NUS National University of Singapore

Behavioural and Implementation Science Interventions
Yong Loo Lin School of Medicine

Master of Science in Behavioural and Implementation Sciences in Health (MScBIS)

Academic Year 2027/2028

tinyurl.com/nusmedmscbis

Academic Director's Message

It is with great pleasure and enthusiasm that I present to you the Master of Science in Behavioural and Implementation Sciences in Health (MScBIS), offered by the Centre for Behavioural and Implementation Science Interventions (BISI).

The first of its kind in Asia, our program is designed to explore the dynamic intersection of behavioural change approaches and implementation strategies, providing you with a unique opportunity to delve into the complexities of human behaviour and translate evidence into effective interventions applied to healthcare settings. Throughout your time here, you will be exposed to cutting-edge research, engage in thought-provoking discussions, and collaborate with esteemed faculty members and fellow students who share your passion for making a positive impact on the major healthcare challenges facing our generation today and in the future.

As you embark on this academic adventure, I encourage you to embrace the challenges and opportunities that lie ahead. Our dedicated course faculty and staff are committed to supporting your academic and personal growth, and we believe that your experiences within our program will not only enhance your knowledge and skills but also shape your future as a leader in the field of human health sciences and services.

I look forward to receiving your application and welcoming you to a community where curiosity meets action, and where your journey towards becoming a thought leader in modern health begins.

Professor Nick Sevdalis

Academic Director, MScBIS
Centre for Behavioural & Implementation Science Interventions (BISI)

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Overview of MScBIS

The Master of Science in Behavioural and Implementation Sciences in Health (MScBIS) is the first of its kind in Asia, designed to explore the dynamic intersection of behavioural change approaches and implementation strategies, providing students with a unique opportunity to delve into the complexities of human behaviour and translate evidence into effective interventions applied to healthcare settings.

Targeted at healthcare professionals, management teams, policy makers and thought leaders, this programme is relevant to anyone at any stage of their career who conduct or are involved in health services or quality improvement projects and implementation work in their workplace, and anyone who seeks knowledge in the areas of behavioural and implementation sciences.

You will learn state-of-the-art behavioural and organisational change methods, master methodological and statistical approaches to evaluate the implementation, spread, and clinical and population health impact of evidenced interventions.

The programme has a rigorous focus on the cross-disciplinary theoretical, empirical, and applied fundamentals of behavioural and implementation sciences. Throughout your time here, you will be exposed to cutting-edge research, engage in thought-provoking discussions, and collaborate with esteemed faculty members and fellow students who share a passion for making a positive impact on the major healthcare challenges facing our generation today and in the future.

3 Unique Features

1. The MScBIS is the first in NUS to be offered as a “hybrid” Master degree programme where 2 core courses will be delivered fully/partially online, allowing greater flexibility to busy professionals who are interested to further their studies.
2. The MScBIS is the only higher education programme that combines behavioural and implementation sciences specifically designed to address the urgent needs of the healthcare community in Singapore and around the region.
3. Students will learn through first-hand experiences of **our world-renowned panel of experts** who are behavioural and implementation scientists, researchers, policy makers and thought leaders.

Career Opportunities

1. Project Management in Healthcare
2. Population Health
3. Health Services Research
4. Policy Advisor
5. Implementation Specialist/Analyst
6. Project Consultant
7. Implementation Leads in their Current Roles
8. Behavioural Economist
9. Operational Partners/Administrators
10. Organisational Scientists

Programme Structure

The MScBIS is a 1-year (full-time) or 2-year (part-time) degree comprising 40 Units of coursework. Students can choose to specialise in either Research Track, or Practice Track. Track specialisation is not a graduation requirement.

The 40-Unit coursework-based degree programme comprises of:

- Core courses (28 Units, 7 courses) and
- Elective courses (12 Units, choose 3 out of 7 courses)

Admission Requirements

- Bachelor's Degree (preferably with Honours) in Health, Healthcare, Psychology, Social Sciences, Social Work or related fields.
- Graduates with M.B.B.S., Life Sciences (e.g. Biochemistry, Cell Biology and Molecular Biology), Bioengineering, Biotechnology or Health Sciences related degrees, and working experience in a healthcare service, leadership or research related field would be advantageous.
- International applicants whose medium of university instruction is not completely in English:
  - Test of English as a Foreign Language (TOEFL) minimum score of 85 (Internet-based), or
  - International English Language Testing System (IELTS) minimum Academic score 6.0
- Candidates should submit a Curriculum Vitae (CV) which provides an overview of your relevant experience, skills and qualifications and accomplishments, along with a Statement of Intent of not more than 300 words and upload it as a document in Word or PDF format. The statement should showcase your academic strength, research interests, motivation to study and long-term development goals.

