BELLEVUE COLLEGE

Robotics and Artificial Intelligence

Associate in Applied Science-T Degree

STUDENT NAME		SID #	
PROGRAM CHAIR		DATE	

PROGRAM REQUIREMENTS			Requested Substitution/Transfer Credits (if applicable)			Completed		
Course	Course Title	CR	College/University	Course	CR	Grade	Quarter	Year
CORE COURSEWORK								
BUSIT 103	SQL Fundamentals	5						
DBA 130	Database Theory	5						
ENGR& 114	Engineering Graphics	4						
IT 103	Networking Basics	5						
IT 128	Information Security Essentials	5						
PROG 110	Introduction to Programming	5						
PROG 120	Object Oriented Programming Concepts	5						
PROG 160	Systems Analysis and Design	5						
PROG 260	Advanced Topics in Object Oriented Programming	5						
ROBAI 101	Intro to Robotics and Artificial Intelligence	5						
ROBAI 240	Programming for Machine Learning	5						
ROBAI 250	Additive Design and Manufacturing	5						
ROBAI 260	Computer Vision in Control Systems	5						
COMMUNICATION								
Choose 10 credits from the following:		10						
ENGL& 101 **ENGL 201** **ENGL& 235**	English Composition I (5 Cr) The Research Paper (5 Cr) Technical Writing (5 Cr)							
HUMANITIES								
Choose 5 credits from the following:		5						
CMST 134 **CMST 250** **PHIL 102**	Cultural Studies in Mass Media (5 Cr) Communication in a Diverse Workplace (5 Cr) Contemporary Moral Problems (5 Cr)							
QUANTITATIVE								
Choose 5 credits from the following:		5						
MATH 130 **MATH 138** **MATH& 141**	Introduction to Statistics (5 Cr) College Algebra for Business & Social Science (5 Cr) Pre-Calculus I (5 Cr)							
NATURAL SCIENCE								
BIOL& 100	Survey of Biology (6 Cr)	6						
One of the courses selected must fulfill Cultural Diversity Requirement of Bellevue College								
GRAND TOTAL		90						

This degree will prepare graduates to work in the field of robotics and artificial intelligence application development. The program will provide students with the knowledge and skills to design, implement, and analyze basic machine learning and embedded systems that run robotics and AI applications. The program also introduces students to the science of computer vision and the fundamentals of robotics control systems. Lastly, students will learn to use 3D printing to develop and test prototypes.

LEARNING OUTCOMES

- Communicate effectively in the three areas of listening, writing and speaking
- Apply critical thinking and logical research to solve technological problems
- Apply basic statistical methods, and time series analysis and forecasting to solve robotics and artificial intelligence programming problems.
- Apply the basics of Python programming language to solve analytical, statistical problems related to machine learning
- Model, design, and analyze embedded system hardware and software architectures and communication protocols
- Design, develop and test control systems for robotics applications based on machine vision
- Apply 3D printing techniques to build models and prototypes

FOR MOST UP-TO-DATE INFORMATION, *GO TO:*

www.bellevuecollege.edu/programs/degrees/proftech/robai

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DIVERSITY DEGREE REQUIREMENT (DDR)

Below is a complete listing of all the courses that meet the college's Diversity requirements for the Associate Transfer Degrees. Classes will be applied toward either the Humanities, Social Science, Natural Sciences or electives.

Transferable Courses:

- ***Anthropology*** 100, 108, 180, 206, 208, 219, 220, 222, 224, 235;
- ***Cultural and Ethnic Studies*** 100, 101, 109, 180, 200, 234, 257;
- ***Communication Studies*** 250, 280;
- ***Philosophy*** 102, 260, 265;
- ***Psychology*** 250;
- ***Sociology*** 101, 105, 249, 253, 254, 256, 258, 262, 264, 278;

Restrictive Electives:

- ***Business*** 120;
- ***Criminal Justice*** 242;
- ***Education*** 150, 240;
- ***Human Development*** 140
- ***Marketing Management*** 200

For more information, go to: *www.bellevuecollege.edu/programs/degrees/culturaldiversity/*