

COGNITIVE SCIENCE MA (HUMANITIES)

Degree programme handbook v2.0

Dr. Mark Sprevak

14 August 2020

Contents

1	Goals and scope	2
2	School-wide degree	2
3	Degree coordination and guidance	2
4	Structure of the degree	3
4.1	Prehonours	3
4.1.1	Year 1 ('Introduction')	3
4.1.2	Year 2 ('Breadth and depth')	3
4.2	Honours	4
4.2.1	Year 3 ('Flexibility')	4
4.2.2	Year 4 ('Flexibility and dissertation')	4
5	Course choices	4
5.1	Year 1 ('Introduction')	4
5.2	Year 2 ('Breadth and depth')	5
5.3	Years 3&4 ('Flexibility and dissertation')	5
6	Societies, social events, and resources	5
7	Study abroad	6
8	Course recommendations	6
8.1	Sample Pathway1: "Referential updating: an eye-tracking investigation"	6
8.2	Sample Pathway2: "Evolutionary Psychology and the Problem of Module-like Processors"	8
8.3	Sample Pathway3: "Discourse and language used by theatre directors"	9
8.4	Sample Pathway4: "The effect of perceptual and semantic similarity on false memory"	10
8.5	Sample Pathway5: "Using tongue-twisters to try and understand inner speech"	10
8.6	Sample Pathway6: "The use of reformation to repair faulty analogical blends"	10
8.7	Sample Pathway7: "A sociolinguistic examination of Verlan of the French banlieues"	10
9	FAQ	11
9.1	Is there a CogSci dissertation?	11
9.2	Is a degree transfer within PPLS possible?	11
9.3	Is CogSci BPS accredited (BPS = British Psychological Society)?	11
9.4	How much overlap exists between courses?	11
9.5	How much computation is part of CogSci?	12

9.6	Are there Informatics Honours courses for students with little prehonours Informatics?	12
9.7	Where is CogSci's home within PPLS?	12
9.8	What timetable clashes exist?	12
9.9	Which Informatics courses to take?	12
9.10	How many credits to put towards Informatics courses in year 2?	13
9.11	Answer to almost all other questions: "It depends what interests you most!" . . .	13

1 Goals and scope

What is cognitive science as an academic pursuit?

Cognitive science is the interdisciplinary attempt to understand the human mind. It focuses on abilities such as reasoning, perception, memory, awareness, emotion, attention, judgment, motor control, language use, and the connections between them. Cognitive science brings together scholars from informatics, linguistics, philosophy, neuroscience, and psychology. Its methods include computer modelling, linguistic analysis, philosophical reasoning, robotics, neuroimaging, and psychological experiments.

2 School-wide degree

Where does this degree fit within the university structure?

Cognitive Science is a school-wide programme within the School of Philosophy, Psychology, and Language Sciences and it includes courses and staff from the School of Informatics as well. PPLS is part of the College of Arts, Humanities and Social Sciences. Informatics is part of the College of Science and Engineering. There is no subject area with Cognitive Science as its singular name or undertaking; rather staff who are involved reside in specific subject areas (Philosophy, Psychology, Linguistics and English Language, and Informatics). This is relevant for understanding where the programme fits within the various governing bodies of the university and what chain of structures guides and influences the nature of the degree.

3 Degree coordination and guidance

Who to talk to?

- Teaching director: Dr Mark Sprevak, Philosophy, mark.sprevak@ed.ac.uk. To talk to me in my office hours, book here: <https://harmonizely.com/sprevak-home/office-hours>
- Degree coordination: representatives from Philosophy, Psychology, and Linguistics & English Language include Dr Alex Doumas (Psychology), Dr Mark Sprevak (Philosophy), Dr Hannah Rohde (LEL)
- Student representatives: One student from each year is nominated to serve as a student representative, to be a voice for student interests and concerns and to attend Student Staff Liaison Committee meetings which meet twice a semester.
- General administrative support: teaching office (Susan Hermiston is course secretary for the Introduction to Cognitive Science course; Emma Nelson keeps track of Honours CogSci students). All emails should go to: lelinfo@ed.ac.uk
- General pastoral support: Student support office: ppls.sso@ed.ac.uk

4 Structure of the degree

What courses to take and when?

