

## NEW 2017 BIOLOGY MAJORS, MINORS AND SPECIALISATIONS

EVOLUTION ECOLOGY AND ORGANISMAL BIOLOGY MAJOR -new	CELL AND MOLECULAR BIOLOGY MAJOR - new	HUMAN BIOLOGY MAJOR - new	BIOCHEMISTRY MAJOR (shared with RSC – no change)
<p><b>48 units must include:</b></p> <p><b>18 units from the following:</b>            BIOL1003 Biology 1: Evol, Ecol &amp; Genetics            BIOL1004 Biology 2: Mol &amp; Cell Biology            BIOL1009 Diversity of Life</p> <p><b>6 units from the following:</b>            BIOL2001 Intro to Quantitative Biology            BIOL2202 Exp Design &amp; Analysis in Biology            ENVS1003 Intro to Env &amp; Social Research            PSYC2009 Quantitative Methods in Psych            BIAN3014 Res Design &amp; Analysis in Biol Anth</p> <p><b>12 units from the following:</b>            BIOL2114 Evolution            BIOL2115 Comparative Physiology            BIOL2131 Ecology            BIOL2151 Genetics            BIOL2203 Field Studies in Functional Ecology</p> <p><b>6 units from the following:</b>            BIOL3125 Plants &amp; Global Climate Change            BIOL3206 Evolution of Biodiversity</p> <p><b>6 units from the following:</b>            BIOL3191 Biology, Society &amp; Ethics            BIOL3201 Big Questions in Biology</p>	<p><b>48 units must include:</b></p> <p><b>24 units from the following:</b>            BIOL1003 Biology 1: Evol, Ecol &amp; Genetics            BIOL1004 Biology 2: Mol &amp; Cell Biology            BIOL2161 Genes: Replication &amp; Expression            BIOL2162 Molecular Gene Technology</p> <p><b>6 units from the following:</b>            BIOL2001 Intro to Quantitative Biology            BIOL2202 Exp Design &amp; Analysis in Biology            ENVS1003 Intro to Env &amp; Social Research            PSYC2009 Quantitative Methods in Psych            BIAN3014 Res Design &amp; Anal in Biol Anth</p> <p><b>6 units from the following:</b>            BIOL2117 Cell Biology            BIOL2142 General Microbiology            BIOL2151 Genetics            BIOL2171 Biochemistry &amp; Nutrition            BIOL2174 Cell Physiology in Health &amp; Disease</p> <p><b>6 units from the following:</b>            BIOL3107 Adv in Medical &amp; Plant Biochem            BIOL3108 Hallmarks of Cancer            BIOL3109 Ecol &amp; Evol Dev Biology            BIOL3141 Infection and Immunity            BIOL3142 Parasitology            BIOL3144 Adv &amp; Applied Immunology            BIOL3161 Genomics &amp; its Application            BIOL3177 Adv in Molecular Plant Science            BIOL3203 Histology &amp; Adv Microscopy            BIOL3204 Genetics of Human Disease 1            BIOL3205 Genetics of Human Disease 2            BIOL3208 Biology Research Project            BIOL3209 Biology Research Project (12u)            NEUR3101 Cellular Neuroscience</p> <p><b>6 units from the following:</b>            BIOL3191 Biology, Society &amp; Ethics            BIOL3201 Big Questions in Biology</p>	<p><b>48 units must include:</b></p> <p><b>24 units from the following:</b>            BIOL1003 Biology 1: Evol, Ecol &amp; Genetics            BIOL1004 Biology 2: Mol &amp; Cell Biology            BIOL2161 Genes: Replication &amp; Expression            BIOL3006 Human Physiology</p> <p><b>6 units from the following:</b>            BIOL2001 Intro to Quantitative Biology            BIOL2202 Exp Design &amp; Anal in Biology            ENVS1003 Intro to Env &amp; Social Research            PSYC2009 Quant Methods in Psych            BIAN3014 Res Design &amp; Anal in Biol Anth</p> <p><b>6 units from the following:</b>            BIOL2117 Cell Biology            BIOL2142 General Microbiology            BIOL2151 Genetics            BIOL2171 Biochemistry &amp; Nutrition            BIOL2174 Cell Physiol in Health &amp; Disease            BIOL2191 Ecology of Health and Disease            BIOL2222 Exquisite Corpse</p> <p><b>6 units from the following:</b>            BIOL3108 Hallmarks of Cancer            BIOL3141 Infection and Immunity            BIOL3142 Parasitology            BIOL3144 Advanced &amp; Applied Immunology            BIOL3186 Human Anatomy            BIOL3204 Genetics of Human Disease 1            BIOL3205 Genetics of Human Disease 2            BIOL3208 Biology Research Project            BIOL3209 Biology Research Project (12u)            NEUR3101 Cellular Neuroscience            NEUR3112 Systems Neuroscience            BIAN3113 Human Evolution            BIAN3124 Evolution of Human Behaviour            BIAN3125 Ancient Health &amp; Disease</p> <p><b>6 units from the following:</b>            BIOL3191 Biology, Society &amp; Ethics            BIOL3201 Big Questions in Biology</p>	<p><b>48 units must include:</b></p> <p><b>24 units from the following:</b>            BIOL1004 Biology 2: Mol &amp; Cell Biology            BIOL2171 Biochemistry &amp; Nutrition            CHEM1201 Chemistry I            CHEM2211 Chemical Biology 1</p> <p><b>6 units from the following:</b>            BIOL2161 Genes: Replication &amp; Expression            BIOL2162 Molecular Gene Technology            CHEM2208 Chemical Biology 2</p> <p><b>18 units from the following:</b>            BIOL3107 Adv in Medical &amp; Plant Biochemistry            BIOL3208 Biology Research Project            BIOL3209 Biology Research Project (12u)            CHEM3204 Structural Methods in Chem Biol            CHEM3207 Current Topics in Chem Biol            CHEM3060 Research Project in Chemistry</p>

