BACHELOR OF SCIENCE

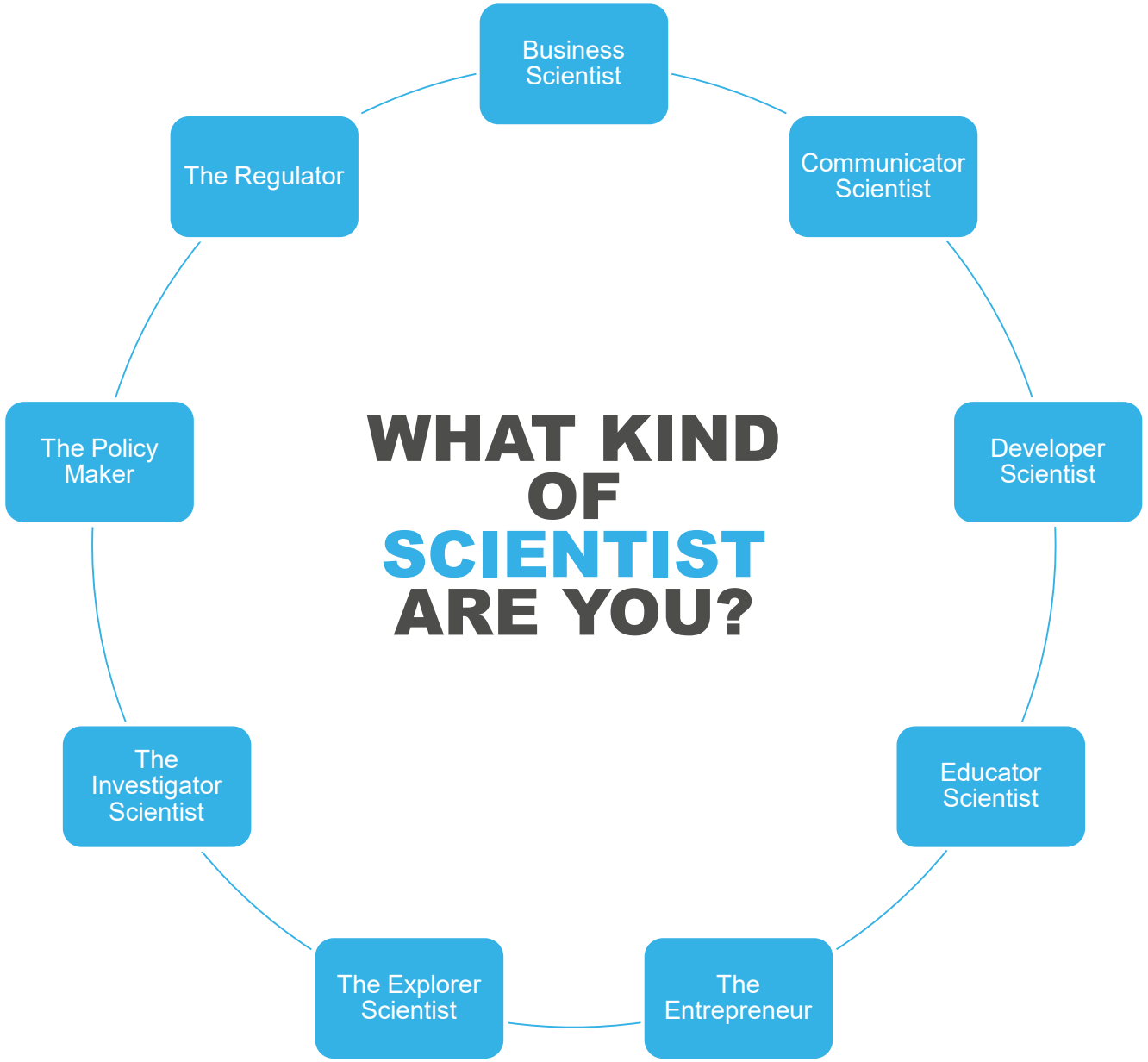
PROFESSIONAL SKILLS ELECTIVE PATHWAYS - CALLAGHAN

THE UNIVERSITY OF NEWCASTLE AUSTRALIA

These pathways have been created to provide guidance for Bachelor of Science students wishing to build their professional skillset with their elective courses.

Each pathway has been selected to complement the content of the Bachelor of Science program with consideration of requisites. Please note that these pathways are suggestions only and will not be noted formally on the final degree certificate.

Students are welcome to enrol in any elective provided that they satisfy the requisites, and they adhere to the rules regarding maximum number of 1000 level courses in their program. For a full list of UON courses, visit the course handbook.



THE BUSINESS SCIENTIST

Business scientists combine their understanding of science, technology and business to excel across all industries. They're not only in demand in obvious fields like pharmaceuticals or IT, but also finance, insurance, marketing, product development and many more.

