# De Anza College
# Program Outline Report

## Program Basics

| | |
|---|---|
| **Program Title:** | Applied Artificial Intelligence Certificate of Completion |
| **Program Status:** | In development |
| **Department:** | CIS - Computer Sci and Info Systems |
| **Award Type:** | Certificate of Completion (Non-Credit) |
| **Program Description** | The Certificate of Completion in Applied Artificial Intelligence (AI) is a noncredit certificate that explores AI fundamentals and operations. Designed for students with limited math, statistics, and programming background, the courses in the certificate will introduce students to practical AI applications, data management, human-AI collaboration, and ethical considerations. |
| **Control Number:** | No value |
| **Credential ID:** | COCL_Applied Artificial Intelligence |
| **TOP Code (SP01) :** | 0799.00 |
| **TOP Code (SP01) :** | *Other Information Technology |
| **CIP Code:** | (11.0102) Artificial Intelligence. |
| **Maximum Hours:** | 222 |
| **Minimum Hours:** | 222 |
| **Curriculum Committee Approval Date:** | No value |
| **Board of Trustees Approval Date:** | No value |

## Proposal Details

Proposal Start:                        Fall 2026

## Submission Rationale

- New Program

# Program Files Upload

## Program Requirements File - ALL certificate/degree programs

ProgramRequirements_AppliedAI_COCL_2026F.docx

⬇ Download

## LMI File - ALL CTE certificate/degree programs

LMI_AppliedAI_COCL_2026F.pdf

⬇ Download

## Advisory Board Minutes File - Credit CTE certificate/degree programs ONLY

No Value

## Regional BACCC Minutes File - Credit CTE certificate/degree programs ONLY

No Value

## TMC Template File - Transfer degree programs ONLY

No Value

## ASSIST File(s) - Transfer certificate/degree programs ONLY

No Value

# Program Goal

**Program Goal**

CTE

# Program Header

**Program Header**

Noncredit: Computer Science and Information Systems

# Program Division

**Program Division**

2CB

# Program Sub-Award

**Program Sub-Award**

NA

# Comments - Program

**Stage 2: CTE Dean**

No Value

**Stage 3: Department Chair**

No Value

**Stage 4: Division Curriculum Representative**

No Value

**Stage 5: Division Dean**

No Value

**Stage 6: SLO Coordinator**

No Value

**Stage 8: Articulation Officer**

No Value

**Stage 9: Curriculum Committee**

No Value

# Curriculum Office - Program

**Program Distance Education**

0% (0000)

**Program Apprenticeship**

No

**Program CDCP Eligibility Criteria**

Workforce Preparation (J)

**Program Employment Potential**

LMID EDD Consultant (lmidedd)

**Program Code**

DA_NC_2AAI

**Curriculum Office Notes**

No Value

## Program Requirements

**COCL_Applied Artificial Intelligence (Total 222)**
**Complete all of the following**

| | |
|---|---|
| IMPORTANT NOTE: Some courses have prerequisites; see the college catalog for more information. | 0 |

**Required Core: (Total 156)**
**Complete all of the following**

| | |
|---|---|
| CISD307. - Introduction to Artificial Intelligence | 66 |
| CISD311. - Foundations of Data Science for All | 66 |
| CISD311X - Support for Foundations of Data Science for All | 24 |

**List A: (Total 66)**
**Complete the following number of hours: 66**

| | |
|---|---|
| CISD351. - Introduction to Prompt Engineering | 66 |
| CISD367. - Implementing Responsible AI | 66 |
| CISD378. - Introduction to Deep Learning | 66 |

## Recommended Sequences

No value

## Program Outcomes

**COCL_Applied Artificial Intelligence**

| PSLO | Performance |
|---|---|
| Discuss Artificial Intelligence (AI) core concepts and explain the fundamentals of AI applications | 100 |

| | |
|---|---|
| Design and utilize effective prompts for Large Language Models, which includes understanding and usage of major prompt patterns, Retrieval Augmented Generation, AI agent, and customized GPT | 100 |
| Evaluate, design, and implement responsible and ethical AI solutions with transparency and accountability | 100 |

## Program Narrative

### 1. Program Goals and Objectives

The Certificate of Completion in Applied Artificial Intelligence (AI) explores the introductory concepts of AI through theory discussions and hands-on applications. The certificate is designed for those with limited programming, math, and statistical background. The series of courses in the certificate will introduce students to the fundamental methodologies and techniques in AI as well as beginning level applications and ethics of AI.

### 2. Master Planning

Prior to 2020 De Anza Computer Science & Information Systems (CIS) department introduced the courses that would become foundational to Data Science courses and the AI program. Prior to 2020, three Python courses and one R programming course were created and being taught. These form the foundation for data science and artificial intelligence work. CIS 9 Introduction to Data Science will be replaced over the next two years. CIS 11 and its support course is slated to be offered Fall 2025. Seven courses focused on artificial intelligence will become effective and be ready to be offered: Introduction to Artificial Intelligence, Introduction to Prompt Engineering, Implementing Responsible AI, Introduction to Deep Learning, Introduction to Machine Learning, Foundations of Machine Learning, Introduction to Natural Language Processing,
The need for this proposed program is evident. According to ProFocus, a recruiting firm, (https://www.profocustechnology.com/general/tech-employment-2024-market-trends-report/): "Artificial intelligence continues to dominate tech job openings, with a notable 5.6% rise in AI vacancies from Q1 to Q2 of 2024. This marks a 31.5% increase compared to 2023."

CompTIA, a trade association that provides certification and training in technology, stated that (https://connect.comptia.org/blog/artificial-intelligence-statistics-facts):
"- AI technology is expected to create 12 million more jobs than it is expected to replace.
 - Jobs are anticipated to be in high demand, with 97 million specialists needed in the AI industry by 2025.
 - More than 1 in 4 dollars invested in American startups in 2023 went to an AI-related company."

### 3. Enrollment Numbers

No Value

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### 4. Place of Program in Curriculum/Similar Programs

No Value

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### 5. Similar Programs at Other Colleges in Service Area

No Value

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### 6. Enrollment and Completer Projections

No Value