AS Degree in Business Information Worker

About the Program

Program Goal: Career
GE Pattern(s): Butte Local
Program Code: 01313.02AS

The Business Information Worker (BIW) program is a two-tiered, structured career pathway for students who are interested in entering the exciting and diverse career field of office and administrative support. Butte College's BIW pathway is aligned with a California statewide program that collaborated with businesses and advisory committees across the state to identify the most in-demand and desirable knowledge and skills required of today's business information workers. Additionally, this pathway clearly communicates to students what skills they need to be successful in today's businesses, as well as provides a branded BIW pathway for businesses to quickly recognize on resumes. Please visit the ICT-DM.NET./BIW site to obtain more information and locate support resources for this pathway.

Students graduating from the BIW program gain proficiency in business communication, professional development, records management, technology tools used to support businesses to achieve goals, such as Microsoft Office applications, collaboration tools, and desktop publishing applications.

Career related fields for the BIW include office and administrative support workers, administrative assistants, receptionists, office specialists, customer service representatives, general office and information clerks, and file clerks.

Students who have earned the AS degree in BIW will have also completed the BIW Certificate and the BIW Certificate of Achievement. Taken full-time, this program can be completed in two years.

Program Learning Outcome(s):
Upon successful completion of the program, the student will be able to:

1. Manage office information and records.
2. Communicate professionally and work effectively in a team
3. Produce business documents with appropriate formatting using word processing software.
4. Create spreadsheets with financial functions and charting.
5. Plan and deliver individual or team oral presentations for business meetings.
6. Use email and calendaring software to communicate and manage time.
7. Apply the features and functions of web-based tools efficiently and effectively in order to meet the desired goals and outcomes of business.

Required courses:		29.50
BCIS 13	Business Communication	3.00
~~BCIS 15~~	~~Web-based Tools for Business~~	~~3.00~~
BCIS 17	Artificial Intelligence Tools for Business	3.00
BCIS 16	Project Management Tools	3.00
BCIS 18	Introduction to Business Technology	3.00
BCIS 20	Beginning Keyboarding	1.50
BCIS 28	Microsoft Word for Windows	3.00
BCIS 33	Skills for the Working Professional	1.00
BCIS 46	Business Math Calculations	2.00
BCIS 50	Office Administration	3.00
BCIS 51	Records Management	3.00
BCIS 70	Adobe Acrobat Professional	1.00
BCIS 85	Microsoft Excel for Windows	3.00

Total: 29.50

Suggested Program Map (Butte GE)

Required courses: **Units:** 60.00-68.00

Term 1		15.50-17.00
BCIS 13	Business Communication	3.00
BCIS 18	Introduction to Business Technology	3.00
BCIS 20	Beginning Keyboarding	1.50
Area 2 Choice (See GE Guide)		3.00-5.00
Area 6 Choice (See GE Guide)		3.00
Graduation Requirement Choice (See GE Guide)		2.00

Term 2		15.00-18.00
BCIS 46	Business Math Calculations	2.00
BCIS 28	Microsoft Word for Windows	3.00
BCIS 33	Skills for the Working Professional	1.00
Area 1A Choice (See GE Guide)		3.00-4.00
Area 1B/C Choice (See GE Guide)		3.00-5.00

Area 4 Choice (See GE Guide)		3.00
Term 3		13.00-15.00
BCIS 16	Project Management Tools	3.00
BCIS 70	Adobe Acrobat Professional	1.00
BCIS 85	Microsoft Excel for Windows	3.00
Area 5 Choice (See GE Guide)		3.00-5.00
Elective (any course numbered 1-99 or C1000-C1999)		3.00
Only necessary if the 60 units needed to graduate have not been completed. Consider taking a Cal-GETC General Education course. Visit www.assist.org to see options.		
Term 4		16.50-17.50
~~BCIS 15~~ BCIS 17	~~Web-based Tools for Business~~ Artificial Intelligence Tools for Business	3.00
BCIS 50	Office Administration	3.00
BCIS 51	Records Management	3.00
Area 3 Choice (See GE Guide)		3.00-4.00
Elective (any course numbered 1-99 or C1000-C1999)		4.50
Only necessary if the 60 units needed to graduate have not been completed. Consider taking a Cal-GETC General Education course. Visit www.assist.org to see options.		

Total: 60.00-68.00

AS Degree in Computer Information Systems

About the Program

Program Goal: Local
GE Pattern(s): Butte Local, Cal-GETC
Program Code: 36241.01AS

~~This program partially reflects requirements for the Bachelor of Science in Computer Information Systems at CSU, Chico.~~ This program meets the lower division major preparation for a similar major at CSU, Chico. Students planning to transfer should contact a counselor for more information on program and transfer requirements.

Computer Information Systems (CIS) as a field focuses on practical applications of technology to support organizations. The program includes a range of subjects, including end-user Information Technology (IT) systems, IT systems analysis and design, software development, and mathematics. Potential careers for CIS graduates include IT consultant, programmer/analyst, application developer, Quality Assurance Specialist, IT support specialist, IT project manager, and many other roles in the IT industry.

Program Learning Outcome(s):
Upon successful completion of the program, the student will be able to:

1. Define terminology, concepts, and functions of end-user Information Technology (IT) systems.
2. Explain how fundamental principles of economics and accounting systems are used to inform business decisions and satisfy the needs of specific businesses and users.
3. Articulate the types of business needs that can be addressed using information technology-based solutions.
4. Articulate business requirements for a technology solution, specify alternative approaches to acquiring the technology capabilities needed to address the business requirements, and specify the requirements for an information systems solution.
5. Design and implement computer algorithms and applications using basic computation, input and output, control structures, and a variety of data structures in an object-oriented programming language
6. Describe how formal tools of symbolic logic are used to model real-life situations, including those arising in computing contexts such as program correctness, database queries, and algorithms.

