Staff member	Organisation eg. SBS / IMS / PFR / LCR	Academic Group eg. EEB / BHB / CMPB / JGS	Size 60/90/120 eg. BScHons = 60pt, taught MSc = 60pt, BiomedHons = 90pt, MSc = 120pt	Title/Area	Expiry Date	Relevant Courses that students should take or have taken
Evolutionary genetics/genomics, Phylogeny projects						
Nicholas Matzke	SBS	EEB	any	Phylogenetic biogeography - testing new models of diversification, extinction, dispersal on with clade of interest or simulated data	none	Evolution or biogeography courses such as: BIOSCI 109: Ecology & Evolution BIOSCI 210: Evolution - molecules to organisms BIOSCI 322: Genes, Populations, Species BIOSCI 700: Phylogenetics BIOSCI 395: Pacific Biogeography BIOSCI 731: Biogeography BIOSCI 220: Quantitative Biology
Nicholas Matzke	SBS	EEB	any	Structural phylogenetics - new models for including protein structure data in phylogenetics, using the models on protein groups of interest (e.g. bacterial flagellum), or testing models & performance on simulated or empirical data	none	Evolution courses such as: BIOSCI 109: Ecology & Evolution BIOSCI 210: Evolution - molecules to organisms BIOSCI 322: Genes, Populations, Species BIOSCI 700: Phylogenetics BIOSCI 220: Quantitative Biology
Nicholas Matzke	SBS	EEB	any	Structural phylogenetics - trialing methods of Multiple Sequence Alignment and MSA visualization for protein structure characters		
Nicholas Matzke	SBS	EEB	any	Other potential phylogenetics/bioinformatics projects of interest, e.g. (1) make a bioinformatics tool (e.g. dot-plot visualiser for 3Di protein structure characters), or (2) updating older questions with new data & methods: AMELX/AMELY (sex-specific proteins in mammal teeth), blood-clotting cascade, GULO pseudogene for vitamin C synthesis		
Anna Santure	SBS	EEB	any	Recombination in hihi (stitchbird): why do males do it more?	none	BIOSCI 351 plus ideally BIOSCI 322 or BIOSCI 210; must take BIOSI 701 (okay if taking concurrently)
Anna Santure	SBS	EEB	any	Comparing mitochondrial and genomic signals of invasion in the common myna	none	BIOSCI 351 plus ideally BIOSCI 322 or BIOSCI 210; must take BIOSI 701 (okay if taking concurrently)
Nobuto Takeuchi	SBS	CMPB	any	Mathematical or computational modelling of genome evolution	none	BIOSCI 702, BIOSCI 700, BIOSCI 701 (700-level can be concurrent)
Nobuto Takeuchi	SBS	CMPB	Hons (60 or 90 pt), 120-pt MSc	Evolutionary genomics of prokaryote genomes	none	BIOSCI 700, BIOSCI 701, BIOSCI 702 (700-level can be concurrent)
Jane Allison	SBS	CMPB	any	Modelling how mitochondrial structure affects the flow of protons		
Jane Allison	SBS	CMPB	any	Modelling antimicrobial peptide-membrane interactions		
Sarah Knight	SBS	EEB	90 or 120	Divergence between NZ isolated yeast and international representatives	none	BIOSCI 220, ideally BIOSCI 322 and/or BIOSCI 351; BIOSCI 701 (700-level can be concurrent)
Sarah Knight	SBS	EEB	120	Population genetics of Wakame in NZ	none	BIOSCI 220, ideally BIOSCI 322 and/or BIOSCI 351; BIOSCI 701 (700-level can be concurrent)
Austen Ganley	SBS	BHB	any	Assessing AI models of genomic predictions	none	BIOSCI355 or equivalent
Austen Ganley	SBS	BHB	any	Determining functional areas of genomes using random DNA	none	BIOSCI355 or equivalent
Austen Ganley	SBS	BHB	90 or 120	Determining the dominant recombination pathway in the ribosomal RNA gene repeats	none	BIOSCI351 or BIOSCI355 or equivalent; BIOSCI736 (700-level can be concurrent)
Austen Ganley	SBS	BHB	90 or 120	Experimental evolution of random DNA sequences	none	BIOSCI210 or BIOSCI355 or equivalent
Kim Handley	SBS	EEB	120	Determine CRISPR spacer variation within bacterial populations as a dynamic record of bacterial-viral interactions	none	BIOSCI 701 (700-level can be concurrent), ideally BIOSCI 204 and 347
Simon Greenhill	SBS	EEB	90 or 120	Tracing the evolution of the Polynesian gods	none	Evolution courses such as: BIOSCI 109: Ecology & Evolution, BIOSCI 210: Evolution - molecules to organisms, BIOSCI 322: Genes, Populations, Species, BIOSCI 700: Phylogenetics, BIOSCI 220: Quantitative Biology
Simon Greenhill	SBS	EEB	90 or 120	Testing and evaluating models of language evolution	none	BIOSCI700