Tuition Fees

Total tuition fees (for students enrolled in AY 2027/2028 only):

S$61,330.28 (w/o 9% Goods & Services Tax (GST))
S$66,850.00 (w 9% GST).

- Tuition fees are subjected to annual review and inflation.
- For information on rebates, please visit the MScBIS website.

Programme Learning Outcome

- Graduates of MScBIS will be equipped to apply behavioural and implementation sciences to improve health outcomes in Singapore and beyond.

Overall Learning Outcomes

1. Graduates will apply knowledge and expertise in behavioural and implementation sciences to improve health outcomes in Singapore and beyond.
2. Graduates will apply behavioural and organisational change methods, engaging and co-designing with stakeholders in healthcare organisations and contributing to the strengthening of health systems.
3. Graduates will critically appraise and synthesise evidence using qualitative, quantitative, and economic methods, and evaluate the implementation and impact of evidence-based policies and interventions.
4. Graduates will practise ethically and reflectively — communicating evidence-based findings and leading BIS projects to professional standards across clinical, policy, and organisational audiences.

Specific Learning Outcomes

1. Apply behavioural and implementation sciences theories and frameworks to diagnose and address health-related challenges at individual, community, and system levels.
2. Critically appraise and synthesise academic literature and evidence pertaining to BIS in healthcare settings.
3. Analyse individual, organisational, and system-level barriers to implementation, and apply behavioural and organisational change methods to address them.
4. Design and lead stakeholder engagement across the intervention and evaluation lifecycle.
5. Apply qualitative and quantitative research methods to formulate policies and interventions guided by evidence, and evaluate their uptake and impact.
6. Apply theoretical principles and practical techniques of economic analysis essential to inform health policy and health care decision-making.
7. Demonstrate ethical and professional practice in BIS work, and engage in critical reflection to develop as evidence-based practitioners.
8. Plan and deliver a BIS project from design to dissemination, and communicate evidence-based recommendations in written and oral form to practitioner, clinical, and policy audiences.

Overview of Courses

Core Courses (4 units each)

Course Title	Semester Offered
BIH5001 Fundamentals of Behavioural and Implementation Sciences	Semester 1
BIH5002 Evidence-informed Practice and Policies in Healthcare	Semester 2
BIH5003 Master's Project I	Semester 1 Semester 2
BIH5101 Intermediate Research Methods for Behavioural and Implementation Sciences	Semester 1
BIH5102 Intermediate Behavioural and Implementation Sciences (eLearning) • ***Pre-requisite:*** *Completion of* ***BIH5001*** *Fundamentals of Behavioural and Implementation Sciences*	Semester 2
BIH5103 Programme Evaluation in Health	Semester 1
BIH5104 Master's Project II • ***Pre-requisite:*** *Completion of* ***BIH5003*** *Master's Project I*	Semester 2

Elective Courses (4 units each)

Course Title	Semester Offered
BIH5004 Behavioural Decision Sciences	Semester 1
BIH5005 Introductory Research Methods in Behavioural and Implementation Sciences • *Recommended if you are new to research or need a refresher.* • ***Exclusion criteria:*** *Completion of* ***BIH5101*** *Intermediate Research Methods for Behavioural and Implementation Sciences*	Semester 1
BIH5105 Advanced Applications of Behavioural and Implementation Sciences • ***Pre-requisite:*** *Completion of* ***BIH5001*** *Fundamentals of Behavioural and Implementation Sciences*	Semester 2
BIH5106 Advanced Research Methods for Behavioural and Implementation Sciences - Complex Intervention Design • ***Pre-requisite:*** *Completion of* ***BIH5101*** *Intermediate Research Methods for Behavioural and Implementation Sciences*	Semester 2
BIH5107 Psychological Mechanisms in Behaviour Change Interventions	Semester 2
DL5102 Digital Agility & Change Leadership	Semester 1
BMI5108 Advanced Value-Based Healthcare	Semester 1
BMI5207 Medical Data and Data Processing	Semester 1

Please note that elective offerings and available vacancies for these courses may vary from year to year.

To graduate with a specialisation in the **Research** track, students must complete **BIH5004** Behavioral Decision Sciences AND **BIH5106** Advanced Research Methods for Behavioural and Implementation Sciences - Complex Intervention Design.