Required courses:		35.00 – 36.00
CSCI 20	Programming and Algorithms I	3.00
CSCI 21	Programming and Algorithms II	3.00
CSCI 22	Discrete Structures	3.00
~~CSCI 23~~	~~Systems Analysis and Design~~	~~3.00~~
CSCI 49	PCs and Peripherals/A+	4.00
ECON C2001	Principles of Microeconomics	3.00
ACCT 2	Financial Accounting	4.00
ACCT 4	Managerial Accounting	4.00
BUS 8	Introduction to Business Law	3.00
Select one:		4.00-5.00
MATH 13	Survey of Calculus	4.00
MATH 13s	Survey of Calculus with Support	4.00
MATH C2210	Calculus I Early Transcendentals	5.00
MATH C2210E	Calculus I Early Transcendentals with Embedded Support	5.00
Select one:		4.00
STAT C1000	Introduction to Statistics	4.00
STAT C1000E	Introduction to Statistics	4.00

Total: 35.00 – 36.00

Suggested Program Map (Butte GE)

Required courses: **Units:** 60.00-65.00

Term 1		13.00-14.00
Select one:		3.00
CSCI 20	Programming and Algorithms I	3.00
~~CSCI 23~~	~~Systems Analysis and Design~~	~~3.00~~
ACCT 2	Financial Accounting	4.00
Select one: Meets Ar a 2		4.00
STAT C1000	Introduction to Statistics	4.00
STAT C1000E	Introduction to Statistics	4.00
Area 1A Choice (See GE Guide)		3.00-4.00
Graduation Requirement Choice (See GE Guide)		2.00
Term 2		18.00-19.00
CSCI 21	Programming and Algorithms II	3.00

CSCI 49	PCs and Peripherals/A+	4.00
Select one: Meets Area 2		4.00
MATH 13	Survey of Calculus	4.00

MATH 13s	Survey of Calculus with Support	4.00
MATH 30	Analytic Geometry and Calculus I	5.00
MATH 30s	Analytic Geometry and Calculus I with Support	5.00
Area 3 Choice (See GE Guide)		3.00-4.00
Area 6 Choice (See GE Guide)		3.00

Term 3		15.00
CSCI 22	Discrete Structures	3.00
Prerequisite: CSCI 20 and MATH 13 or MATH 13s or MATH 26 or MATH 26s or MATH 28 or MATH 28s		
ECON 4	Principles of Microeconomics	3.00
Meets Area 4.		
ACCT 4	Managerial Accounting	4.00
Elective (any course numbered 1-99 or C1000-C1999)		5.00
Only necessary if the 60 units needed to graduate have not been completed. Consider taking a Cal-GETC General Education course. Visit www.assist.org to see options. Department recommends CSCI 31.		

Term 4		16.00-18.00
BUS 8	Introduction to Business Law	3.00
Area 1B/C Choice (See GE Guide)		3.00
Area 5 Choice (See GE Guide)		3.00-5.00
Elective (any course numbered 1-99 or C1000-C1999)		7.00
Only necessary if the 60 units needed to graduate have not been completed. Consider taking a Cal-GETC General Education course. Visit www.assist.org to see options.		

Total: 60.00-65.00

AS Degree in Computer System Administration

About the Program

Program Goal: Career
GE Pattern(s): Butte Local
Program Code: 31306.02AS

The Computer System Administration program prepares students for industry-standard certification exams and entry-level positions as computer support technicians and jr. computer system/network administrators. The core curriculum covers server and network installation, configuration, troubleshooting, and maintenance. No prerequisite skills are required for students to enroll in the program.

The program offers courses that prepare students for many industry certification exams, including Cisco CCNA, CompTIA A+, Linux+, Network+, Server+, Cloud+, and Security+.

Program Learning Outcome(s):
Upon successful completion of the program, the student will be able to:

1. Design and implement basic software solutions using the building blocks of modern computer software systems.
2. Apply the fundamental techniques of computer security to ensure account and data integrity.
3. Identify labor market needs and properly prepare for the most relevant industry certification exams.
4. Identify, describe, install, and maintain the fundamental hardware and software components of a modern computer system.
5. Install, configure, maintain, and network Microsoft desktop computer workstations.
6. Identify and describe connection-oriented network services and the functions of the Open Systems Interconnection (OSI) and TCP/IP model.
7. Design, build, configure, and maintain small to medium-sized Cisco networks utilizing switches, routers, and WAN connections.
8. Implement a core Windows Server infrastructure in an existing enterprise environment.
9. Implement, manage, maintain and provide services and infrastructure in an on-premises, virtual, and cloud environment.

Required courses:		35.00-37.00
CSCI 4	Introduction to Programming Concepts and Methodologies	3.00
CSCI 17	Computer and Network Security/Security+	3.00
CSCI 25	Linux 1	3.00
CSCI 40	Cisco Networks Level I	3.00
CSCI 41	Cisco Networks Level II	3.00
CSCI 42	Cisco Networks Level III	3.00
CSCI 49	PCs and Peripherals/A+	4.00
CSCI 50	CompTIA Cloud+	3.00
CSCI 52	IT Support Professional	3.00
CSCI 65	Microsoft SQL Database Administration	3.00
Select one:		1.00-3.00
BCIS 33	Skills for the Working Professional	1.00
COMM C1000	Introduction to Public Speaking	3.00
CSCI 5	IT Career Skills	**1.00**
CSCI 53	Server Administration	3.00
CSCI 76	Windows Hybrid Infrastructure and Services	3.00

Total: 35.00-37.00

Suggested Program Map (Butte GE)

Required courses:		**Units:** 60.00-68.00
Term 1		15.00-16.00
CSCI 4	Introduction to Programming Concepts and Methodologies	3.00
CSCI 40	Cisco Networks Level I	3.00
CSCI 49	PCs and Peripherals/A+	4.00
Area 1A Choice (See GE Guide)		3.00-4.00
Graduation Requirement Choice (See GE Guide)		2.00
Term 2		15.00-18.00
CSCI 41	Cisco Networks Level II	3.00
CSCI 50	CompTIA Cloud+	3.00
CSCI 52	IT Support Professional	3.00
Area 2 Choice (See GE Guide)		3.00-5.00

