

BSc/MA Psychology teaching curriculum (all degrees)

The following table presents the teaching in 1st through to 3rd year. The 3rd year courses provide most of the BPS accreditation (4th year project completes it) and hence we are required to maintain the material taught in these modules. Furthermore, the 3rd year timetable is also set: joint degree students complete 6 of the 8 half-semester modules and the two methodology modules over the course of two years and this is only possible if the timetable stays the same from year to year.

1000 level PS1001-2	History	Developmental & Comparative		Social	Neuroscience	Learning, memory, attention & emotion	Sensory systems & perception	Clinical, Alzheimer's, Parkinson's, depression, ADHD, Neglect	Methods
2000 level PS2001-2		Comparative		Social	Behavioural neuroscience	Cognition	Perception	Clinical	Methods
3000 level PS3021-38	Conceptual & theoretical issues	Comparative	Development	Social	Cognitive neuroscience	Cognition	Perception	Clinical	Methods

The sub-honours modules (PS1000 and PS2000) are compulsory for all honours psychology & neuroscience students. The numbers are relatively large (300-350 1st year, 150+ 2nd year).

The PS3000 level modules are compulsory for all single honours psychology students and many are taken by joint honours and Neuroscience students. The numbers are still relatively large (80-150), especially compared to 4th year modules. Classes of this size can only be effectively taught using the traditional lecture format. Practical and methodological teaching requires substantial post-graduate help.

The fourth year (PS4000 level) modules are specialist and reflect the interests of the academics in the School (they are not constrained by BPS requirements). Wherever possible, they are taught as seminar series with students presenting their readings to complement the lecturer's teaching. So long as the core BPS requirements are met, we are always looking for new 4000 level modules. The main criterion is that they are different from each other, thereby exposing our students to as wide a range of advanced topics as possible.

The MSC (Conversion) modules. PS5231-PS5238 map to PS3031-PS3038 modules, with specialist methodology modules (SS5104 & PS5005) replacing PS3021 & PS3022

Overview of the PS modules

Module	St Andrews (ECTS) credits	Focus (more details given in curricula below)	Weekly format
1st year			
PS1001	20 (10)	History, Developmental & Comparative, Social, methodology	4 hrs lectures + 2 hrs methodology
PS1002	20 (10)	Sensory, cognitive neuroscience, perception, methodology	4 hrs lectures + 2 hrs methodology
2nd year			
PS2001	30 (15)	Neuroscience, Perception, Clinical, methodology	4 hrs lectures + 3 hrs methodology
PS2002	30 (15)	Cognition, Comparative, Social, methodology	4 hrs lectures + 3 hrs methodology
3rd year			
PS3021	15 (7.5)	Methodology	2 hrs lectures + 1-2 hrs practical
PS3022	15 (7.5)	Methodology	2 hrs lectures + 1-2 hrs practical
PS3031	10 (5)	History & conceptual issues	2 hrs lectures + 1-2 hrs practical
PS3032	10 (5)	Clinical psychology	2 hrs lectures + 1-2 hrs practical
PS3033	10 (5)	Developmental psychology	2 hrs lectures + 1-2 hrs practical
PS3034	10 (5)	Social psychology	2 hrs lectures + 1-2 hrs practical
PS3035	10 (5)	Cognitive neuroscience	2 hrs lectures + 1-2 hrs practical
PS3036	10 (5)	Comparative psychology	2 hrs lectures + 1-2 hrs practical
PS3037	10 (5)	Perception	2 hrs lectures + 1-2 hrs practical
PS3038	10 (5)	Cognition	2 hrs lectures + 1-2 hrs practical
PS4040	10 (5)	Review of topic of interest chosen by student (whole year)	Supervised review
4th year			
PS4299	60 (30)	Empirical project (whole year), single honours only	Supervised project
PS4050	30 (15)	Empirical project for joint degree students (whole year)	Supervised project
PS4060-PS4199 (Elective)	15 (7.5)	Elective modules expose students to cutting edge research, theory and methodology.	2 hr seminars; independent reading and presentations by students

Honours Psychology students (BSc & MA, single and joint degrees) must all take the sub-honours (years 1 & 2) modules. Single Honours (BSc & MA) take all 3rd year modules and, in 4th year a research project. The remainder of the 4th year is taken in the elective modules, allowing students to specialise in areas of their choice.

