

Bachelor of Science (Dean's Scholar, Statistics) (Honours)

2019

Undergraduate

This selective-entry, research-oriented, four year honours program is designed for capable and highly motivated students who want experience with hands-on involvement in research projects.

The program will:

- enable you to become highly employable in the field of statistics
- provide you with a sound knowledge of basic (and some advanced) statistical theory
- expose you to a wide range of statistical models, approaches and software
- enable you to select and apply the appropriate statistical theories, techniques and software to solve a wide range of problems
- expose you to related fields of study which require statistical expertise, such as finance, marketing or environmental modelling
- develop your knowledge of the types of industry which employ statisticians and the variety of tasks they undertake
- develop your range of generic skills and abilities to operate effectively in professional settings that involve mathematical and statistical expertise. These include good communication skills, technology literacy and the ability to work in a team and interact with others
- Identify the need for an ethical approach to your work

The program also offers opportunities for you to engage with research groups and get involved in their research projects. It is also a pathway into higher degrees by research such as a PhD.

Industry connections

You will have the opportunity to work on research projects and practical activities, often undertaken in collaboration with industry.

A mentored research placement in second year provides an opportunity for Dean's Scholar students to experience research at the cutting-edge under the mentorship of research-active academics in the School of Science.

The third year Science Mentored Research Project and fourth year Honours Mathematics Project 1 and 2 will also provide you with the opportunity to develop independent research projects, which can involve an industry partner.

Career outlook

Graduates will be qualified to work in a government, industry or academic research laboratory or continue studying in a higher degree program. Graduates will be prepared with the research skills and advanced knowledge needed to solve real-world problems.

Professional recognition

Graduates may be eligible to apply for graduate membership to:

- The Australian Mathematical Society

International opportunities

RMIT partners with over 150 organisations around the world to provide you with global work and study opportunities. You could spend a semester studying abroad, take part in a study tour or complete an international internship.

Pathways

If you have completed the first year of the Bachelor of Science (Statistics) program or an equivalent program with a grade point average (GPA) of at least 3.5 out of 4.0, you will be eligible to apply for transfer into the second year of the Bachelor of Science (Dean's Scholar, Statistics) (Honours) program.

This program is a preferred pathway into higher degrees by research such as the PhD program.

Program snapshot

Program code: BH101ST

Duration

Full-time: 4 years
Part-time may be available

Location

City campus

Selection mode

ATAR (2018: 81.55)

How to apply

Semester 1: VTAC
vtac.edu.au

Semester 2: Direct to RMIT
rmit.edu.au/programs/apply/direct

Fees

For local fee information:
rmit.edu.au/programs/fees

Contact

Info Corner
330 Swanston Street
(cnr La Trobe Street)
Melbourne VIC 3000
Tel. +61 3 9925 2260

rmit.edu.au/programs/bh101

Program structure

Year 1

You will study foundation courses in mathematics and statistics.

Year 2

During your second year, you will have the opportunity to take part in an industry placement. You will be mentored by a staff member and may have the chance to carry out work that contributes to the project. You will also continue to study courses from your chosen major.

Year 3

You will study more advanced courses in Statistics. The Science Mentored Research Project 2 course gives you the opportunity to work on a small research project under the supervision of an academic staff member. You may have the opportunity to collaborate with an external organisation on this project.

Year 4

During your fourth year you will plan and complete a specific research project in Statistics, in consultation with your supervisor. In addition to the research project, you will undertake advanced coursework and learn the skills to develop a research proposal and carry out experimental design and data analysis.

Year 1	Calculus and Analysis 1	Discrete Mathematics	Introduction to Probability and Statistics	Mathematical Computing
	Basic Statistical Methodologies	Calculus and Analysis 2	Modelling with Algebra	Problem Solving and Algorithms
Year 2	Science Mentored Research Project 1	Linear Algebra and Vector Calculus	Linear Models and Design of Experiments	Industrial Applications of Mathematics and Statistics 1
	Statistical Inference	Statistics elective	Statistics elective	University elective
Year 3	Industrial Applications of Mathematics and Statistics 2	Multivariate Analysis	Science Mentored Research Project 2	Statistics elective
	Statistics elective	Statistics elective	Statistics elective	University elective
Year 4	Honours Statistics Project 1	Advanced Topics in Statistics 1	Advanced Topics in Statistics 2	Advanced Topics in Statistics 3
	Honours Statistics Project 2	Advanced Topics in Statistics 4	Advanced Topics in Statistics 5	Advanced Topics in Statistics 6

Compulsory courses
 Program electives
 University electives

Please note: This is an example of the program structure. Courses may change and may not be available each semester.