Simon Greenhill	SBS	EEB	90 or 120	Using phylogenies of language to shed light into human prehistory	none	Evolution courses such as: BIOSCI 109: Ecology & Evolution, BIOSCI 210: Evolution - molecules to organisms, BIOSCI 322: Genes, Populations, Species, BIOSCI 700: Phylogenetics, BIOSCI 220: Quantitative Biology
Priscila Salloum	SBS	EEB	120	Exploring the genetic basis of shell colour in chitons	2029	BIOSCI 355 or equivalent
Marine/Freshwater Projects						
Kim Handley	SBS	EEB	120	Determine the function of heliorhodopsin in the photoheterotrophy of estuarine bacteria	none	BIOSCI 204, ideally BIOSCI 347
Kim Handley	SBS	EEB	120	Confirm predictions of anaerobic nitrogen metabolism in the subsurface Nitrospirota bacterial phylum	none	BIOSCI 204, ideally BIOSCI 347
Brendon Dunphy	SBS	EEB	any	Ecophysiology of seabirds	none	BIOSCI 334
Kendall Clements	SBS	CMPB	120	Diet in herbivorous and detritivorous coral reef fishes	none	BIOSCI 335, BIOSCI 725
Kendall Clements	SBS	CMPB	120	Biodiversity of coral reef cyanobacteria		
Priscila Salloum	SBS	EEB	120	Probiotics and experimental microbiome manipulation in New Zealand chitons	2029	BIOSCI 204, BIOSCI 749 can be helpful but not required
Zoology/Behaviour/Biodiversity Projects						
Sarah Knight	SBS	EEB	120	Metabolic potential of Aotearoa NZ's yeasts	none	Ideally BIOSCI 322, 348, 204 but not necessary
Sarah Knight	SBS	EEB	120	Biodiversity of NZ vineyards	none	BIOSCI 220, ideally BIOSCI 322 and/or BIOSCI 351; BIOSCI 701 (700-level can be concurrent). This is a computational project with existing data.
Manpreet Dhami	SBS	EEB	120	Microbiomes of endemic pollinators	none	skills: microbial ecology, microbiology, entomology, bioinformatics, statistics
Manpreet Dhami	SBS	EEB	120	Microbiome of kiwi	none	skills: microbial ecology, microbiology, conservation biology, bioinformatics statistics
Manpreet Dhami	SBS	EEB	120	Competition coexistence dynamics of nectar yeast communities	none	skills: ecology, stats, microbiology
Libby Liggins	SBS	EEB	120	Monitoring of tropical and subtropical reef fishes using citizen science	none	
Libby Liggins	SBS	EEB	60/120	Using metabarcoding of Autonomous Reef Monitoring Systems to evaulate the shallow marine biodiversity of Rangitāhua	none	
Priscila Salloum	SBS	EEB	any	Microbiome profiling in chitons	2029	BIOSCI 204 may be helpful, but not required
Priscila Salloum	SBS	EEB	any	Shell colour variation, colour quantification and camouflage in chitons	2029	BIOSCI 109
Neil Birrell & Rich Leschen	SBS/MWL	EEB	120	Finding Mates in Flightless Beetles: Comparative morphology of cerambycid antennal ultrastructures	none	BIOSCI 208 and 338 wpuld be helpful but not necessary
Plant and Other Terrestial Projects						
Margaret Stanley	SBS	EEB	120	Non-chemical weed management - using native pathogens. Māori student preferred for funding (Bioprotection Aotearoa) - fees + $10K stipend funding		BIOSCI 394 ideally, plant pathology
Cate Macinnis-Ng	SBS	EEB	60, 120	Plant responses to a changing climate - field and glasshouse-based projects available	none	BIOSCI 325, BIOSCI 766
James Brock	SBS	EEB	120	Ferns and fire - spore banks in a changing landscape (must start July, have driving licence)	none	BIOSCI 394 and maybe 325
Chris Carrie	SBS	CMP	60/120	Determining the molecular basis of the high temperature stress resistance of geothermal Kānuka	none	BIOSCI 326, BIOSCI 351 or equivalent. Anyone interested in Biochmestry, genetics or molecular biology

Biomedical and Human Biology						
Inken Kelch	SBS	BHB	90 or 120	Comprehensive multicolour imaging of immune organs	none	immunology background (MEDSCI 202 or BIOSCI 201, ideally MEDSCI 314)
Alicia Didsbury & Daniel Verdon	SBS	BHB	90 or 120	Next-Generation T-Cell Expansion for Adoptive Immunotherapy: Integrating Serum-Free Media and Novel Culture Platforms	none	immunology background (MEDSCI 202 or BIOSCI 201, ideally MEDSCI 314)
Catherine (Kate) Angel	SBS	BHB	60	Analysis of RNA-seq data to determine how tPA treatment impairs the brain endothelial barrier following ischemic stroke	Earliest Start: BIOSCI 761 2nd Sem 2026	BIOSCI 220 & stage III/700 level courses with cellular & molecular focus. Experience with R packages.