EVOLUTION & ECOLOGY SPECIALISATION - new	NEUROSCIENCE & PHYSIOLOGY SPECIALISATION	BIOMEDICAL SCIENCE SPECIALISATION - new	GENETICS SPECIALISATION - new
<p><b>24 units from the following:</b>  BIOL3109 Ecol &amp; Evol Dev Biology  BIOL3114 Vertebrates Biology  BIOL3113 Invertebrate Biology  BIOL3116 Marine Conservation Ecology  BIOL3131 Evol &amp; Behavioural Ecology  BIOL3132 Field Studies in Behavioural Ecol  BIOL3142 Parasitology  BIOL3193 Bacteria &amp; Health: An Ecol &amp; Evol Perspective  BIOL3206 Evolution of Biodiversity  BIOL3208 Biology Research Project  BIOL3209 Biology Research Project (12u)  BIOL3303 Adv Field Studies in Functional Ecology</p> <p><b>Co-requisite majors: Evolution, Ecology and Organismal Biology</b></p>	<p><b>24 units must include:</b></p> <p><b>6 units from the following:</b>  BIOL2174 Cell Physiology in Health &amp; Disease</p> <p><b>12 units from the following:</b>  NEUR3101 Cellular Neuroscience  NEUR3112 Systems Neuroscience  BIOL3006 Human Physiology</p> <p><b>6 units from the following:</b>  BIOL3186 Human Anatomy  BIOL3203 Histology &amp; Adv Microscopy  BIOL3208 Biology Research Project  PSYC3016 Issues in Behavioural Neuroscience</p> <p><b>Co-requisite majors: Biochemistry or Cell and Molecular Biology or Human Biology or Psychology</b></p>	<p><b>24 units must include:</b></p> <p><b>6 units from the following:</b>  BIOL2117 Cell Biology  BIOL2142 General Microbiology  BIOL2151 Genetics  BIOL2171 Biochemistry &amp; Nutrition  BIOL2174 Cell Physiology in Health and Disease  BIOL2191 Ecology of Health and Disease  BIOL2222 Exquisite Corpse: Insight into the Human Body</p> <p><b>18 units from the following:</b>  BIOL3006 Human Physiology  BIOL3108 Hallmarks of Cancer  BIOL3141 Infection &amp; Immunity  BIOL3142 Parasitology  BIOL3144 Advanced &amp; Applied Immunology  BIOL3186 Human Anatomy  BIOL3203 Advanced Microscopy and Histology  BIOL3204 Genetics of Human Disease 1  BIOL3205 Genetics of Human Disease 2  BIOL3208 Biology Research Project  BIOL3209 Biology Research Project (12u)  NEUR3101 Cellular Neuroscience  NEUR3112 Systems Neuroscience</p> <p><b>Co-requisite majors: Cell and Molecular Biology or Human Biology or Biochemistry</b></p>	<p><b>24 units must include:</b></p> <p><b>6 units from the following:</b>  BIOL2151 Genetics  BIOL2161 Genes: Replication &amp; Expression</p> <p><b>18 units from the following:</b>  BIOL3108 Hallmarks of Cancer  BIOL3109 Ecol &amp; Evol Dev Biology  BIOL3157 Bioinformatics &amp; Functional Genomics  BIOL3161 Genomics &amp; Its Applications  BIOL3193 Bacteria &amp; Health: An Ecol &amp; Evol Perspective  BIOL3204 Genetics of Human Disease 1  BIOL3205 Genetics of Human Disease 2  BIOL3206 Evolution of Biodiversity  BIOL3208 Biology Research Project  BIOL3209 Biology Research Project (12u)</p> <p><b>Co-requisite majors: Cell and Molecular Biology or Human Biology or Evolution, Ecology and Organismal Biology or Biochemistry</b></p>