Bachelor of Science (Dean's Scholar, Biology) (Honours)

2019

Undergraduate

This selective-entry, research-oriented, four year honours program is designed for capable and highly motivated students who want experience with hands-on involvement in research projects.

This program prepares you for a career as a biologist in industry, consulting, academia or teaching. You will study biological diversity of plants, animals and microbes based on your understanding of chemical and physical basis of how cells function. You will see how these biological entities come together in various environments to form ecosystems, and understand how these environments can be disrupted. You will be given the opportunity to apply your learning through various laboratory practicals and field trips, culminating in a capstone Honours Project.

This program is a preferred pathway into higher degrees by research such as a PhD program

Industry connections

You will have the opportunity to work on research projects and practical activities, often undertaken in collaboration with industry.

Mentored research placements in second year provide an opportunity for Dean's Scholar students to experience research at the cutting-edge under the mentorship of research-active academics in the School of Science.

The third year Science Project and fourth year Science Honours Project will also provide you with the opportunity to develop independent research projects, which can involve an industry partner.

Career outlook

Graduates will be qualified to work in a government, industry or academic research laboratory or continue studying in a higher degree program. Graduates will be prepared with the research skills and advanced knowledge needed to solve real-world problems.

Professional recognition

Graduates may be eligible to apply for professional membership with:

- The Australian Society for Biochemistry and Molecular Biology (ASBMB)

International opportunities

RMIT partners with over 150 organisations around the world to provide you with global work and study opportunities. You could spend a semester studying abroad, take part in a study tour or complete an international internship.

Pathways

If you have completed the first year of the Bachelor of Science (Applied Science) program or an equivalent program with a grade point average (GPA) of at least 3.5 out of 4.0, you will be eligible to apply for transfer into the second year of the Bachelor of Science (Dean's Scholar, Biology) (Honours) program.

This program is a preferred pathway into higher degrees by research such as the PhD program.

Program snapshot

Program code: BH101BI

Duration

Full-time: 4 years
Part-time may be available

Location

City campus Years 1 and 2
Bundoora campus Years 3 and 4

Selection mode

ATAR (2018: 81.55)

How to apply

Semester 1: VTAC
vtac.edu.au

Semester 2: Direct to RMIT
rmit.edu.au/programs/apply/direct

Fees

For local fee information:
rmit.edu.au/programs/fees

Contact

Info Corner
330 Swanston Street
(cnr La Trobe Street)
Melbourne VIC 3000
Tel. +61 3 9925 2260

rmit.edu.au/programs/bh101

Program structure

Year 1

You will study foundation courses in biology, chemistry, physics and maths, and be introduced to scientific skills and communication. You will also start studying courses from your chosen major.

Year 2

During your second year, you will have the opportunity to take part in an industry placement. You will be mentored by a staff member and may have the chance to carry out work that contributes to the project. You will also continue to study courses from your chosen major.

Year 3

You will study more advanced courses from your chosen major. The Science Project course gives you the opportunity to work on a small research project under the supervision of an academic staff member. You may have the opportunity to collaborate with an external organisation on this project.

Year 4

You will plan and complete a specific research project in your chosen major, in consultation with your supervisor. In addition to the research project, you will undertake advanced coursework and learn the skills to develop a research proposal and carry out experimental design and data analysis.

Year 1	Animal Structure and Function	Cell Structure and Function	Introduction to Microbiology, Immunology and Genetics	Scientific Skills and Communication
	Chemistry Option	Mathematics Option	Physics Option	University elective
Year 2	Biological Chemistry	Genetics and Molecular Biology	Animal Diversity	Microbiology
	Plant Structure and Function	Plant Diversity	Ecology	Directed Study
Year 3	Cell and Tissue Culture	Environmental Biotechnology	Ecotoxicology	Marine Biology
	Science Project	The Professional Scientist	Independent Study	University elective
Year 4	Science Honours 1	Physical Science Research Methods	Project Planning	Science Honours Project 1
	Science Honours Project 2	Science Honours Project 3	Science Honours Project 4	Science Honours 2

Compulsory courses
 Program electives
 University electives

Please note: This is an example of the program structure. Courses may change and may not be available each semester.

