

Date of Board Meeting: December 9, 2025

Subject: New Computer Science Programs in Artificial Intelligence & Data Science

Recommendation: Approve Artificial Intelligence & Data Science Degree, Certificates, and Occupational Skills Awards, Effective Fall 2026

Background and Rationale:

For students wishing to transfer to four-year universities, WCJC currently offers an Associate of Science (AS) degree in Computer Science under the General Studies Classification of Instructional Program (CIP) 24.0102. The request is to approve a new vocational track for students not seeking to transfer but wishing to enter the workforce in the Computer Science - Artificial Intelligence & Data Science field. Careers in Computer Science fall on the Texas Higher Education Coordinating Board (THECB) high demand list and many computer occupations rank within the top 10 for growth in the Gulf Coast area.

To meet student needs, workforce demand, and focus on THECB credentials of value tied to House Bill 8 funding, the request is to offer the following vocational awards under Computer Science CIP 11.0701:

- Artificial Intelligence (AI) and Data Science, Associate of Applied Science Degree
- Artificial Intelligence and Machine Learning, Level II Certificate
- Artificial Intelligence and Data Analytics, Level I Certificate
- Data Science Fundamentals, Occupational Skills Award (OSA)
- Artificial Intelligence Fundamentals, OSA

The awards are stackable to allow students to complete an OSA and Level I Certificate during the first year and earn a second OSA, Level II Certificate, and degree during the second year. This structure allows students to enter the workforce at various points along their educational journey yet continue completing additional awards, if desired.

Further, current resources are sufficient to offer the five awards. No new hardware or software is needed. Current faculty have the expertise to teach the eight new courses; additional part-time faculty may be utilized.

Budgetary Implications: No additional budget implication.

Strategic Priority Alignment:	<input checked="" type="checkbox"/> Student Success	<input checked="" type="checkbox"/> Community Impact
	<input checked="" type="checkbox"/> Resource Optimization	<input type="checkbox"/> Institutional Excellence

Resource Personnel: Muna Saeer, Program Director for Computer Science

Approval:

Leigh Ann Collins

Digitally signed by Leigh Ann Collins
Date: 2025.11.11 17:32:57 -06'00'

Cabinet Member



President



Computer Science
Artificial Intelligence and Data Science
Associate of Applied Science (CIP 11.0701)

The Associate of Applied Science in Computer Science - Artificial Intelligence (AI) and Data Science is a recommended course of study for high school graduates or career changers who want to obtain entry-level positions or enhance their job prospects and knowledge in the rapidly growing fields of AI, data science, and data analysis. The degree prepares students for hands-on technical roles in these fields and provides foundational knowledge in Machine Learning, Natural Language Processing, cloud computing, programming, data analysis, and the creation of intelligent systems. The degree offers technical skills for roles like AI developer, data scientist, data analyst, and it can serve as direct employment in various industries such as marketing, retail, finance, tech, medicine, and manufacturing.

Courses	
College Readiness Courses (if needed) and TSI Math requirements met.	
Semester I	Hours
COSC 1436 Programming Fundamentals I	4
ITAI 1370 Artificial Intelligence History, Theory, and Platforms	3
ITSE 1302 Computer Programming (Python)	3
ITSY 1300 Fundamentals of Information Security	3
ITNW 1309 Fundamentals of Cloud Computing	3
Semester 1 Hours	16
Semester II	
COSC 1437 Programming Fundamentals II	4
COSC 2425 Computer Organization	4
DATN 1377 Cloud Computing for Data Analytics	3
DSAI 1371 Introduction to Data Science and Artificial Intelligence	3
ITAI 1371 Introduction to Machine Learning	3
Semester 2 Hours	17
Semester III	
ITAI 2373 Natural Language Processing	3
ITSC 1316 Linux Installation and Configuration	3
ENGL 1301 Composition I (Core 010)	3
MATH 1314 College Algebra (Core 020)	3
GOVT 2305-6 Federal Government or Texas Government (Core 070)	3
Semester 3 Hours	15
Semester IV	
DSAI 2375 Advanced Data Science and Analytics	3
ITAI 2377 Data Science in Artificial Intelligence (Capstone Course)	3
MATH 1342 Elementary Statistical Methods (Core 020)	3
Hum/Art Humanities/Fine Arts from the AAS General Education Course List	3
Semester 4 Hours	12
60 Semester Credit Hours	



Computer Science
Artificial Intelligence and Data Analytics
Level I Certificate (CIP 11.0701)

The Computer Science - Artificial Intelligence (AI) and Data Analytics Level I Certificate is designed to prepare students for careers in the high-demand and rapidly growing fields of AI and data analytics, including understanding the practices and processes of data cleaning, analysis, and visualization. This preparation equips students with both technical skills and business insight to solve real-world problems, enabling them to describe various data management systems, discuss the fundamental ideas and practices of data governance, and identify the types, uses, structures, and characteristics of data, as well as navigate ethical concerns related to AI.

Courses		
Semester I		Hours
ITAI 1370 Artificial Intelligence History, Theory, and Platforms		3
ITSY 1300 Fundamentals of Information Security		3
ITNW 1309 Fundamentals of Cloud Computing		3
	Semester 1 Hours	9
Semester II		
DSA1 1371 Introduction to Data Science and Artificial Intelligence		3
DATN 1377 Cloud Computing for Data Analytics (Capstone Course)		3
	Semester 2 Hours	6
Semester III		
	Semester 3 Hours	
Semester IV		
	Semester 4 Hours	
	15 Semester Credit Hours	



Computer Science
Artificial Intelligence Fundamentals
Occupational Skills Award (CIP 11.0701)

The Occupational Skills Award in Computer Science - Artificial Intelligence (AI) Fundamentals provides students with a basic understanding of foundational and job-relevant skills in Artificial Intelligence, including the use of AI, human error, turnaround times, data overload, general inefficiency, machine learning, AI programming, and the constantly evolving needs of new technology.



**Computer Science
Data Science Fundamentals
Occupational Skills Award
(CIP 11.0701)**

The Occupational Skills Award in Computer Science – Data Science Fundamentals provides students with a basic understanding of practical, job-ready data skills including building models and data wrangling for preparing data, understanding the basic concepts and procedures for data governance, extracting information from data sets, and comprehending important data.