AI Fundamentals Course Outline

Brief Table of Contents

1.0 Getting Started: Why AI Matters

- 1.1 Course Introduction
  - 1.1.1 Course Introduction
  - 1.1.2 How to Use This Course
  - 1.1.3 Activity: Course Knowledge Check

- 1.2 What is AI and Generative AI?
  - 1.2.1 AI and Generative AI
  - 1.2.2 Experiencing Generative AI with ChatGPT
  - 1.2.3 Lesson Summary

- 1.3 Where Do You Use AI?
  - 1.3.1 AI for Summarizing, Brainstorming, and Creating
  - 1.3.2 Lesson Summary
- 1.4 Pre-Assessment

2.0 Building Foundations in AI and GenAI

- 2.1 AI, ML, and GenAI Basics
  - 2.1.1 Introduction to Generative AI
  - 2.1.2 AI, ML, and Generative AI
  - 2.1.3 Lesson Summary

- 2.2 AI Tools and Models
  - 2.2.1 Overview of AI Tools and Models
  - 2.2.2 What You Can Do with AI
  - 2.2.3 Activity: Having a Simple Conversation with AI
  - 2.2.4 Activity Preview
  - 2.2.5 Comparing Examples of AI Tools and Models
  - 2.2.6 Lesson Summary

- 2.3 Chatbots and Assistants
  - 2.3.1 Comparing Search Results and Gemini
  - 2.3.2 Lesson Summary
- 2.4 Module 2 Quiz

3.0 Identifying When and How to Use AI

- 3.1 When and How to Use AI
  - 3.1.1 Video Preview
  - 3.1.2 When to Use AI
  - 3.1.3 Using Gemini as a Tutor
  - 3.1.4 Using Grammarly to Refine Your Writing
  - 3.1.5 Activity Preview
  - 3.1.6 Activity: Identifying When and How to Use AI
  - 3.1.7 Lesson Summary

- 3.2 AI for School and Work Tasks
  - 3.2.1 DRAFT - AI for School Tasks
  - 3.2.2 Activity: Identifying a School Task
  - 3.2.3 DRAFT - AI for Work Tasks
  - 3.2.4 Communicating Concepts with ChatGPT
  - 3.2.5 Assessing Your Work with Claude
  - 3.2.6 Activity: Calibrating Your AI Interaction Strategy
  - 3.2.7 Activity: Tools and Methods for Work Tasks
  - 3.2.8 Lesson Summary

- 3.3 How AI is Changing Work
  - 3.3.1 Working Smarter with Copilot
  - 3.3.2 Lesson Summary
- 3.4 Module 3 Quiz

4.0 Using AI Responsibly and Ethically

- 4.1 Risks of Using AI
  - 4.1.1 The Risks of Using AI
  - 4.1.2 Key Risks and Rules of AI Use
  - 4.1.3 Recognize and Reduce AI Bias
  - 4.1.4 Activity: Avoiding Risks of Using AI
  - 4.1.5 Lesson Summary

- 4.2 Ethical Concerns in AI Use
  - 4.2.1 Planning Your Prompts for ChatGPT
  - 4.2.2 Lesson Summary

- 4.3 Safeguard Data and Privacy
  - 4.3.1 Using AI Securely
  - 4.3.2 DRAFT - Basic Privacy and Security Concepts
  - 4.3.3 Configuring ChatGPT's Privacy Settings
  - 4.3.4 Lesson Summary

- 4.4 Secure and Compliant AI Use
  - 4.4.1 Lesson Summary
- 4.5 Module 4 Quiz

5.0 Writing Effective Prompts

- 5.1 AI Prompting Basics
  - 5.1.1 It All Starts with a Prompt
  - 5.1.2 Basic Components of a Prompt
  - 5.1.3 Activity Preview
  - 5.1.4 Activity: Comparing AI Outputs
  - 5.1.5 Lesson Summary

- 5.2 Write Effective Prompts
  - 5.2.1 Effective Prompts
  - 5.2.2 How to Write an Effective Prompt
  - 5.2.3 Activity Preview
  - 5.2.4 Activity: Elements of an Effective Prompt
  - 5.2.5 Lesson Summary

- 5.3 Evaluate Outputs to Optimize Prompts
  - 5.3.1 Output Quality and Prompt Strength
  - 5.3.2 Use Outputs to Refine Prompts
  - 5.3.3 Activity Preview
  - 5.3.4 Activity: Crafting an Effective Prompt
  - 5.3.5 Activity Preview
  - 5.3.6 Activity: Simple Prompt Add-Ons
  - 5.3.7 Lesson Summary
- 5.4 Module 5 Quiz

6.0 Improving AI Outputs with Context

- 6.1 Context Files and AI Outputs
  - 6.1.1 Introduction to Contextual Files
  - 6.1.2 What is a Context File?
  - 6.1.3 Activity Preview
  - 6.1.4 Activity: Explore the Power of Context
  - 6.1.5 Lesson Summary

