ContinuingEducation GPRC

CONTINUING EDUCATION

COURSE OUTLINE – Emerging Technology for Managers Certificate

INSTRUCTOR:	Self-paced	**PHONE:**	780-539-2975
OFFICE:	M105	**E-MAIL:**	ce@gprc.ab.ca

PREREQUISITE(S): None

REQUIRED TEXT/RESOURCE MATERIALS:

Course materials are included.

CALENDAR DESCRIPTION:

Today's professional landscape has seen a steady influx of new and exciting technological advancements that promise to revolutionize a variety of industries. Managers must be familiar with what emerging technologies may impact their organizations and networks and how these developments can be leveraged to boost their workers' performance. The Emerging Technology for Managers professional development certificate addresses blockchain, artificial intelligence, and robotics. Learners who have completed this suite of courses are knowledgeable in how each technology affects business processes and how each contributes to a discussion about the future of labor.

CONTACT HOURS: 9 hours

CEUs: .9

DELIVERY MODE: Online self-paced

TRANSFERABILITY: N/A

GRADING CRITERIA:

Upon successful completion of the course, you will receive a Certificate of Completion.

EVALUATIONS: Learners must achieve a test score of at least 70% in each course to meet the minimum successful completion requirement and qualify to receive IACET CEUs.

STUDENT RESPONSIBILITIES: Completion of any practice lessons, quizzes, assignments, or tests.

COURSE SCHEDULE/TENTATIVE TIMELINE:
Dates vary (refer to website for current availability).

PROGRAM CONTENT:

A Manager's Guide to Artificial Intelligence – 3 Hours
This course introduces you to basic artificial intelligence concepts and trends. Artificial Intelligence plays an increasingly important role in many industries. The emergence of this new technology promises to bring unprecedented efficiencies for organizations and enhance business performance. In today's global economy, managers will need to know how AI can be leveraged to keep their organizations competitive, as well as understand the potential ethical issues associated with employing AI technologies such as deep learning, machine learning, and the various AI-enabled recognition technologies.

Learning Outcomes

- Describe important events in the history of artificial intelligence
- Compare knowledge-based systems to expert systems
- Summarize the major characteristics of the different types of AI
- Explain the Turing Test and other approaches to AI
- Distinguish between machine learning and deep learning
- Propose ways in which an AI can be designed to not cause harm to humans
- Evaluate ethical concepts as they apply to AI
- Demonstrate how natural language processing and generation work
- Examine how computer vision, robotics, and Big Data relate to AI
- Critique the use of AI in information security and the potential use of AI in attacks

A Manager's Guide to Blockchain – 3 Hours
Blockchain is on the forefront of emerging technologies and is the foundation of modern cryptocurrencies. If you're a manager with little exposure to blockchain as a concept, this course will help you build an understanding of the concepts and how the technology might apply to your business. This course is an introduction to blockchain as an underlying technology for cryptocurrencies and other applications. The assignments delve into critical parts of blockchain, such as consensus mechanisms and cryptography. They also look at blockchain's impact on verticals such as

healthcare, Fintech, and government, along with democracy, governance, and social impact.

Learning Outcomes

- Explain the fundamentals of blockchain
- Describe the critical nature of consensus mechanisms for blockchains
- Debate blockchain as an emerging technology, from its start with cryptocurrencies to its evolution into smart contracts
- Outline the basic parts of Blockchain Network Architecture and the concept of eliminating central authorities in money and equity transactions
- Discuss the various blockchain applications and what issues they are meant to solve
- Describe how blockchain is impacting industries such as Fintech, healthcare, government and supply chains
- Discuss blockchain and its role in democracy, governance and social impact

A Manager's Guide to Robotics – 3 Hours

This course will introduce many of the concepts and metrics for management to consider when evaluating whether an investment in robotics is the right decision for the operation. The course begins by defining automation types and processes before exploring the business functions involved in making the decision to execute an automation enhancement. In addition to delving into pragmatic issues, this course also explores the strategic and ethical issues of replacing human workers with robots.

Learning Outcomes

- Identify the differences among automation, robotic process automation, and robotics
- Evaluate the differing business factors involved in adopting robotics
- Utilize the different methods for identifying uses for robots by their workspace, autonomy, and locomotion
- Assess how the field of robotics is influencing major industries today and tomorrow
- Identify the skill sets and other human resource issues that businesses will encounter as they adopt robotics
- Connect the business drivers for utilizing robotics with real-world ethical issues and strategies