To graduate with a specialisation in the **Practice** track:
- Students who matriculated in **AY2025/26** must complete **BMI5108** Advanced Value-Based Healthcare AND **BIH5105** Advanced Applications of Behavioural and Implementation Sciences.
- Students who matriculated in **AY2026/27** must complete either **BMI5108** Advanced Value-Based Healthcare OR **BIH5107** Psychological Mechanisms in Behaviour Change Interventions, AND **BIH5105** Advanced Applications of Behavioural and Implementation Sciences.
- Students matriculating in **AY2027/28** onwards must complete **BIH5107** Psychological Mechanisms in Behaviour Change Interventions AND **BIH5105** Advanced Applications of Behavioural and Implementation Sciences.

Recommended Study Plan

Full-Time Students

Y1S1 Core Courses

1. **BIH5001** Fundamentals of Behavioural and Implementation Sciences (eLearning)
2. **BIH5101** Intermediate Research Methods for Behavioural and Implementation Sciences
3. **BIH5103** Programme Evaluation in Health
4. **BIH5003** Master's Project I

Y1S1 Elective Courses (Choose 1 or 2)

1. **BIH5004** Behavioural Decision Sciences
2. **BIH5005** Introductory Research Methods in Behavioural and Implementation Sciences
3. **BMI5108** Advanced Value-Based Healthcare
4. **BMI5207** Medical Data and Data Processing
5. **DL5002** Digital Agility and Change Leadership

Y1S2 Core Courses

1. **BIH5002** Evidence-informed Practice and Policies in Healthcare
2. **BIH5102** Intermediate Behavioural and Implementation Sciences (eLearning)
3. **BIH5104** Master's Project II

Y1S2 Elective Courses (Choose 1 or 2)

1. **BIH5105** Advanced Applications of Behavioural and Implementation Sciences
2. **BIH5106** Advanced Research Methods for Behavioural and Implementation Sciences - Complex Intervention Design
3. **BIH5107** Psychological Mechanisms in Behaviour Change Interventions

Please note that elective offerings and available vacancies for these courses may vary from year to year.

Part-Time Students

Y1S1 Core Courses

1. **BIH5001** Fundamentals of Behavioural and Implementation Sciences
2. **BIH5101** Intermediate Research Methods for Behavioural and Implementation Sciences
   **Note: must be taken together with BIH5001.*
3. **BIH5103** Programme Evaluation in Health

Y1S1 Elective Courses

1. **BIH5005** Introductory Research Methods in Behavioural and Implementation Sciences
   *Note: BIH5005 cannot be taken after the *completion* of BIH5101.

Y1S2 Core Courses

1. **BIH5002** Evidence-informed Practice and Policies in Healthcare
2. **BIH5102** Intermediate Behavioural and Implementation Sciences (eLearning)
3. **BIH5003** Master's Project I

Y1S2 Elective Courses

1. **BIH5107** Psychological Mechanisms in Behaviour Change Interventions

Y2S1 Core Courses

1. **BIH5103** Programme Evaluation in Health
   **Note: if not taken in Y1S1.*

Y2S1 Elective Courses (Choose 1 or 2)

1. **BIH5004** Behavioural Decision Sciences
2. **BMI5108** Advanced Value-Based Healthcare
3. **BMI5207** Medical Data and Data Processing
4. **DL5002** Digital Agility and Change Leadership

Y2S2 Core Courses

1. **BIH5104** Master's Project II
2. **BIH5002** Evidence-informed Practice and Policies in Healthcare **Note: if not taken in Y1S2.*

Y2S2 Elective Courses (Choose 1 or 2)

1. **BIH5105** Advanced Applications of Behavioural and Implementation Sciences
2. **BIH5106** Advanced Research Methods for Behavioural and Implementation Sciences - Complex Intervention Design

Core Courses

BIH5001

Fundamentals of Behavioural and Implementation Sciences

Course Description

This course introduces students to key concepts, theories, and frameworks in behavioural and implementation sciences (BIS), with a focus on their application in healthcare. Students will learn to analyse behavioural and implementation challenges, apply frameworks such as COM-B, BCW, CFIR, and RE-AIM, and design strategies that are evidence-informed and context-sensitive. Emphasis is placed on the integration of theory and practice, and the role of context, stakeholders, and behavioural drivers in shaping effective interventions.