- 6.2 Add and Manage Context in AI Tools
  - 6.2.1 Choosing the Right Files for AI
  - 6.2.2 Tips for Managing Context
  - 6.2.3 Activity Preview
  - 6.2.4 Activity: How to Add Context in AI Assistants
  - 6.2.5 Activity Preview
  - 6.2.6 Activity: Choose Appropriate Visual Context
  - 6.2.7 Lesson Summary

- 6.3 Nuances and Risks of Context
  - 6.3.1 Context Windows and Oversharing
  - 6.3.2 Nuances of Adding Context Files
  - 6.3.3 Managing Context Files in Claude
  - 6.3.4 Turn Smart File Choices into Smart Chats
  - 6.3.5 Activity Preview
  - 6.3.6 Activity: Choosing Context Files
  - 6.3.7 Lesson Summary
- 6.4 Module 6 Quiz

7.0 Evaluating and Verifying AI Outputs

- 7.1 Types of Errors in AI Outputs
    - 7.1.1 When AI Just Gets Facts Wrong
    - 7.1.2 Old Information and Misunderstandings
    - 7.1.3 Bias in AI Outputs
    - 7.1.4 Video Preview
    - 7.1.5 Spotting AI Slop
    - 7.1.6 Lesson Summary

- 7.2 Verify AI Responses
    - 7.2.1 The Importance of Verifying AI Outputs
    - 7.2.2 VSpotting Common Quality Issues with AI Outputs
    - 7.2.3 Activity: Verifying AI Outputs
    - 7.2.4 Lesson Summary

- 7.3 Verification Techniques and Workflows
    - 7.3.1 DRAFT - Verification Toolkit
    - 7.3.2 Verifying Gemini and Perplexity Responses
    - 7.3.3 DRAFT - Simple Verification Workflow
    - 7.3.4 Lesson Summary
- 7.4 Module 7 Quiz

8.0 Leading Effective AI Interactions

- 8.1 Engage with AI Responses
  - 8.1.1 Engaging with AI Responses
  - 8.1.2 AI as a Conversation Partner
  - 8.1.3 Video Preview
  - 8.1.4 Using Voice Features in ChatGPT
  - 8.1.5 Video Preview
  - 8.1.6 Customizing Instructions in ChatGPT
  - 8.1.7 Lesson Summary

- 8.2 Refine Outputs with Follow-Up Prompts
  - 8.2.1 Fine-Tuning Prompts
  - 8.2.2 Effective Follow-Up Prompting
  - 8.2.3 Video Preview
  - 8.2.4 Follow-Up Prompting with Perplexity
  - 8.2.5 Video Preview
  - 8.2.6 Follow-Up Prompting with Gemini
  - 8.2.7 Lesson Summary

- 8.3 Maintain Focus in AI Interactions
  - 8.3.1 Staying Focused in Your AI Interactions
  - 8.3.2 Focused Multi-Turn Interactions
  - 8.3.3 Activity Preview
  - 8.3.4 Activity: Practice Sustained Interactions
  - 8.3.5 Activity Preview
  - 8.3.6 Activity: Stay Focused in AI Interactions
  - 8.3.7 Lesson Summary
- 8.4 Module 8 Quiz

9.0 Creating and Improving Content with AI

- 9.1 Kickstart Ideas with AI
  - 9.1.1 Let AI Help You Get Started
  - 9.1.2 Use AI as a Brainstorming Partner
  - 9.1.3 Brainstorming and Ideation with AI Tools
  - 9.1.4 Lesson Summary

- 9.2 Draft and Revise with AI
  - 9.2.1 Revising Output Style and Tone
  - 9.2.2 Video Preview
  - 9.2.3 Using Microsoft and Google AI Tools
  - 9.2.4 Lesson Summary

- 9.3 Generate Media Safely with AI
  - 9.3.1 Generating Media with AI
  - 9.3.2 AI-Powered Media Tools
  - 9.3.3 Activity Preview
  - 9.3.4 Activity: Prompts for Media Creation
  - 9.3.5 Use AI-Generated Media Safely
  - 9.3.6 Activity: Using AI Generated Media Safely
  - 9.3.7 Lesson Summary

- 9.4 Critique Your Work with AI
  - 9.4.1 AI as a Personal Editor
  - 9.4.2 Activity Preview
  - 9.4.3 Activity: Use AI as a Coach or Critic
  - 9.4.4 Using AI to Critique Your Work
  - 9.4.5 Lesson Summary
- 9.5 Module 9 Quiz

10.0 Using AI for Learning and Growth

- 10.1 AI as a Learning Coach
    - 10.1.1 AI as a Personal Tutor
    - 10.1.2 Activity Preview
    - 10.1.3 Activity: Use AI as a Tutor
    - 10.1.4 Using AI as a Learning Coach
    - 10.1.5 Enabling Coaching in ChatGPT and Gemini
    - 10.1.6 Lesson Summary

- 10.2 Create Study Aids with AI
    - 10.2.1 Creating Study Resources with NotebookLM
    - 10.2.2 Lesson Summary

- 10.3 Academic Integrity and AI Use
    - 10.3.1 Lesson Summary
- 10.4 Module 10 Quiz