The requirements for the CogSci degree are structured such that students are asked to satisfy a number of prerequisites during prehonours to support the flexibility that characterises the Honours years. This frontloading of prerequisites incurs a cost in that it limits students' outside course options (in comparison with prehonours students on other PPLS degrees); however, the upside is being able to take Honours courses in 3 (possibly 4) subject areas during Honours (an option unavailable to other degree students).

The DPT gives the full details, but a general structure is sketched below to show the requirements and options in prehonours and honours: <http://www.drps.ed.ac.uk/current/dpt/utcoscs.htm>)

4.1 Prehonours

4.1.1 Year 1 ('Introduction')

The aim is to provide exposure to PPLS and Informatics in order to convey breadth of Cognitive Science with a bit of room for outside courses.

Compulsory courses (100 credits):

- Introduction to Cognitive Science
- LEL1A
- Informatics 1 - Cognitive Science
- *Either* Informatics 1 - Introduction to Computation *Or* Logic 1
- *Either* Morality and Value *Or* Greats

and 1 course from 'Group B' (20 credits):

- Informatics 1 - Object Oriented Programming
- Linguistics and English Language 1B
- Philosophy of Science 1
- Morality and Value
- Greats: From Plato to the Enlightenment
- Psychology 1A
- Psychology 1B
- Data Analysis for Psychology in R1

Informatics courses in year 2 require the student to have done sufficient Informatics courses in year 1. If you plan to take any Informatics courses in year 2, you must take in year 1: Informatics 1 - Introduction to Computation and Informatics 1 - Object Oriented Programming.

4.1.2 Year 2 ('Breadth and depth')

The aim is to ensure breadth and depth in preparation for Honours.

Compulsory course (20 credits):

- Data Analysis for Psychology in R2

Breadth: sample at least 3 out of 4 subject areas (100 credits)

- Informatics 2D - Reasoning and Agents (*see note above*)
- Informatics 2 - Introduction to Algorithms and Data Structures (*see note above*)

- LEL2A: Linguistic Theory and the Structure of English
- LEL2B: Phonetic Analysis and Empirical Methods
- LEL2C: English in Time and Space
- LEL2D: Cross-linguistic Variation: Limits and Theories
- Philosophy: Mind, Matter and Language
- Philosophy: Knowledge and Reality
- Psychology 2A
- Psychology 2B

Outside-degree options (20 credits):

- It is recommended that students take these 20 credits in PPLS or Informatics year 2 courses on an as-needed basis for prerequisites to Honours courses of interest.

4.2 Honours

One requirement during Honours is that students must take at least 20 credits from at least 3 out of the 4 subject areas (Philosophy, Psychology, LEL, Informatics) at some point during years 3 and 4 combined (a total of 60 credits to satisfy this requirement). The expectation is that these 60 credits of courses will be in the three subject areas that the student has studied in year 2.

4.2.1 Year 3 ('Flexibility')

The aim is to tailor a set of courses around the student's interests. There are a large range of Honours courses, see DPT and staff/student guidance below on course choices.

4.2.2 Year 4 ('Flexibility and dissertation')

The aim is to continue tailoring courses to student's interests while also pursuing a dissertation in Philosophy, Psychology, Language Sciences or Informatics.

When specifying enrolment preferences, know that there are waitlists sometimes so it's best to list many options. Note that Philosophy has designated certain courses as year 3 and others as year 4. The year 3 courses will be relatively stable year to year while the fourth year courses will be more variable, depending on who is available. The Y3 courses will be larger but have more contact time. The Y4 courses will be smaller but less contact time. Philosophy provides descriptions of courses and a timetable that is released each year in spring when course signups are happening for the following year. Note that Psychology has specific year 3 and year 4 courses. Note that Informatics lets year 3 students take level 9 and level 10 courses, and they let year 4 students take level 10 and level 11 ("4th year undergrad") courses.

For progression requirements, see the DPT: <http://www.drps.ed.ac.uk/current/dpt/utcoscs.htm>

5 Course choices

How to make decisions among available options?

5.1 Year 1 ('Introduction')

In year 1, course choices are fairly constrained. One important point to factor into your planning is that if you plan to take any Informatics courses in future years, you need to take both 'Informatics 1 - Introduction to Computation' and 'Informatics 1 - Object Oriented Programming' in year 1.