Joint degree students, across their two honours years, must cover the core areas in their third year (PS3031-PS3034; either PS3035 or PS3036; either PS3037 or PS3038). The methodology and review modules are compulsory for BPS-GBC, but optional for non-accredited joint degrees. BPS-BGC requires a 4th year project.

Curricula by area

The tables below indicate the main content areas covered during each of the three years. This provides an example of the range of teaching and will naturally evolve from this over time. It serves, however, to provide a framework in which proposed changes of teaching should be considered.

Clinical curriculum					
1st year	<p>PS1001: Freud and psychoanalytic theories</p> <p>PS1002: brief history of clinical psychology</p>	<p>PS1001: Autism. Triad of impairments (imagination, socialisation & communication). Kanner (classic) and Asperger syndrome. Social impairments and abnormal social development</p>	<p>PS1002: Optical deficits early in life; altered perception of emotion, object, faces, motion following brain damage, autism, depression, conduct disorder. Separate preservation of visual control of action and visual recognition following brain damage; Schizophrenia and recognising own actions.</p>	<p>PS1002: Deep brain stimulation, neural prosthetics, using brain activation to probe patients with locked in syndrome.</p> <p>PS1002: Depression & learned helplessness; Depression & drug treatment (MAOIs, TCAs, SSRIs)</p> <p>PS1002: Neurobiology of disorders (ACh & Alzheimer's; DA and Parkinson's; Huntington's and disgust perception</p>	<p>PS1002: Drug addiction: rewards, homeostasis & opponent processes, basal ganglia and DA</p> <p>PS1002: Memory disorders, hippocampus (HM, alcoholism, Korsakov's syndrome & mammillary bodies)</p>
2nd year	<p>PS2001-2: Historical roots of psychopathology; Concepts, classification and treatments of psychopathology</p> <p>PS2002: Classification, assessment of psychopathology (depression & bipolar disorder, neurological, anxiety, eating disorders, substance abuse)</p>	<p>PS2001: Depression (neural basis, amygdala – PFC interaction, serotonin transporter gene)</p> <p>PS2001: Neurodegenerative disorders (PD, AD, ALS Huntington's)</p>	<p>PS2001: Schizophrenia (DA hypothesis, hypofrontality, twin studies)</p>	<p>PS2001: Consciousness (split brain patients, awareness in coma patients)</p>	<p>PS2001: Mirror neurones & autism. Sleep disorders.</p> <p>PS2001: Cognitive neuroscience of memory & memory disorders</p>
3rd year	<p>PS3032: Spatial cognition (spatial attention, spatial neglect), Executive function and executive dysfunction, Object perception and simultanagnosia</p>	<p>PS3032: Assessment in clinical psychology. Individual differences, normal distribution, behavioural and neurobiological assessment, evaluating assessments.</p>	<p>PS3032: the importance of understanding disease mechanisms for designing assessment methods and rehabilitation strategies</p>	<p>PS3033: Developmental theories explaining the social deficit in autism ('Theory of Mind' vs more recent embodied explanations)</p>	<p>PS3037: Amblyopia and plasticity as a tool for visual therapy. Restoring Vision in later life: vision after congenital cataract surgery.</p>

PN3312: Pharmacological interventions in AD, Pain, Schizophrenia, PD and other central motor disorders.

PS3035: Cognitive Control: State and Trait Anxiety, Externalizing vs Internalizing Personalities, Aging, Depression

Motion blindness and anatomy of motion-specific brain areas. Colour blindness, both cortical and congenital.

