**Daniel Felix Ritchie School
of Engineering & Computer Science**
UNIVERSITY OF DENVER

Students enrolled in **MS in Applied Data Science and AI** program can substitute any industry certifications listed below for one or more approved courses in the program up to 12 credit hours (3 courses). Students must provide a certification validation number or similar identification to verify successful completion.

INDUSTRY CERTIFICATION	APPROVED COURSES
PCEP CERTIFIED ENTRY-LEVEL PYTHON PROGRAMMER[4]	**Foundations in Python Programming** COMP 3005
PCEP CERTIFIED ASSOCIATE PYTHON PROGRAMMER[5]	**Foundations in Python Programming** COMP 3005 **Python Software Development** COMP 3006
ORACLE CERTIFIED FOUNDATIONS ASSOCIATE, DATABASE[6]	**Database Organization and Management** COMP 3421
MICROSOFT CERTIFIED: AZURE DATABASE ADMINISTRATOR ASSOCIATE[7]	**Database Organization and Management** COMP 3421
MICROSOFT CERTIFIED: AZURE DATA ENGINEER ASSOCIATE[8]	**Parallel and Distributed Computing** COMP 4334
DATABRICKS CERTIFIED DATA ENGINEER ASSOCIATE[9]	**Database Organization and Management** COMP 3421 **Parallel and Distributed Computing** COMP 4334
DATABRICKS MACHINE LEARNING ENGINEER ASSOCIATE[10]	**Machine Learning Operations** COMP 4450
DATABRICKS CERTIFIED GENERATIVE AI ENGINEER ASSOCIATE[11]	**Large Language Models for Data Science** COMP 4451
AWS CERTIFIED MACHINE LEARNING ENGINEER ASSOCIATE OR CERTIFIED DATA ENGINEER[12]	**Machine Learning Operations** COMP 4450