**COMPUTER INFORMATION SYSTEMS – CIS**

Kenyetta Tribble, Senior Dean (Interim)  
San Ramon Campus Division  
San Ramon Campus

**Possible career opportunities**

Training in computer information systems prepares students for a broad range of roles. Some possible career options include webmaster, web developer, web designer, executive assistant, office manager, office assistant, entrepreneur, database analyst, database designer, computer trainer, project manager, and team member in a startup.

**Program-level student learning outcomes**

Program learning outcomes are subject to change. The most current list of program learning outcomes for each program is published on the DVC website at [www.dvc.edu/slo](http://www.dvc.edu/slo).

**Associate in science degree**

**Computer information systems**

Students completing the program will be able to...

A. perform the duties of information technologies and management workers as identified by the Bureau of Labor Statistics
B. provide technical assistance and training to computer system users.
C. investigate and resolve computer software and hardware problems of users.
D. perform the professional duties demanded in any modern office environment.
E. design and maintain static and dynamic web sites.
F. integrate elements such as graphics, animation and streaming media on web sites.
G. develop and implement database systems for stand-alone or internet based deployment.
H. use technology to manage multi-faceted projects.
I. demonstrate basic graphical user interface operations in a computer environment.
J. produce spreadsheets, documents and presentations by using basic to advanced software operations.

The computer information systems associate in science program prepares the student for jobs in business and government as information technologies and management workers. Principal areas of study are computer software applications, internet technologies, database systems, project management systems and basic network principles. These CIS courses prepare students for a career path in computer information systems and technologies. These courses teach terminology and provide hands-on laboratory experience with operating and network systems and stand alone and internet based applications.

In order to obtain an associate in science degree, students must complete the courses required for the core certificate of achievement and a minimum of one area of technical specialization, and complete all general education requirements as listed in the Diablo Valley College catalog. To earn a degree, students must complete each course used to meet a major requirement with a "C" grade or higher and maintain an overall GPA of 2.5 or higher in the coursework required for the major. Other electives and course substitutions not listed below are possible with department chairperson approval.

Students are limited to one associate in science degree regardless of the number of specializations completed. Multiple certificates may be awarded.

**Major requirements: units**

**Core courses:**

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>CIS-115 Microsoft Word - Comprehensive</td>
<td>2</td>
</tr>
<tr>
<td>CIS-116 Microsoft Excel - Comprehensive</td>
<td>2</td>
</tr>
<tr>
<td>CIS-118 Microsoft PowerPoint - Comprehensive</td>
<td>2</td>
</tr>
</tbody>
</table>

**Plus at least 2 units from:**

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>CIS-100 Microsoft Windows - Comprehensive</td>
<td>2</td>
</tr>
<tr>
<td>CIS-101 Apple Mac Operating System</td>
<td>2</td>
</tr>
</tbody>
</table>

**Plus at least 4 units from:**

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>CIS-107 Introduction to Web Databases</td>
<td>2</td>
</tr>
<tr>
<td>CIS-117 Microsoft Access - Comprehensive</td>
<td>2</td>
</tr>
<tr>
<td>CIS-160 Introduction to MySQL</td>
<td>2</td>
</tr>
</tbody>
</table>

**Core courses units subtotal** 12

Choose one of the following four technical specialization areas:

**Database management - required courses:**

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>CIS-107 Introduction to Web Databases</td>
<td>2</td>
</tr>
<tr>
<td>CIS-117 Microsoft Access - Comprehensive</td>
<td>2</td>
</tr>
<tr>
<td>CIS-160 Introduction to MySQL</td>
<td>2</td>
</tr>
</tbody>
</table>

**Project management - required courses:**

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>CIS-180 Introduction to Project Management</td>
<td>3</td>
</tr>
<tr>
<td>CIS-181 Project Management Fundamentals/PMI PMP Preparation</td>
<td>3</td>
</tr>
</tbody>
</table>

**Project management - recommended electives:**

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>CIS-182 Project Risk Management</td>
<td>3</td>
</tr>
<tr>
<td>CIS-185 Project Management Tools</td>
<td>2</td>
</tr>
</tbody>
</table>

**Web graphics - required courses:**

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>CIS-130 Adobe Photoshop Elements</td>
<td>2</td>
</tr>
<tr>
<td>CIS-132 Adobe Premiere Elements - Comprehensive</td>
<td>2</td>
</tr>
<tr>
<td>CIS-133 Developing Video Content for the Web</td>
<td>2</td>
</tr>
</tbody>
</table>
Computer information systems

**web technology - required courses:**
- CIS-105 Introduction to Web Design 2
- CIS-106 Adobe Dreamweaver - Comprehensive 2
- CIS-107 Introduction to Web Databases 2

**web technology - recommended electives:**
- CIS-108 Introduction to WordPress 2
- CIS-117 Microsoft Access - Comprehensive 2
- CIS-120 iPhone and iPad App Development for Beginners 2
- CIS-160 Introduction to MySQL 2

**total minimum units for the major** 18

**Certificate of achievement**
**Computer information systems - core**

Students completing the program will be able to...

