ARTICULATION AGREEMENT
BETWEEN
COMMUNITY COLLEGE OF ALLEGHENY COUNTY
AND
CALIFORNIA UNIVERSITY OF PENNSYLVANIA

THIS AGREEMENT, dated this 29th day of Oct. 2015, is made by and between, Community College of Allegheny County, located in Allegheny County, hereinafter called "CCAC", and California University of Pennsylvania, located at 250 University Avenue, California, Pennsylvania, hereinafter called "CAL U".

CCAC and CAL U acknowledge their shared mission to provide quality higher education programs, which meet the needs of the region and provide a workforce of highly trained residents.

The primary purpose of this agreement is to enhance the transferability of students and their credits between CCAC's Associate of Science Degree Programs in Computer Information Systems, Business Management, and Business University Parallel to CAL U's Global Online Bachelor of Science Degree in Computer Information Systems. The above referenced Associate Degree's will qualify the student for full junior standing upon admission to Cal U. A secondary purpose is to provide faculty and administration of both institutions with more precise guidelines for advising students interested in pursuing a Global Online Bachelor of Science in Computer Information Systems.

This agreement does not exclude students from transferring to majors other than Computer Information Systems. Appendix A, consisting of two (2) pages, attached hereto and incorporated herein, outlines the courses that will be accepted from CCAC. Appendix B, consisting of three (3) pages, attached hereto and incorporated herein, outlines the courses necessary for the Bachelor of Science in Computer Information Systems from CAL U.

I. MUTUAL TERMS AND CONDITIONS

a. *Term of Agreement.* The term of this Agreement shall be five years from the date of execution and will be reviewed annually for accuracy. This Agreement may not exceed a period of five (5) years.

b. *Termination of Agreement.* Either party may terminate this Agreement for any reason with ninety (90) days' notice. In the event of a substantial breach, either party may terminate this agreement upon the occurrence of the breach by written notice that may be less than 90 days.

c. *Nondiscrimination.* The parties agree to continue their respective policies of nondiscrimination and related procedures to insure that students enrolled at Cal U are afforded the protections of Title VI of the Civil Rights Act of 1964 in regard to sex, age, race, color, creed, national origin, Title IX of the Education Amendments of 1972 and other applicable laws, as well as the provisions of Section 504 of the

Rehabilitation Act of 1973 (as amended) and the Americans with Disabilities Act (ADA) of 1990.

d. *Interpretation of the Agreement.* The laws of the Commonwealth of Pennsylvania shall govern this Agreement.

e. *Modification of Agreement.* This Agreement shall only be modified in writing with the same formality as the original Agreement.

f. *Relationship of Parties.* The relationship between the parties to this Agreement to each other is that of independent contractors. The relationship of the parties to this contract to each other shall not be construed to constitute a partnership, joint venture or any other relationship, other than that of independent contractors.

g. *Liability.* Neither of the parties shall assume any liabilities to each other. As to liability to each other or death to persons, or damages to property, the parties do not waive any defense as a result of entering into this contract. This provision shall not be construed to limit the Commonwealth's rights, claims or defenses which arise as a matter of law pursuant to any provisions of this contract. This provision shall not be construed to limit the sovereign immunity of the Commonwealth or of the State System of Higher Education or the University.

h. *Entire Agreement.* This Agreement represents the entire understanding between the parties. No other prior or contemporaneous oral or written understandings or promises exist in regard to this relationship.

IN WITNESS WHEREOF, the authorized representatives of the parties have executed this Agreement as of the final date indicated below.
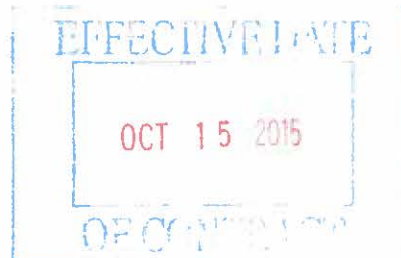
Community College of Allegheny College   California University of Pennsylvania:

_____   _____
Quintin B. Bullock, President   Bruce Barnhart, Acting Provost and Vice
                                              President for Academic Affairs

_____9/29/15_____   _____16-5-15_____
Date   Date

Reviewed and approved as to form and legality:

_____
University Legal Counsel

_____October 15, 2015_____
Date of final signature

Community College of Allegheny County	California University of Pennsylvania
AS in Computer Information Systems	***BS in Computer Information Systems***
ACC 104 Financial Accounting (General Elective)	ACC 200 Financial Accounting 3 crs.
ENG 101 English Comp I	ENG 101 English Comp I 3 crs.
ECO 103 Intro Microeconomics (General Elective)	ECO 201 Intro Microeconomics 3 crs.
ENG 102 English Comp 2	ENG 102 English Comp II 3 crs.
PSY 101 General Psychology (Social Science Elective)	PSY 100 General Psychology 3crs.
SPH 101 Oral Communication	COM 101 Oral Communication 3crs.
BUS 101 Intro Business (General Elective)	BUS 100 Introduction Business 3 crs.
MUS 101 Intro Music (Humanities) OR	MUS 100 Intro Music OR
THE 101 Intro Theater OR	THE 100 Intro Theater OR
ART 106 Art Appreciation	ART 162 Art transfer 3 crs.
MAT 111 College Algebra (Math Elective)	MAT 181 College Algebra 3 crs.
BUS 122 Business Stats (Math Elective) OR	MAT 225 Business Stats OR
MAT 161 Elem Statistics OR	MAT 215 Statistics OR
MAT 165 Probability & Statistics I OR	MAT 215 Statistics OR
MAT 210 Statistics	MAT 215 Statistics 3 crs.
MAT 201 Calculus (Math Elective)	MAT 281 Calculus 3 crs.
CIT 115 Intro Info Tech (CIT Restricted Electives)	CIS 110 Intro to Info Systems 3 crs
CIT 111 Inform Systems-JAVA	CIS 120 Application Prog I 3 crs.
GGY 201 Geology (Science w Lab Elective) OR	EAS 150 Intro to Geology OR
CHM 151 General Chem I	CHE 101 General Chem I 4 crs.
BIO 120 Human Repro-Std	BIO 112 Human sex & Society 3 crs.
BUS 103 Prin Management (General Elective)	MGT 300 Prin of Management 3 crs.
BUS 104 Prin Marketing (General Elective)	MKT 300 Prin Marketing 3 crs.
CIT 130 Object Oriented Prog (CIT Restricted Elective)	CIS 220 Application Prog II 3 crs.
BUS 108 Financial Mngt (General Elective)	FIN 301 Financial Management 3 crs.
CIT 215 Sys Analysis/Design (CIT Restricted Elective)	CIS 299 System Analysis I 3 crs.
	TOTAL TRANSFER CREDITS 61 Crs.

AS in Business Management	***BS in Computer Information Systems***
ACC 104 Financial Accounting	ACC 200 Financial Accounting 3 crs.
ENG 101 English Comp I	ENG 101 English Comp I 3 crs.
ECO 103 Intro Microeconomics (Business Course)	ECO 201 Intro Microeconomics 3 crs.
ENG 102 English Comp 2	ENG 102 English Comp II 3 crs.
PSY 101 General Psychology (Social Science)	PSY 100 General Psychology 3crs.
SPH 101 Oral Communication	COM 101 Oral Communication 3crs.
BUS 101 Introduction Business	BUS 100 Introduction Business 3 crs.
MUS 101 Intro Music (Humanities) OR	MUS 100 Intro Music OR
THE 101 Intro Theater OR	THE 100 Intro Theater OR
ART 106 Art Appreciation	ART 162 Art transfer 3 crs.
BUS 122 Business Stats (Math Elective) OR	MAT 225 Business Stats OR

MAT 161 Elem Statistics	OR	MAT 215 Statistics	OR
MAT 165 Probability & Statistics I	OR	MAT 215 Statistics	OR
MAT 210 Statistics		MAT 215 Statistics	3crs.
CIT 115 Intro Info Tech (Comp. Tech Elective)		CIS 110 Intro to Info Systems	3 crs
CIT 111 Inform Systems-JAVA(business elective)		CIS 120 Application Prog I	3 crs.
BIO 120 Human Repro-Std		BIO 112 Human sex & Society	3 crs.
GGY 201 Geology (Science Elective)	OR	EAS 150 Intro to Geology OR	
CHM 151 General Chem I		CHE 101 General Chem I	4 crs.
BUS 103 Prin Management		MGT 300 Prin of Management	3 crs.
BUS 104 Prin Marketing		MKT 300 Prin Marketing	3 crs.
BUS 108 Financial Mngt (Business Course)		FIN 301 Financial Management	3 crs.
ECO 102 Intro Macroeconomics		ECO 202 Intro Macroeconomics	3 crs.
ACC 203 Managerial Accting		ACC 321 Managerial Accting	3 crs.
BUS Business Law I		BUS 251 Business law I	3 crs.
Restricted Elective Course		Transfer credit	3 cr.
		TOTAL TRANSFER CREDITS 61 crs.	