Bachelor of Science (Dean's Scholar, Biotechnology) (Honours)

2019

Undergraduate

This selective-entry, research-oriented, four year honours program is designed for capable and highly motivated students who want experience with hands-on involvement in research projects.

Graduates of this program will be ready to move straight into the burgeoning field of biotechnology, equipped with skills in genetic engineering, industrial microbiology, bioinformatics, and regulatory, ethical and legal issues in biotechnology.

The program provides a combination of basic and advanced knowledge and extensive 'hands-on' techniques taught in laboratory practicals, culminating in a capstone Honours Project.

It is also a pathway into higher degrees by research such as a PhD.

Industry connections

You will have the opportunity to work on research projects and practical activities, often undertaken in collaboration with industry.

A mentored research placement in second year provides an opportunity for Dean's Scholar students to experience research at the cutting-edge under the mentorship of research-active academics in the School of Science.

The third year Science Project and fourth year Science Honours Project will also provide you with the opportunity to develop independent research projects, which can involve an industry partner.

Career outlook

Graduates will be qualified to work in a government, industry or academic research laboratory or continue studying in a higher degree program. Graduates will be prepared with the research skills and advanced knowledge needed to solve real-world problems.

Professional recognition

Graduates may be eligible to apply for professional membership with:

- The Australian Society for Biochemistry and Molecular Biology (ASBMB)

International opportunities

RMIT partners with over 150 organisations around the world to provide you with global work and study opportunities. You could spend a semester studying abroad, take part in a study tour or complete an international internship.

Pathways

If you have completed the first year of the Bachelor of Science (Applied Science) program or an equivalent program with a grade point average (GPA) of at least 3.5 out of 4.0, you will be eligible to apply for transfer into the second year of the Bachelor of Science (Dean's Scholar, Biotechnology) (Honours) program.

This program is a preferred pathway into higher degrees by research such as the PhD program.

Program snapshot

Program code: BH101BT

Duration

Full-time: 4 years
Part-time may be available

Location

City campus Years 1 and 2
Bundoora campus Years 3 and 4

Selection mode

ATAR (2018: 81.55)

How to apply

Semester 1: VTAC
vtac.edu.au

Semester 2: Direct to RMIT
rmit.edu.au/programs/apply/direct

Fees

For local fee information:
rmit.edu.au/programs/fees

Contact

Info Corner
330 Swanston Street
(cnr La Trobe Street)
Melbourne VIC 3000
Tel. +61 3 9925 2260

rmit.edu.au/programs/bh101

Program structure

Year 1

You will study foundation courses in biology, chemistry, physics and maths, and be introduced to scientific skills and communication. You will also start studying courses from your chosen major.

Year 2

During your second year, you will have the opportunity to take part in an industry placement. You will be mentored by a staff member and may have the chance to carry out work that contributes to the project. You will also continue to study Biotechnology courses.

Year 3

You will study more advanced courses in Biotechnology. The Science Project course gives you the opportunity to work on a small research project under the supervision of an academic staff member. You may have the opportunity to collaborate with an external organisation on this project.

Year 4

You will plan and complete a specific research project in Biotechnology, in consultation with your supervisor. In addition to the research project, you will undertake advanced coursework and learn the skills to develop a research proposal and carry out experimental design and data analysis.

Year 1	Cell Structure and Function	Animal Structure and Function	Introduction to Microbiology, Immunology and Genetics	Scientific Skills and Communication
	Chemistry Option	Mathematics Option	Physics Option	University elective
Year 2	Biological Chemistry	Cell and Tissue Culture	Microbiology	Bioinformatics
	Genetics and Molecular Biology	Science Mentored Research Placement 1	Food Microbiology	University elective
Year 3	The Professional Scientist	Science Project	Science Mentored Research Placement 2	Industrial Microbiology
	Major course	Major course	Major course	Major Course
Year 4	Science Honours 1	Physical Science Research Methods	Project Planning	Science Honours Project 1
	Science Honours Project 2	Science Honours Project 3	Science Honours Project 4	Science Honours 2

Compulsory courses
 Program electives
 University electives

Please note: This is an example of the program structure. Courses may change and may not be available each semester.

