



## Mapping of Graduate School Doctoral Courses to Professional Competencies for CPhys.

Requirements: M = Mandatory, O = Optional and R = Recommended

M<sup>1</sup> = Recommended for appointed student representatives

Programme Group & Course Title:	Mapping	Year	CPhys. Comp.
<b>Research Communication Programme:</b>			
Thesis Writing Retreat	O	3 <sup>rd</sup>	A(a), D(a)
A Scientific Approach to Research Communication	O	1 <sup>st</sup>	A(a), D(a)
Literature Review	M	1 <sup>st</sup>	A(a), D(b)
Publication (BEPS/MLSPD)	O	Any	A(a), A(3), D(a),
Thesis	M	2 <sup>nd</sup> /3 <sup>rd</sup>	D(b)
Grant Applications	O	Any	A(b), A(c), D(a),
Critical Thinking for communication	O	Any	A(c), D(d)
Poster Top Tips	O	1 <sup>st</sup>	A(c), D(d)
Present your Poster!	M	1 <sup>st</sup>	A(a), A(c), D(b)
Conferences and Seminars	M	2 <sup>nd</sup>	D(a)
Advanced Presentations	M	3 <sup>rd</sup>	D(a), D(b)
Preparing for thesis submission, examination and Open Access Q&A	O	3 <sup>rd</sup> /4 <sup>th</sup>	A(7), D(a), D(b)
<b>Research Impact Programme</b>			
Understanding Impact and How to Achieve It	R	2 <sup>nd</sup> /3 <sup>rd</sup>	A(7), D(d)
Bibliometrics and Demonstrating Academic Impact	O	2 <sup>nd</sup> /3 <sup>rd</sup>	A(7), D(d)
Communicating Research in Schools	O	Any	A(2), A(8)
Publishing Open Access: Your Research and Thesis	O	Any	A(a), A(3), A(8), D(a)
Core Public Engagement MasterClass: Exploring Planning and Evaluating Engagement	O	Any	A(8), D(a)
Preprints and Open Peer Review	O	Any	A(a), A(3), D(a),
<b>Research Computing &amp; Data Science Programme</b>			
Basic Statistics	R	Any	A(a)
Data Processing with Python Pandas	O	Any	A(a)
Data Exploration and Visualisation	R	Any	A(a)
Data Processing with R	O	Any	A(a)
Further Hypothesis Testing	O	Any	A(a)
Introduction to Machine Learning	O	Any	A(a)
Introduction to Sampling & Hypothesis Testing	O	Any	A(a)
Introduction to Statistics Using SPSS.	O	Any	A(a)
Machine Learning with Python	O	Any	A(a)
Introduction to R	O	Any	A(a)
Regression Modelling in R	R	Any	A(a)
Introduction to C++	O	Any	B(b)
Introduction to Fortran	O	Any	B(b)
Introduction to HPC at Imperial	O	Any	B(b)
Introduction to Julia	O	Any	B(b)



