

HSMA 4 Key Dates Key:

Note: AM training sessions run 0930-1230, and PM sessions run 1330-1630

If no AM or PM is specified, the training session is a full day session that spans both 0930-1230 and 1330-1630

Trainee Mentor Scheme Exclusive Session

Event / Meeting

Core Training Session Option Training Session

Deadline / Milestone / Panel Meeting (HSMAs not required)

Dependencies (for Option modules)

8A

8A, 8B

6A, 6B

June 2021

16/06/21 Virtual Open Day and Applications for HSMA 4 Open

July 2021

20/07/21 Trainee Mentor Scheme: Meet the Trainee Mentor Applicants (1000-1130) For applicants to the Trainee Mentor Scheme only

28/07/21 Applications for HSMA 4 Close

August 2021

04/08/21 HSMA 4 Application Panel Decision Meeting

29/09/21 HSMA 3 Virtual Showcase Event (0930-1530)

September 2021

11/08/21 Applicants notified whether they were successful by this date

All welcome to this event to hear about the project work of our HSMAs in HSMA 3

October 2021 Session Name Trainer Session Code Core / Option Module 05/10/21 HSMA 4 Phase 1 Commencement 05/10/21 Introduction to Operational Research and Data Science (AM) Dan Chalk 1A CORE M1 – Introduction to OR, Data Science and Programming Principles of Programming (PM) Dan Chalk 1B CORE M1 – Introduction to OR, Data Science and Programming M2 – Open Source Collaborative Development 07/10/21 Spyder, Jupyter Notebooks and Google CoLab (AM) Dan Chalk 2A CORE CORE 12/10/21 Python Programming Part 1 Dan Chalk 1C M1 – Introduction to OR, Data Science and Programming 19/10/21 Python Programming Part 2 Dan Chalk 1D CORE M1 – Introduction to OR, Data Science and Programming 26/10/21 Python Programming Part 3 1E CORE M1 – Introduction to OR, Data Science and Programming Dan Chalk

Dan Chalk

Dan Chalk

Dan Chalk

November 2021

CORE 28/10/21 Version Control, GitHub and Docker (AM) Dan Chalk 2B M2 – Open Source Collaborative Development 02/11/21 Introduction to Discrete Event Simulation (AM) Dan Chalk ЗА CORE M3 – Modelling Pathway and Queuing Problems SimPy for Discrete Event Simulation (Part 1) (PM) Dan Chalk 3B CORE M3 – Modelling Pathway and Queuing Problems Sean Manzi 09/11/21 Introduction to Network Analysis (AM) 4A CORE M4 – Modelling Whole Systems M7 - Machine Learning Introduction to AI and Machine Learning (PM) Dan Chalk 7A CORE 16/11/21 Introduction to Modelling Geographic Problems (AM) Dan Chalk, Kerry Pearn CORE M5 – Geographic Modelling and Visualisation 5A Introduction to Natural Language Processing (PM) CORE M8 – Natural Language Processing Dan Chalk A8 17/11/21 SimPy for Discrete Event Simulation (Part 2) (AM) Dan Chalk 3C CORE M3 – Modelling Pathway and Queuing Problems Cellular Automata (PM) Dan Chalk 6A CORE M6 – Modelling Behaviour 18/11/21 Geographic Modelling Algorithms and Evolutionary Computing (Part 1) (AM) 5B OPTION M5 – Geographic Modelling and Visualisation Dan Chalk, Kerry Pearn 5C **OPTION** 5A, 5B Geographic Modelling Algorithms and Evolutionary Computing (Part 2) (PM) Dan Chalk, Kerry Pearn M5 – Geographic Modelling and Visualisation 23/11/21 Introduction to Forecasting (AM) Tom Monks 9A CORE M9 - Forecasting 7B Ethics in AI (PM) Dan Chalk CORE M7 – Machine Learning Dan Chalk 7C OPTION M7 – Machine Learning 7A, 7B 24/11/21 Machine Learning – Who Would Survive the Titanic? (AM) 5D OPTION M5 – Geographic Modelling and Visualisation Geographic Visualisation using QGIS (PM) Kerry Pearn 5A 25/11/21 Deeper into Machine Learning - Introduction to Neural Networks (AM) 7D **OPTION** Dan Chalk M7 – Machine Learning 7A, 7B, 7C 7E **OPTION** Synthetic Data (PM) Dan Chalk M7 – Machine Learning 7A, 7B, 7C, 7D 29/11/21 HSMA 4 Phase 2 Pitches and Panel Session (1000-1300) All HSMAs to attend to present their pitches

8B

SC

OPTION

OPTION

OPTION

M8 – Natural Language Processing

M8 – Natural Language Processing

M6 - Modelling Behaviour

December 2021 01/12/21 Getting to Grips with Programming in R Sean Manzi 1F CORE M1 – Introduction to OR, Data Science and Programming 1G OPTION – 6 M1 – Introduction to OR, Data Science and Programming 1F 02/12/21 Advanced R Sean Manzi 5E OPTION M5 – Geographic Modelling and Visualisation 07/12/21 Geopandas (AM) Kerry Pearn 5A, 5D System Dynamics (PM) 4B CORE M4 – Modelling Whole Systems Dan Chalk 08/12/21 Relation Extraction (AM) 8D M8 - Natural Language Processing Dan Chalk **OPTION** 8A, 8B, 8C A Generic ED Model Using R (PM) 3D CORE M3 – Modelling Pathway and Queuing Problems Luca Grieco 09/12/21 Advanced Network Analysis (Part 1) Sean Manzi 4C OPTION M4 – Modelling Whole Systems 4A M4 – Modelling Whole Systems 4A, 4C 4D OPTION Advanced Network Analysis (Part 2) Sean Manzi 13/12/21 Successful Phase 2 pitches announced by this date 14/12/21 Simple Forecasting Methods (AM) Tom Monks 9B OPTION M9 - Forecasting 9A OPTION Advanced Forecasting Methods (PM) Tom Monks 9C M9 - Forecasting 9A, 9B 15/12/21 Transformers and Pre-Trained Contextualised Word Embedding OPTION - 6 M8 - Natural Language Processing Dan Chalk 8E 8A, 8B, 8C, 8D, 8E 16/12/21 Agent Based Simulation using MESA (Part 1) (AM) Dan Chalk 6B OPTION M6 – Modelling Behaviour 6A

6C

January 2022

17/01/22 HSMA 4 Phase 2 Commencement

Agent Based Simulation using MESA (Part 2) (PM)

30/11/21 Named Entity Recognition (AM)

Sentiment Analysis (PM)

For Trainee Mentor Scheme participants only 18/01/22 Trainee Mentor Scheme: Training Session (0930-1230) 26/01/22 Learning Set Meeting 1 (1100-1300)

February 2022

23/02/22 Learning Set Meeting 2 (1100-1300)

March 2022

23/03/22 Learning Set Meeting 3 (1100-1300)

May 2022

April 2022

27/04/22 Learning Set Meeting 4 (1100-1300)

25/05/22 Learning Set Meeting 5 (1100-1300)

June 2022

29/06/22 Learning Set Meeting 6 (1100-1300)

July 2022

27/06/22 Learning Set Meeting 7 (1100-1300) August 2022

24/08/22 Learning Set Meeting 8 (1100-1300)

September 2022 28/09/22 HSMA 4 Final Presentation Event (FULL DAY, Times TBC)