You can choose between ‘Logic 1’ and ‘Informatics 1 - Introduction to Computation’. Both courses cover similar material, but the Informatics course moves a bit faster and covers more. In general, Informatics courses are better suited to students who enjoy a bit of programming and mathematics.

5.2 Year 2 (‘Breadth and depth’)

In Year 2, the number of within-degree courses that a student takes is large but leaves 20 credits for outside course(s). The student can decide what emphasis to place on the different subject areas. For example, for the breadth requirements, a student can sample from across PPLS and Informatics or restrict the course choices to only PPLS. For the depth requirement, the student can choose to pursue the depth course in any of the PPLS subject areas.

By looking ahead during prehonours to Honours courses of interest, students can see what prerequisites in prehonours will be most useful. That said, completing all the listed prerequisites may not fit into a prehonours schedule. Students are encouraged to email course organisers to find out what prerequisites are most relevant and to describe preferred year 2 courses to see if that is sufficient preparation — e.g., a course that requires LEL2B as a prerequisite may do so for the phonetics training (which is only available from LEL2B) or for the empirical methods training (which is arguably replaceable with DAPR2).

What about meeting the prerequisites for Year 2 courses? CogSci students can take year 2 PPLS courses even if they have not completed the year 1 courses in that subject area. It has been arranged in PPLS that relevant year 2 PPLS courses will list as prerequisites courses that correspond to CogSci students’ required year 1 courses (e.g., Psych2A/2B, LEL2A/2B all lists INF1:CogSci alongside Psych1A/1B as possible prerequisites). *For Informatics, things are different.* You must have done the required year 1 Informatics courses in order to take year 2 Informatics courses.

With regard to course choices in year 2, note that Psych2B can be expected to cover more topics in cognitive psychology than Psych2A.

5.3 Years 3&4 (‘Flexibility and dissertation’)

Students must satisfy the 20/20/20 requirement, but beyond that, students are encouraged to take full advantage of the variety of courses and flexibility of the degree to follow their interests.

How narrow or wide is this degree? Why aren’t students required to split their honours credits evenly across subject areas? On one hand, it can be the case that there is actually more breadth in some cases to be found within a subject area than across subject areas. Take psycholinguistics for example – one could take the courses on psycholinguistics that are offered in psych and in LEL and even in Informatics for computational models of language processing and still actually have a fairly narrow picture of Cognitive Science. On the other hand, it’s also possible to get a lot of breadth from only one or two disciplines. Therefore, since it’s hard to precisely estimate the amount of novelty/overlap and general CogSci-relevance of a given set of courses, the DPT sets only the 20/20/20 requirement. It is up to the student how they want to shape their degree.

6 Societies, social events, and resources

How to meet other students?

One challenge that CogSci students report is that it can be hard to locate the other CogSci students. We have begun addressing this via tutorial assignments, and we encourage students to take advantage of the available societies, events and resources.

The introductory courses in year₁ are large and finding the handful of CogSci students (average incoming cohort is ~20) can be difficult. With the help of the teaching office, CogSci students will be assigned tutorials with other PPLS students and, when possible, other CogSci degree students.

For other contexts in which you can meet students, consider joining one or more of the undergraduate societies, attending social events, and availing yourself of PPLS resources. The societies that would be most relevant include:

- CogSciSoc: <https://www.eusa.ed.ac.uk/activities/societies/society/cogscisoc/>
- LangSoc: <https://www.eusa.ed.ac.uk/activities/societies/society/lingsoc/>
- PsychSoc: <https://www.eusa.ed.ac.uk/activities/societies/society/psychologysociety/>
- PhilSoc: <https://www.eusa.ed.ac.uk/activities/societies/society/philosophysociety/>
- CompSoc: <https://www.eusa.ed.ac.uk/activities/societies/society/compsoc/>

You will also see occasional events and resources advertised. Consider attending advertised workshops on topics like essay writing or time management. Subject area colloquia are open to all students and touch on a range of topics and research. Occasionally, CogSci-relevant international conferences are held in Edinburgh that will be advertised via mailing lists and posters, with possible discounts for undergraduate students.

7 Study abroad

What options are there?