Bachelor of Science (Dean's Scholar, Chemistry) (Honours)

2019

Undergraduate

This selective-entry, research-oriented, four year honours program is designed for capable and highly motivated students who want experience with hands-on involvement in research projects.

This program allows you to prepare for a career as a scientist in the field of chemistry. You will study the molecular basis of chemical reactions with the opportunity to put these studies into practice in practical laboratory sessions. The basic concepts associated with inorganic, organic and physical chemistry are applied in analysis, synthesis and detection of chemical substances. Your studies in chemistry will prepare you for a career in industry, academia or in teaching.

The program also offers opportunities for you to engage with research groups and get involved in their research projects. It is also a pathway into higher degrees by research such as a PhD.

Industry connections

You will have the opportunity to work on research projects and practical activities, often undertaken in collaboration with industry.

A mentored research placement in second year provides an opportunity for Dean's Scholar students to experience research at the cutting-edge under the mentorship of research-active academics in the School of Science.

The third year Science Project and fourth year Science Honours Project will also provide you with the opportunity to develop independent research projects, which can involve an industry partner.

Career outlook

Graduates will be qualified to work in a government, industry or academic research laboratory or continue studying in a higher degree program. Graduates will be prepared with the research skills and advanced knowledge needed to solve real-world problems.

Professional recognition

The program is accredited by the Royal Australian Chemical Institute (RACI).

Graduates may be eligible to apply for professional membership with:

- Royal Australian Chemical Institute (RACI)
- The Australian Biochemical Society (ABS)

International opportunities

RMIT partners with over 150 organisations around the world to provide you with global work and study opportunities. You could spend a semester studying abroad, take part in a study tour or complete an international internship.

Pathways

If you have completed the first year of the Bachelor of Science (Applied Science) program or an equivalent program with a grade point average (GPA) of at least 3.5 out of 4.0, you will be eligible to apply for transfer into the second year of the Bachelor of Science (Dean's Scholar, Chemistry) (Honours) program.

This program is a preferred pathway into higher degrees by research such as the PhD program.

Program snapshot

Program code: BH101CH

Duration

Full-time: 4 years
Part-time may be available

Location

City campus

Selection mode

ATAR (2018: 81.55)

How to apply

Semester 1: VTAC
vtac.edu.au

Semester 2: Direct to RMIT
rmit.edu.au/programs/apply/direct

Fees

For local fee information:
rmit.edu.au/programs/fees

Contact

Info Corner
330 Swanston Street
(cnr La Trobe Street)
Melbourne VIC 3000
Tel. +61 3 9925 2260

rmit.edu.au/programs/bh101

Program structure

Year 1

You will study foundation courses in biology, chemistry, physics and maths, and be introduced to scientific skills and communication. You will also start studying courses from your chosen major.

Year 2

During your second year, you will have the opportunity to take part in an industry placement. You will be mentored by a staff member and may have the chance to carry out work that contributes to the project. You will also continue to study Chemistry courses.

Year 3

You will study more advanced courses in Chemistry. The Science Project course gives you the opportunity to work on a small research project under the supervision of an academic staff member. You may have the opportunity to collaborate with an external organisation on this project.

Year 4

During your fourth year you will plan and complete a specific research project in Chemistry, in consultation with your supervisor. In addition to the research project, you will undertake advanced coursework and learn the skills to develop a research proposal and carry out experimental design and data analysis.

Year 1	Chemistry of Materials 1	Analytical Science	Chemistry of Materials 2	Scientific Skills and Communication
	Biology Option	Mathematics Option	Physics Option	University elective
Year 2	Analytical Spectroscopy	Chemistry Laboratory 2A	Chemistry Theory 2A	Science Mentored Research Placement 1
	Chemistry Laboratory 2B	Chemistry Theory 2B	Instrumental and Environmental Analysis	University elective
Year 3	Advanced Instrumental Analysis	Chemistry Laboratory 3	Chemistry Theory 3A	Science Mentored Research Placement 2
	The Professional Scientist	Advanced Spectroscopic Analysis	Chemistry Theory 3B	Science Project
Year 4	Science Honours 1	Physical Science Research Methods	Project Planning	Science Honours Project 1
	Science Honours Project 2	Science Honours Project 3	Science Honours Project 4	Science Honours 2

Compulsory courses
 Program electives
 University electives

Please note: This is an example of the program structure. Courses may change and may not be available each semester.