Cognition curriculum

1st year	<p>PS1002: Learning (classical & operant conditioning; fear conditioning & amygdala; Thorndike's law of effect; 2nd order vs blocking, contiguity & contingency; Rescorla-Wagner model; equi-potentiality; reinforcement schedules)</p>	<p>PS1002: Memory (explicit vs implicit; Modal model and working memory models; role of hippocampus & frontal cortices)</p>	<p>PS1002: Attention (focused, divided, and sustained; core idea of limited capacity; early & late filtering models)</p> <p>PS1002: Interactions between attention and perception. Top down models of perception. Imagery. Language and perception. Action and perception interactions. Illusions and aftereffects</p>	<p>PS1002: Emotion: Hull's drive reduction theory; James-Lange interpretatist model; Schacter & Singer's attribution theory; Dutton & Aron's misattribution; Universality of expression; Micro-expressions</p>	<p>PS1002: Models of emotion: Plutchick's evolutionary model, socio-evolutionary models, strong vs moderate constructionism (Averill vs Barrett)</p>
2nd year	<p>PS2002: development of spatial cognition; development of imagery, Object recognition</p>	<p>PS2001: Memory (declarative/non-declarative, neural systems supporting spatial and episodic memory, place cells, grid cells, cognitive map and animal models of memory)</p> <p>PS2002: Working memory and executive function; autobiographical memory; eyewitness testimony & forgetting</p>	<p>PS2001: Language and Perception (Sapir-Whorf Hypothesis: Understand the different hypothesis, understand key experiments in the field incl World color survey & Winawer et al. Russian blue. The BBC Davidoff Video)</p> <p>PS2002: Attention; Reading, language</p>	<p>PS2001: Learning and social learning; association theory, types of conditioning; constraints on learning; social learning; stimulus enhancement and response facilitation; imitation and affordance learning.</p> <p>PS2002: Cognition & emotion</p>	<p>PS2001: Evidence of intentionality in animals: knowledge/ignorance, attribution of intent, role-taking, mirror self-understanding.</p> <p>PS2002: Expertise</p>
3rd year	<p>PS3038: Introduction to computational approaches and experimental paradigms in cognitive research. Key topics include attention, decision making, memory & history effects in behavioural data, and logic & reasoning.</p> <p>PS3032: Spatial cognition (spatial attention, spatial neglect)</p>	<p>PN3313: Memory types, Mechanisms for implicit and explicit memories, habituation and sensitization in aplysia, hippocampal LTP/LTD and spatial memory formation, place cells and grid cells.</p>	<p>PS3035: Individual variations affecting Cognitive Control: State and Trait Anxiety, Externalizing vs Internalizing Personalities, Aging, Depression</p>	<p>PS3035: Cognitive Control: The control homunculus, modularity hypothesis; basic experimental paradigms (e.g. Stroop, flanker text); Neuroanatomy of cognitive control; computational modelling;</p> <p>PS3032: Executive function and executive dysfunction, Object perception and simultanagnosia</p>	<p>PS3037: Unusual colour experiences: synaesthesia</p> <p>PS3037: Complex motions: recognition of animacy in human and animal forms</p>

Developmental & Comparative curriculum

1st year	PS1001: Piaget: infant cognition, object permanence in humans and animals; modern infant cognition (numerosity, object individuation, crossmodal cognition in humans and animals) child cognition (conservation; child as scientist; implicit vs explicit knowledge).	PS1001: Language acquisition, nativist and social cognitive approaches to language acquisition. Evolution of verbal and nonverbal communication. Learning from others.	PS1001: Social development, Attachment, Vygostkian approaches to social-cognitive development; theory of mind in humans and animals, evolution of social cognition. Educational psychology.	PS1001: Autism. Triad of impairments (imagination, socialisation & communication). Kanner (classic) and Asperger syndrome. Social impairments and atypical social development PS1002: Comparative and developmental perspectives on visual development	PS1002: Models of emotion: Plutchick's evolutionary model vs socio-evolutionary models vs Averill & strong constructionism, Barrett & moderate constructionism
2nd year	PS2002: Evolution and natural selection; convergent evolution; evolution of behaviour and cognition; comparative psychology; levels of explanation; Tinbergen's 4 questions.	PS2002: socioecology; kin selection, altruism; prosociality; functional and causal explanations; bluff and honest advertisement; cooperation and competition in social life.	PS2002: Humans as primates, Finding and hoarding food; Navigation and homing; Extracting and processing food; Predator and anti-predator behaviour ; Coalitions and alliances	PS2002: Learning and social learning; constraints on learning; Aggression and conflict resolution; Territorial defence; Sexual behaviour and reproduction; Parental behaviour	PS2002: animal cognition; Social interaction and communication; social learning and culture
3rd year	PS3033: Hunter-gatherer childhoods (as a model for ancestral childhood) and extended childhoods in an evolutionary and comparative context.	PS3033: Cumulative Culture (imitation fidelity, over-imitation, cooperation and/or teaching in infants and children, conformity at the expense of personal information and normativity in young children)	PS3033: Joint Intentionality: development from infancy (understanding intentionality, sharing emotions, communicative pointing. Critiques (lean interpretations and relational explanations)	PS3033: Developmental theories explaining the social deficit in autism ('Theory of Mind' vs more recent embodied explanations)	PS3037: Development of vision during first few months of life. Methods to measure visual and cognitive performance in infants. PN3312: CNS development and teratogenic effects of drugs on the nervous system