Area 3 Choice (See GE Guide)		3.00-4.00
Term 3		15.00-17.00
CSCI 25	Linux 1	3.00
CSCI 42	Cisco Networks Level III	3.00
CSCI 65	Microsoft SQL Database Administration	3.00
Select one:		3.00
CSCI 53	Server Administration	3.00
CSCI 76	Windows Hybrid Infrastructure and Services	3.00
Area 5 Choice (See GE Guide)		3.00-5.00
Term 4		15.00-17.00
CSCI 5	IT Career Skills	1.00
CSCI 17	Computer and Network Security/Security+	3.00
Select one:		1.00-3.00
BCIS 33	Skills for the Working Professional	1.00
COMM C1000	Introduction to Public Speaking	3.00
Meets Area 1B.		
Area 1B/C Choice (See GE Guide)		3.00
Only necessary if not already met.		
Area 4 Choice (See GE Guide)		3.00
Area 6 Choice (See GE Guide)		3.00
Elective (any course numbered 1-99 or C1000-C199)		2.00
Only necessary if the 60 units needed to graduate have not been completed. Consider taking a Cal-GETC General Education course. Visit www.assist.org to see options.		

Total: 60.00-68.00

AS Degree in Cyber-Security Practitioner

About the Program

Program Goal: Career
GE Pattern(s): Butte Local
Program Code: 40710.01AS

The Associate of Science Degree in Cyber-Security Practitioner will provide our community with a workforce of highly skilled digital security professionals well versed in industry standards and best practices. This program is designed to prepare students for employment in a cybersecurity related field and successfully pass globally recognized industry certifications. Upon completion of this program students will have the skills required for an entry level career as a cyber-security practitioner.

Program Learning Outcome(s):
Upon successful completion of the program, the student will be able to:

1. Implement and analyze access control including policies, standards, and procedures that define who users are, what they can do, which resources they can access, and what operations they can perform on a system.
2. Administer a secure network environment through: identification of information assets, documentation of policies, standards, procedures and guidelines that ensure confidentiality, integrity, and availability.
3. Explain security analysis planning and scoping, conduct information gathering and vulnerability identification, and create reports and communicate results of security tests.
4. Implement processes essential to control of loss associated with uncertain events by analyzing risk, recovery and response.
5. Analyze and protect systems from malicious code and use countermeasures and prevention techniques for dealing with viruses, worms, logic bombs, Trojan horses and other related forms of intentionally created deviant code.
6. Engineer, integrate and implement secure solutions in complex enterprise environments to build resilient networks.
7. Describe and analyze the network structures, transmission methods and techniques, transport formats and security measures used to operate both private and public communication networks.

Required courses:		32.00-37.00 29.00-32.00
CSCI 4	Introduction to Programming Concepts and Methodologies	3.00
CSCI 17	Computer and Network Security/Security+	3.00
CSCI 18	Ethical Hacking	3.00
CSCI 24	CompTIA Advanced Security Practitioner+	3.00
CSCI 25	Linux 1	3.00
CSCI 26	Linux 2, System Administration	3.00
CSCI 49	PCs and Peripherals/A+	4.00
Select one:		1.00
BCIS 33	Skills for the Working Professional	1.00
COMM C1000	Introduction to Public Speaking	3.00
CSCI 5	IT Career Skills	1.00
Complete one track:		9.00-12.00
Systems Administration		12.00
CSCI 19	Computer Networking Fundamentals	3.00
CSCI 50	CompTIA Cloud+	3.00
CSCI 52	IT Support Professional	3.00
Select		3.00
CSCI 53	Server Administration	3.00
CSCI 76	Windows Hybrid Infrastructure and Services	3.00
CCNA		9.00
CSCI 40	Cisco Networks Level I	3.00
CSCI 41	Cisco Networks Level II	3.00
CSCI 42	Cisco Networks Level III	3.00

Total: 29.00-32.00

Suggested Program Map (Butte GE)

Required courses:

Units: 60.00-66.00 63.00

Term 1		15.00-16.00
CSCI 4	Introduction to Programming Concepts and Methodologies	3.00
CSCI 25	Linux 1	3.00
CSCI 49	PCs and Peripherals/A+	4.00
Area 1A Choice (See GE Guide)		3.00-4.00

Graduation Requirement Choice (See GE Guide)		2.00
Term 2		15.00-17.00
CSCI 17	Computer and Network Security/Security+	3.00
CSCI 26	Linux 2, System Administration	3.00
Select one track:		3.00
CCNA		
CSCI 40	Cisco Networks Level I	3.00
Systems Administration		
CSCI 19	Computer Networking Fundamentals	3.00
Area 2 Choice (See GE Guide)		3.00-5.00
Area 5 Choice (See GE Guide)		3.00-5.00
Term 3		13.00-15.00 12.00
CSCI 18	Ethical Hacking	3.00
Select one:		1.00-3.00
BCIS 33	Skills for the Working Professional	1.00
COMM C1000	Introduction to Public Speaking	3.00
Meets Area 1C.		
Select one track:		3.00
CCNA		
CSCI 41	Cisco Networks Level II	3.00
Systems Administration		
CSCI 50	CompTIA Cloud+	3.00
Area 4 Choice (See GE Guide)		3.00
Elective (any course numbered 1-99 or C1000-C1999)		3.00
Only necessary if the 60 units needed to graduate have not been completed. Consider taking a Cal-GETC General Education course. Visit www.assist.org to see options.		
Term 4		17.00-18.00 15.00-18.00
CSCI 24	CompTIA Advanced Security Practitioner+	3.00
CSCI 5	IT Career Skills	1.00
Select one track:		3.00
CCNA		
CSCI 42	Cisco Networks Level III	3.00
Systems Administration		
CSCI 52	IT Support Professional	3.00
Systems Administ. ation (Select one):		
CSCI 53	Server Administration	3.00
CSCI 76	Windows Hybrid Infrastructure and Services	3.00
Area 1B/C Choice (See GE Guide)		3.00
Only necessary if COMM C1000 is not completed.		
Area 3 Choice (See GE Guide)		3.00-4.00
Area 6 Choice (See GE Guide)		3.00
Elective (any course numbered 1-99 or C1000-C1999)		2.00 4.00-7.00
Only necessary if the 60 units needed to graduate have not been completed. Consider taking a Cal-GETC General Education course. Visit www.assist.org to see options.		
		Total: 60.00-66.00 63.00