CogSci students are welcome to apply to study abroad. There are two possible avenues for study abroad – the university-wide programme (<https://www.ed.ac.uk/global/exchanges>) and the subject-specific ERASMUS programmes in Philosophy, Psychology, and LEL. Students can apply to any and all of these. If applying via ERASMUS, a student should expect that available courses in English at the host institution will be primarily in the subject area of that ERASMUS exchange, but sometimes this is flexible and more courses are available. Study abroad applications are submitted in Year₂, Semester 1, usually in November. Decisions are made based on a combination of the student's marks, available places on relevant programmes, and the application statement that indicates student interest, fit for a particular programme, and ability to be an 'ambassador' for Edinburgh. If you study abroad with ERASMUS, course choices abroad should sum to 58-60 ETCS credits. The CogSci teaching director is the study abroad coordinator for confirming Learning Agreements and Risk Assessments.

8 Course recommendations

What do staff and students suggest is relevant and interesting?

Below are sample pathways from a set of former and finishing CogSci MA students. Note that they entered the programme under slightly different DPTs and some of the available course offerings have changed, so some of their choices may not map directly onto the current DPT, but it can be valuable to see what courses other CogSci students have done. Pathway titles correspond to the student's dissertation title.

8.1 Sample Pathway₁: "Referential updating: an eye-tracking investigation"

- LEL dissertation supervised by Hannah Rohde
- Year₁: LEL₁ (40), Psych₁ (40), INF₁:CogSci (20), Philosophy of Science 1 (20)
- Year₂: Psych₂ (40), LEL_{2A} (20), LEL_{2D} (20), MML (20), K&R (20)

- Year3: Year abroad
- Year4: LEL dissertation (40), Computer Programming for Speech and Language Processing (20), Speech Processing (20), Pragmatics (20), Speech Synthesis (20)

Student's comments:

1st year: Informatics 1 Cognitive Science: a truly amazing course that I enjoyed very much and that pretty much shaped and deepened my interest in Cognitive Science and the research opportunities the field offers. The only problem with the course was that we had to do assignments with MATLAB. However, as far as I know, now it's being done with Python, which, in my opinion, is a great improvement.

Linguistics and English Language 1: I couldn't have enjoyed the course more. Especially the first assignment we had to do, which was figuring out the phonology, morphology, syntax and semantics of an unknown language. I truly think it was the most interesting assignment I have ever done for the university.

Philosophy of Science 1: I think that taking a philosophy course in the first semester of year 1 was a great decision, because it taught me a lot in terms of scientific writing. Also, the content of the course and the lecturers were really interesting.

Psychology 1: The course was interesting, but quite simplistic. However, it lead to Psychology 2 course, which was much better.

2nd year: Mind, Matter and Language: The contents of the course were very interesting, especially the part about cognition. I don't think that it closely links with what I want to do in the future, but since having taken the course, I read a lot about the issues we studied in my free time.

Knowledge and Reality: I enjoyed the course, but would have rather taken something else from the Philosophy department (e.g. Metaphysics of Mind or the Computational Mind (however, these are only offered in 3rd year, I think)). A side note: I think that the Philosophy courses we were allowed to choose from in 1st and 2nd year were quite limited and very anglo-saxon based, I would have liked to see more variety.

LEL2A & LEL2D: I enjoyed both of the courses, but for what I want to do in the future, it would have been much more beneficial for me to take LEL2B (it wasn't allowed at the time) - the course on phonetics instead of either LEL2A or LEL2D.

Psychology 2: I think that it was very beneficial for me to have studied statistics in this course. Also, it was great that we had to run 2 experiments throughout the course and write reports on them. Both of these things helped me a lot while I was taking my courses abroad and I have/ will have to use the skills gained in this course for my dissertation.

3rdyear: I went on an Erasmus exchange to Utrecht University. I was able to do so through the Linguistics department. I didn't regret it for a second, however, I already knew it by then that I wanted to focus most on Linguistics and Informatics. For someone who enjoys studying Philosophy and Psychology, I wouldn't recommend doing the same. However, the course choices might be different in a different university.

4th year: All three of these courses are very directly linked with what I want to do later ' a MSc in Speech and Language Processing. They are all great courses, though quite challenging ones. I was a bit afraid to take them with little programming knowledge and it was quite hard towards the end of the semester, but definitely doable for a humanities student.'Worth mentioning that I didn't have the prerequisites for the Computer Programming for Speech and Language Processing and

Speech Processing courses since I haven't taken LEL2B, however, after contacting the lecturers directly, I was able to take these courses.

