

**NORCO COLLEGE
SLO to PLO MATRIX**

PLOs

		Describe and use operating system software	Describe and use Word processing software	Write structured programs using C++, or Java.	Describe and use graphics software to manipulate digital images.	Describe and use database software to construct 3NF databases.	Construct a visually appealing web site including database structures within the design.	Design and use spreadsheets that have embedded equations/formulas utilizing different data types.
CERTIFICATE/PROGRAM:	Computer Applications NAS726/NCE726							
COURSE:	CIS -1A: Introduction to Computer Information Systems							
SLO 1	Identify the fundamental computer concepts and terminology used for input, processing, output, and storage;			I	I			
SLO 2	Identify the key features of a variety of software such as operating systems, word processors, spreadsheets, databases, communications and graphics;	I, D	I, D			I	I	I
SLO 3	Apply the principles of and solve problems with word processing, spreadsheet, database, communications and file management programs;		I, D					
SLO 4	Create electronic presentations with presentation graphics;				I			
SLO 5	Demonstrate the principles of Internet research;							
SLO 6	Understand the principles of computer security, ethics and privacy;							
COURSE:	CIS-1B: Advanced Concepts in Computer Information Systems							
SLO 1	Apply advanced word processing skills to solve problems.		I, D, M					
SLO 2	Apply advanced spreadsheet skills to analyze and solve problems.							I, D, M
SLO 3	Apply advanced database skills to analyze and solve problems.					I, D	I	
SLO 4	Apply advanced presentation skills to design and edit electronic presentations.							
SLO 5	Integrate, link and embed work processing documents, worksheets, charts and databases.							
COURSE:	CIS/CSC-5: Fundamentals of Programming Logic using C++							
SLO 1	Create computer programs in C++ using the principles of structured programming.			I, D				
SLO 2	Apply the principles of logical programming concepts to develop specific solutions for gaming, business, scientific and mathematics problems.			I, D				

**NORCO COLLEGE
SLO to PLO MATRIX**

		PLOs	Describe and use operating system software	Describe and use Word processing software	Write structured programs using C++, or Java.	Describe and use graphics software to manipulate digital images.	Describe and use database software to construct 3NF databases.	Construct a visually appealing web site including database structures within the design.	Design and use spreadsheets that have embedded equations/formulas utilizing different data types.
SLO 3	Identify the information input requirements, synthesize the algorithmic steps needed to transform the data input into the required output information, and organize the output format to facilitate user communication.				I, D				
SLO 4	Demonstrate the use of the C++ IDE and libraries.			I					
COURSE: CIS/CSC-28A: MS Access Programming									
SLO 1	Demonstrate database languages (SQL, DAO, ADO) to interrogate, modify and delete data					I, D, M	I, D		
SLO 2	Demonstrate error finding techniques using the Visual Basic Editor.					I	I		
SLO 3	Create forms and reports using the VBA language								
SLO 4	Create the User Interface features within an application utilizing VBA features.						I		
SLO 5	Design and document a database application						I, D		
COURSE: CIS/CSC-21: Introduction to Operating Systems									
SLO 1	Demonstrate the installation, usage, and administration of a variety of operating systems.	I, D							
SLO 2	Identify operating system features, particularly as they pertain to system performance.	I, D, M							
SLO 3	Demonstrate how various operating systems interface with the network, user i/o, storage devices, and other hardware components.	I, D							
COURSE: CIS-95A: Introduction to the Internet									
SLO 1	Demonstrate the principles of navigating and accessing information resources on the Web.								
SLO 2	Apply the fundamental concepts of using the Internet to retrieve and send information.								