A.S. Environmental Science

Possible Modification to align with CSUC

Required Core (31 units):

AGS 50 General Soils (4)
BIOL 43 Ecology and Evolution (5)
CHEM 1 General Chemistry I (5)
CHEM 2 General Chemistry II (5)
GEOL 32 Physical Geology with Lab (4)
PSC 10 Introduction to Environmental Science (4) aligns with CPH
PSC 50 Introduction to Weather (3)
PSC 51 Weather Lab (1)

Select one of the following (4-5 units):

- MATH 30 Analytic Geometry and Calculus (5)
- MATH 30S Analytic Geometry and Calculus with Support (5)
- STAT C1000 or C1000E Introduction to Statistics (4) aligns with CPH and UCD

Select one sequence (8 units):

- PHYS 21 College Physics I (4) AND
  PHYS 22 College Physics II (4)
- PHYS 41 Physics for Scientists and Engineers I (4) AND
  PHYS 42 Physics for Scientists and Engineers II (4)

Total Units: 43-44

Facts to Consider:

Neither Chico State nor Cal Poly Humboldt honor the AS-T in Environmental Science for their Environmental Science majors.

We currently exceed the 60 units required to offer the AS-T in Environmental Science by 2-3 units.

The current local degree claims to be aligned with Chico State in the course description and with Humboldt in the degree structure. It does not align with Chico's current major structure, unclear how much it aligns with Humboldt.

Counselors have identified that the majority of Environmental Science majors are planning on transfer to Chico State, so that is the focus of this proposal.

Physics 43 is left off because the unit minimum for this area is 8 units which is covered by Phys 41+42.

Math 13 and 13s will work for Chico State but may not leave as many options open to students who end up transferring to another university or switch STEM majors down the line.

AS Degree in Environmental Science

About the Program

Program Goal: Local
GE Pattern(s): Butte Local, Cal-GETC
Program Code: 15151.00AS

~~This program meets the lower-division major preparation for a similar major at CSU, Chico. Visit website for details www.assist.org~~

~~The major promotes an understanding of basic operational principles underlying the biosphere and ecosystem through a transdisciplinary approach to understanding interaction between the biological and physical world and human institutions. Students will understand essential biological and physical processes, analyze human/environment interactions, understand different cultural perspectives on the environment, build critical thinking skills as the basis for decision making and sound value judgements, gain specialized analytical skills in at least one area of environmental science, build teamwork, leadership, conflict resolution skills, and develop effective communication skills.~~

This program prepares students for successful transfer to university level Environmental Sciences programs as well as entry-level positions in environmentally focused careers such as resource management, environmental consulting and regulatory agencies. Curriculum is primarily aligned with the lower-division requirements of CSU, Chico. Students are strongly advised to consult a counselor and refer to www.assist.org when determining a course of study for a particular transfer goal.

Environmental science explores the interactions between human activities and the geological, biological, chemical and ecological systems that shape Earth's natural environment. Students in this program will develop a strong foundation in scientific concepts, analytical problem-solving skills and quantitative reasoning. They will learn to identify and analyze environmental problems and propose sustainable, science-based solutions.

Program Learning Outcome(s):
Upon successful completion of the program, the student will be able to:

~~1. Investigate and describe specific evidence used to construct individual scientific principles.~~
~~2. Use scientific principles to explain well-established fundamental biological or physical phenomena and analyze their underlying components.~~
~~3. Utilize scientific methodologies when solving a problem.~~
~~4. Demonstrate knowledge of how human activities impact the physical and biological environments.~~
~~5. Demonstrate knowledge of environmental policy-making, regulation, compliance, enforcement, and the collection of data from fieldwork.~~

1. Explain fundamental scientific principles underlying Earth's geological, biological, chemical, and ecological systems.
2. Analyze environmental problems using scientific methods, quantitative reasoning, and data interpretation.
3. Evaluate human impacts on natural systems and propose evidence-based, sustainable solutions.
4. Demonstrate proficiency in scientific inquiry and laboratory techniques used to do research and collect data for environmental monitoring and assessment.
5. Communicate scientific information effectively in written, oral, and graphical formats to diverse audiences.
6. Apply interdisciplinary perspectives (e.g., natural sciences, policy, ethics) to environmental decision-making and resource management.

Required courses:		43.00-44.00 23.00-35.00
~~*Complete one emphasis:*~~		~~23.00-35.00~~
~~*Ecological Restoration emphasis at Cal Poly Humboldt*~~		~~26.00~~
AGS 50	General Soils	4.00
~~BIOL 41~~	~~Cell and Molecular Biology~~	~~5.00~~
BIOL 43	Ecology and Evolution	5.00
~~CHEM 51~~	~~Elementary Inorganic Chemistry~~	~~5.00~~
CHEM 1 General Chemistry I		5.00
CHEM 2 General Chemistry II		5.00
GEOL 32 Physical Geology with Lab		4.00
~~NR 28~~	~~Environmental Management~~	~~3.00~~
PSC 10	Introduction to Environmental Science	4.00
PSC 50 Introduction to Weather		3.00
PSC 51 Weather Lab		1.00
Select one (4-5 units):		4.00-5.00
MATH 30 Analytic Geometry and Calculus (5)		5.00
MATH 30S Analytic Geometry and Calculus with Support (5)		5.00
STAT C1000 or C1000E Introduction to Statistics (4)		4.00
Select one (8 units):		8.00