Learning Outcomes

1. Describe key theories, models, and frameworks in behavioural and implementation sciences, and explain their relevance to healthcare.
2. Apply core BIS concepts and tools to the design of strategies that address behavioural and implementation challenges in healthcare.
3. Critically appraise evidence for behavioural and implementation approaches, including their application and impact in real-world interventions.
4. Use BIS frameworks to analyse and plan health interventions, taking into account behavioural determinants, contextual factors, and stakeholder dynamics.

Teaching Faculty

Dr Jessica Ng

Lecturer & Programme Director, Centre for Behavioural and Implementation Science Interventions (BISI), Yong Loo Lin School of Medicine, National University of Singapore

Adj Asst Prof Serene Koh

Adjunct Assistant Professor, Centre for Behavioural and Implementation Science Interventions (BISI), Yong Loo Lin School of Medicine, National University of Singapore

Dr Gayatri Kembhavi-Tam

Visiting Professor,
Yong Loo Lin School of Medicine,
National University of Singapore

Asst Prof Rayner Kay Jin Tan

Assistant Professor (Joint), Centre for Behavioural and Implementation Science Interventions (BISI), Yong Loo Lin School of Medicine, National University of Singapore

Core Courses

BIH5002

Evidence-informed Practice and Policies in Healthcare

Course Description

This specialised course is tailored for middle to senior-level healthcare professionals who aim to lead change in their settings. With a focus on developing clinical practice guidelines and public policies, the course offers a rigorous, evidence-based approach to healthcare decision-making at various levels. Participants will journey from understanding the fundamentals of healthcare leadership and the role of evidence, to mastering economic evaluation and implementation strategies. The course concludes with practical application, guiding students in translating evidence into clinical guidelines and public policy recommendations.

Learning Outcomes

1. Understand the foundational role of leadership in healthcare change and its relationship to evidence-based practice.
2. Master the techniques to identify, assess, and synthesise high-quality evidence for healthcare decision-making.
3. Acquire skills in applying health economics for robust economic evaluation in clinical guideline development.
4. Gain a nuanced understanding of the global context affecting health policy, including technological advancements and socioeconomic factors.
5. Develop skills in designing research methodologies tailored to specific healthcare questions.
6. Learn how to adapt international evidence and global policies for local contexts, considering cultural, fiscal, social, technical and ethical aspects.
7. Translate evidence into clinical practice guidelines and public policy recommendations.
8. Navigate challenges and formulate solutions when faced with limited, conflicting, poor-quality or no evidence.

Teaching Faculty

Prof Tikki Elka Pangestu

Visiting Professor,
Yong Loo Lin School of Medicine,
National University of Singapore

A/Prof Yap Chin Huat Jason

Associate Professor and Senior Advisor (Practice),
Saw Swee Hock School of Public Health,
National University of Singapore

BIH5101

Core Courses

Intermediate Research Methods for Behavioural and Implementation Sciences

Course Description

This course provides students with an understanding of how to conduct a research project and a working knowledge of the research methodologies used in Behavioural and Implementation Sciences.

Learning Outcomes

1. Understand how research methods apply to specific implementation research questions.
2. Be able to articulate examples of different study designs as applicable across different implementation research, evaluation and practice scenarios.
3. Become familiar with and able to appraise and select validated implementation outcome scales.
4. Able to formulate hybrid RCT designs as applicable to controlled implementation evaluations – including feasibility and definite studies.
5. Understand how to develop, apply and analyse implementation theory-driven topic guides for interviews or focus groups and surveys for large scale investigations.

Teaching Faculty

Prof Nick Sevdalis

Visiting Professor, Department of Psychological Medicine, Yong Loo Lin School of Medicine, National University of Singapore

Academic Director, Centre for Behavioural and Implementation Science Interventions (BISI), Yong Loo Lin School of Medicine, National University of Singapore

Dr Laura Martinengo

Senior Research Fellow,
Centre for Behavioural and Implementation Science Interventions (BISI),
Yong Loo Lin School of Medicine,
National University of Singapore

Core Courses

BIH5102

Intermediate Behavioural and Implementation Sciences (eLearning)

Course Description

This course provides students with a deeper understanding of how Behavioural and Implementation sciences can be used together to improve health and health outcomes.

