

# PROGRAM BREAKDOWN

## BACHELOR IN COMPUTER ENGINEERING

**CONCENTRATION IN ARTIFICIAL INTELLIGENCE**  
 LOWER DIVISION GENERAL EDUCATION COURSES  
 GENERAL EDUCATION COURSES (15.0 CREDITS REQUIRED)

COURSE NUMBER	COURSE NAME	CREDIT HOURS
<b>ORAL COMMUNICATIONS</b>		
ENGL 100	Language and Speech Communications	3.0 credit hours
ENGL 115	Fundamentals of Public Speaking	3.0 credit hours
SPC 200	Speech and Public Speaking	3.0 credit hours
<b>HUMANITIES</b>		
PHIL 102	Legal and Ethical Issues	3.0 credit hours
PHIL 200	Introduction to Philosophy	3.0 credit hours
<b>MATHEMATICS</b>		
MATH 102	College Algebra	3.0 credit hours
<b>ENGLISH</b>		
ENGL 200	English Composition I	3.0 credit hours
<b>BEHAVIORAL SCIENCE / SOCIAL ENVIRONMENT</b>		
PSY 201	Psychology	3.0 credit hours
SOC 210	Sociology	3.0 credit hours

**UPPER DIVISION GENERAL EDUCATION COURSES**  
 UPPER DIVISION GENERAL EDUCATION COURSES (15.0 CREDITS REQUIRED)

<b>ENGLISH</b>		
ENGL 302	English Composition II	3.0 credit hours
<b>FOREIGN LANGUAGE</b>		
SPN 310	Conversational Spanish	3.0 credit hours
<b>NATURAL SCIENCE</b>		
BSC 310	General Biology	3.0 credit hours
<b>ECONOMICS</b>		
ECON 302	Principles of Economics (Microeconomics)	3.0 credit hours
ECON 303	Macroeconomics	3.0 credit hours



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### LOWER DIVISION MAJOR COURSES LOWER DIVISION MAJOR COURSES (45 CREDITS REQUIRED)

COURSE NUMBER	COURSE NAME	CREDIT HOURS
CIT 102	Introduction to Computer Programming	3.0 credit hours
CIT 105	Programming Practice	3.0 credit hours
CIT 110	Computer Operating Systems	3.0 credit hours
CIT 280	Network Design	3.0 credit hours
CIT 281	Network Administration & Technical Support	3.0 credit hours
CIT 282	Advanced Network Administration	3.0 credit hours
CIT 283	Networking on Azure and AWS	3.0 credit hours
CIT 381	Linux Technology	3.0 credit hours
CIT 382	Cloud Technology Developer	3.0 credit hours
CIT 383	Advanced Cloud Technology Architect	3.0 credit hours
CIT 384	Manage Cloud Technology Identities & Requirements	3.0 credit hours
CIT 385	Cloud Technology Compute Services	3.0 credit hours
EGN 101	Introduction to Computer Engineering	3.0 credit hours
EGN 201	Engineering Drawing	3.0 credit hours
PHY 101	Introduction to Physics	3.0 credit hours

### UPPER DIVISION MAJOR COURSES UPPER DIVISION MAJOR COURSES (30 CREDITS REQUIRED)

CIT 480	Security Technology	3.0 credit hours
CIT 481	Security Ethical Hacking	3.0 credit hours
CIT 482	Security Analyst	3.0 credit hours
CIT 483	Information Systems Security	3.0 credit hours
CIT 484	Advanced Information Systems Security	3.0 credit hours
EGN 310	Data Structures	3.0 credit hours
EGN 321	Engineering Software Technology	3.0 credit hours
EGN 325	Computer Architecture	3.0 credit hours
EGN 410	Product Design	3.0 credit hours
PHY 440	Solid State Physics	3.0 credit hours



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## BACHELOR IN COMPUTER ENGINEERING

### MAJOR CONCENTRATION COURSES

MAJOR CONCENTRATION COURSES (18 CREDITS REQUIRED)

CERTIFICATIONS ARTIFICIAL INTELLIGENCE(18 CREDITS REQUIRED)

### TECHNICAL AND SPECIALIST MAJOR COURSES

This Certification provides participants with the ability to apply the fundamentals of Artificial Intelligence (AI) and design smart agents to solve real-world problems, including search, gaming, machine learning, logic, and constraint satisfaction problems.

CCAI 420	Artificial intelligence fundamentals	3.0 credit hours
CCAI 430	Machine Learning	3.0 credit hours
CCAI 440	Neural Network	3.0 credit hours
CCAI 450	Artificial intelligence: algorithms and theory	3.0 credit hours
CCAI 460	Computer Vision: Foundations and Applications	3.0 credit hours
CCAI 470	AI Applications	3.0 credit hours