Pragmatics - The course is very interesting and, strangely enough, the only course that directly links with my dissertation.

Dissertation in Language Sciences: The title of my dissertation is 'Referential updating: an eye-tracking investigation'. Even though my dissertation doesn't directly link with my future plans, it's a fun and challenging project. Also, I constantly use my skills gained from other courses (such as programming, statistical analysis, etc.) while working on the project.

All of the courses I'm taking in my 4th year are from the Linguistics department. I was able to take all of my courses from Linguistics, because I studied Psychology, Philosophy and Informatics based courses while on my exchange.

8.2 Sample Pathway2: "Evolutionary Psychology and the Problem of Module-like Processors"

- Philosophy dissertation supervised by Alistair Isaac
- Year1: LEL1 (40), Psych1 (40), INF1:CogSci (20), Philosophy of Science 1 (20)
- Year2: Psych2 (40), LEL2A (20), LEL2D (20), MML (20), K&R (20)
- Year3: Ancient Ethics (20), Philosophy of Psychology (20), Child Bilingualism: Language and Cognition (20), Social Cognition (20), Clinical Psychological Problems in Context (10), Cognitive Development in Children (10), Learning and Memory (10), Development of language, literacy and communication (10)

Student's comments:

Courses I wish I could have taken:

- Frontal Lobe Functions (PSYL10075)
- Children with Language Impairments (PSYL10014)
- Working Memory (PSYL10117)
- Class: The Psychology of Wealth, Poverty, and Social Rank (PSYL10123)
- Clinical Neuropsychology: a Cognitive Perspective (PSYL10041)

Links between courses: Most 3rd/4th year psychology courses will have Research Methods and Statistics as a prerequisite.

Dissertation Subject Area: Philosophy of Psychology. In my dissertation, I developed an argument against a particular approach to psychology/cognitive science research (Evolutionary Psychology by Cosmides and Tooby), supporting my argument using cross-cultural comparative research.

Most of the philosophy courses I took had large philosophy of mind components. I was also consistently trying to take courses regarding cognitive development/learning/memory in children. The psychology course, Cognitive Development, in particular, was highly relevant to many of my other honours courses as I found that the research provided relevant case studies for philosophy of mind debates and provided a good foundation for navigating other areas of psychology. I would describe my pathway as a major in philosophy of mind with a minor in cognitive development.

Ongoing: In October, if all goes well, I will begin studying MPhil in Education (Globalisation and International Development) at Cambridge University. My proposed research project involves creating and adapting cognitive development support strategies for low-resource contexts. Studying philosophy of mind has given me opportunity and guided practice in generating theoretical arguments based on empirical evidence. I have also learned how to critically assess research

methodology to better analyze and compare empirical findings. Therefore, I feel strongly that my cognitive science studies at the University of Edinburgh have prepared me well for this endeavor.

8.3 Sample Pathway3: “Discourse and language used by theatre directors”

- LEL dissertation supervised by Bettelou Los
- Year1: LEL1 (40), Psych1 (40), INF1:CogSci (20), Philosophy of Science 1 (20)
- Year2: Psych2 (40), LEL2A (20), LEL2D (20), MML (20), K&R (20)
- Year3: Year abroad
- Year4: Origins and Evolution of Language (20), Dialects of English in Britain and Ireland (20), Children with Language Impairments (10), Clinical Neuropsychology: a Cognitive Perspective (10), Parapsychology (10), Psychology of Counselling (10)

Student's comments:

I don't really know if there's a specific “pathway” you can see in my courses - or what its title would be. We were very limited in our choices in first and second year - which i know we all found frustrating - especially due to the overlap between material we had learnt in linguistics and philosophy, and also, in some respects, in psychology. However, I guess we all know those features really well - perhaps they are necessary foundations, that we have interestingly looked at from several perspectives? In my third year, I went to the university of Chicago. This i took as an opportunity to do some weird courses, and things that fell outside of the University of Edinburgh's program. Some of the classes I applied to take (like, the Linguistics of Pornography and the Psychology of Child Psychopaths) were actually not ran while i was away, which was a big disappointment.