AS in Business University Parallel   *BS in Computer Information Systems*

ACC 104 Financial Accounting		ACC 200 Financial Accounting	3 crs.
ENG 101 English Comp I		ENG 101 English Comp I	3 crs.
ECO 103 Intro Microeconomics		ECO 201 Intro Microeconomics	3 crs.
ENG 102 English Comp 2		ENG 102 English Comp II	3 crs.
PSY 101 General Psychology (Social Science Elective)		PSY 100 General Psychology	3crs.
SPH 101 Oral Communication		COM 101 Oral Communication	3crs.
BUS 101 Intro Business (Social Science Elective)		BUS 100 Introduction Business	3 crs.
MUS 101 Intro Music (Humanities)	OR	MUS 100 Intro Music OR	
THE 101 Intro Theater	OR	THE 100 Intro Theater	
ART 106 Art Appreciation		ART 162 Art transfer	3 crs.
BUS 122 Business Stats (Math Elective)	OR	MAT 225 Business Stats OR	
MAT 161 Elem Statistics	OR	MAT 215 Statistics OR	
MAT 165 Probability & Statistics I	OR	MAT 215 Statistics OR	
MAT 210 Statistics		MAT 215 Statistics	3crs.
MAT 201 Calculus (Math Elective)		MAT 281 Calculus	3 crs.
CIT 115 Intro Info Tech (CIT Electives)		CIS 110 Intro to Info Systems	3 crs
CIT 111 Inform Systems-JAVA(Major Field Elective)		CIS 120 Application Prog I	3 crs.
GGY 201 Geology (Science w Lab Elective) OR		EAS 150 Intro to Geology OR	
CHM 151 General Chem I		CHE 101 General Chem I	4 crs.
BUS 103 Prin Management (Major Field Elective)		MGT 300 Prin of Management	3 crs.
BUS 104 Prin Marketing (Major Field Elective)		MKT 300 Prin Marketing	3 crs.
CIT 130 Object Oriented Prog (Major Field Elective)		CIS 220 Application Prog II	3 crs.
BUS 108 Financial Mngt (Major Field Elective)		FIN 301 Financial Management	3 crs.
CIT 215 System Analysis/Design (Major Field Elect)		CIS 299 System Analysis I	3 crs
ECO 102 Intro Macroeconomics		ECO 202 Intro Macroeconomics	3 crs.
ACC 203 Managerial Accting		ACC 321 Managerial Accting	3 crs.
		TOTAL TRANSFER CREDITS	**61 crs.**

Residency Policy: To earn a California University of PA degree, 30 of the last 45 credits must be taken from Cal U. In addition, students will take at least 50% of credits required for the Major from a PASSHE university. The degree-granting University may require up to a maximum of 50% of the Major credits. This is in accordance with PASSHE's academic residency policy and related Board of Governors' policies.

California University of Pennsylvania

AS CIT/Bachelor of Science
College of Science and Technology
Major: Computer Information Systems
Major Code: 7489

Credits Required: 120
Concentration:
Required Minor:
Required Minor Code:

General Education (40/41 Credits)

Building a Sense of Community (1 credit)

UNI 100: First Year Seminar	WAIVE

Composition (3 credits)

ENG 101: Composition I	CCAC

Public Speaking (3 credits)

SPH 101 Oral Communications	CCAC

Mathematics and Quantitative Literacy (3 credits)

MAT 201 Calculus I	CCAC

Health and Wellness (3 credits)

BIO 120 Human Reproductive Std	CCAC

Technological Literacy (3 credits)

CIT 115 Introduction Information Tech	CCAC

Humanities (3 credits)

ENG 102 English Composition II	CCAC

Fine Arts (3 credits)

MUS 101 OR ART 106 OR THE 101	CCAC

Natural Sciences (3/4 credits)

GGY 201 Geology OR CHM 151 Gen. Chem I	CCAC

Social Sciences (3 credits)

BUS 101 Introduction to Business	CCAC

General Education Options (12 credits)