Learning Outcomes

1. Identify and critically analyze the role of individual behaviours and organizational behaviour in influencing change and facilitating the implementation of policy or evidence-based practice.
2. Apply core concepts of BIS to motivate behavioural change in a healthcare setting.
3. Identify and critically analyze facilitators and barriers to implementation of evidence-based policies and interventions.
4. Conduct and report on intervention adaptations and fidelity assessments.
5. Understand stakeholder engagement techniques and principles.
6. Understand strategies for increasing the adoption, implementation and sustainability of evidence-based healthcare intervention design.
7. Able to design hybrid effectiveness-implementation studies and evaluations at different stages of implementation.

Teaching Faculty

Prof Ivo Vlaev

Professor,
Centre for Behavioural and Implementation Science Interventions (BISI),
Yong Loo Lin School of Medicine,
National University of Singapore

BIH5103

Programme Evaluation in Health

Course Description

This course will equip the students in skills to conduct different formsof health and healthcare programme evaluations in different contexts (as an internal or external evaluator of a programme). The students will acquire practical skills on how to prepare for an evaluation, conduct an evaluation and appropriately disseminate the evaluation results to the relevant stakeholders and decision makers.

Learning Outcomes

1. Discuss the uses and inter-connectedness of the different types of programme evaluations, including formative evaluation, process evaluation, outcome evaluation, impact evaluation and different types of health economic evaluation.
2. Explore the key designs, methods and frameworks for data collection for the different types of evaluations.
3. Design an evaluation plan, including the Terms of Reference (TOR), evaluation framework and operational arrangements.
4. Interpret the results of an evaluation and discuss whether these can be attributed to the programme.
5. Explore approaches to formulating and communicating evaluation findings and recommendations effectively to policymakers, implementers, project partners etc.
6. Draft and present an evaluation executive summary. Able to design hybrid effectiveness-implementation studies and evaluations at different stages of implementation.

Teaching Faculty

Adj Prof Joanne Yong Su Yin

Adjunct Professor, Yong Loo Lin School of Medicine, National University of Singapore

Founder and Chief Executive, Research for Impact, Singapore

Prof Nick Sevdalis

Visiting Professor, Department of Psychological Medicine, Yong Loo Lin School of Medicine, National University of Singapore

Academic Director, Centre for Behavioural and Implementation Science Interventions (BISI), Yong Loo Lin School of Medicine, National University of Singapore

BIH5003

Master's Project I

Course Description

This course is part I of the research project students are required to fulfil for graduation. Students will apply knowledge gained in programme to design and intervention in the healthcare setting.

Learning Outcomes

1. Identify and articulate a research problem relevant to behavioural and/or implementation science in health.
2. Critically review and synthesise academic literature relevant to behavioural and implementation science in healthcare settings.
3. Formulate clear, focused and feasible research questions, aims and objectives.
4. Design and justify a coherent research project, evaluation or evidence-informed intervention, where appropriate, using suitable theoretical frameworks, study designs, data-collection methods and analysis plans.
5. Identify and address relevant ethical, governance and data-management considerations, and prepare ethics applications where required.
6. Communicate and defend a research proposal effectively in written and oral formats.

Teaching Faculty

Dr Jessica Ng

Lecturer & Programme Director, Centre for Behavioural and Implementation Science Interventions (BISI), Yong Loo Lin School of Medicine, National University of Singapore

Dr Yuen Wei Lun

Research Fellow, Centre for Behavioural and Implementation Science Interventions (BISI), Yong Loo Lin School of Medicine, National University of Singapore

Dr Voon Xin Pei

Research Fellow, Centre for Behavioural and Implementation Science Interventions (BISI), Yong Loo Lin School of Medicine, National University of Singapore

BIH5104

Master's Project II

Course Description

This course is part II of the research project students require to complete for graduation. Having completed part I, students are to apply skills gained from the programme to design the implementation of the intervention (public health, clinical or implementation) in the chosen healthcare setting.

Learning Outcomes

1. Execute and manage an approved research project, evaluation orintervention in line with the project plan and ethical requirements.
2. Apply behavioural and implementation science knowledge to collect,manage and analyse data in a healthcare setting.
3. Interpret and critically evaluate findings in relation to the researchquestions, literature, relevant frameworks and implications for practice.
4. Critically reflect on project decisions, challenges, adaptations and learning.
5. Communicate the completed project effectively in written and oral formats.

Teaching Faculty

Dr Jessica Ng

Lecturer & Programme Director (MScBIS Programme and PhD Programme),
Centre for Behavioural and Implementation Science Interventions (BISI),
Yong Loo Lin School of Medicine,
National University of Singapore

Dr Voon Xin Pei

Research Fellow,
Centre for Behavioural and Implementation Science Interventions (BISI),
Yong Loo Lin School of Medicine,
National University of Singapore

Elective Courses

BIH5004

Behavioural Decision Sciences

Course Description

This course explores how individuals and groups make decisions, examining cognitive biases, emotions, and social influences. Students learn to analyse decision processes and apply behavioural insights to improve outcomes in real-world contexts.