**NORCO COLLEGE
SLO to PLO MATRIX**

PLOs

		Describe and use operating system software	Describe and use Word processing software	Write structured programs using C++, or Java.	Describe and use graphics software to manipulate digital images.	Describe and use database software to construct 3NF databases.	Construct a visually appealing web site including database structures within the design.	Design and use spreadsheets that have embedded equations/formulas utilizing different data types.
SLO 3	Demonstrate an understanding of Internet security, cyber crime, threats to privacy, and privacy countermeasures.							
SLO 4	Evaluate images, audio, animated content, in the use of multimedia on the Internet.							
COURSE: CAT-31: Business Communications								
SLO 1	Understand the role of communication in business.							
SLO 2	Adapt language to specific readers by employing the effective use of words and constructing clear sentences and paragraphs.							
SLO 3	Demonstrate basic patterns of business letters in answering routine business correspondence.							
SLO 4	Demonstrate proofreading and editing skills, and utilize proper punctuation skills.							
SLO 5	Produce correctly formatted personal and business documents							
COURSE: BUS-22: Management Communications								
SLO 1	Explain effective and efficient communication styles appropriate in various business settings							
SLO 2	Analyze the effects of human behavior and communication within an organization							
SLO 3	Apply concepts of organizational relationships, political/cultural considerations, teamwork, problem-solving, and decision-making to communication tasks							
SLO 4	Demonstrate competency in developing content and in applying skills in various written and oral business communications including reports, letters, memos, e-mails, instant messages, resumés, and group presentations							
SLO 5	Apply the understanding of group dynamics and cross-cultural communication in making effective written and oral communications							

**NORCO COLLEGE
SLO to PLO MATRIX**

		PLOs	Describe and use operating system software	Describe and use Word processing software	Write structured programs using C++, or Java.	Describe and use graphics software to manipulate digital images.	Describe and use database software to construct 3NF databases.	Construct a visually appealing web site including database structures within the design.	Design and use spreadsheets that have embedded equations/formulas utilizing different data types.
SLO 6	Develop proficiency in the analysis of organizational relationships, including political and cultural aspects, and application of problem, solving and decision making strategies that lead to the attainment of goals								
COURSE: CIS/CSC-2: Fundamentals of Systems Analysis									
SLO 1	Demonstrate an understanding of systems analysis as applied to the effective use of computers in business operations.	I							
SLO 2	Analyze various user requirements applying structured analysis tools like Data Flow Diagrams, Data Dictionary and Process Description.								
SLO 3	Design output screens and reports, input screens, and user interface screens.								
SLO 4	Demonstrate an understanding of various developmental methodologies.								
SLO 5	Analyze data with relational databases in mind and design normalized files.					I			
COURSE: CIS-23: Software End User Support									
SLO 1	Demonstrate the principles of configuration, memory management and diagnostic utilities to optimize computer performance.								
SLO 2	Apply the fundamental concepts of operating systems and network software.	I							
SLO 3	Identify the functions of computer microprocessors, memory and peripheral components.	I							
COURSE: CIS/CSC-25: Data Communications									
SLO 1	Apply the principles of current data communications technology to business applications.								
SLO 2	Identify the fundamental concepts and terminology used in data communications.	I							
SLO 3	Plan, analyze, design and implement computer communications networks.								

**NORCO COLLEGE
SLO to PLO MATRIX**

PLOs

NORCO COLLEGE SLO to PLO MATRIX		PLOs							
		Describe and use operating system software	Describe and use Word processing software	Write structured programs using C++, or Java.	Describe and use graphics software to manipulate digital images.	Describe and use database software to construct 3NF databases.	Construct a visually appealing web site including database structures within the design.	Design and use spreadsheets that have embedded equations/formulas utilizing different data types.	
SLO 4	Analyze and apply network communications protocols, including broadcast domain, subnet mask, classless interdomain routing (CIDR), loopback address, and IP Addressing.								
SLO 5	Construct network policies and network security policies to include privacy, acceptable use, authentication, internet, access, auditing, and data protection.								
SLO 6	Construct network policies and network security policies to include privacy, acceptable use, authentication, internet, access, auditing, and data protection.								
COURSE: CIS/CSC-61: Introduction to Databases									
SLO 1	Apply the techniques used to design and develop a database.				I	I			
SLO 2	Create entity-relationship models.					I			
SLO 3	Create the various table relationships.					I, D			
SLO 4	Analyze work group and enterprise models.								
SLO 5	Define and demonstrate database normalization.								
COURSE: CIS/CAT-80: Word Processing: Microsoft Word for Windows			I, D, M						
SLO 1	Apply principles of fundamental word processing concepts and skills.		I, D						
SLO 2	Identify and solve word processing/software problems.		I						
SLO 3	Identify functions and apply keyboarding techniques to a variety of Word processing situations.		I, D, M						
SLO 4	Apply problem-solving principles to job-related word processing tasks which require decision-making, time management, and skill competency at all levels- beginning, intermediate, and advanced.		I, D, M						
SLO 5	Make analytical and problem-solving decisions regarding the preparation and final appearance of professional-looking documents.		I						