Individual differences curriculum (embedded and assessed in other teaching)

<p>1st year</p>	<p>PS1001: Social vs. individual explanations of behaviour, Le Bon vs. Allportian individualism;</p> <p>PS1001: Individual and social explanation of prejudice and discrimination, Authoritarian Personality theory</p> <p>PS1001: Individual difference vs. relational models of leadership, 'great man' theories of the leader.</p> <p>PS1002: how perception is shaped through culture and individual differences in experience.</p>	<p>PS1002: Neurodegenerative disorders (Parkinson's, Alzheimer's)</p> <p>PS1002: Decline of hearing and seeing with age;</p> <p>PS1002: How failure to use context contributes to schizophrenia</p> <p>PS1002: individual difference in attentional following with autistic spectrum disorder.</p> <p>PS1002: Alcoholism & memory disorders</p> <p>PS1002: Other clinical: Phantom limbs and synaesthesia</p>	<p>PS1002: Subjective nature of perception; Perception practical, experiments and analysis of individual differences in perception; Individual differences in perception arising from differences in brain organization including those reflecting genetics; How differences in interpreting actions of other depend on differences in motor skill.</p> <p>PS1002: interpretation of expressions and empathy differs according to individual biases in cognition (conduct disorder) and mood</p> <p>PS1002: the basis of individual differences in interpersonal attraction to faces (e.g. self-esteem).</p>	<p>PS1002: Models of emotion: from Plutchick's evolutionary to strong vs moderate constructionism (Averill vs Barrett)</p> <p>PS1001: Origins of Intelligence testing (Binet). IQ testing and the notions of General Intelligence, Individual differences in Autism.</p>
<p>2nd year</p>	<p>PS2002: Helping, empathy prejudice & discrimination; Leadership and leadership styles; Dual process theories of persuasion.</p> <p>PS2001-2: Neurodegenerative disorders (Parkinson's, Alzheimer's, ALS [Lou Gehrig's/motor neurone disease] Huntington's)</p>	<p>PS2001-2: Historical roots of psychopathology; Concepts, classification and treatments of psychopathology</p>	<p>PS2001: Variability in sensory perceptions caused by individual differences in sensory physiology, (e.g. genetic variations in vision, smell, taste, pain). Cultural influences on perception (e.g. language and environmental influences on colour perception).</p>	<p>PS2001: Deficits & disorders in reading & language</p> <p>PS2002: Evidence for evolution; Darwinian fitness & causal explanations.</p>
<p>3rd year</p>	<p>PS3021: Project: Students relate individual difference to performance measure (RT/accuracy) in visual search [design, implement, collect data, analyse, write-up].</p> <p>PS3031: Psychology and Society; Criticisms of Psychology; WEIRD participants; psychology as anthropology</p> <p>PS3034: key debates in personality psychology (e.g., nature vs. nurture), an overview of the Big5, individual differences in right-wing authoritarianism and social dominance orientation and how these relate to prejudice,</p>	<p>PS3031: Beliefs, Concepts and categories. Brains, minds and machines. reductionism; Freewill and determinism</p> <p>PS3032: Assessment in clinical psychology. Individual differences, normal distribution, behavioural and neurobiological assessment, evaluating assessments.</p> <p>PS3035: Individual variations affecting Cognitive Control: State and Trait Anxiety, Externalizing vs Internalizing Personalities, Aging, Depression</p>	<p>PS3031: Individual differences – Personality; Intelligence; Nomothetic and idiographic approaches; models of mental health. Identity and Embodiment</p> <p>PS3033: individual differences in language development, categorisation, mathematical reasoning, numerical competency & spatial reasoning</p> <p>PS3022: The factors of Intelligence (Spearman's G, Thurstone). Right-wing</p>	<p>PS3031: Freudianism, behaviourism, humanistic psychology. Social Constructionism; Positive Psychology</p> <p>PS3036: sex differences, cross-cultural differences, differences in individual fitness, inherited versus environmental components of individual difference</p>

