (CC.11331)
see also: Oracle certifications (network / systems management software) (CB.5636)
see also: Oracle Designer (CASE software) (CB.6622)
see also: Oracle Discoverer (business intelligence software) (CC.63213)
see also: Oracle Financials (business intelligence software) (CC.63214)
see also: Oracle JDeveloper (CB.61221)
Portal Server, CB.5642=
Power Play (business intelligence software), CC.63215
PowerBuilder (integrated development environment), CB.6431
PowerPoint (presentation software), CC.142
Premiere (video editing software), CC.3633
presentation software (use), CC.14
Presentation (presentation software), CC.143
printers, CB.143
Pro/Engineer (CAD software), CC.3233
project management software (use), CC.637
Project (project management software), CC.6371
Project Manager Workbench (project management software), CC.6372
Propellerhead Software: Reason (music software), CC.66112
Proxy Server (internet security system), CB.4434
Publisher (desktop publishing software), CC.16132
Python (computer programming language), CB.61345

Q

QMF, CC.534=
Quark CopyDesk, CC.16143=
Quark Xpress (desktop publishing software), CC.16143
Quattro (spreadsheet software), CC.1532
Quattro Pro, CC.1532=
Query Management Facility, CC.534=
Quest (structured query language), CC.1152
questionnaire design, CD.41
QuickBooks (accounts software), CC.631134
Quicken (accounts software), CC.631135
QuickPlace (group working software), CC.6353

R

RACF, CC.534=

RAD, CB.6642=
radio frequency wireless networking, CB.2244=
rapid application development, CB.6642
Rational ClearCase, CB.6623
Rational Rose, CB.662=
real time systems, CB.23
Reason (music software), CC.66112
recording software (audio-visual), CC.6612
records management, CB.43=
Red Hat Linux (operating system), CC.5311
remote access, CB.226
see also: mobile computing (communications and networking) (CB.2243)
see also: wireless networks (CB.2244)
replication, data, CB.2211=
Replication Server (network / systems management software), CB.5637
requirements engineering, CB.452
Rexx (computer programming language), CB.61361
robotics, CB.311=
route planning software, CC.622=
routers, bridges and switches, CB.2212
RPG (computer programming language), CB.61362

S

Sabre (ticketing software), CC.6113
Sage (accounts software), CC.631141
Samba (network / systems management software), CB.5641
SAN (Storage Area Network), CB.2211=
SAP (business intelligence software), CC.63216
scanners, CB.144
scanning / OCR software (use), CC.37
Schedule+ (personal organisation software), CC.133
schools software, CC.64
sciences software, CC.651
scientific / technical
information services, CD.7
libraries, CE.21
screen reading, CB.362
see also: speech / voice processing (computer) (CB.361)
security,
data, CB.433=
information, CB.433
security systems,
computer, CB.53
internet, CB.443
Security Certified Network Architect (SCNA), CB.53=
SendMail (email software), CC.413
server-based systems, CB.213
see also: distributed networks (CB.2241)
SGML (standard generalised markup language), CB.331
see also: extensible markup language (XML) (CB.44642)

Shake (image compositing software), CC.6641
SharePoint (network / systems management software), CB.5642
shell systems (Unix), CC.54213
Simple Mail Transfer Protocol (SMTP), CB.4423
Simple Network Management Protocol (SNMP), CB.4424
simulation systems, CB.342
SIP, CB.4426=
Small Business Server (network / systems management software), CB.5643
SmartSuite (integrated package), CC.1241
SMS (Systems Management Server), CB.5644
SMTP (Simple Mail Transfer Protocol), CB.4423
SNMP (Simple Network Management Protocol), CB.4424
SOAP, CB.44642=
social sciences / humanities / arts and crafts software, CC.66
Softline: Pastel (accounts software), CC.631132
SoftQuad: HoTMetaL Pro (website development software), CB.446523
software
- design methodologies, CB.664
- development, CB.6
- engineering, CB.66
- for film/video industry, CC.664
- for specific subjects and industries (use), CC.6
- quality assurance, CB.665
- testing, CB.6651
- using, CC.