**NORCO COLLEGE
SLO to PLO MATRIX**

PLOs

NORCO COLLEGE SLO to PLO MATRIX		PLOs						
		Describe and use operating system software	Describe and use Word processing software	Write structured programs using C++, or Java.	Describe and use graphics software to manipulate digital images.	Describe and use database software to construct 3NF databases.	Construct a visually appealing web site including database structures within the design.	Design and use spreadsheets that have embedded equations/formulas utilizing different data types.
COURSE:	CIS/CAT-84: Word Processing: WordPerfect for Windows							
SLO 1	Apply principles of fundamental word processing concepts and skills.		I, D, M					
SLO 2	Identify and solve word processing/software problems.		I, D					
SLO 3	Identify functions and apply keyboarding techniques to a variety of Word processing situations.		I					
SLO 4	Apply problem-solving principles to job-related word processing tasks which require decision-making, time management, and skill competency at all levels-beginning, intermediate, and advanced.		I, D, M					
SLO 5	Make analytical and problem-solving decisions regarding the preparation and final appearance of professional-looking documents.		I					
COURSE:	CIS/CAT-98B: Advanced Excel							
SLO 1	Create, modify, query, and manipulate lists (databases) of information in a spreadsheet and present various scenarios.							I, D, M
SLO 2	Apply problem-solving principles to develop macros and templates.							I, D
SLO 3	Apply decision-making strategies using Goal Seek, Solver and What-if analysis in complex business problems.							I
SLO 4	Import and/or export Excel data from/to other software application products.							I, D, M
COURSE:	CIS/CSC-12: PHP Dynamic Web Site Programming							
SLO 1	Write working PHP scripts to create valid content on web pages.							
SLO 2	Write and use PHP functions and objects effectively.							
SLO 3	Create PHP scripts that display dynamic web page content retrieved from a database.							
SLO 4	Create form pages using PHP to validate data entry, process form data and update a database.							

**NORCO COLLEGE
SLO to PLO MATRIX**

PLOs

NORCO COLLEGE SLO to PLO MATRIX		PLOs							
		Describe and use operating system software	Describe and use Word processing software	Write structured programs using C++, or Java.	Describe and use graphics software to manipulate digital images.	Describe and use database software to construct 3NF databases.	Construct a visually appealing web site including database structures within the design.	Design and use spreadsheets that have embedded equations/formulas utilizing different data types.	
COURSE:	CIS/CSC-14A: Web Programming: Javascript								
SLO 1	Create JavaScript programs that will run successfully in a browser using various data types, variables, operators, expressions, statements, decisions, loops, and functions.								
SLO 2	Write effective scripts using JavaScript core objects, properties, and methods, including the Array, Math, String, and Date objects.								
SLO 3	Write scripts that effectively validate forms, manipulate frames and windows, and employ cookies.								
SLO 4	Write scripts that apply the usage of objects, properties, methods, and events of the Document Object Model (DOM) to provide real world web site features and enhancements.								
COURSE:	CIS-14B: Web Programming: Active Server Pages								
SLO 1	Identify and employ the various components of the ASP object model.								
SLO 2	Create client-side and server-side programs that will run successfully in a web browser.								
SLO 3	Create ASP scripts that control the dynamic positioning and movement of objects on a Web page.								
SLO 4	Create ASP scripts that successfully access, retrieve, and update databases on the Web.								
SLO 5	Create Web sites that successfully employ form data validation, form processing, and data manipulation.								
COURSE:	CIS/CAT-54A: Introduction to Flash								
SLO 1	Demonstrate a mastery of authoring tools used for web page and training mediums.								
SLO 2	Create drawing, animation basics, movie clips, action script basics.				I				