Introduction to LaTeX	R	Any	B(b)
Introduction to MATLAB	R <sup>3</sup>	Any	B(b)
Introduction to Python (online)	R <sup>3</sup>	Any	B(b)
The Linux Command Line for Scientific Computing	O	Any	B(b)
Essential Software Engineering for Researchers	O	Any	B(b)/A(a)
Numerical Computing in Python with NumPy & SciPy	O	Any	B(b)/A(a)
Object-Oriented Python	O	Any	B(b)/A(a)
Plotting in Python with Matplotlib	O	Any	B(b)/A(a)
Profiling and Optimisation in Python	O	Any	B(b)/A(a)
Reproducible & Scalable Research Computing with Containers	O	Any	B(b)/A(a)
Using Git to code, collaborate and share	O	Any	B(b)
Writing Theses in LaTeX	R	Any	B(b)
<b>Research Integrity Programme</b>			
Plagiarism Awareness	M	1 <sup>st</sup>	C(d)
Intellectual Property (online)	O	Any	C(d)
Copyright for Researchers	M	Any	C(d)
Science, Research and Integrity	M	Any	E(d)
Information Retrieval	O	Any	D(b)
EndNote	O	Any	A(a)
Introducing the Web of Science Database	O	Any	A(a)
Keeping Your Research Up to Date	M	Any	A(a)
Research Data Management	M	2 <sup>nd</sup>	A(a)
Research Data Management Plans LIBRARY	O	Any	A(a)
Introduction to Philosophy	O	Any	D(b)
<b>Professional Effectiveness Programme</b>			
Becoming an Effective Researcher	M	1 <sup>st</sup>	C(b), D(c)
Time Management for your Doctorate	M	1 <sup>st</sup>	C(a), C(b)
Putting Project Management into Action	M	1 <sup>st</sup>	B(a) B(c)
Planning & Preparing for your Thesis & Viva	O	Any	B(a), C(d), D(a)
Teams & Communication Retreat	M	1 <sup>st</sup>	D(c)
Introduction to MBTI	O	Any	D(c), D(d)
Introduction to the Clifton Strengths Finder	O	Any	C(b), D(c)
Enhancing Wellbeing for Doctoral Researchers	M	2 <sup>nd</sup>	C(d)
Academic Resilience	O	Any	C(d)
Enhancing your Leadership Skills	M	2 <sup>nd</sup> /3 <sup>rd</sup>	C(b), D(d)
Understanding and Developing Assertiveness	O	Any	D(d)
Introduction to Unconscious Bias	R	1 <sup>st</sup>	C(b), D(c)
<b>Professional Progression</b>			
Finish Up Move On + (FUMO)	M	3 <sup>rd</sup>	C(b), D(d), E(d)
Networking for Progressing Your PhD	M	2 <sup>nd</sup> /3 <sup>rd</sup>	C(b), D(d)
Negotiation for Your Doctorate and Beyond	O	Any	C(b), D(b)
Maintaining your Motivation and Building Independence	M	2 <sup>nd</sup>	A(c), B(a)
Thinking about Doing a Postdoc?	O	2 <sup>nd</sup> /3 <sup>rd</sup>	E(d)
Ask the Doctor: your Chance to Chat with a Doctoral Graduate at Work	O	2 <sup>nd</sup> /3 <sup>rd</sup>	E(d)



An Introduction to Career Planning for 1st & 2 <sup>nd</sup> Year PhDs: <del>Business</del> , Engineering & Physical Sciences Or An Introduction to Career Planning for 1st & 2 <sup>nd</sup> Year PhDs: Life Sciences & Medicine	M	1 <sup>st</sup>	E(d)
Effective CVs and Applications	O	Any	E(d)
Strategic Job Searching	O	Any	E(d)
Preparing for Interviews	O	Any	E(d)
<b>Graduate Teaching Assistants (GTA) Programme</b>			
Introduction to Learning and Teaching	O	Any	A(6), C(c)
Introduction to Assessment and Feedback for Learning	O	Any	A(2), C(c)
Promoting Active Learning in Labs	O	Any	A(5), C(c)
Microteaching	O	Any	A(6), C(c)
Applying for Associate Fellowship (AFHEA)	O	Any	C(c)/D(d)
GTA Retreat	O	Any	C(c)
<b>PG REP Programme</b>			
Negotiation skills for Postgraduate Representatives	M <sup>1</sup>	Any	D(b)
Chairing Meetings for Postgraduate Representatives	M <sup>1</sup>	Any	D(c), D(d)
Assertiveness for Postgraduate Representatives	M <sup>1</sup>	Any	D(d)
Postgraduate Well-being: Help your Peers	M <sup>1</sup>	Any	C(c), D(c)
<b>Discipline / Departmental / Imperial Safety Training</b>			
Local Safety Courses and Departmental requirements	M	1 <sup>st</sup>	E(b) E(c)