I purposefully chose to complete the philosophy remit of my honours courses abroad, as I have always found philosophy the most unpredictable of my grades, and we were told in first year that there was no way we would get a first if we chose to do philosophy. I know that's untrue, but it stuck in my head and has put me off ever since.

Psychology-wise, I have always looked for the most neuro-scientific features. I particularly like children's development and neuroscience. I have done more counselling courses than i would have expected, or, I guess, liked to do, but I was quite unsure of the options for this year anyway. Clinical Neuropsychology was the best course of this year in psychology, and I also really enjoyed parapsychology as an outside subject. Children with language impairments has seemed quite basic for someone with a linguistics background.

In my first two years psychology was by far my favourite subject, but in the last two years that has become linguistics. In Chicago I really got to focus on what I liked about international variation, and also the creation of language - which lead me to Dialects and Origins this year. I feel that in Edinburgh there is a lot of focus on English, and so really enjoyed being able to study swahili while i was abroad. People in my Dialects of English class have said there is a lot of overlap between the scots class that they took last year. I would have liked to have done a dissertation in dialectology, but I felt like i had insufficient background and would have had to take the extra courses that teach you how to write your dissertation, losing out on those credit spaces in my final year. My dissertation is instead on discourse and the language used by directors in the theatre - this is a completely new field of linguistics for me and is bringing in my outside experience in the arts.

Informatics was incredibly difficult for me, and so I chose to drop in at the end of first year. I found my lack of a maths background incredibly difficult, as it was taught to us as if we were maths geniuses.

I hope this is helpful - probably not it's a bit of a shambles of just picking what i liked the sound of best!

8.4 Sample Pathway4: “The effect of perceptual and semantic similarity on false memory”

- Psych dissertation supervised by Alexa Morcom
- Year1: Psych1 (40), Morality & Value (20), INF1:CogSci (20), INF1:Computation & Logic (10), INF1:Functional Programming (10), INF1: Data & Analysis (10), INF1:Object-Oriented Programming (10)
- Year2: Psych2 (40), INF2A (20), INF2B (20), INF2D (20), Intro to Linear Algebra (20)
- Year3: Introduction to Vision and Robotics (10), Critical Analysis (10), Research Methods and Statistics 2 (10), Research Methods & Statistics 3 (10), Biological Psychology (10), Clinical Psychological Problems in Context (10), Cognitive Development in Children (10), Development of language, literacy and communication (10), Learning and Memory (10), Social Psychology: Experimental and Applied Approaches (10), Thinking and Reasoning (10)
- Year4: Computational Cognitive Science (10), Professional Issues (10), Language Pathology (20), Children with Language Impairments (10), Intimate Relationships (10), Multisensory Integration (10), Working Memory (10)

8.5 Sample Pathway5: “Using tongue-twisters to try and understand inner speech”

- Psych dissertation supervised by Martin Corley
- Year1: Psych1 (40), Morality & Value (20), INF1:CogSci (20), INF1:Computation & Logic (10), INF1:Functional Programming (10), INF1: Data & Analysis (10), INF1:Object-Oriented Programming (10)
- Year2: Psych2 (40), LEL1 (audit), INF2A (20), INF2D (20), LELA (20), LELD (20)
- Year3: Lexical Semantics (20), Speech Processing (20), Corpus Linguistics (20), Pragmatics (20), Foundations of Natural Language Processing (10), Cognitive Development in Children (10), Development of language, literacy and communication (10), Psychology of Language (10)
- Year4: Professional Issues (10), First Language Acquisition (20), Figurative Language (20), Second Language Acquisition (20) Psycholinguistics of Language Production (10)

8.6 Sample Pathway6: “The use of reformation to repair faulty analogical blends”

- Informatics Honours Project supervised by Alan Bundy
- Year1: LEL1 (40), Logic 1 (20), Morality & Value (20), Greats: From Plato to the Enlightenment (20), Introducing New Testament Greek (20)
- Year2: INF1:CogSci (20), LEL2A (20), LEL2B (20), MML (20), K&R (20), INF1:Data & Analysis (10), INF1:Object-Oriented Programming (10)
- Year3: INF2A (20), Logic 2: Modal Logics (20), Metaphysics (20), History of Analytic Philosophy (20), Corpus Linguistics (20), Simulating Language (20), Introduction to Theoretical Computer Science (10)
- Year4: Computer Programming for Speech and Language Processing (20), Introductory Applied Machine Learning (20), Current Issues in Semantics and Pragmatics (20), Philosophy of Time Travel (20)