*CIS 352 Global, Economic and Social Ethical Issues in Computing

CIT 111 Inform Systems-JAVA	CCAC

*ENG 217 Scientific & Technical Writing

PSY 101 General Psychology	CCAC

Required Related Courses

ACC104 Financial Accounting (3 credits)	CCAC
ECO 103 Intro Microeconomics (3 credits)	CCAC
MAT 195 Discrete Mathematical Structures (3 credits)	
BUS 103 Principles of Management (3 credits)	CCAC
BUS 104 Principles of Marketing (3 credits)	CCAC

Select twelve credits from the following: [4]

Networking: [5]
  CIS 342 CISCO CCNA 2
  CIS 343 CISCO CCNA 3
  CIS 344 CISCO CCNA 4
Programming:
  CIS 302 Visual Programming
  CIS 304 COBOL
Business Analytics:
  CIS 325 Decision Support Systems
  CIS 401: Concepts in Enterprise Resource
Others:
  CIS 419 Internship [6]
  CIS 474 Special Topics in Information Systems

Additional Requirements

(Not counted toward the General Education requirements)
Special Experience Course (1 course required)
*CIS 492 Systems Development & Implementation
Upper-Division Writing Component Courses (2 courses required)
*CIS 490 Systems Analysis II
*CIS 492 Systems Development & Implementation
Laboratory Course (1 course required)
Any Laboratory Course

Program Requirements

Required Major Courses (58 credits)

CIT 130 Object Oriented Prog (3 credits)	CCAC
CIT 215 Syst Analysis/Design (3 credits)	CCAC
CIS 321 Data Base Management Systems & Data Base Design (3 credits)	
CIS 322 Data Base Application Development (3 credits)	
CIS 330 Web Programming I (3 credits)	
CIS 332 Web Programming II (3 credits)	
CIS 341 CISCO CCNA 1 (4 credits)	
CIS 354 Systems Project Management (3 credits)	
CIS 490 Systems Analysis II (3 credits)	
CIS 492 Systems Development & Implementation (3 credits)	

Coursework Related to the Major (9 credits)

BUS 122 Bus. Stats OR MAT 161 Elem. Stats OR

MAT 165 Prob & StatsI OR MAT 210 Stats (3 crs.)	CCAC

Select two courses from the following:

BUS 108 Financial management	CCAC
MGT 301 Organizational Behavior	
MKT 311 E-Marketing	

Free Electives (12/13 credits)

MAT 111 College Algebra (3 credits)	CCAC

Program Notes:

Note 1   HON 100 Honors & University Orientation can be used in place of UNI 100.

Note 2   HON 150 Honors Composition I can be used in place of ENG 101.

Note 3   HON 250 Honors Composition II can be used in place of ENG 217.

Note 4   Students can choose any course listed; however, choosing all courses from a grouping offers a specialization in a CIS area.

Note 5   Upon completion of CIS 344, student will be prepared to take certification exam.

Note 6   A maximum of three credits can be used from Internship toward the program.

*Pending Gen Ed Approval

Suggested Eight-Semester Course Sequence

Semester 1 (16 Credits)

CIS 110: Introduction to Information Systems (3 credits)

CIS 120: Application Programming I (3 credits)

ENG 101: English Composition I (3 credits)

MAT 281: Calculus I (3 credits)

PSY 100: General Psychology (3 credits)

UNI 100: First Year Seminar (1 credits)

Semester 2 (15 Credits)

BUS 100: Introduction to Business (3 credits)

CIS 220: Application Programming II (3 credits)

ENG 217: Scientific & Technical Writing (3 credits)

MAT 195: Discrete Mathematical Structures (3 credits)

Any General Education course (3 credits)

Semester 3 (16 Credits)

ACC 200: Financial Accounting (3 credits)

CIS 341: CISCO CCNA 1 (4 credits)

MAT 215: Statistics OR MAT 225: Business Statistics (3 credits)

Public Speaking course (3 credits)

Any General Education course (3 credits)

Semester 4 (15 Credits)

CIS 299: Systems Analysis I (3 credits)

CIS 352: Global, Economic and Social Ethical Issues in Computing (3 credits)

ECO 201: Introductory Microeconomics (3 credits)

Any General Education course (3 credits)

Free Elective course (3 credits)

Semester 5 (15 Credits)

CIS 321: Data Base Management Systems and

CIS 330: Web Programming I (3 credits)

Data Base Design (3 credits)

CIS 354: Systems Project Management (3 credits)

MGT 300: Principles of Management (3 credits)