Bachelor of Science (Dean's Scholar, Computer Science) (Honours)

2019

Undergraduate

This selective-entry, research-oriented, four year honours program is designed for capable and highly motivated students who want experience with hands-on involvement in research projects.

This program develops a skill set that spans from theoretical and algorithmic foundations to cutting-edge developments in computing. As a graduate of this program, you will be knowledgeable and creative; have excellent programming skills; be capable of designing, implementing and maintaining complex software systems which drive mobile devices, social media, intelligent robots and more. You will also be able to readily adapt to new advances in the rapidly changing information technology environment and/or continue towards a research degree.

The program also offers opportunities for you to engage with research groups and get involved in their research projects. It is also a pathway into higher degrees by research such as a PhD.

Industry connections

You will have the opportunity to work on research projects and practical activities, often undertaken in collaboration with industry.

A mentored research project in second year provides an opportunity for Dean's Scholar students to experience research at the cutting-edge under the mentorship of research-active academics in the School of Science.

The third year Science Mentored Research Placement and fourth year Computer Science Honours Project 1 and 2 will also provide you with the opportunity to develop independent research projects, which can involve an industry partner.

Career outlook

Graduates will be qualified to work in a government, industry or academic research laboratory or continue studying in a higher degree program. Graduates will be prepared with the research skills and advanced knowledge needed to solve real-world problems.

Professional recognition

Graduates may be eligible to apply for professional membership with:

- The Australian Computer Society (ACS)

International opportunities

RMIT partners with over 150 organisations around the world to provide you with global work and study opportunities. You could spend a semester studying abroad, take part in a study tour or complete an international internship.

Pathways

If you have completed the first year of the Bachelor of Computer Science program or an equivalent program with a grade point average (GPA) of at least 3.5 out of 4.0, you will be eligible to apply for transfer into the second year of the Bachelor of Science (Dean's Scholar, Computer Science) (Honours) program.

This program is a preferred pathway into higher degrees by research such as the PhD program.

Program snapshot

Program code: BH101CS

Duration

Full-time: 4 years
Part-time may be available

Location

City campus

Selection mode

ATAR (2018: 81.55)

How to apply

Semester 1: VTAC
vtac.edu.au

Semester 2: Direct to RMIT
rmit.edu.au/programs/apply/direct

Fees

For local fee information:
rmit.edu.au/programs/fees

Contact

Info Corner
330 Swanston Street
(cnr La Trobe Street)
Melbourne VIC 3000
Tel. +61 3 9925 2260

rmit.edu.au/programs/bh101

Program structure

Year 1

You will study foundation courses in programming techniques, computer systems, software architecture and security in computing.

Year 2

During your second year, you will have the opportunity to take part in an industry project. You will work in a team on a software engineering project, interacting with a professional software project manager.

Year 3

You will study more advanced courses in computer science. The Science Mentored Research Placement course 2 gives you the opportunity to work on a small research project under the supervision of an academic staff member. You may have the opportunity to collaborate with an external organisation on this project.

Year 4

During your fourth year of study, you will carry out a major research project in the Computer Science Honours Thesis course. You will work individually under the guidance of a research active scientist.

Year 1	Discrete Structures in Computing	Introduction to Computer Systems and Platform Technologies	Programming Techniques	User-centred Design
	Data Communication and Net-Centric Computing	Security in Computing and Information Technology	Software Architecture: Design and Implementation	Web Programming
Year 2	Advanced Programming Techniques	Computing Theory	Database Concepts	Software Engineering Fundamentals
	Algorithms and Analysis	Operating Systems Principles	Software Engineering: Process and Tools	Program elective
Year 3	Science Mentored Research Placement 1	Professional Computing Practice	Science Mentored Research Placement 2	Programming Project 1
	Program elective	Program elective	University elective	University elective
Year 4	Research Methods	Program elective	Program elective	Program elective
	Computer Science Honours Thesis Part 1	Computer Science Honours Thesis Part 2		

Compulsory courses
 Program electives
 University electives

Please note: This is an example of the program structure. Courses may change and may not be available each semester.

Bachelor of Science (Dean's Scholar, Geospatial Science) (Honours)

2019

Undergraduate

This selective-entry, research-oriented, four year honours program is designed for capable and highly motivated students who want experience with hands-on involvement in research projects.

You will gain a sound repertoire of scientific knowledge and skills, which will provide you with a foundation for a professional career in Geospatial Science.