Learning Outcomes

1. Develop a foundation in the science of decision making, including core concepts from psychology, economics, and related disciplines.
2. Learn to identify, analyse, and critically evaluate the various biases, heuristics, and contextual factors that affect human judgment and choice.
3. Acquire practical tools and techniques to design, implement, and assess interventions (such as nudges) that improve decision making in personal, organizational, and policy contexts.

Teaching Faculty

Prof Giuseppe A. Veltri

Professor,
Centre for Behavioural and Implementation Science Interventions (BISI),
Yong Loo Lin School of Medicine,
National University of Singapore

Dr Eugene Tay

Senior Research Fellow,
Centre for Behavioural and Implementation Science Interventions (BISI),
Yong Loo Lin School of Medicine,
National University of Singapore

BIH5005

Elective Courses

Introductory Research Methods in Behavioural and Implementation Sciences

Course Description

This course will familiarise students with the concepts in how to conduct a research project and a working knowledge of the research methodologies used in Behavioural and Implementation Sciences.

** We recommend that students who are new to research methods, healthcare sciences, or returning to studies after a few years, take this refresher course.*

Learning Outcomes

1. Understand what is data and identify appropriate data to solve a problem.
2. Apply the appropriate statistical method and Stata command(s) in data analysis.
3. Perform the necessary data management with Stata before and during data analysis.
4. Interpret the generated Stata output (numerical and graphical) to answer the research question(s).
5. Compare, contrast and consolidate the generated results based on appropriate methods relevant for data analysis.
6. Evaluate the generated results and the applied statistical method.
7. Explain the elements of research design, the logic of qualitative research and the relationship between theory and data.
8. Introduce a range of techniques and methods – ethnography, in-depth interviews, participant observation - for generating qualitative data.
9. Demonstrate methods and processes of analysing qualitative data – thematic coding, content analysis and discourse analysis.
10. Interpret issues of validity and reliability of qualitative data and analysis as well as related notions of objectivity and subjectivity.
11. Write a report to present research findings and outcomes.

Teaching Faculty

Adj A/Prof Chan Siew Pang

Adjunct Associate Professor,
Centre for Behavioural and Implementation Science Interventions (BISI),
Yong Loo Lin School of Medicine,
National University of Singapore

Prof Manfred Max Bergman

Visiting Professor,
Centre for Behavioural and Implementation Science Interventions (BISI),
Yong Loo Lin School of Medicine,
National University of Singapore

BIH5105

Elective Courses

Advanced Applications of Behavioural and Implementation Sciences

Course Description

This course provides participants an overview of case studies from practitioners on aspects related to designing and implementing healthcare interventions in various healthcare settings including community and hospitals, and an opportunity to interact with different practitioners in the areas of patient safety, quality and technology deployment.

Learning Outcomes

1. Develop an understanding of the challenges and opportunities faced when designing programmes/ interventions within different healthcare settings.
2. Understand and appreciate aspects of implementation related to technology deployment within different healthcare settings.
3. Understand the interface between BIS, improvement science and quality improvement within hospitals and healthcare organizations.
4. Appreciate the use of BIS through an overview of case studies from practitioners within the preventive health, primary care, home care, patient safety, hospital quality, community mental health and technology deployment within the hospital.
5. Stakeholder engagement and management, and codesign approaches using case studies from the region.

Teaching Faculty

Prof Nick Sevdalis

Visiting Professor, Department of Psychological Medicine, Yong Loo Lin School of Medicine, National University of Singapore

Academic Director, Centre for Behavioural and Implementation Science Interventions (BISI), Yong Loo Lin School of Medicine, National University of Singapore

Mr Tong Shao Chuen

Senior Assistant Director, Centre for Behavioural and Implementation Science Interventions (BISI), Yong Loo Lin School of Medicine, National University of Singapore

Member,
Medical Advisory Committee in Ren Ci

Elective Courses

BIH5106

Advanced Research Methods for Behavioural and Implementation Sciences - Complex Intervention Design

Course Description

This course will equip students with the knowledge to design and evaluate complex interventions.