Solaris (operating system), CC.54212
sound processing (computer), CB.36
speech input mechanisms, CB.361=
speech output, CB.362=
speech / voice processing (computer), CB.361
spreadsheet software (use), CC.15
SQL Server (Microsoft) (database software), CC.1141
see also: SQL Server (Sybase) (CC.1142)
SQL Server (Sybase) (database software), CC.1142
standard generalised markup language (SGML), CB.331
StarOffice (integrated package), CC.1242
Statistical Analysis System (SAS), CC.65211
Statistical Package for the Social Sciences (SPSS), CC.65212
statistics software, CC.6521
Storage Area Network (SAN), CB.2211=
stress testing, CB.66511=
structured query languages (SQLs), CC.115
Struts Programming, CB.6122=
Studio (video editing software), CC.3641
Studio Pro (graphics software), CC.3541
Sun: StarOffice (integrated package), CC.1242
SuperCalc (spreadsheet software), CC.1541
SuperProject (project management software), CC.6373
switches, routers, bridges and, CB.2212
Sybase Adaptive Server (database software), CC.11113

SyBase: Replication Server (network / systems management software), CB.5637
system testing, CB.66513
systems
  administration, CB.5=
  analysis and design, CB.45
  analysis, CB.453
  design, CB.454
  integration software, CB.565=
  management, CB.5
  software, CB.56=
  support, CB.543
Systems Management Server (network / systems management software), CB.5644

T

TAS Books (accounts software), CC.631142
TCL, CB.44421=
TCP/IP, CB.2232
telematics, CB.22=
telephony applications, CC.67
testing
  load testing (computer systems), CB.66511
  operational acceptance testing, CB.66514=
  penetration testing (computer systems), CB.66512
  performance testing, CB.66511=
  software testing, CB.6651
  stress testing, CB.66511=
  system testing, CB.66513
  user acceptance testing, CB.66514
text processing, CB.33
  software (use), CC.16
ticketing software (not separately defined), CC.611
Tivoli (network / systems management software), CB.5645
topology, CB.224=
Transact-SQL (structured query language), CC.1153
Transmission Control Protocol / Internet Protocol (TCP/IP), CB.2232
transport software, CC.622
TurboPascal, CB.61341=

U

Ultradev, CB.446514=
UML, CB.455
Unified Modelling Language (UML), CB.455
Unix (operating system), CC.5421
  Bourne Shell Scripts, CC.542131=
  Korn Shell Scripts, CC.542132=
user acceptance testing, CB.66514
using software, CC.
using the world wide web, CC.45

V

v5r2, CC.535=
VB Script (computer programming language), CB.6142
see also: Visual Basic (CB.6441)
VectorWorks (CAD software), CC.3241
Ventura (desktop publishing software), CC.16141
virtual reality systems design, CB.6631
Virtual Private Networks (VPN), CB.4425
Visio (diagramming software), CC.332
Visual Basic (visual development environment), CB.6441
see also: VB Script (computer programming language) (CB.6142)
Visual C++ (visual development environment), CB.6442
see also: C++ (computer programming language) (CB.61132)
Visual C# (visual development environment), CB.6443
Visual FoxPro (visual development environment), CB.6444
Visual Interdev, CB.6446=
Visual Studio (visual development environment), CB.6446
see also: .NET (Microsoft) (CB.4451)
Viztopia Accounts (accounts software), CC.631143
VM (operating system), CC.5431
VMS (operating system), CC.5432
Voice Over Internet Protocol (VoIP), CB.4426
VoIP (Voice Over Internet Protocol), CB.4426
VPN (Virtual Private Networks), CB.4425

W

WAP (wireless application protocol) site development, CB.4466
web server management, CB.444
see also: network / systems management (CB.5)
web server management software, CB.4442
web services, CB.445
webcams, CB.145
webmaster, CB.446=
website
development, CB.446
software, CB.4465
management, CB.446=
Websphere Studio, CB.6447=
WebSphere Application Developer (WSAD) (visual development environment), CB.6447
wide area networks (WAN), CB.2222
Windows (general) (operating system), CC.5441
Windows
2000 (operating system), CC.54411
2003, CC.54415
95, CC.5441=
98, CC.5441=
CE (operating system), CC.54412
ME (operating system), CC.54413
NT (operating system), CC.54414
XP (operating system), CC.54416
Windows Server, CC.54415
2003 (operating system), CC.54415

wireless
application protocol (WAP) site development, CB.4466
markup language (WML), CB.44644
networks, CB.2244
see also: mobile computing (communications and networking) (CB.2243)
see also: remote access (CB.226)
WML Script (computer programming language), CB.6141
word processing software (use), CC.163
Word (word processing software), CC.16341
advanced, CC.163413
intermediate, CC.163412
introductory, CC.163411
WordPerfect
desktop publishing software, CC.16142
word processing software, CC.16342
WordPerfect Executive (integrated package), CC.1243
WordPro (word processing software), CC.16343
working with computers, CA.1=
Works (Apple) (integrated package), CC.1244
Works (Lotus) (integrated package), CC.1245
Works (Microsoft) (integrated package), CC.1246
Worldspan (ticketing software), CC.6114

X
X.25, CB.2233
XHTML (extensible hypertext markup language), CB.44641
XML, CB.44642
Xpress (desktop publishing software), CC.16143

Z
z/VM, CC.5431=
Z/OS (operating system), CC.5442
ZENworks (network / systems management software), CB.5646