**NORCO COLLEGE
SLO to PLO MATRIX**

PLOs

		Describe and use operating system software	Describe and use Word processing software	Write structured programs using C++, or Java.	Describe and use graphics software to manipulate digital images.	Describe and use database software to construct 3NF databases.	Construct a visually appealing web site including database structures within the design.	Design and use spreadsheets that have embedded equations/formulas utilizing different data types.
SLO 3	Create symbols and instances, shape tweening, motion tweening, and bitmaps, to develop powerful and interactive web sites and training CD's.							
COURSE: CIS/CAT-56A: Designing Web Graphics								
SLO 1	Use Photoshop to design quality images that are optimized for the Web.				I, D			
SLO 2	Use Photoshop and ImageReady to create and modify backgrounds, buttons, animated images, image maps, banners, logos, heading text, thumbnail images, and other web graphics.				I, D			
SLO 3	Use Photoshop to retouch photographs for use on the Web.				I, D			
SLO 4	Use Photoshop to apply the basic principles of page layout and design in creating Web page tracing images.							
COURSE: CIS-72A: Introduction to Web Page Creation								
SLO 1	Design and create Web pages with Extensible Hypertext Markup Language (XHTML) using a text editor.							
SLO 2	Create valid, properly structured XHTML pages containing headings, paragraphs, hyperlinks, lists, and images.							
SLO 3	Create valid XHTML pages containing tables and forms.							
SLO 4	Create and format a typical 5 to 10 page small business or personal Web site using XHTML and CSS styles.							
COURSE: CIS-72B: Intermediate Web Page Creation Using Cascading Style Sheets								
SLO 1	Create Web pages with proper separation of structure (HTML) and presentation (CSS).							

**NORCO COLLEGE
SLO to PLO MATRIX**

		PLOs	Describe and use operating system software	Describe and use Word processing software	Write structured programs using C++, or Java.	Describe and use graphics software to manipulate digital images.	Describe and use database software to construct 3NF databases.	Construct a visually appealing web site including database structures within the design.	Design and use spreadsheets that have embedded equations/formulas utilizing different data types.
SLO 2	Analyze a given XHTML document lacking in formatting, create "div" and "span" tags where appropriate, and effectively apply CSS formatting to these tagged areas.								
SLO 3	Apply formatting to Web page elements using a variety of CSS selection techniques including type, class, id, descendant, and pseudo-class selectors.								
SLO 4	Apply CSS properties to control typography, backgrounds, color, spacing, borders, links, and page layout to achieve industry standard Web page formatting.								
SLO 5	Create external style sheets that effectively control an entire Web site's formatting.								
COURSE: CIS/CAT-76A: Introduction to Microsoft Expression Web									
SLO 1	Use Microsoft Expression Web's features to employ cascading styles sheets to exhibit industry standard site-wide design, including multi-column layout, navigation, typography, color, and images.								
SLO 2	Use Microsoft Expression Web's features to design, create, test, upload, and manage typical 5 to 10 page personal and small business web sites.								
SLO 3	Use Microsoft Expression Web's features to create Web pages that include headings, lists, images, links, tables, and forms.								
SLO 4	Use Microsoft Expression Web's features to utilize image rollovers, form validation, and other industry standard behaviors and interactive content to build interactive web pages.								
SLO 5	Analyze a web site, then utilize Microsoft Expression Web's template and library features to effectively reduce the effort required to maintain the site as it grows and changes.								
SLO 6	Use Microsoft Expression Web's features to develop valid and accessible XHTML based web pages that include accessible images, site navigation, tables, and forms, as defined by the World Wide Web Consortium (W3C).								