8.7 Sample Pathway7: “A sociolinguistic examination of Verlan of the French banlieues”

- LEL dissertation supervised by John Joseph

- Year1: Psych1 (40), LEL1 (40), Logic 1 (20), INF1:CogSci (20), Philosophy of Science (20)
- Year2: Psych2 (40), LEL2A (20), MML (20), LEL2D (20), Figurative Language (20)
- Year3: The Early Continentals: Hegel and Nietzsche (20), Phenomenology: Merleau-Ponty (20), Philosophy of Psychology (20), Clinical Psychological Problems in Context (10), Social Psychology: Experimental and Applied Approaches (10), History of Linguistics (20), Psycholinguistics (20), Introductory Arabic Language (20)
- Year4: Language, Politics and Identity (20), Cognition, Culture and Context (10), Ethics of Artificial Intelligence (20), Critical Social Psychology (10), Marxist Psychology (10), Psychology of Counselling (10)

9 FAQ

9.1 Is there a CogSci dissertation?

There is no “CogSci dissertation” to enrol on. CogSci students register for a dissertation in one of the PPLS subject areas (Philosophy, Psychology, or LEL) or in Informatics. Students are encouraged to work with staff with CogSci interests (e.g., see COs of recommended courses above) to pursue a project that addresses questions from Cognitive Science. The dissertation, however, will be submitted as a Philosophy or Psychology or LEL dissertation or else as an Informatics Honours project.

9.2 Is a degree transfer within PPLS possible?

Yes, the degree is set up so that in prehonours (years 1 and 2), CogSci students are required to take a sufficient number of courses in one of the PPLS subject areas to make a degree transfer possible within PPLS. For example, if a CogSci student takes both MML (Mind, Matter and Language) and K&R (Knowledge and Reality) in year 2 as part of satisfying their breadth and depth requirements, they will be in a good position to apply for a transfer to Philosophy. Similarly, DAPR2 and Psych2A and Psych2B would be appropriate for a transfer to Psychology.

9.3 Is CogSci BPS accredited (BPS = British Psychological Society)?

For accreditation, unfortunately there is no longer a pathway to BPS accreditation for CogSci degree students. For this reason, some students apply to transfer to a Psychology degree if their future career plans depend specifically on BPS accreditation (e.g., some counseling/therapy training programmes). For most postgraduate programmes in Psychology or related areas, it is often the case that demonstrating coursework in Psychology or a dissertation in Psychology is sufficient. Your dissertation supervisor or Personal Tutor can help write a letter of reference explaining what the CogSci degree covers generally and what particular skills training and topics you emphasized. Students can also seek accreditation via a subsequent MSc degree or other postgraduate conversion programme.

9.4 How much overlap exists between courses?

Students sometimes remark on cases where multiple courses converge on a topic. Sometimes students find this useful as it provides varying perspectives on complicated debates, but sometimes the redundancy is frustrating. Keep an eye out for overlap between in the following cases: between LEL2A ~ INF1:Computation&Logic (discussion of 1st-order logic), between LEL2A ~ MML (semantics), between First Language Acquisition ~ Development of language, literacy and communication, and between Psycholinguistics ~ First Language Acquisition. The content for

these courses will adjust over time, but it's good to go into such courses knowing about the possible overlap.

9.5 How much computation is part of CogSci?

It is not necessary to have prior computational training to do CogSci. Both the year-1 Intro CogSci courses involve computer programming and both provide lab time with tutors present. Anecdotally, we see that most students find they enjoy programming, particularly those who like solving puzzles, finding patterns, tinkering to see how things work. Some students have reported coming in to the degree worried that they wouldn't like it and one of those students ended up staying on to do a computationally focused MSc in Speech and Language Processing.

