



## Artificial Intelligence Capstone Project Course Descriptor

Course Title	Artificial Intelligence Capstone Project	Faculty	EDGE Innovation Unit (London)
Course code	NCHNAP790	Course Leader	Professor Scott Wildman (interim)
Credit points	30	Teaching Period	This course will typically be delivered over a 12-week period
FHEQ level	7	Date approved	March 2021
Compulsory/ Optional	Compulsory		
Prerequisites	None		

### COURSE SUMMARY

This course is an artificial intelligence (AI) capstone project, conceived and executed by the learner in an external organisation. The project will demonstrate a professional level of technical and analytical skill, aligned to achieving organisational goals and enabling effective institutional change. The learner will use the scientific method to formulate the AI research/business question, design the experiment(s) and test hypotheses. The project may be:

- An idea or opportunity to use AI or new developments in the AI/machine learning field in the business.
- A specific business problem to be addressed using AI.
- A recurring issue in AI.

The project will culminate with a written dissertation and a *viva voce* exam.

### COURSE AIMS

- Give learners the opportunity to carry out an independent research project in artificial intelligence aligned to a business problem.
- Train learners to write up their findings and ideas accurately, clearly, coherently and to a high-professional standard.
- Train learners to present their own arguments logically and competently, to engage specialist and non-specialist stakeholders.

## LEARNING OUTCOMES

On successful completion of the course, learners will be able to:

### KNOWLEDGE AND UNDERSTANDING

- K1d Demonstrate an awareness of the opportunities of AI and data science to create business value and growth.
- K2d Comprehensively understand how to apply appropriate scientific and technological methods for machine learning.

### SUBJECT SPECIFIC SKILLS

- S1d Critically evaluate the effectiveness and performance of the proposed AI and data science solution(s).
- S2d Apply systematic methodology and project management principles in the delivery of innovative, stable and robust solutions.
- S3d Correctly select and apply AI project and development management.

### TRANSFERABLE AND PROFESSIONAL SKILLS

- T2d Use communication and influencing skills across workplace teams.
- T3d Demonstrate professional practice in a commercial environment.

## TEACHING AND LEARNING

The contact hours on this course are formed predominantly of supervisory meetings, typically 6 x 1 hour.

Learners are expected to carry out independent research into the topic.

Readings should include a mix of books, journal articles, policy papers and other relevant documents, depending on the topic and the approach taken in the dissertation.

Course information and supplementary materials are available on the College's Virtual Learning Environment (VLE).

Learners are required to attend and participate in all the formal and timetabled sessions for this course. Learners are also expected to manage their directed learning and independent study in support of the course.

The course learning and teaching hours will be structured as follows:

- Off-the-job learning (12 days x 7 hours) = 84 hours (e.g. 1 day per week for 12 weeks)
- On-the-job learning (24 days x 7 hours) = 168 hours (e.g. 2 days per week for 12 weeks)
- Private study = 48 hours (e.g. 4 hours per week for 12 weeks)
- Total 300 hours

## ASSESSMENT

### FORMATIVE

Learners will be formatively assessed during the course by means of set assignments. These will not count towards the final degree but will provide learners with developmental feedback.

**SUMMATIVE**

<b>AE</b>	<b>Assessment Type</b>	<b>Weighting</b>	<b>Online submission</b>	<b>Duration</b>	<b>Length</b>
1	Dissertation	70%	Yes	Requiring on average 30 – 50 hours to complete	5,000 words +/- 10% Excluding references and data tables
2	Viva Voce exam (based on project)	30%	N/A	20 minutes	N/A

**FEEDBACK**

Learners will receive formal feedback in a variety of ways: written (via email or VLE correspondence) and indirectly through online discussion groups. Regular tri-partite reviews between the learner (apprentice), their apprenticeship advisor (provider) and workplace line manager (employer) formally monitor and evaluate the learner's progress.

**INDICATIVE READING**

Note: Comprehensive and current reading lists for courses are produced annually in the Course Syllabus or other documentation provided to learners; the indicative reading list provided below is used as part of the approval/modification process only.

**BOOKS**

Preece, R., 1994. *Starting Research: An Introduction to Academic Research and Dissertation Writing*. London, New York: Pinter Publishers

Stephan F. M., and Smith, I., 2019. *A Practical Guide to Dissertation and Thesis Writing*. Newcastle upon Tyne, England: Cambridge Scholars Publishing

Dubber, M., Pasquale, F., and Das, S., 2020. *The Oxford Handbook of Ethics of AI*. New York, New Jersey: Oxford University Press

**JOURNALS**

Learners are encouraged to read material from relevant journals on postgraduate dissertations and artificial intelligence as directed by their Course Leader.

**ELECTRONIC RESOURCES**

Learners are encouraged to consult relevant websites on postgraduate dissertations and artificial intelligence.

**INDICATIVE TOPICS**

Learners will study the following topics:

- Artificial intelligence solutions
  - Business context
  - Scientific method
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<b>Approved by: Academic Board</b>					
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1.0	March 2021	March 2021	Professor Scott Wildman	Academic Handbook/programme specifications and handbooks/apprenticeships	March 2026
<b>Modifications (As per AQF4)</b>					
Version number	Date approved	Date published	Modification (including category number)		