the role of personality (Big 5) in shaping RWA and SDO.		authoritarianism (prejudice) and its measurement	
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Methodology curriculum

1st year	<p>PS1001: What is science? Theories & hypotheses. Experimental and quasi-experimental designs. Within, matched & between subjects designs. Independent, dependent & confounding variables.</p> <p>PS1001: Types of measures, frequency tables & histograms, bar chart & box plots.</p>	<p>PS1001: Measures of central tendency (mean, median, mode) & dispersion (range, IQR, variance SD). Skewness. Standardised Z-scores. Excel workshop (using excel to calculate descriptive statistics and produce a bar chart); levels of measurement.</p> <p>PS1002: Non-parametric statistics. Wilcoxon t-test, Mann-Whitney-U test. Chi-squared. As goodness of fit. As test of association</p>	<p>PS1001: Inferential statistics. 1 vs 2-tailed tests, type 1 & type 2 errors. Standard error of the mean. T-tests (paired and between subjects)</p> <p>PS1002: Bivariate analysis: Correlation and simple linear regression.</p>	<p>PS1001 & PS1002: Designing & running a small group project. Ethics, validity & reliability. Writing a research proposal and lab reports. Content and aims of abstract, introduction, methods, results & discussion. Figures and legends. Databases & literature searches; APA referencing. Experiments and analysis of individual differences in perception</p>	<p>PS1002: Introduction to Psychophysics, Weber, Fechner, JND, Signal detection theory.</p> <p>PS1002: Neuroscience methods: CRT, MRI, fMRI, EEG, single unit, lesions, TMS; spatio-temporal resolution</p>
2nd year	<p>PS2001: History and current state of ESP research (the methodological flaws, also in many conventional experiments)</p> <p>PS2001: Common statistical errors (Texas sharpshooter, file-drawer, multiple comparisons)</p>	<p>PS2001-2: Describing data (types of scale; measures of central tendency and dispersion; relationships between mean & variance; central limit theorem)</p> <p>PS2001-2: Principles of univariate analysis</p>	<p>PS2001-2: Univariate analysis (Excel, SPSS): z-scores, t-tests & ANOVA (up to 2-way, fixed/random factors, within subjects & mixed designs); Overview of nonparametric alternatives.</p>	<p>PS2001-2: Correlation (Excel, SPSS) and linear regression (SPSS), including overviews of nonparametric alternatives to correlation and multiple linear regression.</p>	<p>PS1001-2: The relationship between critical values, test statistics and p-values</p> <p>PS2001-2: Writing lab reports. Using theory to formulate hypotheses. Using and reporting statistics to test hypotheses.</p>
3rd year	<p>PS3021: Philosophy of science (Epistemology; critical rationalism; induction vs deduction; logical positivism). Popper, Lakatos, Kuhn, Feyerabend & Laudan; the Duhem-Quine problem). Using philosophy in experimental design</p>	<p>PS3021: Describing data & SPSS (types of scale; central tendency & dispersion; CLT and its limitations; graphing data. Frequentist (Neyman-Pearson) vs Bayesian approach.</p> <p>PS3022: Using path models to describe theoretical relations in regression and factor models.</p>	<p>PS3021: SPSS & Univariate analysis: z-scores, t-tests & ANOVA (including 2-way, fixed/random factors, within subjects & mixed designs). Bivariate analysis: Covariance, correlation & regression. Relationship between regression and the ANOVA family</p>	<p>PS3021: SPSS & Non-parametric data; Failures in the assumptions and what to do about it.</p> <p>PS3022: Students demonstrate some psychological phenomenon in a science fair; write a report in accessible style.</p>	<p>PS3022: Multiple regression, sequential regression, path analysis rules and doing mediation/moderation analyses; factor analysis and reliability. Qualitative methods: interpretive phenomenological analysis and discourse analysis</p>