PHYS 21 College Physics I (4)		4.00
AND		4.00
PHYS 22 College Physics II (4)		
PHYS 41 Physics for Scientists and Engineers I (4)		4.00
AND		
PHYS 42 Physics for Scientists and Engineers II (4)		4.00
		TOTAL 43.00-44.00

~~*Energy and Climate emphasis at Cal Poly Humboldt*~~		~~30.00-35.00~~
~~NR 28~~	~~Environmental Management~~	~~3.00~~
~~PHYS 21~~	~~College Physics I~~	~~4.00~~
~~PHYS 22~~	~~College Physics II~~	~~4.00~~
~~PSC 10~~	~~Introduction to Environmental Science~~	~~4.00~~
~~*Select one:*~~		~~5.00~~
~~BIOL 41~~	~~Cell and Molecular Biology~~	~~5.00~~
~~BIOL 43~~	~~Ecology and Evolution~~	~~5.00~~
~~*Select one:*~~		~~5.00~~
~~MATH 30~~	~~Analytic Geometry and Calculus I~~	~~5.00~~
~~MATH 30s~~	~~Analytic Geometry and Calculus I with Support~~	~~5.00~~
~~*Select one:*~~		~~5.00-10.00~~
~~CHEM 51~~	~~Elementary Inorganic Chemistry~~	~~5.00~~
~~OR~~		
~~*Taking CHEM 1 requires CHEM 2*~~		~~10.00~~
~~CHEM 1~~	~~General Chemistry I~~	~~5.00~~
~~AND~~		
~~CHEM 2~~	~~General Chemistry II~~	~~5.00~~

~~OR~~		
~~*Environmental Poli y emphasis at Cal Poly Humboldt*~~		~~23.00~~
~~MATH 20~~	~~Trigonometry~~	~~3.00~~
~~NR 28~~	~~Environmental Management~~	~~3.00~~
~~PSC 10~~	~~Introduction to Environmental Science~~	~~4.00~~
~~*Select one:*~~		~~5.00~~
~~BIOL 41~~	~~Cell and Molecular Biology~~	~~5.00~~
~~BIOL 43~~	~~Ecology and Evolution~~	~~5.00~~
~~*Select one:*~~		~~4.00~~
~~MATH 26~~	~~College Algebra~~	~~4.00~~
~~MATH 26s~~	~~College Algebra with Support~~	~~4.00~~
~~*Select one:*~~		~~4.00~~
~~STAT C1000~~	~~Introduction to Statistics~~	~~4.00~~
~~STAT C1000E~~	~~Introduction to Statistics~~	~~4.00~~

Program Map

Program					Total Units	61-62
Course	**Course Title**	**Units**	**Local GE Area**	**Prerequisite**	**Notes or Corequisite**	
Term 1, Fall					**Term Units**	**15-16**
	Area 1A Choice (See GE Guide)	4	1A	None		
PSC 10	Intro to Environmental Science	4	5	None		
MATH 30/30s or STAT C1000 or C100E	Analytic Geometry and Calculus I/with Support or Introduction to Statistics	4-5	2	None		
	Area 6 Choice (See GE Guide)	3	6	None		
Term 2, Spring					**Term Units**	**15**
CHEM 1	General Chemistry I	5	5	Chem 11 or 51 or 1 year High School Chemistry + Intermediate Algebra or Equivalent		
	Graduation Requirement Choice (See GE Guide)	2		None		
BIOL 43	Ecology & Evolution	5	5	Intermediate Algebra or Equivalent		
	Area 3 Choice (See GE Guide)	3	3			
Term 3, Fall					**Term Units**	**16**
CHEM 2	General Chemistry II	5	5A/5C	CHEM 1		
PHYS 21 or PHYS 41	College Physics I Physics for Scientists and Engineers I	4	5A/5C	MATH 20, 28, 28s or high school trigonometry; or, Math 30 or 30s		
	Area 1B/C Choice (See GE Guide)	3	1B/C			
AGS 50	General Soils	4	5A/5C			
Term 4, Spring					**Term Units**	**15**
PHYS 22 or PHYS 42	College Physics II or Physics for Scientists and Engineers II	4	5A/5C	PHYS 21; or, MATH 31 + PHYS 41		
PSC 50/51	Introduction to Weather/with lab	4	5	None		
	Area 4 Choice	3	4			
GEOL 32	Physical Geology with Lab	4	5			

AS Degree in Marketing

About the Program

Program Goal: Career
GE Pattern(s): Butte Local, Cal-GETC
Program Code: 01311.00AS

The Marketing program is designed to provide students with a well-rounded education in business operations, management techniques, human relations, accounting, and economics with an emphasis in marketing principles, sales, and advertising. To be successful students need basic competence in reading, written and oral communication, and mathematics. Students in this field should possess an interest in working with others, developing business strategies, and responding to today's competitive business environment.

This program is designed to teach students to solve problems, develop marketing strategies, make oral presentations, and write reports such as marketing plans and sales proposals. Marketing skills are useful in many job settings: retail, wholesale, manufacturing, social services, government, and education. These skills also are important for people who wish to improve their performance in existing jobs or develop their own businesses.

Program Learning Outcome(s):
Upon successful completion of the program, the student will be able to:

1. Identify business terms and concepts, and effectively communicate using the language of business.
2. Make effective business decisions using a systematic, evaluative, information-based approach.
3. Develop and exhibit high standards of professional practice, demonstrating awareness of ethical and social responsibilities in today's multicultural, team-oriented, rapidly changing environment.