A. demonstrate basic graphical user interface operations in a computer environment.

B. produce spreadsheets, documents and presentations by using basic to advanced software operations.

**required courses:**

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>CIS-115</td>
<td>2</td>
</tr>
<tr>
<td>CIS-116</td>
<td>2</td>
</tr>
<tr>
<td>CIS-118</td>
<td>2</td>
</tr>
</tbody>
</table>

**plus at least 2 units from:**

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>CIS-100</td>
<td>2</td>
</tr>
<tr>
<td>CIS-101</td>
<td>2</td>
</tr>
</tbody>
</table>

**Certificate of achievement**
**Computer information systems - project management**

Students completing the program will be able to...

A. demonstrate basic graphical user interface operations in a computer environment.

B. produce spreadsheets, documents and presentations by using basic to advanced software operations.

C. apply the principles of the Project Management Institute (PMI) processes of project management.

**required courses:**

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>CIS-115 Microsoft Word - Comprehensive</td>
<td>2</td>
</tr>
<tr>
<td>CIS-116 Microsoft Excel - Comprehensive</td>
<td>2</td>
</tr>
<tr>
<td>CIS-118 Microsoft PowerPoint - Comprehensive</td>
<td>2</td>
</tr>
<tr>
<td>CIS-180 Introduction to Project Management</td>
<td>3</td>
</tr>
<tr>
<td>CIS-181 Project Management Fundamentals/ PMI PMP Preparation</td>
<td>3</td>
</tr>
</tbody>
</table>

**plus at least 2 units from:**

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>CIS-100</td>
<td>2</td>
</tr>
<tr>
<td>CIS-101</td>
<td>2</td>
</tr>
</tbody>
</table>

**Certificate of achievement**
**Computer information systems - database management**

Students completing the program will be able to...

A. demonstrate basic graphical user interface operations in a computer environment.

B. produce spreadsheets, documents and presentations by using basic to advanced software operations.

C. apply database syntax, properties, operators, and functions.

**required courses:**

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>CIS-105</td>
<td>2</td>
</tr>
<tr>
<td>CIS-115</td>
<td>2</td>
</tr>
<tr>
<td>CIS-116</td>
<td>2</td>
</tr>
<tr>
<td>CIS-117</td>
<td>2</td>
</tr>
<tr>
<td>CIS-118</td>
<td>2</td>
</tr>
<tr>
<td>CIS-119</td>
<td>2</td>
</tr>
<tr>
<td>CIS-160</td>
<td>2</td>
</tr>
<tr>
<td>CIS-170</td>
<td>2</td>
</tr>
</tbody>
</table>

**Certificate of achievement**
**Computer information systems - web graphics**

Students completing the program will be able to...

A. demonstrate basic graphical user interface operations in a computer environment.

B. produce spreadsheets, documents and presentations by using basic to advanced software operations.

C. perform the duties demanded in any modern office environment.

D. able to prepare images for sharing and distribution.

**required courses:**

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>CIS-115 Microsoft Word - Comprehensive</td>
<td>2</td>
</tr>
<tr>
<td>CIS-116 Microsoft Excel - Comprehensive</td>
<td>2</td>
</tr>
<tr>
<td>CIS-118 Microsoft PowerPoint - Comprehensive</td>
<td>2</td>
</tr>
<tr>
<td>CIS-130 Adobe Photoshop Elements</td>
<td>2</td>
</tr>
<tr>
<td>CIS-132 Adobe Premiere Elements - Comprehensive</td>
<td>2</td>
</tr>
<tr>
<td>CIS-133 Developing Video Content for the Web</td>
<td>2</td>
</tr>
</tbody>
</table>
Computer information systems

Certificate of accomplishment
Computer information systems - project management

Students completing the program will be able to...
A. demonstrate basic graphical user interface operations in a computer environment.
B. apply the principles of the Project Management Institute’s (PMI) processes of project management.

required courses: units
CIS-180 Introduction to Project Management .......... 3
CIS-181 Project Management Fundamentals/PMI PMP Preparation .............. 3

total minimum required units 6

project management - recommended electives:
CIS-182 Project Risk Management ...................... 3
CIS-185 Project Management Tools ....................... 2

