SOUTHEAST COMMUNITY COLLEGE
CONSTRUCTION MANUFACTURING AND TECHNOLOGY DIVISION
Computer Information Technology Program
Revision Date: August 21, 2023

I. CATALOG DESCRIPTION

Course Number:	INFO1020
Course Title:	AI Fundamentals
Prerequisite(s):	none
Corequisite(s):	none
Catalog Description:	This course is designed for anyone who wants to learn about Artificial Intelligence (AI). Students are introduced to AI and how it is used in everyday life. Students learn basic AI concepts and terms, such as machine learning, deep learning, and neural networks, as well as issues and concerns regarding AI, such as ethics, and bias. This course does not require any programming or computer science background.
Credit Hours:	2
Class Hours:	30
Lab Hours:	0
Total Contact Hours	30

II. COURSE OBJECTIVES: *Course will:*

- **A.** Introduce AI terms and concepts.
- **B.** Discuss how AI is currently being used.
- **C.** Introduce the basics of how AI works.
- **D.** Illustrate the importance of data in the field of AI.
- **E.** Provide understanding of AI Learning models.
- **F.** Provide awareness of AI tools available.
- **G.** Provide students hands-on experience exploring current AI tools.
- **H.** Discuss the future of AI.

III. STUDENT LEARNING OUTCOMES AND GENERAL EDUCATION LEARNING OUTCOMES:

A. Student Learning Outcomes: *Student will be able to:*

1. Define AI
2. Describe impact of AI on society
3. Describe the history and development of AI.
4. Describe current trends in AI.
5. Demonstrate understanding of the need for digitalization in AI.
6. Demonstrate understanding of AI datasets.
7. Describe the AI Project Cycle.
8. Describe ethical concerns related to AI.
9. Differentiate between basic ML models.
10. Classify AI Learning models.
11. Deconstruct simple Neural Networks.
12. Differentiate common DL models
13. Classify data into structured and unstructured
14. Explain different methods of data mining and data storage.
15. Describe roles played by key AI team stakeholders.
16. Differentiate between No-Code and Code based tools for implementing AI.

B. General Education Learning Outcomes (GELOs)
- **1.** GELO #3: Critical Thinking & Problem Solving
- **2.** Outcome 1: Collect, identify, interpret and analyze data.

IV. CONTENT/TOPICAL OUTLINE

- **A.** Demystifying AI and the Evolution of AI
- **B.** AI & Technology
- **C.** Industry 4.0 – Digitalization
- **D.** Domains of AI
- **E.** AI Project Cycle
- **F.** Societal Impact of AI
- **G.** Elements of Machine Learning (ML)
- **H.** Elements of Deep Learning (DL)
- **I.** Data – Fuel for AI
- **J.** AI Data Science Teams
- **K.** Tools to Implement AI
- **L.** Future Possibilities of AI

V. INSTRUCTIONAL MATERIALS

- **A.** Required Text(s): Taulli, Tom. *Artificial Intelligence Basics: A Non-Technical Introduction* ISBN: 978-1-4842-5027-3
- **B.** Other Resources: Materials provided in digital format; Microsoft Office 365
- **C.** Computer and Internet access

VI. METHODS OF PRESENTATION/INSTRUCTION

- **A.** Methods of presentation typically include a combination of the following:
  - **1.** Lecture presentation or related video content
  - **2.** Engaged learning discussion and problem-solving activities

VII. METHODS OF EVALUATION

- **A.** Methods of evaluation, although determined by the individual instructor, traditionally includes a combination of the following:
  - **1.** Problem-solving participation activities
  - **2.** Homework assignments
  - **3.** Quizzes
  - **4.** Tests

VIII. SPECIFIC COURSE REQUIREMENTS

- **A.** This course will not qualify as a prerequisite if the student receives a final grade below a C (70%).