Required courses:		41.00
ACCT 20	Introduction to Accounting	3.00
BCIS 13	Business Communication	3.00
BCIS 33	Skills for the Working Professional	1.00
BCIS 81	Microsoft Excel for Business	1.00
BUS 8	Introduction to Business Law	3.00
BUS 20	Introduction to Business	3.00
BUS 35	Leading and Supervising Teams	3.00
BUS 50	Sales Strategies	3.00
BUS 60	Advertising and Promotion	3.00
BUS 64	Principles of Marketing	3.00
BUS 68	Web Marketing	3.00
COMM C1000	Introduction to Public Speaking	3.00
ECON C2001	Principles of Microeconomics	3.00
Select 6 units:		6.00
ART 31	Graphic Design I	3.00
~~BCIS 15~~	~~Web-based Tools for Business~~	~~3.00~~
BCIS 17	Artificial Intelligence Tools for Business	3.00
BCIS 18	Introduction to Business Technology	3.00
BUS 25	Introduction to Entrepreneurship	3.00
MSP 5	Introduction to Interactive Web Design and Authoring	3.00
MSP 74	Multimedia Production I	3.00

Total: 41.00

Suggested Program Map (Butte GE)

Required courses: **Units:** 60.00-66.00

Term 1		15.00-19.00
BUS 20	Introduction to Business	3.00
BUS 35	Leading and Supervising Teams	3.00
Area 1A Choice (See GE Guide)		3.00-4.00
Area 2 Choice (See GE Guide)		3.00-5.00
Area 3 Choice (See GE Guide)		3.00-4.00
Term 2		15.00
BCIS 13	Business Communication	3.00
COMM C1000	Introduction to Public Speaking	3.00
Meets Area 1C.		
ECON C2001	Principles of Microeconomics	3.00

Meets Area 4.

Area 6 Choice (See GE Guide)		3.00
Elective (any course number 1-99 or C1000-C1999)		3.00
Only necessary if the 60 units needed to graduate have not been completed. Consider taking a Cal-GETC General Education course. Visit www.assist.org to see options.		
Term 3		14.00
ACCT 20	Introduction to Accounting	3.00
BUS 8	Introduction to Business Law	3.00
BUS 50	Sales Strategies	3.00
BUS 60	Advertising and Promotion	3.00
Graduation Requirement Choice (See GE Guide)		2.00
Term 4		16.00-18.00
BCIS 33	Skills for the Working Professional	1.00
BCIS 81	Microsoft Excel for Business	1.00
BUS 68	Web Marketing	3.00
Select 6 units:		6.00
ART 31	Graphic Design I	3.00
~~BCIS 15~~ BCIS 17	~~Web-based Tools for Business~~ Artificial Intelligence Tools for Business	3.00
BCIS 18	Introduction to Business Technology	3.00
BUS 25	Introduction to Entrepreneurship	3.00
MSP 5	Introduction to Interactive Web Design and Authoring	3.00
MSP 74	Multimedia Production I	3.00

Department recommends BCIS 15.

Area 5 Choice (See GE Guide)		3.00-5.00
Elective (any course number 1-99 or C1000-C1999)		2.00
Only necessary if the 60 units needed to graduate have not been completed. Consider taking a Cal-GETC General Education course. Visit www.assist.org to see options.		

Total: 60.00-66.00

Certificate of Achievement in Business Information Worker

About the Program

Program Goal: Career
GE Pattern(s): None
Program Code: 01313.02CA

This is the second tier of the Business Information Worker (BIW) career pathway. Students completing this next level of certificate will take courses that are designed to build on their BIW solid foundation and allow students an opportunity to become proficient in the in-demand knowledge and skills sought out by employers.

Career related fields include office and administrative support workers, administrative assistants, receptionists, office specialists, customer service representatives, general office and information clerks, and file clerks. This certificate of achievement can be completed in one year.

Program Learning Outcome(s):
Upon successful completion of the program, the student will be able to:

1. Communicate professionally and work effectively in a team.
2. Manage office information in both physical and electronic formats.
3. Produce business documents with appropriate formatting using word processing applications.
4. Create spreadsheets with financial functions and charts.
5. Plan and deliver individual or team oral presentations for business meetings.
6. Use management software used in today's successful businesses.
7. Apply the features and functions of web-based tools efficiently and effectively in order to meet the desired goals and outcomes of business.

Required courses:		29.50
BCIS 13	Business Communication	3.00
~~BCIS 15~~	~~Web-based Tools for Business~~	~~3.00~~
BCIS 17	Artificial Intelligence Tools for Business	3.00
BCIS 16	Project Management Tools	3.00
BCIS 18	Introduction to Business Technology	3.00
BCIS 20	Beginning Keyboarding	1.50
BCIS 28	Microsoft Word for Windows	3.00
BCIS 33	Skills for the Working Professional	1.00
BCIS 46	Business Math Calculations	2.00
BCIS 50	Office Administration	3.00
BCIS 51	Records Management	3.00
BCIS 70	Adobe Acrobat Professional	1.00
BCIS 85	Microsoft Excel for Windows	3.00

Total: 29.50

Suggested Program Map

Required courses: **Units:** 29.50

Term 1		13.50
BCIS 13	Business Communication	3.00
BCIS 18	Introduction to Business Technology	3.00
BCIS 20	Beginning Keyboarding	1.50
BCIS 28	Microsoft Word for Windows	3.00
BCIS 33	Skills for the Working Professional	1.00
BCIS 46	Business Math Calculations	2.00
Term 2		16.00
~~BCIS 15~~ BCIS 17	~~Web-based Tools for Business~~ Artificial Intelligence Tools for Business	3.00
BCIS 16	Project Management Tools	3.00
BCIS 50	Office Administration	3.00
BCIS 51	Records Management	3.00
BCIS 70	Adobe Acrobat Professional	1.00
BCIS 85	Microsoft Excel for Windows	3.00

Total: 29.50

Certificate of Achievement in Computer System Administration

About the Program

Program Goal: Career
GE Pattern(s): None
Program Code: 31236.02CA

See AS Degree in Computer Systems Administration.