Learning Outcomes

1. Understand and appreciate the different perspectives (e.g. efficacy, effectiveness, systems- based or theory based) needed when designing and evaluating complex interventions.
2. Understand and appreciate the different types of hybrid designs that can be used for implementation trial design.
3. Understand and apply intervention mapping techniques.
4. Appreciate concepts of co-design and co-production in intervention design.

Teaching Faculty

Prof Nick Sevdalis

Visiting Professor, Department of Psychological Medicine, Yong Loo Lin School of Medicine, National University of Singapore

Academic Director, Centre for Behavioural and Implementation Science Interventions (BISI), Yong Loo Lin School of Medicine, National University of Singapore

Prof Giuseppe A. Veltri

Professor,
Centre for Behavioural and Implementation Science Interventions (BISI),
Yong Loo Lin School of Medicine,
National University of Singapore

Elective Courses

BIH5107

Psychological Mechanisms in Behavioural Change Interventions

Course Description

This course examines how psychological and behavioural interventions influence behaviour change and mental health outcomes. Drawing on clinical psychology, behavioural science, and intervention science, the course focuses on the psychological mechanisms that inform interventions to produce behaviour change. Students will analyse established interventions such as cognitive behavioural therapy, motivational interviewing, and mindset interventions to understand how theoretical mechanisms are translated into practical strategies. The course emphasises mechanism-informed intervention design and culminates in a project where students develop a psychologically informed intervention addressing a real-world health or well-being challenge.

Teaching Faculty

Dr Jessica Ng

Lecturer & Programme Director (MScBIS Programme and PhD Programme),
Centre for Behavioural and Implementation Science Interventions (BISI),
Yong Loo Lin School of Medicine,
National University of Singapore

Learning Outcomes

1. Explain key psychological mechanisms underlying behaviour change and mental health interventions.
2. Critically analyse psychological and behavioural interventions in terms of their underlying mechanisms and theoretical basis.
3. Evaluate how psychological mechanisms are operationalised within intervention strategies and components.
4. Apply behavioural and psychological principles to design interventions that improve health and well-being outcomes.
5. Develop and present a mechanism-informed intervention addressing a real-world behavioural or health challenge.

Elective Courses

DL5102	Digital Agility & Change Leadership (from NUS Institute of Systems Science)
Course Description	Digital Agility and Change Leadership enables participants to acquire skill set to lead their organisation with abilities to sense, response and adapt quickly to market changes and evolving customer needs in a complex and volatile digital business environment today. Some topics covered include practices of agile leadership style, implementation of agile practices, adopting digital first mind-set and developing cohesive change leadership strategies to increase organisation's agility and digital quotient.
Learning Outcomes	1. Benchmark and set vision for an appropriate level of digital agility for the organisation. 2. Select high-level options and develop a high-level plan for the development of capabilities to achieve the desired digital agility. 3. Assess progress towards digital agility vision and the need and readiness for fostering of organisational agility and trust 4. Develop a personal plan to improve own agile capability so as to support digital agility as well as provide a leadership example to the organisation. 5. Evaluate the right level of empowerment, decentralised decision-making and distributed controls to drive organisational changes. 6. Analyse and justify the forming of agile and autonomous organisation structure that can respond effectively to the evolving digital business environment 7. Create new alignment of business support services such as Human Capital Management and Financial Management that can drive organisational changes effectively. 8. Develop a stakeholder engagement strategy to lead effective changes within the organisation and in their business ecosystem. 9. Evaluate how are the existing culture becomes the key barriers to Digital Transformation and develop an integrated change strategy to shape the new desired culture and ways of working to support Digital Transformation.

BMI5108	Advanced Value-Based Healthcare (from Biomedical Informatics)
Course Description	This course introduces participants to "Value Based Healthcare" concepts and framework, and how value-based healthcare can be implemented in Singapore's context. Participants will learn structured data management framework, identification of key clinical quality measurements for specific medical conditions and tracking of improvements in quality and safety.
Learning Outcomes	1. Develop an understanding of "Value Based HealthCare" and the key enablers that are needed to make the shift to a value-based healthcare approach from a traditional healthcare setting. 2. Understand the role of Data and Health informatics when implementing "Value Based HealthCare". 3. Understand how NUHS has attempted to implement "Value Based Healthcare" in Singapore's context.