Christopher Walker	SBS	BHB		Cell signalling and receptors in metabolic disease		
Hilary Sheppard	SBS	BHB	90 or 120	Gene editing for severe skin conditions		
Jessie Jacobsen	SBS	BHB		Lymphatic modulation by		
John Taylor	SBS	BHB				
Anthony Phillips	SBS	BHB	120	Oxidative stress measures at the bedside - developing a new window on critical illness		do 761 in S1
Anthony Phillips	SBS	BHB	120	Extending the biological capability of a lowgravity simulation machine		do 761 in S1; interest in engineering and some basic programming experience advantageous
Anthony Phillips	SBS	BHB	120	Modulating lymphatic function to help congestive heart failure		do 761 in S1; interest in engineering and some basic programming experience advantageous
Anthony Phillips	SBS	BHB	120	Attenuating negative effects of space flight on mitochondria		do 761 in S1
Garth Cooper	SBS	BHB				
Kerry Loomes	SBS	BHB				
Mike Taylor	SBS	BHB				
Rod Dunbar	SBS	BHB				
Russell Snell	SBS	BHB				
Saem Park	SBS	BHB	90 or 120	Spatial Mapping of Immune Responses in Human Cancers		immunology background (MEDSCI 202 or BIOSCI 201, ideally MEDSCI 314)
Nicole Edwards	SBS	BHB				
Emma Scotter	SBS	BHB	90 or 120	Developing cell models of neurodegenerative disease		
Emma Scotter	SBS	BHB	90 or 120	Multiplex immunohistochemistry of human brain tissue in motor neuron disease		
Jennifer Miles-Chan	SBS	BHB				
Paul Harris	SBS	BHB				
Shaun Lott	SBS	CMPB/BHB	60/90/120	RNaseHI as a target for new antibiotics		
Iman Kavianinia	SBS		120	Developing Next-Generation Platforms for Precision Cancer Therapy		
Cellular, Molecular and Physiological Biology						
Matthew Sullivan	SBS	CMP	120	Structural and Functional Analysis of Protein–Metallodrug Interactions	none	BIOSCI350, BIOSCI353 or equivalent.
David Goldstone	SBS	CMP	120	Using structural biology to understand the function and role of polygalacturonases in fruit ripening	none	Biochemistry or plant biology.
David Goldstone	SBS	CMP	121	Structural investigation of anti-retroviral compounds targeting the HIV-1 Capsid	none	Biochemistry, BIOSCI350, BIOSCI353 or equivalent.
David Goldstone	SBS	CMP	120	Establishing a method to probe the recognition of the retroviral capsids by the host restriction factor Trim5alpha.	none	BIOSCI350,BIOSCI353 or equivalent.