You will develop:

- knowledge and fundamental skills essential for all aspects of work and research in the geospatial sciences;
- knowledge in all areas of geospatial science including cartography, mapping, surveying, measurement, and geographical visualisation;
- practical skills developed through field work, presentations, projects and reports;
- a foundation for a career in geospatial sciences and opportunities to take on a leadership role in a changing global market shaped by economic, cultural, environmental and regulatory dynamics

The program also offers opportunities for you to engage with research groups and get involved in their research projects. It is also a pathway into higher degrees by research such as a PhD.

Industry connections

You will have the opportunity to work on research projects and practical activities, often undertaken in collaboration with industry.

A mentored research placement in second year provides an opportunity for Dean's Scholar students to experience research at the cutting-edge under the mentorship of research-active academics in the School of Science.

The third year Science Project and fourth year Science Honours Project will also provide you with the opportunity to develop independent research projects, which can involve an industry partner.

Career outlook

Graduates will be qualified to work in a government, industry or academic research laboratory or continue studying in a higher degree program. Graduates will be prepared with the research skills and advanced knowledge needed to solve real-world problems.

Professional recognition

Depending on their subject choices, graduates may be eligible to apply for professional membership with:

- Mapping Sciences Institute of Australia (MSIA)
- Institution of Surveyors (Victoria)
- Surveying & Spatial Sciences Institute of Australia (SSSI)

International opportunities

RMIT partners with over 150 organisations around the world to provide you with global work and study opportunities. You could spend a semester studying abroad, take part in a study tour or complete an international internship.

Pathways

If you have completed the first year of the Bachelor of Science (Geospatial Science) program or an equivalent program with a grade point average (GPA) of at least 3.5 out of 4.0, you will be eligible to apply for transfer into the second year of the Bachelor of Science (Dean's Scholar, Geospatial Science) (Honours) program.

This program is a preferred pathway into higher degrees by research such as the PhD program.

Program snapshot

Program code: BH101GS

Duration

Full-time: 4 years
Part-time may be available

Location

City campus

Selection mode

ATAR (2018: 81.55)

How to apply

Semester 1: VTAC
vtac.edu.au

Semester 2: Direct to RMIT
rmit.edu.au/programs/apply/direct

Fees

For local fee information:
rmit.edu.au/programs/fees

Contact

Info Corner
330 Swanston Street
(cnr La Trobe Street)
Melbourne VIC 3000
Tel. +61 3 9925 2260

rmit.edu.au/programs/bh101

Program structure

Year 1

You will study foundation courses in geospatial science, surveying and be introduced to scientific communication.

Year 2

During your second year, you will have the opportunity to take part in an industry placement. You will be mentored by a staff member and may have the chance to carry out work that contributes to the project. You will also continue to study Geospatial Science courses.

Year 3

You will study more advanced courses in Geospatial Science. The Science Mentored Research Placement course 2 gives you the opportunity to work on a small research project under the supervision of an academic staff member. You may have the opportunity to collaborate with an external organisation on this project.

Year 4

During your fourth year of study, you will carry out a major research project in Geospatial Science, in consultation with your supervisor. In addition to the research project, you will undertake advanced coursework and learn the skills to develop a research proposal and carry out experimental design and data analysis.

Year 1	Cartography 1	Mathematics for Surveying and Geomatics A	Scientific Communication	Surveying 1
	Applied Geospatial Techniques	Introduction to Physical Modelling	Physical Geography	Spatial Information Science Fundamentals
Year 2	Science Mentored Research Placement 1	Cartography 2	Surveying 2	Distributed Mapping
	Remote Sensing and Photogrammetry 1	Spatial Information Science Principles	Geospatial Elective	University elective
Year 3	The Professional Scientist	Science Project	Science Mentored Research Placement 2	Cartography 3
	Remote Sensing and Photogrammetry 2	Spatial Information Science Analytics	Geospatial Elective	Geospatial Elective
Year 4	Advanced Spatial Information Science	Physical Science Research Methods	Project Planning	Science Honours Project 1
	Science Honours Project 2	Science Honours Project 3	Science Honours Project 4	University elective

Compulsory courses
 Program electives
 University electives

Please note: This is an example of the program structure. Courses may change and may not be available each semester.

Bachelor of Science (Dean's Scholar, Mathematics) (Honours)

2019

Undergraduate

This selective-entry, research-oriented, four year honours program is designed for capable and highly motivated students who want experience with hands-on involvement in research projects.