Certificate of accomplishment
Computer information systems - web technology

Students completing the program will be able to...
A. demonstrate basic graphical user interface operations in a computer environment.
B. able to prepare images for sharing and distribution.

required courses: units
CIS-130 Adobe Photoshop Elements ...................... 2
CIS-132 Adobe Premiere Elements - Comprehensive ......................... 2
CIS-133 Developing Video Content for the Web ................ 2

total minimum required units 6

Certificate of accomplishment
Computer information systems - web graphics

Students completing the program will be able to...
A. demonstrate basic graphical user interface operations in a computer environment.
B. plan and design web pages.

required courses: units
CIS-105 Introduction to Web Design ...................... 2
CIS-106 Adobe Dreamweaver - Comprehensive .............. 2
CIS-107 Introduction to Web Databases .................... 2

total minimum required units 6

web technology - recommended electives:
CIS-108 Introduction to WordPress ..................... 2
CIS-117 Microsoft Access - Comprehensive .............. 2
CIS-120 iPhone and iPad App Development for Beginners ......................... 2
CIS-160 Introduction to MySQL ......................... 2

Certificate of accomplishment
Computer information systems - database management

Students completing the program will be able to...
A. demonstrate basic graphical user interface operations in a computer environment.
B. apply database syntax, properties, operators, and functions.

required courses: units
CIS-107 Introduction to Web Databases .................... 2
CIS-117 Microsoft Access - Comprehensive .............. 2
CIS-160 Introduction to MySQL ......................... 2

total minimum required units 6
CIS-100 Microsoft Windows - Comprehensive
2 units SC
• 36 hours lecture/18 hours laboratory per term
• Note: Credit by examination option available. Students may petition to repeat this course when software or hardware is changed. Only the first course completed will be applied toward a degree or certificate requirement. Units for both courses will apply towards the 60 units required for the degree.

This course introduces the functions of the Microsoft Windows Operating System (Win OS), including the graphical user interface, file and folder management, system preferences, and networking. No previous computer experience is required. CSU

CIS-101 Apple Mac Operating System
2 units SC
• 36 hours lecture/18 hours laboratory per term
• Note: Credit by examination option available. Students may petition to repeat this course when software or hardware is changed. Only the first course completed will be applied toward a degree or certificate requirement. Units for both courses will apply towards the 60 units required for the degree.

This course introduces the functions of the Apple Mac Operating System (OS), including the graphical user interface, file and folder management, system preferences, and networking. No previous computer experience is required. CSU

CIS-105 Introduction to Web Design
2 units SC
• 36 hours lecture/18 hours laboratory per term
• Recommended: CIS-100 or CIS-101 or equivalent
• Note: Credit by examination option available. Students may petition to repeat this course when software or hardware is changed. Only the first course completed will be applied toward a degree or certificate requirement. Units for both courses will apply towards the 60 units required for the degree.

This course presents fundamentals of the website development cycle. Topics will include basic web design concepts and processes used to design, organize, and maintain basic websites. Emphasis is placed on navigation, organization, presentation, and maintenance of websites. No previous web design experience is required. CSU

CIS-106 Adobe Dreamweaver - Comprehensive
2 units SC
• 36 hours lecture/18 hours laboratory per term
• Recommended: CIS-100 or CIS-101 or equivalent
• Note: Credit by examination option available. Students may petition to repeat this course when software or hardware is changed. Only the first course completed will be applied toward a degree or certificate requirement. Units for both courses will apply towards the 60 units required for the degree.

This course introduces the web development capabilities of Adobe Dreamweaver. This web authoring program is used for basic and professional web site development. Topics include planning, designing, creating, and troubleshooting web pages using the features of the software. No previous experience with this software is required. CSU

CIS-107 Introduction to Web Databases
2 units SC
• 36 hours lecture/18 hours laboratory per term
• Recommended: CIS-100 or CIS-101 or equivalent
• Note: Credit by examination option available. Students may petition to repeat this course when software or hardware is changed. Only the first course completed will be applied toward a degree or certificate requirement. Units for both courses will apply towards the 60 units required for the degree.

This course presents the fundamentals of database-driven web page development. Topics will include basic database configuration, the use of server-side tools to connect to a database, and the display and manipulation of database content over the web. CSU

CIS-108 Introduction to WordPress
2 units SC
• 36 hours lecture/18 hours laboratory per term
• Recommended: CIS-100 or CIS-101 or equivalent
• Note: Credit by examination option available. Students may petition to repeat this course when software or hardware is changed. Only the first course completed will be applied toward a degree or certificate requirement. Units for both courses will apply towards the 60 units required for the degree.