Karine David	SBS	CMP	120	Molecular pathways controlling fruit flesh development in apple/tomato	none	BIOSCI 326, BIOSCI 351 or equivalent
Karine David	SBS	CMP	120	Analysis on candidate genes controlling fruit size in kiwifruit	none	BIOSCI 326, BIOSCI 351 or equivalent
Soledad Perez Santangelo	SBS	CMP	60/120	Role of alternative splicing in circadian clock regulation by temperature in legumes	none	BIOSCI 326, BIOSCI 351 or equivalent
Soledad Perez Santangelo	SBS	CMP	60/120	Analysis of candidate genes involved in temperature-mediated modulation of circadian rhythms in legumes	none	BIOSCI 326, BIOSCI 351 or equivalent
Chris Carrie	SBS	CMP	60/120	Determining the molecular basis of the high temperature stress resistance of geothermal Kānuka	none	BIOSCI 326, BIOSCI 351 or equivalent. Anyone interested in Biochmestry, genetics or molecular biology
Chris Carrie	SBS	CMP	60/120	What is the molecular role of the MICOS complex in maintaining plant mitochondrial ultrastructure	none	BIOSCI 326, BIOSCI 351 or equivalent. Anyone interested in Biochmestry, genetics or molecular biology
Chris Carrie	SBS	CMP	60/120	Development of an inducible chloroplast biogenesis system	none	BIOSCI 326, BIOSCI 351 or equivalent. Anyone interested in Biochmestry, genetics or molecular biology
Kim Snowden	PFR	CMP	60/120	Understanding the pathways that control plant architecture	none	BIOSCI 326, BIOSCI 351 or equivalent
Kim Snowden	PFR	CMP	60/120	Developing new tools to control plant development	none	BIOSCI 326, BIOSCI 351 or equivalent
Kim Snowden	PFR	CMP	60/120	Gene editing of crop plants to improve management and yield	none	BIOSCI 326, BIOSCI 351 or equivalent
Augusto Simoes-Barbosa	SBS	CMP				
Iain Hay	SBS	CMP	120	Designing protein inhibitors for bacterial outer membrane proteins	none	
Iain Hay	SBS	CMP	120	Understanding bacterial intra species competion and kin recognition	none	
Richard Kingston	SBS	CMP	120	How does Syto9, a widely-used fluorescent dye, bind nucleic acids?		
Richard Kingston	SBS	CMP	120	Investigating the oligomeric state of the coiled-coil found in Paramyxoviral Phosphoproteins.		
Andrew Allan	SBS	CMP				
Anthony Poole	SBS	CMP	120	Recovery and sequencing of complete mitogenomes using Oxford nanopore technology		
Craig Millar	SBS	CMP	120	Establishing parentage and relatedness in the communal groups of Brown Skua using microsatellite markers		
Matthew Templeton	SBS	CMP				
Christopher Squire	SBS	CMP	120	How immune receptors switch on: exploring ligand binding with molecular dynamics simulations		
Christopher Squire	SBS	CMP	120	Predicting resistance mutations: using molecular dynamics to understand how rodenticides fail		
Ghader Bashiri	SBS	CMP	120	Genome mining for novel antimicrobial agents		
Ghader Bashiri	SBS	CMP	120	Biosynthetic enzymes in microbial secondary metabolism		
Ghader Bashiri	SBS	CMP	120	Enzyme engineering for biocatalysis		
Ghader Bashiri	SBS	CMP	120	How pathogenic bacteria sense oxidative stress?		
Ghader Bashiri	SBS	CMP	120	Targeting DNA repair for new antibiotics		
Robert Schaffer	SBS	CMP/PFR				
Robin MacDiarmid	SBS	CMP/PFR				
Shaun Lott	SBS	CMPB/BHB	60/90/120	Rhs repeat proteins in bacterial competition and multicellular evolution.		