Complete 40 units from the following (with a recommended maximum of 20 units at 1000 level)	
ECON1001	Microeconomics for Business Decisions
ECON1002	Macroeconomics in the Global Economy
LEGL1001	Foundations of Law
IBUS1000	Managing International Business Risk
MNGT1001	Introduction to Management
MNGT1002	Introduction to Entrepreneurship and Innovation
MKTG1001	Foundations of Marketing
LEGL2002	Law of Business Organisations
MNGT2002	Business Venturing
MNGT3009	Business Development and Growth

THE COMMUNICATOR SCIENTIST

Communicators share science with the world. They find creative, targeted ways to communicate information to a wide range of audiences, and work across diverse industries like TV, advertising, public affairs, museums and cultural institutions.

Complete 40 units from the following (with a recommended maximum of 20 units at 1000 level)	
CMNS1000	Digital and Social Media
CMNS1090	Media Storytelling
CMNS1240	Mobile Media Making
EDUC1751	Knowledge and Communication Technologies
INFT3950	Games Design
STAT3100	Systems Thinking for an Integrated Workforce

THE DEVELOPER SCIENTIST

Developers take other people's discoveries and transform them into something practical – like a new product, service or technology. They are practical problem-solvers who embrace challenges with fresh eyes and new ideas.

Complete the following	
MECH1110	Introduction to Mechanical Engineering Design
MECH2110	Mechanical Engineering Design 1
MECH2430	Mechanics of Solids 1
MECH3110	Mechanical Engineering Design 2

THE EDUCATOR SCIENTIST

Educators share their passion and knowledge of science with the world. They help students in colleges, universities, and other institutions like museums, to understand scientific concepts, and inspire them to use their new knowledge to make the world better. They also develop tools and methods to improve the way science is taught, and information is received.

Complete 40 units from the following	
EDUC1090	Specialist Studies in Mathematics 1
EDUC1101	Curriculum, Assessment and Pedagogy
EDUC2052	Specialist Studies in Science 1
EDUC2200	The Future of Teaching and Learning
MATH2920	Thinking and Working Mathematically
EDUC3810	Teaching Science with the Creative Arts
MATH3910	Mathematics With a View to Teaching
EDUC4110	STEM – an exercise in integration

THE ENTREPRENEUR

Entrepreneurs make big ideas a reality. They combine their knowledge of science and business with an entrepreneurial flair, embracing every opportunity to bring new innovations to the world.

Complete the following	
MNGT1001	Introduction to Management
MNGT1002	Introduction to Entrepreneurship and Innovation
MNGT2004	Managing Innovation
Complete 10 units from the following	
MNGT3008	Advanced Innovation Management
MNGT3009	Business Development and Growth

THE EXPLORER SCIENTIST

Explorers take risks. They embrace a bold approach to research in pursuit of new scientific discovery. They aspire to break new ground across a diverse range scientific fields, and it's hard to know what they might find. Whatever it is, it'll be something new.

Complete the following	
SENG1110	Object Oriented Programming
COMP1140	Database and Information Management
COMP3350	Advanced Database
Complete 10 units from the following	
STAT2000	Applied Statistics and Research Methods
STAT2020	Predictive Analytics

THE INVESTIGATOR SCIENTIST

Investigators are experts at finding connections between ideas and information, and using this to map the scientific landscape. By working in a team to plot the bigger picture, they allow others to find their way more easily.

Complete 40 units from the following	
DESN1121	Experimental Design Imaging
DESN1200	Drawing Foundations
DESN2060	Scientific Illustration
DESN2050	Anatomical and Medical Illustration
DESN2211	Visual Narrative
DESN2804	3D Motion

THE POLICY MAKER

Policy makers use their scientific knowledge and understanding to help shape government policy. Through excellent communication and negotiating skills, they ensure decisions are grounded in sound, scientific evidence.

Complete 40 units from the following (with a recommended maximum of 20 units at 1000 level)	
LEGL1001	Foundations of Law
POLI1010	Australian Politics and Government
SOCS1100	Professional Practice and Key Debates in Social Sciences
POLI2203	International Political Economy and Global Development
SOCS2100	Organisational Management and Social Behaviour
SOCS2300	Ethical Debates in the Social Sciences
SOCS2400	Applied Social Research
POLI3150	Issues in International Relations
POLI3180	Politics, Policy and Government
POLI3203	Democracy in the 21st Century: Local Power, Policy and Participatory Politics
SOCS3100	Policy Development, Program Management and Evaluation

THE REGULATOR SCIENTIST

Regulators are all about safety. They ensure that new science and technology is safe and secure. They require excellent communication skills and must build trust and confidence among other scientists and the public. For example, regulators check that our food is safe to eat.

Complete the following	
LEGL1001	Foundations of Law
ENVS2002	Environmental Legislation and Planning
LEGL2002	Law of Business Organisations
Complete 10 units from the following	
LAWS6037	International Environment Law and Policy
LAWS6038	Law and Economics of Climate Change
LEGL6004	Law for Workplace Health and Safety