This course introduces students to WordPress. This easy to use software is used to create, organize, and maintain web sites. Emphasis is placed on installation, configuration, navigation, organization, presentation, and maintenance of web sites. No previous web design experience is required. CSU
CIS-115  Microsoft Word - Comprehensive  
2 units  SC  
• 36 hours lecture/18 hours laboratory per term  
• Recommended: CIS-100 or CIS-101 or equivalent  
• Note: Credit by examination option available. Students may petition to repeat this course when software or hardware is changed. Only the first course completed will be applied toward a degree or certificate requirement. Units for both courses will apply towards the 60 units required for the degree.

This course presents the comprehensive functions of Microsoft Word, a powerful word processing program which is part of the Microsoft Office Suite. Topics include formatting and editing documents, forms, charts, and diagrams. Material relevant to the Microsoft certification examination will be covered. No previous experience with this software is required. CSU

CIS-116  Microsoft Excel - Comprehensive  
2 units  SC  
• 36 hours lecture/18 hours laboratory per term  
• Recommended: CIS-100 or CIS-101 or equivalent  
• Note: Credit by examination option available. Students may petition to repeat this course when software or hardware is changed. Only the first course completed will be applied toward a degree or certificate requirement. Units for both courses will apply towards the 60 units required for the degree.

This course presents the comprehensive functions of Microsoft Excel, a powerful spreadsheet program which is part of the Microsoft Office Suite. Topics include work-sheets, charts, formulas, functions, workbooks, and macros. Material relevant to the Microsoft certification examination will be covered. No previous experience with this software is required. CSU

CIS-117  Microsoft Access - Comprehensive  
2 units  SC  
• 36 hours lecture/18 hours laboratory per term  
• Recommended: CIS-100 or CIS-101 or equivalent  
• Note: Credit by examination option available. Students may petition to repeat this course when software or hardware is changed. Only the first course completed will be applied toward a degree or certificate requirement. Units for both courses will apply towards the 60 units required for the degree.

This course presents the comprehensive functions of Microsoft Access, a powerful database program which is part of the Microsoft Office Suite. Topics include database design, queries, forms, and reports. Material relevant to the Microsoft certification examination will be covered. No previous experience with this software is required. CSU

CIS-118  Microsoft PowerPoint - Comprehensive  
2 units  SC  
• 36 hours lecture/18 hours laboratory per term  
• Recommended: CIS-100 or CIS-101 or equivalent  
• Note: Credit by examination option available. Students may petition to repeat this course when software or hardware is changed. Only the first course completed will be applied toward a degree or certificate requirement. Units for both courses will apply towards the 60 units required for the degree.

This course presents the comprehensive functions of Microsoft PowerPoint, a powerful presentation program which is part of the Microsoft Office Suite. Topics include presentation development, special effects, slide shows, and the use of text, graphics, and multimedia. Material relevant to the Microsoft certification examination will be covered. No previous experience with this software is required. CSU

CIS-119  Microsoft Outlook - Comprehensive  
2 units  SC  
• 36 hours lecture/18 hours laboratory per term  
• Recommended: CIS-100 or CIS-101 or equivalent  
• Note: Credit by examination option available. Students may petition to repeat this course when software or hardware is changed. Only the first course completed will be applied toward a degree or certificate requirement. Units for both courses will apply towards the 60 units required for the degree.

This course presents the comprehensive functions of Microsoft Outlook, a powerful email and personal information manager which is part of the Microsoft Office Suite. Topics include managing emails, contacts, calendars, and tasks. Material relevant to the Microsoft certification examination will be covered. No previous experience with this software is required. CSU

CIS-120  iPhone and iPad App Development for Beginners  
2 units  SC  
• 36 hours lecture/18 hours laboratory per term  
• Recommended: CIS-100 or CIS-101 or equivalent  
• Note: Credit by examination option available. Students may petition to repeat this course when software or hardware is changed. Only the first course completed will be applied toward a degree or certificate requirement. Units for both courses will apply towards the 60 units required for the degree.

This course introduces students to application (app) development for iPhone and iPad devices. Essentials of iPhone and iPad app development including tools, frameworks, and concepts are covered. Hands-on exercises will be used to reinforce theory. No previous app development experience is required. Students will learn the essentials of iPhone and iPad app development: the tools, frameworks, and concepts. Hands-on exercises will be part of this course. CSU
CIS-130 Adobe Photoshop Elements
2 units SC
• 36 hours lecture/18 hours laboratory per term
• Recommended: CIS-100 or CIS-101 or equivalent
• Note: Credit by examination option available. Students may petition to repeat this course when software or hardware is changed. Only the first course completed will be applied toward a degree or certificate requirement. Units for both courses will apply towards the 60 units required for the degree.