11.0 Supporting Analysis and Decision Making with AI

- 11.1 AI as a Thought Partner and Decision Aide
  - 11.1.1 Activity Preview
  - 11.1.2 Activity: Use AI for Decision Making
  - 11.1.3 Using AI As a Thought Partner
  - 11.1.4 Traditional AI vs. Reasoning Models
  - 11.1.5 Lesson Summary

- 11.2 Interpret Scenarios and Data Using AI
  - 11.2.1 Analyzing Data with Claude
  - 11.2.2 Visualizing Data with Claude
  - 11.2.3 Lesson Summary

- 11.3 Communicate AI-Assisted Decisions
  - 11.3.1 Creating and Using an AI Workfile
  - 11.3.2 Lesson Summary
- 11.4 Module 11 Quiz

12.0 Powering Automation and Workflows with AI

- 12.1 AI Automation Basics
  - 12.1.1 Getting Started with Basic AI Automation
  - 12.1.2 Routine Tasks and AI Automation
  - 12.1.3 Activity Preview
  - 12.1.4 Activity: Streamlining an Upcoming Task
  - 12.1.5 Types of Automated Workflows
  - 12.1.6 Checklist for Tasks to Automate
  - 12.1.7 Lesson Summary

- 12.2 AI-Assisted Workflows and Projects
  - 12.2.1 AI as Your Workflow Partner
  - 12.2.2 Types of AI-Assisted Workflows
  - 12.2.3 Video Preview
  - 12.2.4 Advanced Automation Using AI Assistants
  - 12.2.5 Activity Preview
  - 12.2.6 Activity: Designing Automated Workflows
  - 12.2.7 Video Preview
  - 12.2.8 Using AI for Projects
  - 12.2.9 Design Structured AI Projects
  - 12.2.10 Activity Preview
  - 12.2.11 Activity: Designing Structured AI Projects
  - 12.2.12 Lesson Summary

- 12.3 AI Agents and Human-in-the-Loop
  - 12.3.1 Introduction to AI Agents
  - 12.3.2 Video Preview
  - 12.3.3 Building an AI Agent
  - 12.3.4 Human-in-the-Loop Oversight
  - 12.3.5 High\u2011Stakes AI Decisions
  - 12.3.6 Strong Human Oversight Matters
  - 12.3.7 Activity Preview
  - 12.3.8 Activity: Designing Human-in-the-Loop Agents
  - 12.3.9 Lesson Summary

13.0 Using AI Transparently and Professionally

- 13.1 Transparency and Disclosure in AI Use
  - 13.1.1 Transparency, Trust, and AI Use
  - 13.1.2 AI Uses and Disclosure Needs
  - 13.1.3 Disclosing AI Use
  - 13.1.4 Creating AI Use Disclosures
  - 13.1.5 Responsible AI Use in Academics
  - 13.1.6 Professional AI Use
  - 13.1.7 Activity Preview
  - 13.1.8 Lesson Summary

- 13.2 AI-Aware Team Roles
  - 13.2.1 AI and Teamwork
  - 13.2.2 Working in AI-Aware Teams
  - 13.2.3 Reviewing Reasoning Logs with AI
  - 13.2.4 Responsible AI Use in Teamwork
  - 13.2.5 Team-in-the-Loop
  - 13.2.6 Lesson Summary

- 13.3 Explain AI to Non-Experts
  - 13.3.1 Explaining AI
  - 13.3.2 How AI "Thinks"
  - 13.3.3 Explaining AI to Build Trust
  - 13.3.4 Making AI Relatable with Analogies
  - 13.3.5 Activity Preview
  - 13.3.6 Activity: Explain AI Uses
  - 13.3.7 Lesson Summary
- 13.4 Module 13 Quiz

14.0 Preparing for AI-Ready Careers

- 14.1 AI and the Future of Work
  - 14.1.1 Tomorrow\u2019s Workplace with AI
  - 14.1.2 Skills That Matter in an AI Future
  - 14.1.3 Mapping AI Workflows with Zapier
  - 14.1.4 Lesson Summary

- 14.2 AI-Related Skills in Job Postings
  - 14.2.1 Emerging Value of AI Skills
  - 14.2.2 AI Skills in Job Opportunities
  - 14.2.3 Using AI Tools to Decode Job Descriptions
  - 14.2.4 Branding Your AI Skill Set
  - 14.2.5 Activity Preview
  - 14.2.6 Activity: Analyze AI Skills in a Jobs
  - 14.2.7 Lesson Summary

- 14.3 Ethical AI Use for Career Preparation
  - 14.3.1 Career Preparation with AI
  - 14.3.2 Using AI Ethically in Career Preparation
  - 14.3.3 Using AI to Plan Your Skill\u2011Building
  - 14.3.4 Using ChatGPT to Prepare for Interviews
  - 14.3.5 Activity Preview
  - 14.3.6 Activity: Practice Interviewing with AI
  - 14.3.7 Lesson Summary
- 14.4 Module 14 Quiz

15.0 Integrating and Reflecting on AI Use

- 15.1 Integrate AI Concepts and Skills
  - 15.1.1 Combining AI Strategies to Create Complex Deliverables
  - 15.1.2 Lesson Summary

- 15.2 AI Learning Roadmap and Career Plan
  - 15.2.1 Lesson Summary