**NORCO COLLEGE
SLO to PLO MATRIX**

PLOs

		Describe and use operating system software	Describe and use Word processing software	Write structured programs using C++, or Java.	Describe and use graphics software to manipulate digital images.	Describe and use database software to construct 3NF databases.	Construct a visually appealing web site including database structures within the design.	Design and use spreadsheets that have embedded equations/formulas utilizing different data types.
COURSE:	CIS/CAT-76B: Introduction to Dreamweaver							
SLO 1	Use Dreamweaver's features to design, create, test, upload, and manage typical 5 to 10 page personal and small business Web sites.							
SLO 2	Use Dreamweaver's features to create Web pages that include headings, lists, images, links, tables, and forms.							
SLO 3	Use Dreamweaver's features to employ cascading styles sheets to exhibit industry standard site-wide design, including multi-column layout, navigation, typography, color, and images.							
SLO 4	Use Dreamweaver's features to utilize image rollovers, form validation, and other industry standard behaviors and interactive content to build interactive Web pages.							
SLO 5	Analyze a Web site, then utilize Dreamweaver's template and library features to effectively reduce the effort required to maintain the site as it grows and changes.							
SLO 6	Use Dreamweaver's features to develop valid and accessible XHTML based Web pages that include accessible images, site navigation, tables, and forms, as defined by the World Wide Web Consortium (W3C).							
COURSE:	CIS/CAT-78A: Introduction to Adobe Photoshop							
SLO 1	Complete basic projects in Adobe Photoshop using selections, layers and channels to edit Images used for print or web design.				I, D, M			
SLO 2	Apply college-level methods of critical analysis and synthesis in creating a camera-ready project using Photoshop's methods of photo correction and retouching along with color management.				I, D, M			
SLO 3	Design and create images used for printed media in advertising.							
SLO 4	Describe, analyze, and demonstrate the process of image creation for a print and web page and apply it to a finished product.							

**NORCO COLLEGE
SLO to PLO MATRIX**

		PLOs	Describe and use operating system software	Describe and use Word processing software	Write structured programs using C++, or Java.	Describe and use graphics software to manipulate digital images.	Describe and use database software to construct 3NF databases.	Construct a visually appealing web site including database structures within the design.	Design and use spreadsheets that have embedded equations/formulas utilizing different data types.
			Describe and use operating system software	Describe and use Word processing software	Write structured programs using C++, or Java.	Describe and use graphics software to manipulate digital images.	Describe and use database software to construct 3NF databases.	Construct a visually appealing web site including database structures within the design.	Design and use spreadsheets that have embedded equations/formulas utilizing different data types.
COURSE:	CIS/CAT-79: Introduction to Adobe Illustrator								
SLO 1	Comprehend and apply the techniques used to create and modify artwork using a vector-based program.					I, D			
SLO 2	Create and transform Illustrator drawings.					I, D			
SLO 3	Apply elements of Illustrator skillfully in order to incorporate type in drawing images.								
SLO 4	Combine, integrate, modify and rearrange layering, shadowing, transparency and blending modes, in order to create a variety of Illustrator images used for printed material.								
COURSE:	CIS/CAT-81: Introduction to Desktop Publishing using Adobe InDesign								
SLO 1	Recognize and apply the key features of a document layout program;								
SLO 2	Exhibit knowledge of beginning and intermediate desktop publishing skills from planning, writing, page layout, and production;								
SLO 3	Integrate text and graphics in a document layout program to create professional-quality, full-color documents;					I, D			
SLO 4	Demonstrate the knowledge of use of typographical controls, importance of importing text and camera-ready graphics in a finished project.								