Program Learning Outcome(s):
Upon successful completion of the program, the student will be able to:

1. Design and implement basic software solutions using the building blocks of modern computer software systems.
2. Apply the fundamental techniques of computer security to ensure account and data integrity.
3. Identify labor market needs and properly prepare for the most relevant industry certification exams.
4. Identify, describe, install, and maintain the fundamental hardware and software components of a modern computer system.
5. Install, configure, maintain, and network Microsoft desktop computer workstations.
6. Identify and describe connection-oriented network services and the functions of the Open Systems Interconnection (OSI) model, and TCP/IP model
7. Design, build, configure, and maintain small to medium-sized Cisco networks utilizing switches, routers, and WAN connections.
8. Implement a core Windows Server 2016 infrastructure in an existing enterprise environment.
9. Implement, manage, maintain and provision services and infrastructure in a Windows Server 2016 environment.
10. Implement a core Windows Server infrastructure in an existing enterprise environment.
11. Implement, manage, maintain and provide services and infrastructure in an on-premises, virtual, and cloud environment.

Required courses:		35.00-37.00
CSCI 4	Introduction to Programming Concepts and Methodologies	3.00
CSCI 17	Computer and Network Security/Security+	3.00
CSCI 25	Linux 1	3.00
CSCI 40	Cisco Networks Level I	3.00
CSCI 41	Cisco Networks Level II	3.00
CSCI 42	Cisco Networks Level III	3.00
CSCI 49	PCs and Peripherals/A+	4.00
CSCI 50	CompTIA Cloud+	3.00
CSCI 52	IT Support Professional	3.00
CSCI 65	Microsoft SQL Database Administration	3.00
Select one:		3.00
CSCI 53	Server Administration	3.00
CSCI 76	Windows Hybrid Infrastructure and Services	3.00
Select one:		1.00-3.00
BCIS 33	Skills for the Working Professional	1.00
COMM C1000	Introduction to Public Speaking	3.00
CSCI 5	IT Career Skills	1.00

Total: 35.00-37.00

Suggested Program Map

Required courses: **Units:**35.00-37.00

Term 1		10.00
CSCI 4	Introduction to Programming Concepts and Methodologies	3.00
CSCI 40	Cisco Networks Level I	3.00
CSCI 49	PCs and Peripherals/A+	4.00
Term 2		6.00
CSCI 41	Cisco Networks Level II	3.00
CSCI 50	CompTIA Cloud+	3.00
Term 3		12.00
CSCI 25	Linux 1	3.00
CSCI 42	Cisco Networks Level III	3.00
CSCI 52	IT Support Professional	3.00
CSCI 65	Microsoft SQL Database Administration	3.00
Term 4		7.00-9.00
CSCI 17	Computer and Network Security/Security+	3.00

BCIS 33	Skills for the Working Professional	1.00
COMM C1000	Introduction to Public Speaking	3.00
CSCI 5	IT Career Skills	1.00
Select one:		3.00
CSCI 53	Server Administration	3.00
CSCI 76	Windows Hybrid Infrastructure and Services	3.00

Total: 35.00-37.00

Certificate of Achievement in Cyber-Security Practitioner

About the Program

Program Goal: Career
GE Pattern(s): None
Program Code: 40709.01CA

See AS Degree in Cyber-Security Practitioner.

Program Learning Outcome(s):
Upon successful completion of the program, the student will be able to:

1. Understand, implement, and analyze access control, those policies, standards, and procedures that define who users are, what they can do, which resources they can access, and what operations they can perform on a system.
2. Use industry best practices, administer, maintain, and analyze a secure network environment through identification of information assets, and documentation of policies, standards, procedures, and guidelines that ensure confidentiality, integrity and availability.
3. Explain security analysis planning and scoping, conduct information gathering and vulnerability identification, and create reports and communicate results of security tests.
4. Develop and analyze risk, response, and recovery through the review, analysis and implementation processes essential to the identification, measurement and control of loss associated with uncertain events.
5. Analyze and protect systems from malicious code and use countermeasures and prevention techniques for dealing with viruses, worms, logic bombs, Trojan horses and other related forms of intentionally created deviant code.
6. Conceptualize, engineer, integrate and implement secure solutions in complex enterprise environments to build resilient networks.
7. Understand comprehensive data communications and analysis including: The network structure, transmission methods and techniques, transport formats and security measures used to operate both private and public communication networks.

Required courses:		32.00-37.00 29.00-32.00
CSCI 4	Introduction to Programming Concepts and Methodologies	3.00
CSCI 17	Computer and Network Security/Security+	3.00
CSCI 18	Ethical Hacking	3.00
CSCI 24	CompTIA Advanced Security Practitioner+	3.00
CSCI 25	Linux 1	3.00
CSCI 26	Linux 2, System Administration	3.00
CSCI 49	PCs and Peripherals/A+	4.00
Select one:		1.00-3.00
BCIS 33	Skills for the Working Professional	1.00
COMM C1000	Introduction to Public Speaking	3.00
CSCI 5	IT Career Skills	1.00
Complete one track:		9.00-12.00
Systems Administration		12.00
CSCI 19	Computer Networking Fundamentals	3.00
CSCI 50	CompTIA Cloud+	3.00
CSCI 52	IT Support Professional	3.00
		3.00
CSCI 53	Server Administration	3.00
OR		
CSCI 76	Windows Hybrid Infrastructure and Services[or]	3.00
CCNA		9.00
CSCI 40	Cisco Networks Level I	3.00
CSCI 41	Cisco Networks Level II	3.00
CSCI 42	Cisco Networks Level III	3.00

Total: 32.00-37.00 29.00-32.00

Suggested Program Map

Required courses:		**Units:** 29.00-32.00
Term 1		10.00
CSCI 4	Introduction to Programming Concepts and Methodologies	3.00
CSCI 25	Linux 1	
3.00		
CSCI 49	PCs and Peripherals/A+	4.00
Term 2		9.00

