

COURSE DETAIL

ADVANCED ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING: GENERATIVE AI AND DEEP UNSUPERVISED LEARNING

Country

United Kingdom - England

Host Institution

Lady Margaret Hall, University of Oxford

Program(s)

Summer in Oxford, Lady Margaret Hall

UCEAP Course Level

Upper Division

UCEAP Subject Area(s)

Computer Science

UCEAP Course Number

135

UCEAP Course Suffix

S

UCEAP Official Title

ADVANCED ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING:
GENERATIVE AI AND DEEP UNSUPERVISED LEARNING

UCEAP Transcript Title

ADV GENERATIVE AI

UCEAP Quarter Units

6.00

UCEAP Semester Units

4.00

Course Description

This course introduces unsupervised learning and clustering algorithms, before exploring generative adversarial networks and deep generative models. It examines self-supervised learning, anomaly detection, flow-based models, and unsupervised representation learning. The final part of the course focuses on clustering in high-dimensional spaces, semi-supervised learning, energy-based models, and unsupervised learning for reinforcement. This intensive course offers theoretical understanding and practical experience with a focus throughout on real-world applications of deep unsupervised learning across various domains, offering career skills as well as excellent foundations for future research.

Language(s) of Instruction

English

Host Institution Course Number**Host Institution Course Title**

ADVANCED ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING:
GENERATIVE AI AND DEEP UNSUPERVISED LEARNING

Host Institution Course Details

<https://www.lmh.ox.ac.uk/advanced-artificial-intelligence-genai-deep-unsupervis...>

Host Institution Campus**Host Institution Faculty****Host Institution Degree****Host Institution Department****Course Last Reviewed**

2026-2027

[Print](#)