

GENESIS ITU

AI Fundamentals

Concepts, ethics, practical use & workplace AI literacy

College-style student textbook & workbook · Clean · Practical · Professional

Zarco AI Systems LLC · Genesis ITU

How to use this book

Read each chapter in order. Learn formal definitions the way employers and exams use them. Complete pause-and-review prompts. Use only authorized lab systems. This course teaches lawful, professional practice.

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Chapter 1 — What AI is (and is not)

AI systems learn patterns from data to assist prediction, generation, or classification. They are tools — not people.

Machine learning

Systems that improve performance on a task using data rather than only fixed rules.

Pause and review. Give one example of AI as a tool at work or school.

Chapter 2 — Data & models

Models need data. Quality, bias, and privacy in training data affect outcomes.

Training data

Examples used to fit a model before deployment.

Chapter 3 — Generative AI basics

Large language models predict text sequences. Useful for drafting and tutoring; risky for unchecked facts and sensitive data.

- Verify important facts
- Do not paste secrets into public tools
- Use AI to teach, not to cheat

Chapter 4 — Ethics & safety

Fairness, transparency, human oversight, and clean content standards matter — especially for family and education products.

Human in the loop

Keeping people responsible for high-impact decisions.

Pause and review. *Why should students still learn the skill if AI can draft answers?*

Chapter 5 — Prompting for work & school

Clear goals, context, constraints, and format requests improve results. Iterate.

- State the audience level
- Ask for steps, not only finals
- Request sources when needed

Chapter 6 — Workplace AI

Policies, approved tools, and data classification decide what is allowed. Productivity gains require judgment.

Chapter 7 — Limits & hallucinations

Models can invent plausible falsehoods. Critical reading remains a human skill.

Hallucination

Confident but incorrect model output.

Chapter 8 — Career & next learning

AI literacy pairs with domain skill. Paths include applied AI, cloud AI services, or deeper ML engineering with more math and code.

Closing

Review every formal definition before practice exams. Continue with labs, instructor video when available, and job-path practice on NodePath or REACH. Genesis ITU wishes you steady progress.

Genesis ITU · Educational use · Authorized systems only