MICROBIOLOGY & IMMUNOLOGY SPECIALISATION - new	PLANT SCIENCE SPECIALISATION	BIOCHEMISTRY SPECIALISATION (Shared with RSC – no change)	BIOLOGY MINOR (no change)
<p><b>24 units must include:</b></p> <p><b>12 units from the following:</b> BIOL2142 General Microbiology BIOL3141 Infection &amp; Immunity</p> <p><b>12 units from the following:</b> BIOL3106 Biosecurity BIOL3142 Parasitology BIOL3144 <b>Adv &amp; Applied</b> Immunology BIOL3193 Bacteria &amp; Health: An Ecological and Evolutionary Perspective BIOL3208/3209 Biology Research Project</p> <p><b>Co-requisite majors: Cell and Molecular Biology or Human Biology or Evolution, Ecology and Organismal Biology or Biochemistry</b></p>	<p><b>24 units must include:</b></p> <p><b>6 units from the following:</b> BIOL2114 Evolution BIOL2115 Comparative Physiology BIOL2117 Cell Biology BIOL2131 Ecology BIOL2151 Genetics BIOL2161 Genes: Replication &amp; Expression BIOL2162 Molecular Gene Technology</p> <p><b>18 units from the following:</b> BIOL3106 Biosecurity BIOL3107 Advances in Medical &amp; Plant Biochemistry BIOL3109 Ecological &amp; Evolutionary Developmental Biology BIOL3002 Plants: Genes to Environment BIOL3003 Plant Physiological Ecology BIOL3125 Plants &amp; Global Climate Change BIOL3177 Adv in Molecular Plant Science BIOL3303 Adv Field Studies in Functional Ecology BIOL3208/3209 Biology Research Project</p> <p><b>Co-requisite majors: Cell and Molecular Biology or Evolution, Ecology and Organismal Biology</b></p>	<p><b>24 units must include:</b></p> <p><b>12 units from the following:</b> BIOL2171 Biochemistry &amp; Nutrition CHEM2208 Protein Engineering &amp; Analysis</p> <p><b>12 units from the following:</b> BIOL3107 Adv in Medical &amp; Plant Biochem BIOL3208 or BIOL3209 Biology Research Project CHEM3201, CHEM3204, CHEM3207 or CHEM3060 Research Project (relevant to Biochem)</p> <p><b>Co-requisite majors: Cell and Molecular Biology or Chemistry</b></p>	<p><b>24 units must include:</b></p> <p><b>12 units from the following:</b> BIOL1003 Biology 1: Evol, Ecol &amp; Genetics BIOL1004 Biology 2: Mol &amp; Cell Biology BIOL1008 Human Biology BIOL1009 Diversity of Life</p> <p><b>12 units from the following:</b> 2000 or 3000 BIOL or NEUR course</p>

<b>HUMAN EVOLUTIONARY BIOLOGY MAJOR</b> <i>(new shared with Arts)</i>	<b>QUANTITATIVE BIOLOGY MAJOR</b> <i>(new shared with Maths)</i>	<b>QUANTITATIVE BIOLOGY &amp; BIOINFORMATICS SPECIALISATION</b> <b>(Shared with Maths – no change)</b>
<p><b>48 units must include:</b></p> <p><b>18 units from the following:</b>            BIAN1001 The Human Voyage: Introduction to Biological Anthropology            BIAN3113 Human Evolution            BIOL1003 Biology 1: Evol, Ecol &amp; Genetics</p> <p><b>6 units from the following:</b>            BIOL3131 Evol &amp; Behavioural Ecology            BIOL3186 Human Anatomy            BIOL3206 Evolution of Biodiversity</p> <p><b>12 units from the following:</b>            BIAN2015 Human Skeletal Analysis            BIAN2119 Nutrition, Disease &amp; the Env            BIAN3124 Evolution &amp; Human Behaviour            BIAN3127 Primate Ecology &amp; Behaviour</p> <p><b>12 units from the following:</b>            BIAN2126 Primate Evolutionary Biology            BIAN2131 Evolutionary Perspectives on Parenting &amp; Childcare            BIAN3021 Primate Conservation Biology            BIAN3125 Ancient Health &amp; Disease            BIOL2131 Ecology            BIOL2191 Ecology of Health and Disease            BIOL2222 Exquisite Corpse – Insight into the Human Body            BIOL3204 Genetics of Human Disease 1            BIOL3205 Genetics of Human Disease 2</p>	<p><b><i>This major is not yet approved and may not be offered in 2017</i></b></p> <p><b>48 units of the following compulsory courses:</b>            BIOL1003 Biology 1: Evolution, Ecology and Genetics            MATH1013 or MATH1115 Mathematics and Applications 1            BIOL2151 <b>Genetics</b>            MATH2307 Bioinformatics and Computational Biology            STAT2001 Introductory Mathematical Statistics            BIOL3157 Bioinformatics and Functional Genomics            MATH3353 Advanced Mathematical Bioinformatics            MATH3511 Scientific Computing</p>	<p><b>24 units must include:</b></p> <p><b>18 units from the following:</b>            MATH2307 Bioinformatics &amp; Biology Modelling            MATH3353 Advanced Topics in Bioinformatics            BIOL3157 Bioinformatics and Functional Genomics</p> <p><b>6 units from the following:</b>            BIOL2202 Experimental Design &amp; Analysis            BIOL3161 Genomics &amp; Its Applications            MATH2306 Applied Mathematics II</p> <p><b><i>Co-requisite majors: Cell and Molecular Biology or Evolution, Ecology and Organismal Biology or Mathematics or Mathematical Modelling</i></b></p>

