800.674.3550
Info@AppliedTechAc.com
AppliedTechnologyAcademy.com

Certified Ethical Emerging Technologist (CEET)

CertNexus Authorized Training · Applied Technology Academy

Mutually reinforcing innovations in computing and engineering are catapulting advances in technological production. From blockchain and artificial intelligence (AI) to gene editing and the Internet of Things (IoT), these advances come with tremendous opportunities for improvement in productivity, efficiency, and human well-being. But as scandals increasingly demonstrate, these advances also introduce new and serious risks of conflict and harm.

LEVEL	DURATION	EXPERIENCE	AVERAGE SALARY	LABS
Beginner	**3 Days**	**0 years: Basic Computing**	**Not Applicable**	**No**

Course Overview

Technology professionals now face growing demands to identify and mitigate ethical risks to human rights and the environment, as well as to navigate ethical tradeoffs between qualities such as privacy and accuracy, fairness and utility, and safety and accountability. This course provides the tools to identify and manage common ethical risks in the development of emerging data-driven technologies. It distills ethical theory, public regulations, and industry best practices into concrete skills and guidelines needed for the responsible development of digital products and services. By following the course's

practical, problems-based approach, learners will become adept at applying theories, principles, frameworks, and techniques in their own roles and organizations.

In this course, you will incorporate ethics into data-driven technologies such as AI, IoT, and data science.

You will:

- Describe general concepts, theories, and challenges related to ethics and emerging technologies
- Identify ethical risks
- Practice ethical reasoning
- Identify and mitigate safety and security risks
- Identify and mitigate privacy risks
- Identify and mitigate fairness and bias risks
- Identify and mitigate transparency and explainability risks
- Identify and mitigate accountability risks
- Build an ethical organization
- Develop ethical systems in technology-focused organizations

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Course Outline

- **Lesson 1: Introduction to Ethics of Emerging Technologies**
  - Topic A: What's at Stake
  - Topic B: Ethics and Why It Matters
  - Topic C: Ethical Decision-Making in Practice
  - Topic D: Causes of Ethical Failures
- **Lesson 2: Identifying Ethical Risks**
  - Topic A: Ethical Reason
  - Topic B: Stumbling Blocks for Ethical Reasoning
  - Topic C: Identify Ethical Risks in Product Development
  - Topic D: Tools for Identifying Ethical Risks
  - Topic E: Use Regulations, Standards, and Human Rights to Identify Ethical Risks
- **Lesson 3: Ethical Reasoning in Practice**
  - Topic A: Ethical Theories
  - Topic B: Use Ethical Decision-Making Frameworks
  - Topic C: Select Options for Action
  - Topic D: Avoid Problems in Ethical Decision-Making
- **Lesson 4: Identifying and Mitigating Security Risks**
  - Topic A: What Is Security?
  - Topic B: Identify Security Risks
  - Topic C: Security Tradeoffs
  - Topic D: Mitigate Security Risks
- **Lesson 5: Identifying and Mitigating Privacy Risks**
  - Topic A: What Is Privacy?
  - Topic B: Identify Privacy Risks
  - Topic C: Privacy Tradeoffs
  - Topic D: Mitigate Privacy Risks
- **Lesson 6: Identifying and Mitigating Fairness and Bias Risks**
  - Topic A: What Are Fairness and Bias?
  - Topic B: Identify Bias Risks
  - Topic C: Fairness Tradeoffs
  - Topic D: Mitigate Bias Risks
- **Lesson 7: Identifying and Mitigating Transparency and Explainability Risks**
  - Topic A: What Are Transparency and Explainability?
  - Topic B: Identify Transparency and Explainability Risks
  - Topic C: Transparency and Explainability Tradeoffs

  - Topic D: Mitigate Transparency and Explainability Risks
- **Lesson 8: Identifying and Mitigating Accountability Risks**
  - Topic A: What Is Accountability?
  - Topic B: Identify Accountability Risks
  - Topic C: Accountability Tradeoffs
  - Topic D: Mitigate Accountability Risks
- **Lesson 9: Building an Ethical Organization**
  - Topic A: What Are Ethical Organizations?
  - Topic B: Organizational Purpose
  - Topic C: Ethics Awareness
  - Topic D: Develop Professional Ethics within Organizations
- **Lesson 10: Developing Ethical Systems in Technology-Focused Organizations**
  - Topic A: Policy and Compliance
  - Topic B: Metrics and Monitoring
  - Topic C: Communication and Stakeholder Engagement
  - Topic D: Ethical Leadership

Intended Audience

This course is designed for technology leaders, solution developers, project managers, organizational decision makers, and other individuals seeking to demonstrate a vendor-neutral, cross-industry understanding of ethics in emerging data-driven technologies, such as AI, robotics, IoT, and data science.

This course is also designed for professionals who want to pursue the CertNexus Certification Exam CET-110: Certified Ethical Emerging Technologies.

Prerequisites

Demonstrate an understanding of the fundamental/foundational concepts related to ethics in data-driven technologies.

Identify common ethical principles and frameworks and select the appropriate framework to understand and/or address ethical issues.

Identify regulations, standards, and best practices utilized in the industry and identify the ethical challenges that may conflict with or compromise their implementation.

Identify and mitigate the myriad risks that arise within the development, utilization, and/or implementation of data-driven technologies.

- Communicate about ethical risks and ethical practices internally within the organization and externally to relevant third parties.

- Create, implement, and evaluate ethical policies and governance regarding data-driven technology throughout the organization.

Follow-On Courses

- Certified Associate in Python Programming (PCAP)
- Certified Artificial Intelligence Practitioner (CAIP)
- Certified Data Science Practitioner (CDSP)

Ready to enroll? Call 800.674.3550 or email Info@AppliedTechAc.com — private team cohorts, GSA MAS purchasing, military credentialing funding, VA GI Bill and VR&E and student financing available.