Any CIS Elective course (3 credits)

Semester 6 (15 Credits)

CIS 322: Data Base Application Development (3 credits)

CIS 332: Web Programming II (3 credits)

MKT 300: Principles of Marketing (3 credits)

Any CIS Elective course (3 credits)

Any Related Elective course (3 credits)

Semester 7 (15 Credits)

CIS 490: Systems Analysis II (3 credits)

Any CIS Elective course (3 credits)

Any General Education course (3 credits)

Any Related Elective course (3 credits)

Free Elective course (3 credits)

Semester 8 (13 Credits)

CIS 492: Systems Development & Implementation (3 credits)

Any CIS Elective course (3 credits)

Two Free Elective courses (7 credits)

AS Bus. Mgt/Bachelor of Science	Credits Required: 120
College of Science and Technology	Concentration:
Major: Computer Information Systems	Required Minor:
Major Code: 7489	Required Minor Code:

General Education (40/41 Credits)

Building a Sense of Community (1 credit)
UNI 100: First Year Seminar — **WAIVE**

Composition (3 credits)
ENG 101: Composition I — **CCAC**

Public Speaking (3 credits)
SPH 101 Oral Communications — **CCAC**

Mathematics and Quantitative Literacy (3 credits)
MAT 281 Calculus I

Health and Wellness (3 credits)
BIO 120 Human Reproductive Studies — **CCAC**

Technological Literacy (3 credits)
CIT 115 Introduction Information Tech — **CCAC**

Humanities (3 credits)
ENG 102 English Composition II — **CCAC**

Fine Arts (3 credits)
ART 106 OR THE 101 OR MUS 101 — **CCAC**

Natural Sciences (3/4 credits)
GGY 201 Geology OR CHM Gen. Chem I — **CCAC**

Social Sciences (3 credits)
*BUS 101 Introduction to Business — **CCAC**

General Education Options (12 credits)
*CIS 352 Global, Economic and Social Ethical Issues in Computing
CIT 111 Inform Systems-JAVA — **CCAC**
*ENG 217 Scientific & Technical Writing
PSY 101 General Psychology — **CCAC**

Required Related Courses
ACC104 Financial Accounting (3 credits) — **CCAC**
ECO 103 Intro Microeconomics (3 credits) — **CCAC**
MAT 195 Discrete Mathematical Structures (3 credits)
BUS 103 Principles of Management(3 credits) **CCAC**
BUS 104 Principles of Marketing (3 credits) — **CCAC**

Select twelve credits from the following: [4]
Networking: [5]
CIS 342 CISCO CCNA 2
CIS 343 CISCO CCNA 3
CIS 344 CISCO CCNA 4
Programming:
CIS 302 Visual Programming
CIS 304 COBOL
Business Analytics:
CIS 325 Decision Support Systems
CIS 401: Concepts in Enterprise Resource
Others:
CIS 419 Internship [6]
CIS 474 Special Topics in Information Systems

Additional Requirements

(Not counted toward the General Education requirements)
Special Experience Course (1 course required)
*CIS 492 Systems Development & Implementation
Upper-Division Writing Component Courses (2 courses required)
*CIS 490 Systems Analysis II
*CIS 492 Systems Development & Implementation
Laboratory Course (1 course required)
Any Laboratory Course

Program Requirements

Required Major Courses (58 credits)
CIS 220 Application Programming II (3 credits)
CIS 299 Systems Analysis I (3 credits)
CIS 321 Data Base Management Systems & Data Base Design (3 credits)
CIS 322 Data Base Application Development (3 credits)
CIS 330 Web Programming I (3 credits)
CIS 332 Web Programming II (3 credits)
CIS 341 CISCO CCNA 1 (4 credits)
CIS 354 Systems Project Management (3 credits)
CIS 490 Systems Analysis II (3 credits)
CIS 492 Systems Development & Implementation (3 credits)

Coursework Related to the Major (9 credits)
BUS 122 Bus. Stats OR MAT 161 Elem. Stats OR
MAT 165 Prob & StatsI OR MAT 210 Stats (3 crs.) **CCAC**
Select two courses from the following:
BUS 108 Financial Management — **CCAC**
MGT 301 Organizational Behavior
MKT 311 E-Marketing

Free Electives (12/13 credits) — 12 credits **CCAC**
ACC 203, ECO 102, BUS 251, Any Restricted Elective
Transfer