<p>PS3031: Philosophy of Science; rationalism and empiricism; history of psychology as a science.</p> <p>PS3038: Model based approaches in cognitive research. RT and mental chronometry. Logic and hypothesis testing.</p>	<p>PS3035: Lesions, TMS/tDCS, PET, fMRI, EEG/ERP, MEG, Optical Imaging; spatio-temporal resolution; spatial and temporal integration).</p> <p>PS3032: CT, MR, VBM, VLBM, fMRI in stroke, TMS in stroke</p>	<p>PS3037: How to read a (vision-related) research paper and extract the key elements of the science and methodology.</p> <p>PN3312: critical analysis of scientific literature</p>	<p>PS3037: Perception methods (behaviour, psychophysics). Precision and accuracy. Measuring visual and cognitive performance in infants. Adaptation and after-effects for probing brain function.</p>	<p>PN3312: data analysis (SPSS or r) parametric v non-parametric, generating & dealing with lab data: basic pharmacology techniques, data presentation (graphs, images, scaling) and analysis; dose response curves and analysis of their parameters</p>
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Methodology curriculum for MSc (Conversion) students

<p>MSc</p>	<p>SS5104: handling missing data</p> <p>PS5005: meta-analysis; pseudoreplication; bootstrapping; permutation tests; combining qualitative and quantitative approaches</p> <p>PS5231: Philosophy of Science; rationalism and empiricism; history of psychology as a science.</p> <p>PS5238: Model based approaches in cognitive research. RT and mental chronometry. Logic and hypothesis testing.</p>	<p>SS5104: representing data visually</p> <p>PS5005: digital signal processing (e.g., fMRI, image processing); structured equation modelling; linear mixed models;</p> <p>PS5235: Lesions, TMS/tDCS, PET, fMRI, EEG/ERP, MEG, Optical Imaging; spatio-temporal resolution; spatial and temporal integration).</p> <p>PS5232: CT, MR, VBM, VLBM, fMRI in stroke, TMS in stroke</p>	<p>SS5104: t-tests, one-way ANOVA, correlation, regression</p> <p>PS5005: one-way ANOVA; factorial ANOVA; ANCOVA; repeated measures ANOVA; mixed ANOVA;</p> <p>PS5237: How to read a (vision-related) research paper and extract the key elements of the science and methodology.</p>	<p>SS5104: chi-square</p> <p>PS5005: nonparametric analyses;</p> <p>PS5237: Perception methods (behaviour, psychophysics). Precision and accuracy. Measuring visual and cognitive performance in infants. Adaptation and after-effects for probing brain function</p>	<p>PS5005: multiple linear regression; cluster analysis; discriminant analysis; multidimensional scaling; binary logistic regression;</p>
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Psychological Neuroscience curriculum