CSCI 17	Computer and Network Security/Security+	3.00
CSCI 26	Linux 2, System Administration	3.00
Select one track:		3.00
CCNA		
CSCI 40	Cisco Networks Level I	3.00
Systems Administration		
CSCI 19	Computer Networking Fundamentals	3.00
Term 3		6.00
CSCI 18	Ethical Hacking	3.00
Select one track:		3.00
CCNA		
CSCI 41	Cisco Networks Level II	3.00
Systems Administration		
CSCI 50	CompTIA Cloud+	3.00
Term 4		7.00-12.00
CSCI 24	CompTIA Advanced Security Practitioner+	3.00
Select one:		1.00-3.00
BCIS 33	Skills for the Working Professional	1.00
COMM C1000	Introduction to Public Speaking	3.00
CSCI 5	IT Career Skills	1.00
Select one track:		3.00-6.00
CCNA		
CSCI 42	Cisco Networks Level III	3.00
Systems Administration		
CSCI 52	IT Support Professional	3.00
Systems Administration	*(Select one):*	
CSCI 53	Server Administration	3.00
CSCI 76	Windows Hybrid Infrastructure and Services	3.00

Total: 29.00-32.00

Certificate in Business on the Web

About the Program

Program Goal: Career
GE Pattern(s): None
Program Code: BUSONWEB.CC

(Not Eligible for Financial Aid) Students are introduced to web marketing tools, strategies, application and measurement. It examines benefits and challenges associated with web marketing technologies including web site development, search engine optimization, online advertising, social media, email campaigns, blog marketing, digital public relations, multimedia and mobile marketing. Students will learn how to create a web marketing strategy and then apply web marketing technologies in a measurable way to achieve business objectives.

The certificate is designed to provide students with an exposure to web marketing tools and strategies which would qualify the student to work as a web assistant to help manage a company's online presence.

Program Learning Outcome(s):
Upon successful completion of the program, the student will be able to:

1. Understand business terms and concepts, and effectively communicate using the language of business.
2. Make effective web-based business decisions using a systematic, evaluative, information-based approach.

Required courses:		15.00
BCIS 13	Business Communication	3.00
~~BCIS 15~~	~~Web-based Tools for Business~~	~~3.00~~
BCIS 17	Artificial Intelligence Tools for Business	3.00
BUS 25	Introduction to Entrepreneurship	3.00
BUS 64	Principles of Marketing	3.00
BUS 68	Web Marketing	3.00

Total: 15.00

Suggested Program Map

Required course: **Units:** 15.00

Term 1		15.00
BCIS 13	Business Communication	3.00
~~BCIS 15~~ BCIS 17	~~Web-based Tools for Business~~ Artificial Intelligence Tools for Business	3.00
BUS 25	Introduction to Entrepreneurship	3.00
BUS 64	Principles of Marketing	3.00
BUS 68	Web Marketing	3.00

Total: 15.00

Certificate in Security Pro

About the Program

Program Goal: Career
GE Pattern(s): None
Program Code: SECURITYPRO.CC

(Not Eligible for Financial Aid) This certificate is designed for current ICT Professionals wishing to up-skill their career. It provides a foundation of cyber-security skills applicable to the IT workforce. Students that complete this certificate have the skills necessary to protect data and prevent loss according to industry best practices.

Program Learning Outcome(s):
Upon successful completion of the program, the student will be able to:

1. Understand, implement, and analyze access control, policies, standards, and procedures that define who users are, what they can do, which resources they can access, and what operations they can perform on a system.
2. Develop and analyze risk, response, and recovery through the review, analysis and implementation processes essential to the identification, measurement and control of loss associated with uncertain events.
3. Analyze and protect systems from malicious code and use countermeasures and prevention techniques for dealing with viruses, worms, logic bombs, Trojan horses and other related forms of intentionally created deviant code.
4. Use industry best practices, administer, maintain, and analyze a secure network environment through identification of information assets, and documentation of policies, standards, procedures, and guidelines that ensure confidentiality, integrity and availability.

Required courses:		12.00-10.00
CSCI 17	Computer and Network Security/Security+	3.00
CSCI 18	Ethical Hacking	3.00
CSCI 19	Computer Networking Fundamentals	3.00
CSCI 24	CompTIA Advanced Security Practitioner+	3.00
CSCI 5	IT Career Skills	1.00

Total: 12.00-10.00

Suggested Program Map

Required courses:		**Units:**12.00-10.00
Term 1		6.00
CSCI 17	Computer and Network Security/Security+	3.00
CSCI 19	Computer Networking Fundamentals	3.00
Term 2		3.00 4.00
CSCI 18	Ethical Hacking	3.00
CSCI 5	IT Career Skills	1.00
Term 3		3.00
CSCI 24	CompTIA Advanced Security Practitioner+	3.00

Total: 12.00-10.00

Certificate in Server Administration

About the Program

Program Goal: Career
GE Pattern(s): None
Program Code: SERVERADMIN.CC

(Not Eligible for Financial Aid) Completion of this certificate validates student knowledge of management and maintaining a modern Windows Server hybrid infrastructure.

Program Learning Outcome(s):
Upon successful completion of the program, the student will be able to:

1. Implement, manage, maintain, and provide services and infrastructure in a Windows Server Hybrid environment.
2. Implement and migrate core Windows Server infrastructure in an existing enterprise environment.
3. Identify labor market needs and properly prepare for the most relevant industry certification exams.

Required courses:		13.00 11.00
CSCI 49	PCs and Peripherals/A+	4.00
CSCI 50	CompTIA Cloud+	3.00
CSCI 53	Server Administration	3.00
CSCI 76	Windows Hybrid Infrastructure and Services	3.00
CSCI 5	IT Career Skills	1.00

Suggested Program Map

Required courses: **Units:** 13.00 11.00

Term 1		
		7.00
CSCI 49	PCs and Peripherals/A+	4.00
CSCI 50	CompTIA Cloud+	
3.00		
Term 2		4.00
CSCI 53	Server Administration	3.00
CSCI 76	Windows Hybrid Infrastructure and Services	3.00
CSCI 5	IT Career Skills	1.00

Total: 11.00