Tristan de Rond	SCS	CMP	60/90/120	Genome mining / biosynthetic enzyme discovery		Biochemistry, Molecular biology, Organic chemistry
Tristan de Rond	SCS	CMP	60/90/120	Enzyme biotechnology / synthetic biology / metabolic engineering		Biochemistry, Molecular biology, Organic chemistry. Some computer competency would be good if you want to use the pipetting robot ;)
Tristan de Rond	SCS	CMP	60/90/120	Bioinformatic tool development for genome mining / biosynthetic enzyme discovery		Microbial genomics, Bioinformatics, Biochemistry
Irina Miller	Daisy Lab		60	Investigating Flocculation in Genetically Engineered Pichia Pastoris for Heterologous Protein Expression - how flocculation can be used to reduce downstream processing in heterologous protein expression. 1 to 2 projects will be offered in this topic.	for BIOSCI 761 in S1 2026. Research completed end of S2 2026	Background in Protein Structure/Function, microbiology
Irina Miller	Daisy Lab		60	Computational analysis of fermentation data for protein optimisation in heterologous expression systems. 1 to 2 projects will be offered in this topic.	for BIOSCI 761 in S1 2026. Research completed end of S2 2026	Background in Protein Structure/Function, microbiology
Irina Miller	Daisy Lab		60	Investigation of the Relationship Between Glycosylation Patterns and Functional Properties of Recombinant Lactoferrin. 1 to 2 projects will be offered in this topic.	for BIOSCI 761 in S1 2026. Research completed end of S2 2026	Background in Protein Structure/Function, microbiology
Irina Miller	Daisy Lab		60	Stability assessment of Recombinant Lactoferrin under variable processing and storage conditions. 1 to 2 projects will be offered in this topic.	for BIOSCI 761 in S1 2026. Research completed end of S2 2026	Background in Protein Structure/Function, microbiology
Irina Miller	Daisy Lab		60	Functional testing of recombinant lactoferrin. 1 to 2 projects will be offered in this topic.	for BIOSCI 761 in S1 2026. Research completed end of S2 2026	Background in Protein Structure/Function, microbiology
Projects at the policy interface						

Juliet Gerrard	SBS/SCS/CHEMMAT	any	any	Bespoke projects to suit student interest at the policy interface	none	any
Ecology and Evolution						
David Pattemore	MWL	EEB				
Maj Padamsee	MWL	EEB				
Shane Wright	SBS	EEB				
Alexei Drummond	SBS	EEB				
Cate Macinnis-Ng	SBS	EEB				
Gavin Lear	SBS	EEB	any	Microbial interactions with plastic pollutants	I	
Greg Holwell	SBS	EEB	any	Camouflage, aposematism, mimicry, and other antipredator adaptations in insects (variety of possible projects)	none	BIOSCI 207, 337,338
Jacqueline Beggs	SBS	EEB				
James Russell	SBS	EEB				
Maren Wellenreuther	PFR	EEB				
Mary Sewell	SBS	EEB	120	Lipid analysis of the roe, eggs and embryos of the sea urchin *Centrostephanus rodgersii*	none	BIOSCI 208 or knowledge of invertebrates useful. Good background in chemistry.
Rochelle Constantine	SBS	EEB				
Tony Hickey	SBS	EEB				
ZhiQiang Zhang	MWL	EEB				
Dave Seldon& Sam Brown	SBS	EEB	90, 120	can micro-hymenoptera diversity indicate arthropod diversity in mangroves		
Dave Seldon	SBS	EEB	120	Revision of aotearoa weevil genus Clypeolus		
Dave Seldon	SBS	EEB	90,120	micro-hymenotpera diversity in urban restoration projects		
Dave Seldon	SBS	EEB	120	Revision of the infimate species group within the genus Mecodema (ground beetles)		
Al Glen	SBS	EEB	120	Revision of the endemic ground beetle genus Neoferonia		
Anne Gaskett	SBS	EEB	any	Sensory ecology and interactions, esp. colour and light perception (plant-animal or fungi-animal interactions such as pollination or fruit dispersal, or seabirds and sensory traps such as plastic ingestion or light pollution)	none	any zoology, botany and natural history subjects (e.g. BIOSCI 206, BIOSCI 207, BIOSCI325, BIOSCI337, BIOSCI 338, BIOSCI395)
Brendon Dunphy	SBS	EEB	120	Physiological apporaches to improve invertebrate aquaculture	none	BIOSCI 208, MARSCI328, and BIOSCI 727
Bruce Burns	SBS	EEB				
Darren Ward	MWL	EEB	any	Do citizen scientists (iNaturalist) and museum collections document similar data on biodiversity	none	
Darren Ward	MWL	EEB	any	Using automated identification models to identify invasive ants (can include a small field component)	none	
Emma Carroll	SBS	EEB				
J David Aguirre	SBS	EEB	120	Heritability of tropical damselfish feeding and locomotion traits	none	
J David Aguirre	SBS	EEB	120	Diet niche variance and segragation within populations of damselfishes using Stable Isotope analyses	none	
Kristal Cain	SBS	EEB				
Libby Liggins	SBS	EEB	120	Recent and predicted furture changes to NZ shallow marine environments using dispersal simulations and niche modelling	none	
Libby Liggins	SBS	EEB	120	Diet analysis of co-occurring NZ urchins using metabarcoding	none	
Libby Liggins	SBS	EEB	120	Kin and spatial genetic structuring of tropical damselfishes across reefscapes	none	
Margaret Stanley	SBS	EEB	120pt	Bioprotection Aotearoa funded project on weed management (w stipend) for Māori student	for BIOSCI 761 in S2 2026	
Alice Della Penna	IMS+SBS	EEB	Any	Investigating plankton patchiness with semi-automated microscopy		