Program Notes:
Note 1   HON 100 Honors & University Orientation can be used in place of UNI 100.
Note 2   HON 150 Honors Composition I can be used in place of ENG 101.
Note 3   HON 250 Honors Composition II can be used in place of ENG 217.
Note 4   Students can choose any course listed; however, choosing all courses from a grouping offers a specialization in a CIS area.
Note 5   Upon completion of CIS 344, student will be prepared to take certification exam.
Note 6   A maximum of three credits can be used from Internship toward the program.
*Pending Gen Ed Approval

Suggested Eight-Semester Course Sequence

Semester 1 (16 Credits)

CIS 110: Introduction to Information Systems (3 credits)

CIS 120: Application Programming I (3 credits)

ENG 101: English Composition I (3 credits)

MAT 281: Calculus I (3 credits)

PSY 100: General Psychology (3 credits)

UNI 100: First Year Seminar (1 credits)

Semester 2 (15 Credits)

BUS 100: Introduction to Business (3 credits)

CIS 220: Application Programming II (3 credits)

ENG 217: Scientific & Technical Writing (3 credits)

MAT 195: Discrete Mathematical Structures (3 credits)

Any General Education course (3 credits)

Semester 3 (16 Credits)

ACC 200: Financial Accounting (3 credits)

CIS 341: CISCO CCNA 1 (4 credits)

MAT 215: Statistics OR MAT 225: Business Statistics (3 credits)

Public Speaking course (3 credits)

Any General Education course (3 credits)

Semester 4 (15 Credits)

CIS 299: Systems Analysis I (3 credits)

CIS 352: Global, Economic and Social Ethical Issues in Computing (3 credits)

ECO 201: Introductory Microeconomics (3 credits)

Any General Education course (3 credits)

Free Elective course (3 credits)

Semester 5 (15 Credits)

CIS 321: Data Base Management Systems and

CIS 330: Web Programming I (3 credits)

Data Base Design (3 credits)

CIS 354: Systems Project Management (3 credits)

MGT 300: Principles of Management (3 credits)

Any CIS Elective course (3 credits)

Semester 6 (15 Credits)

CIS 322: Data Base Application Development (3 credits)

CIS 332: Web Programming II (3 credits)

MKT 300: Principles of Marketing (3 credits)

Any CIS Elective course (3 credits)

Any Related Elective course (3 credits)

Semester 7 (15 Credits)

CIS 490: Systems Analysis II (3 credits)

Any CIS Elective course (3 credits)

Any General Education course (3 credits)

Any Related Elective course (3 credits)

Free Elective course (3 credits)

Semester 8 (13 Credits)

CIS 492: Systems Development & Implementation (3 credits)

Any CIS Elective course (3 credits)

Two Free Elective courses (7 credits)

California University of Pennsylvania

AS Bus. Parallel/Bachelor of Science	Credits Required: 120
College of Science and Technology	Concentration:
Major: Computer Information Systems	Required Minor:
Major Code: 7489	Required Minor Code:

General Education (40/41 Credits)

Building a Sense of Community (1 credit)
UNI 100: First Year Seminar .... **WAIVE**

Composition (3 credits)
ENG 101: Composition I .... **CCAC**

Public Speaking (3 credits)
SPH 101 Oral Communications .... **CCAC**

Mathematics and Quantitative Literacy (3 credits)
MAT 201 Calculus I .... **CCAC**

Health and Wellness (3 credits)
Any Health & Wellness Course

Technological Literacy (3 credits)
CIT 115 Introduction Information Tech .... **CCAC**

Humanities (3 credits)
ENG 102 English Composition II .... **CCAC**

Fine Arts (3 credits)
ART 106 OR THE 101 OR MUS 101 .... **CCAC**

Natural Sciences (3/4 credits)
GGY 201 Geology OR CHM Gen. Chem I .... **CCAC**

Social Sciences (3 credits)
*BUS 101 Introduction to Business .... **CCAC**

General Education Options (12 credits)
*CIS 352 Global, Economic and Social Ethical Issues in Computing
CIT 111 Inform Systems-JAVA .... **CCAC**
*ENG 217 Scientific & Technical Writing
PSY 101 General Psychology .... **CCAC**

Required Related Courses
ACC104 Financial Accounting (3 credits) .... **CCAC**
ECO 103 Intro Microeconomics (3 credits) .... **CCAC**
MAT 195 Discrete Mathematical Structures (3 credits)
BUS 103 Principles of Management(3 credits) **CCAC**
BUS 104 Principles of Marketing (3 credits) .... **CCAC**