The program will:

- give you a sound knowledge of both fundamental and advanced mathematical theory
- expose you to a wide range of mathematical models, approaches and software
- enable you to select and apply appropriate mathematical theories, techniques and software to a wide range of problems
- expose you to related fields of study, such as environmental modelling, finance, statistics or information security
- develop your knowledge of the types of industry which employ mathematicians and the types of tasks they undertake
- enable you to become highly employable in the mathematics field and capable of further study
- provide you with the opportunity to develop the generic skills and abilities to operate effectively in professional settings that involve mathematical and statistical expertise. These include communication skills, technology literacy, and the ability to work in a team

The program also offers opportunities for you to engage with research groups and get involved in their research projects. It is also a pathway into higher degrees by research such as a PhD.

Industry connections

You will have the opportunity to work on research projects and practical activities, often undertaken in collaboration with industry.

A mentored research placement in second year provides an opportunity for Dean's Scholar students to experience research at the cutting-edge under the mentorship of research-active academics in the School of Science.

The third year Science Mentored Research Placement and fourth year Honours Mathematics Project 1 and 2 will also provide you with the opportunity to develop independent research projects, which can involve an industry partner.

Career outlook

Graduates will be qualified to work in a government, industry or academic research laboratory or continue studying in a higher degree program. Graduates will be prepared with the research skills and advanced knowledge needed to solve real-world problems.

Professional recognition

Graduates may be eligible to apply for graduate membership to:

- The Australian Mathematical Society

International opportunities

RMIT partners with over 150 organisations around the world to provide you with global work and study opportunities. You could spend a semester studying abroad, take part in a study tour or complete an international internship.

Pathways

If you have completed the first year of the Bachelor of Science (Mathematics) program or an equivalent program with a grade point average (GPA) of at least 3.5 out of 4.0, you will be eligible to apply for transfer into the second year of the Bachelor of Science (Dean's Scholar, Mathematics) (Honours) program.

This program is a preferred pathway into higher degrees by research such as the PhD program.

Program snapshot

Program code: BH101MA

Duration

Full-time: 4 years
Part-time may be available

Location

City campus

Selection mode

ATAR (2018: 81.55)

How to apply

Semester 1: VTAC
vtac.edu.au

Semester 2: Direct to RMIT
rmit.edu.au/programs/apply/direct

Fees

For local fee information:
rmit.edu.au/programs/fees

Contact

Info Corner
330 Swanston Street
(cnr La Trobe Street)
Melbourne VIC 3000
Tel. +61 3 9925 2260

rmit.edu.au/programs/bh101

Program structure

Year 1

You will study foundation courses in mathematics and statistics.

Year 2

During your second year, you will have the opportunity to take part in an industry placement. You will be mentored by a staff member and may have the chance to carry out work that contributes to the project. You will also continue to study Mathematics courses.

Year 3

You will study more advanced courses in Mathematics. The Science Mentored Research Placement 2 course gives you the opportunity to work on a small research project under the supervision of an academic staff member. You may have the opportunity to collaborate with an external organisation on this project.

Year 4

During your fourth year of study, you will carry out a major research project in Mathematics, in consultation with your supervisor. In addition to the research project, you will undertake advanced coursework and learn the skills to develop a research proposal and carry out experimental design and data analysis.

Year 1	Calculus and Analysis 1	Discrete Mathematics	Introduction to Probability and Statistics	Mathematical Computing
	Basic Statistical Methodologies	Calculus and Analysis 2	Modelling with Algebra	Problem Solving and Algorithms
Year 2	Science Mentored Research Project 1	Linear Algebra and Vector Calculus	Mathematical Modelling	Modelling with Differential Equations
	Computational Mathematics	Industrial Applications of Mathematics and Statistics 1	Scientific Computing	University elective
Year 3	Industrial Applications of Mathematics and Statistics 2	Real and Complex Analysis	Science Mentored Research Project 2	Mathematics elective
	Mathematics elective	Mathematics elective	Mathematics elective	University elective
Year 4	Honours Mathematics Project 1	Advanced Topics in Mathematics 1	Advanced Topics in Mathematics 2	Advanced Topics in Mathematics 3
	Honours Mathematics Project 2	Advanced Topics in Mathematics 4	Advanced Topics in Mathematics 5	Advanced Topics in Mathematics 6

Compulsory courses
 Program electives
 University electives

Please note: This is an example of the program structure. Courses may change and may not be available each semester.