1st year	PS1002: Gross anatomy (CNS vs PNS; hemispheres; hind- mid- & fore-brain; lobes). Pathways (sensory &, motor; primary & secondary cortices)	PS1002: Neuronal function (membrane potential, action potential; electrical & chemical synapses; ionotropic vs metabotropic; learning & memory: mechanisms of LTP)	PS1002: Gross brain anatomy, neurons, and basic electrophysiology. Sensory systems: Transduction processes from physical signals to the first action potential. Pathway to cortex, definition of receptive fields, topographic brain organisation.	PS1002: Methods (CRT, MRI, fMRI, EEG, single unit, lesions, TMS; spatio-temporal resolution) PS1002: EEG from sleep to aroused; Sympathetic system & GSR; Eating & the hypothalamus. Emotion: Amygdala & fear; insula & disgust; PS1002: Neuroscience of processing of contours, visual grouping, objects, faces, emotion and visuo-motor control of action.	PS1002: Memory: interplay between hippocampus, frontal cortices etc. Attention: commonality of brain structures across different types of attention
2nd year	PS2001: Motor control and action selection (motor cortex, SMA, premotor cortex and cerebellum). Link into mirror neurons and autism.	PS2001: Synaptic function and action potentials (action potentials, receptors, information processing). Psychopharmacology (including neurotransmitter systems)	PS2001: Physiology of vision (the retina, rods & cones, information coding, transmission of information to cortex, properties of neurones in cortex); Physiology of hearing (function of hearing, what sound is and how to characterize it, basic anatomy of the auditory system (basilar membrane and hair cells)	PS2001: Sleep (including neural mechanisms, disorders, sleep deprivation and circadian rhythms). Fear and emotion (amygdala and PFC circuitry, extinction, cognitive control and reconsolidation)	PS2001: Memory. Declarative/non-declarative, neural systems supporting spatial and episodic memory, place cells, grid cells, cognitive map and animal models of memory)
3rd year	PS3035: Neuroanatomy of cognitive control; PS3037: Adult visual plasticity: plasticity in a normal population and how it is measured.	PN3313: Electrical & chemical synapses, ionotropic and metabotropic receptors, short- and long-term plasticity, synaptic integration & simple synaptic connections, classical conditioning, neuromuscular junctions	PS3037: Linking behaviour to neuroscience: mapping psychophysical channels onto neural population responses. PS3037: Colour in the brain, relationship between theories and measurements of human vision and the neuronal function of colour pathways. Anatomy and neurophysiology of colour and motion-specific brain areas.	PS3035: Methods (Lesion studies, TMS/tDCS, PET, fMRI, EEG/ERP, MEG, Optical Imaging; spatio-temporal resolution; spatial and temporal integration) PS3032: Neuropsychology (Behavioral and neuroanatomical assessment, VBM/VLBM, DTI, fMRI/Brain Stimulation in brain damaged populations)	PN3313: Memory types, Mechanisms for implicit and explicit memories, habituation and sensitization in aplysia, hippocampal LTP/LTD and spatial memory formation, place cells and grid cells

Perception curriculum

1st year	<p>PS1002: Touch. Transduction processes from physical signals to the first action potential. Pathway to cortex, receptive fields and topographic organisation in the brain.</p>	<p>PS1002: Vision. Transduction processes from physical signals to the first action potential. Pathway to cortex, receptive fields, retinotopic organisation. From sensation to perception, colour vision as an example.</p> <p>PS1002: perception of contours, groupings, objects, faces, emotions, motion depth and distance, illusions.</p>	<p>PS1002: Multisensory integration, Synaesthesia.</p> <p>PS1002: Imagery & perception involve activation of the same/similar cortical areas</p>	<p>PS1002: Audition & vestibular. Transduction processes from physical signals to the first action potential. Pathway to cortex, receptive fields, tonotopic organisation.</p> <p>PS1002: Perception and action, perception and attention, top down control of perception. Development of perception</p>	<p>PS1002: Smell & taste. Transduction processes from physical signals to the first action potential. Pathway to cortex, receptive fields.</p>
2nd year	<p>PS2001: Touch, Temperature, Proprioception & Pain. Mechanoreceptor types and transduction. Pathways to the brain. Reflexes. Tactile representation in the brain</p> <p>PS2001: Consciousness (split brain patients, selective attention, awareness in coma patients)</p>	<p>PS2001: History of Scientific Study of Light & Vision (illustrated by colour)</p> <p>PS2001: Colour. How colours mix. Colour perception (univariance, trichromacy, opponent processing, metamers), colour blindness, why trichromacy evolved in old world primates</p>	<p>PS2001: Motion. The role of motion perception, different types of visual motion, Hassenstein-Reichardt correlator (HRC) motion detector, aperture & correspondence problems, akinetopsia video, Newsome et al. monkey MT response is linked to motion perception</p>	<p>PS2001: Hearing. Place & rate theories of pitch coding, sound localisation (inter-aural time & intensity differences, head related transfer function). Sound perception, McGurk effect.</p> <p>PS2001: Vestibular system. Linear acceleration, angular motion, gravity. Anatomy (semicircular canals, otoliths). Disorders</p>	<p>PS2001: Smell & Taste. Olfactory receptors (shape and vibration theories), how we discriminate different chemicals, smell distinguished from other senses. Strong memory and emotion linkages (amygdala etc), (probably) oldest sensory modality, direct connections to cortex)</p>
3rd year	<p>PS3037: Principles of perceptual theories. Methods (behaviour, eye movements, psychophysics, imaging). Visual Psychophysics. Methods of measuring behavioural performance. Precision and accuracy as performance measures.</p>	<p>PS3037: Motion for a moving observer, motion blindness, motion-specific brain areas. Adaptation and after-effects to probe visual brain function. Recognition of animacy and emotion. Depth and distance perception, and monocular and binocular cues to each.</p> <p>PS3032: Visual attention, visuospatial localization</p>	<p>PS3037: Motion for a moving observer, motion blindness, motion-specific brain areas. Adaptation and after-effects to probe visual brain function. Recognition of animacy and emotion. Depth and distance perception, and monocular and binocular cues to each.</p>	<p>PS3037: Spatial representation. Simple visual stimuli, sinusoidal gratings. Spatial frequency channel model of early vision. How behaviour and psychophysical channels map onto neural population responses.</p>	<p>PS3037: Vision in the first months of life. Measuring visual and cognitive performance in infants. Restoring vision. Measuring adult plasticity. Amblyopia and plasticity in visual therapy. Culture and environment on visual perception.</p>