9.6 Are there Informatics Honours courses for students with little prehonours Informatics?

It's always best to check with course organisers of honours courses you're interested in taking, but Computational Cognitive Science is currently understood to take INF1:Cognitive Science as the best prerequisite. (Note that this course does not run every year). It would also be useful to have a good dose of probability theory as preparation (e.g., mastery of these concepts: http://homepages.inf.ed.ac.uk/sgwater/math_tutorials.html)

9.7 Where is CogSci's home within PPLS?

Students on CogSci have many homes. It is the only degree programme to give students access at Honours to courses across the school of PPLS and the school of Informatics. The physical buildings of DSB and 7GS are your joint homes. Students can take advantage of a number of resources/labs/events/opportunities across the two schools including the PPLS library in 7GS and Resty McRestplace on the ground floor of DSB.

A challenge for this degree is that it has no single home and no subject area or teaching office devoted exclusively to CogSci. Because of this, we encourage you to be proactive, to ask when you have questions and to seek out opportunities that look interesting from any part of PPLS or Informatics (good skills to practice in general).

9.8 What timetable clashes exist?

It is important to look for timetable clashes, particularly at Honours. Within a given subject area, clashes are minimised where possible (not always possible)(which is a reflection of the number and variety of courses on offer!). However, across subject areas there is little in place to avoid possible clashes and they do arise. One possible workaround is that the lectures for some courses may be recorded and posted online. You should email the course organiser to check if they can be willing to grant you permission to take the lecture course remotely. Of course, this is less ideal than in-person lectures.

9.9 Which Informatics courses to take?

A number of CogSci students come into the programme with an interest in computational aspects of the field; others get hooked after taking a couple courses that include computational components (and there are others who do not :). If a student is interested in pursuing Honours courses in Informatics (beyond a course like Computational Cognitive Science whose best preparation is INF1:CogSci), the earlier one can start, the better. The information below outlines some factors to keep in mind for possible Honours Informatics courses, some considerations regarding prehonours, and the maths knowledge that one should build up. Two proposals are listed for

possible prehonours pathways that would be reasonable preparation for some CogSci-relevant Honours-level Informatics courses.

First, it's worth considering some Honours Informatics courses that are CogSci-relevant in order to understand which year2 courses will be most useful. The following are a sample with notes about prerequisites:

- Foundations of Natural Language Processing: INF2A, plus some math, uses Python
- Introductory Applied Machine Learning: linear algebra, probability, and/or INF2B, uses Python
- Automated Reasoning: INF2D (which itself requires INF2A)
- Agent Based Systems: INF2D (which itself requires INF2A)
- various robotics courses: linear algebra, probability, INF2B
- other Informatics courses are listed here: http://www.drps.ed.ac.uk/current/dpt/cx_sb_infr.htm

If it's the case that a student wants to prepare for Honours courses in Informatics, the next question is how to fit sufficient Informatics prehonours courses and relevant maths courses into the already tight schedule of the CogSci degree. In year 1, ideally a student would follow the full INF1 sequence. In year 2, ideally a student would take INF2A/2B/2D. The most relevant maths courses are Introduction to Linear Algebra, Calculus and its Applications, Probability with Applications, and Discrete Mathematics and Mathematical Reasoning.

In weighing the options, consider the sample pathways above. One suggestion from Informatics is that it may be the case that a stronger mathematical background is more worthwhile than Inf2D, especially if the student is planning to do more learning-based AI (rather than planning and reasoning). The assignments in Inf2D use Haskell and Prolog, which means more languages to deal with for someone who doesn't have a strong programming background and perhaps should focus on getting good with one language. Inf2B is likely to be very challenging for someone who hasn't done much maths, although unfortunately a lot of the relevant math is spread over many different courses (some discrete math from Discrete Mathematics and Mathematical Reasoning, and the learning part assumes both some linear algebra and an ability to do partial derivatives. They use probability but it's not clear how much is assumed ahead of time; many Informatics students are taking Probability with Applications simultaneously.)

9.10 How many credits to put towards Informatics courses in year 2?

If a student has only 20 credits and is interested in natural language processing, INF2A is the best precursor to other NLP courses they might try to take. For a student who is game to use 60 credits in year2 towards preparation for Honours Informatics courses, a good selection would be INF2A, INF2D, and some maths (Introduction to Linear Algebra or else Probability with Applications or Discrete Mathematics and Mathematical Reasoning if they have the maths background for it).

9.11 Answer to almost all other questions: "It depends what interests you most!"

That said, do seek out advice from your PT and from instructors of courses that you find interesting. Staff are typically excited to hear about your enthusiasm and will help to find relevant resources wherever possible.