This course presents the basics of Adobe Photoshop Elements. Topics include acquiring, organizing, fixing, enhancing, and sharing images. CSU

CIS-132 Adobe Premiere Elements - Comprehensive
2 units SC
• 36 hours lecture/18 hours laboratory per term
• Recommended: CIS-100 or CIS-101 or equivalent
• Note: Credit by examination option available. Students may petition to repeat this course when software or hardware is changed. Only the first course completed will be applied toward a degree or certificate requirement. Units for both courses will apply towards the 60 units required for the degree.

This course introduces students to Adobe Premiere Elements, a full-featured, video-editing program. This course covers how to turn video clips into a single movie, complete with color correction, effects, audio, and titles. Exporting videos to media and devices or online channels such as Facebook and YouTube will be addressed. CSU

CIS-133 Developing Video Content for the Web
2 units SC
• 36 hours lecture/18 hours laboratory per term
• Recommended: CIS-100 or CIS-101 or equivalent
• Note: Credit by examination option available. Students may petition to repeat this course when software or hardware is changed. Only the first course completed will be applied toward a degree or certificate requirement. Units for both courses will apply towards the 60 units required for the degree.

This course prepares students to produce digitally formatted videos and prepare them for use on the Internet. Topics include how to import digital video, create screen captures, edit, and produce video for distribution via online and other digital media. CSU

CIS-150 Topics in Computer Information Systems
.3-4 units SC
• Variable hours

A supplemental course in computer information systems to provide a study of current concepts and problems. Specific topics will be announced in the schedule of classes. CSU

CIS-160 Introduction to MySQL
2 units SC
• 36 hours lecture/18 hours laboratory per term
• Recommended: CIS-100 or CIS-101 or equivalent
• Note: Credit by examination option available. Students may petition to repeat this course when software or hardware is changed. Only the first course completed will be applied toward a degree or certificate requirement. Units for both courses will apply towards the 60 units required for the degree.

This course introduces students to the MySQL database program, which is used to create, organize, and maintain dynamic web sites. Emphasis is placed on table creation, queries, and database management. CSU

CIS-170 Networking for Non-IT Professionals
2 units SC
• 36 hours lecture/18 hours laboratory per term
• Note: Credit by examination option available. No previous networking experience is required. Students interested in professional training in computer networking should see the Computer Network Technology (CNT) programs in this catalog.

This course presents the basics of Small Office/Home Office (SOHO) networking. Topics include Internet connectivity, network design, network software, and network devices, such as hubs, switches, and routers. Emphasis is placed on connectivity, hardware, and implementation specifically designed for small office and home networking environments. CSU

CIS-180 Introduction to Project Management
3 units SC
• 54 hours lecture per term
• Note: Credit by examination option available

This course introduces students to project management; topics include key concepts, terminology, principles, and processes. No previous experience with project management is required. CSU

CIS-181 Project Management/PMI PMP Preparation
3 units SC
• 54 hours lecture per term
• Recommended: CIS-180 or equivalent
• Note: Credit by examination option available

This is an intermediate course on project management and builds on skills acquired in CIS-180. This course provides preparation for the internationally-recognized Project Management Institute (PMI) Project Management Professional (PMP) exam, which certifies skills in project management and product delivery. CSU
Computer information systems

**CIS-182  Project Risk Management**
3 units  SC  
- 54 hours lecture per term  
- *Recommended: CIS-180 or equivalent*
This course presents an introduction to the risks associated with the management of projects. The skills needed to manage risks associated with projects, deliver projects based on a solid plan and mitigate any risk factors to those projects, will be examined. CSU

**CIS-185  Project Management Tools**
2 units  SC  
- 36 hours lecture/18 hours laboratory per term  
- *Recommended: CIS-100 or CIS-101 or equivalent*  
- *Note: Credit by examination option available. Students may petition to repeat this course when software or hardware is changed. Only the first course completed will be applied toward a degree or certificate requirement. Units for both courses will apply towards the 60 units required for the degree.*
This course introduces students to the software tools, MS Visio and MS Project used in project management. The software is used to create, save, and publish flow charts, diagrams and task lists as well as to set up and assign project resources, track progress on tasks, organize and format project details, and publish project information. No previous experience with the software is required. CSU