PS3038: Categories of attention, visual search, and inattentional blindness

Social curriculum

1st year	PS1001: Sherif: group conflict and harmony; Asch: conformity and normative social influences; Milgram: obedience & the agentic state; Zimbardo: deindividuation; Tajfel: minimal group & in-group bias;	PS1001: Social identity theory: lies at heart of social behaviour (idea of stages: Social identification then social comparison then social differentiation)	PS1001: Groups: conflict & conflict reduction through contact; bystander effect (as diffusion of responsibility, audience inhibition and social influence; influence of in-group and out-group membership on both by-standers and victims)	PS1001: Leadership: Social identity leadership (be one of us, do it for us, craft a sense of us & make us matter), put in practice through the 3Rs (Reflect – find out about the group, Represent – stand for and stand up for the group, Realize – turn the identity into reality)	PS1001: Social development, theory of mind, evolution of social cognition. Social cognitive approach to language acquisition PS1002: Social influences and misattribution of emotion (Schacter & Singer; Dutton & Aron) and social constructionist models emotional processing (e.g. Averill, Barrett).
2nd year	PS2001-2: Introduction to social cognition; social categorization; stereotyping and prejudice, gender, aggression and prosocial behavior;	PS2001-2: Cognitive Consistency; Attributional processes; self-perception theory; culture.	PS2001-2: social learning; imitation and affordance learning. Cultural learning.	PS2001-2: Prejudice & discrimination;	
3rd year	PS3034: Levels of analysis & methodologies in social psychology; history of social-psychological approaches to prejudice; definitions of prejudice; attitude structure; implicit vs. explicit measurement; forms of discrimination (blatant & subtle); theories of contemporary prejudice; dehumanization; objectification; ambivalent sexism	PS3034: Individual-level approaches in social psychology; evolutionary approaches to group behaviour & prejudice; fitness-relevant threats & prejudice; personality approaches to group behaviour & prejudice; generalized prejudice; authoritarian personality/right-wing authoritarianism; social dominance orientation; dual-process model; cognitive ability & prejudice; critiques of individual-level approaches; measurement issues	PS3034: Group-level approaches in social psychology; realistic group conflict theory; relative deprivation theory; social identity theory; social structure & social change; power; individualism (social mobility, tokenism, queen-bee syndrome); paternalism (benevolent sexism & helping) PS3035: Effects of culture and environment on visual perception	PS3034: Individual-level interventions; models of social categorization; intergroup contact; empathy & perspective taking; social norms; critiques of individual-level approaches	PS3034: Group-level approaches to social change; models of collective action (grievance models, instrumental models, social identity); group emotion; integrating contact & collective action models; intergroup solidarity; radical collective action & terrorism