Bachelor of Science (Dean's Scholar, Physics) (Honours)

2019

Undergraduate

This selective-entry, research-oriented, four year honours program is designed for capable and highly motivated students who want experience with hands-on involvement in research projects.

This program allows you to prepare for a career as a scientist in the field of physics. In addition to physics, you will study introductory courses in chemistry and biology to provide you with the basic building blocks of scientific knowledge. From that broad base, you will specialise in materials, thermal, optics, radiation, electromagnetism and quantum physics. Theoretical knowledge is complemented with practical experiences in laboratory and modelling courses.

The program also offers opportunities for you to engage with research groups and get involved in their research projects. It is also a pathway into higher degrees by research such as a PhD.

Industry connections

You will have the opportunity to work on research projects and practical activities, often undertaken in collaboration with industry.

A mentored research placement in second year provides an opportunity for Dean's Scholar students to experience research at the cutting-edge under the mentorship of research-active academics in the School of Science.

The third year Science Project and fourth year Science Honours Project will also provide you with the opportunity to develop independent research projects, which can involve an industry partner.

Career outlook

Graduates will be qualified to work in a government, industry or academic research laboratory or continue studying in a higher degree program. Graduates will be prepared with the research skills and advanced knowledge needed to solve real-world problems.

Professional recognition

Graduates may be eligible to apply for professional membership with:

- Australian Institute of Physics (AIP)

International opportunities

RMIT partners with over 150 organisations around the world to provide you with global work and study opportunities. You could spend a semester studying abroad, take part in a study tour or complete an international internship.

Pathways

If you have completed the first year of the Bachelor of Science program or an equivalent program with a grade point average (GPA) of at least 3.5 out of 4.0, you will be eligible to apply for transfer into the second year of the Bachelor of Science (Dean's Scholar, Physics) (Honours) program.

This program is a preferred pathway into higher degrees by research such as the PhD program.

Program snapshot

Program code: BH101PH

Duration

Full-time: 4 years
Part-time may be available

Location

City campus

Selection mode

ATAR (2018: 81.55)

How to apply

Semester 1: VTAC
vtac.edu.au

Semester 2: Direct to RMIT
rmit.edu.au/programs/apply/direct

Fees

For local fee information:
rmit.edu.au/programs/fees

Contact

Info Corner
330 Swanston Street
(cnr La Trobe Street)
Melbourne VIC 3000
Tel. +61 3 9925 2260

rmit.edu.au/programs/bh101

Program structure

Year 1

You will study foundation courses in biology, chemistry, physics and maths, and be introduced to scientific skills and communication. You will also start studying courses from your chosen major.

Year 2

During your second year, you will have the opportunity to take part in an industry placement. You will be mentored by a staff member and may have the chance to carry out work that contributes to the project. You will also continue to study Physics courses.

Year 3

You will study more advanced courses in Physics. The Science Project course gives you the opportunity to work on a small research project under the supervision of an academic staff member. You may have the opportunity to collaborate with an external organisation on this project.

Year 4

During your fourth year you will plan and complete a specific research project in Physics, in consultation with your supervisor. In addition to the research project, you will undertake advanced coursework and learn the skills to develop a research proposal and carry out experimental design and data analysis.

Year 1	Calculus and Analysis 1	Mechanics	Calculus and Analysis 2	Modern Physics
	Scientific Skills and Communication	Thermodynamics and Electromagnetism	Biology elective	Chemistry elective
Year 2	Science Mentored Research Placement 1	Materials and Thermal Physics	Mathematics for Physicists	Optics and Radiation Physics
	Electromagnetics and Quantum Physics	Practical Physics 1	Mathematics elective	University elective
Year 3	Applied Physics	Quantum and Statistical Physics	The Professional Scientist	Science Mentored Research Placement 2
	Science Project	Photonics and Nuclear Physics	Solid State Physics	University elective
Year 4	Science Honours 1	Physical Science Research Methods	Project Planning	Science Honours Project 1
	Science Honours Project 2	Science Honours Project 3	Science Honours Project 4	Science Honours 2

Compulsory courses
 Program electives
 University electives

Please note: This is an example of the program structure. Courses may change and may not be available each semester.