Select twelve credits from the following: [4]
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CIS 343 CISCO CCNA 3
CIS 344 CISCO CCNA 4
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Others:
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Upper-Division Writing Component Courses (2 courses required)
*CIS 490 Systems Analysis II
*CIS 492 Systems Development & Implementation
Laboratory Course (1 course required)
Any Laboratory Course

Program Requirements

Required Major Courses (58 credits)
CIT 130 Object Oriented Prog (Maj. Field Elect) 3crs.**CCAC**
CIT 215 Syst. Analysis/Design (Maj. Field Elect) 3crs.**CCAC**
CIS 321 Data Base Management Systems & Data Base Design (3 credits)
CIS 322 Data Base Application Development (3 credits)
CIS 330 Web Programming I (3 credits)
CIS 332 Web Programming II (3 credits)
CIS 341 CISCO CCNA 1 (4 credits)
CIS 354 Systems Project Management (3 credits)
CIS 490 Systems Analysis II (3 credits)
CIS 492 Systems Development & Implementation (3 credits)

Coursework Related to the Major (9 credits)
BUS 122 Bus. Stats OR MAT 161 Elem. Stats OR
MAT 165 Prob & StatsI OR MAT 210 Stats (3 crs.) **CCAC**
Select two courses from the following:
BUS 108 Financial Management .... **CCAC**
MGT 301 Organizational Behavior
MKT 311 E-Marketing

Free Electives (12/13 credits)   6 credits **CCAC**
ACC 203, ECO 102 Transfer

Program Notes:
Note 1   HON 100 Honors & University Orientation can be used in place of UNI 100.
Note 2   HON 150 Honors Composition I can be used in place of ENG 101.
Note 3   HON 250 Honors Composition II can be used in place of ENG 217.
Note 4   Students can choose any course listed; however, choosing all courses from a grouping offers a specialization in a CIS area.
Note 5   Upon completion of CIS 344, student will be prepared to take certification exam.
Note 6   A maximum of three credits can be used from Internship toward the program.
*Pending Gen Ed Approval

Suggested Eight-Semester Course Sequence

Semester 1 (16 Credits)

CIS 110: Introduction to Information Systems (3 credits)

CIS 120: Application Programming I (3 credits)

ENG 101: English Composition I (3 credits)

MAT 281: Calculus I (3 credits)

PSY 100: General Psychology (3 credits)

UNI 100: First Year Seminar (1 credits)

Semester 2 (15 Credits)

BUS 100: Introduction to Business (3 credits)

CIS 220: Application Programming II (3 credits)

ENG 217: Scientific & Technical Writing (3 credits)

MAT 195: Discrete Mathematical Structures (3 credits)

Any General Education course (3 credits)

Semester 3 (16 Credits)

ACC 200: Financial Accounting (3 credits)

CIS 341: CISCO CCNA 1 (4 credits)

MAT 215: Statistics OR MAT 225: Business Statistics (3 credits)

Public Speaking course (3 credits)

Any General Education course (3 credits)

Semester 4 (15 Credits)

CIS 299: Systems Analysis I (3 credits)

CIS 352: Global, Economic and Social Ethical Issues in Computing (3 credits)

ECO 201: Introductory Microeconomics (3 credits)

Any General Education course (3 credits)

Free Elective course (3 credits)

Semester 5 (15 Credits)

CIS 321: Data Base Management Systems and

CIS 330: Web Programming I (3 credits)

Data Base Design (3 credits)

CIS 354: Systems Project Management (3 credits)

MGT 300: Principles of Management (3 credits)

Any CIS Elective course (3 credits)

Semester 6 (15 Credits)

CIS 322: Data Base Application Development (3 credits)

CIS 332: Web Programming II (3 credits)

MKT 300: Principles of Marketing (3 credits)

Any CIS Elective course (3 credits)

Any Related Elective course (3 credits)

Semester 7 (15 Credits)

CIS 490: Systems Analysis II (3 credits)

Any CIS Elective course (3 credits)

Any General Education course (3 credits)

Any Related Elective course (3 credits)

Free Elective course (3 credits)

Semester 8 (13 Credits)

CIS 492: Systems Development & Implementation (3 credits)

Any CIS Elective course (3 credits)

Two Free Elective courses (7 credits)