BMI5207	Medical data and data processing (from Biomedical Informatics)
Course Description	This course seeks to introduce data standards, its sources (traditional and contemporary) and applications in healthcare. Some important standards covered here include SNOMED, ICD9\10, HL7, OMOP and other international standards. Features of healthcare databases and processing of data would be covered. Concepts in databases and data mapping would be demonstrated in practice.
Learning Outcomes	1. Appreciate the importance of medical standards. 2. Understand the industry-approved standards like SNOMED, ICD-9\10, HL7 and OMOP. 3. Learn to perform data transformation and processing. 4. Understand the different medical standards use in national medical facilities medical standard followed internationally.

List of Teaching Staff

The programme is taught by specialists at the forefront of research and practitioners in behavioural and implementation sciences.

Prof Nick Sevdalis

Visiting Professor, Department of Psychological Medicine, National University of Singapore
Academic Director, Centre for Behavioural and Implementation Science Interventions (BISI), Yong Loo Lin School of Medicine, National University of Singapore

Dr Jessica Ng

Lecturer, Centre for Behavioural and Implementation Science Interventions (BISI), Yong Loo Lin School of Medicine, National University of Singapore
Programme Director (MScBIS Programme and PhD Programme), Centre for Behavioural and Implementation Science Interventions (BISI), Yong Loo Lin School of Medicine, National University of Singapore

Prof Giuseppe Alessandro Veltri

Professor of Behavioural Science and Computational Social Science, Centre for Behavioural and Implementation Science Interventions (BISI), Yong Loo Lin School of Medicine, National University of Singapore

Prof Ivo Vlaev

Professor of Behavioural Psychology, Centre for Behavioural and Implementation Science Interventions (BISI), Yong Loo Lin School of Medicine, National University of Singapore

Asst Prof Rayner Kay Jin Tan

Assistant Professor (Joint), Centre for Behavioural and Implementation Science Interventions (BISI), Yong Loo Lin School of Medicine, National University of Singapore

Asst Prof Jocelyn Chew

Assistant Professor, Centre for Behavioural and Implementation Science Interventions (BISI), Yong Loo Lin School of Medicine, National University of Singapore

Dr Laura Martinengo

Senior Research Fellow, Centre for Behavioural and Implementation Science Interventions (BISI), Yong Loo Lin School of Medicine, National University of Singapore

Dr Eugene Tay

Senior Research Fellow, Centre for Behavioural and Implementation Science Interventions (BISI), Yong Loo Lin School of Medicine, National University of Singapore

Dr Voon Xin Pei

Research Fellow, Centre for Behavioural and Implementation Science Interventions (BISI), Yong Loo Lin School of Medicine, National University of Singapore

Dr Yuen Wei Lun

Research Fellow, Centre for Behavioural and Implementation Science Interventions (BISI), Yong Loo Lin School of Medicine, National University of Singapore

Mr Tong Shao Chuen

Senior Assistant Director, Centre for Behavioural and Implementation Science Interventions (BISI), Yong Loo Lin School of Medicine, National University of Singapore
Member, Medical Advisory Committee in Ren Ci

Prof Manfred Max Bergman

Visiting Professor, Centre for Behavioural and Implementation Science Interventions (BISI), Yong Loo Lin School of Medicine, National University of Singapore

Prof Tikki Elka Pangestu

Visiting Professor, Yong Loo Lin School of Medicine, National University of Singapore

Prof Gayatri Kembhavi-Tam

Visiting Professor, Yong Loo Lin School of Medicine, National University of Singapore

A/Prof Yap Chin Huat Jason

Associate Professor and Senior Advisor (Practice), Saw Swee Hock School of Public Health, National University of Singapore

Adj Prof Joanne Yoong Su Yin

Adjunct Professor, Yong Loo Lin School of Medicine, National University of Singapore
Founder and Chief Executive, Research for Impact, Singapore

Adj Asst Prof Serene Koh

Adjunct Assistant Professor, Centre for Behavioural and Implementation Science Interventions (BISI), Yong Loo Lin School of Medicine, National University of Singapore
Director, Behavioural Insights Team (Singapore)

Adj A/Prof Chan Siew Pang

Adjunct Associate Professor, Centre for Behavioural and Implementation Science Interventions (BISI), Yong Loo Lin School of Medicine, National University of Singapore

Prof G.J. Melendez-Torres

Visiting Professor, Yong Loo Lin School of Medicine, National University of Singapore

Contact Information and Application Details

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Centre for Behavioural and Implementation Science Interventions (BISI)

@BISI_NUS

bisilearning@nus.edu.sg

Yong Loo Lin School of Medicine
National University of Singapore
10 Medical Drive
MD11, Level 2
Clinical Research Centre
Singapore 117597