Master of Public Health

Improve the health of
people and populations

#9
BEST UNIVERSITY
UNDER 50 IN THE
WORLD

THE Young University
Rankings, 2023

★★★★★

**5 STARS FOR
STUDENT
RETENTION**

TOP 100
UNIVERSITY
GLOBALLY

QS Rankings, 2024

This document also includes information about:

- Graduate Certificate in Public Health
- Graduate Certificate in Public Health & Communicable Disease
- Graduate Certificate in Health Analytics
- Graduate Diploma in Public Health

Table of Contents

The UTS Online difference

Get ahead. Stay ahead.

When the world around you is constantly changing, take control by upgrading your skills to ensure future career success. Get ahead and stay ahead when faced with new challenges, new technology, and new career environments.
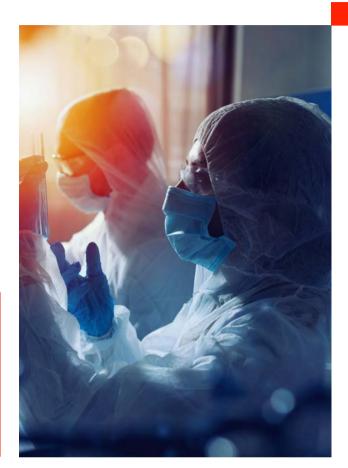
YOU CAN LEARN TO ADAPT.

UTS Online not only gives you the specialist skills and knowledge you'll need to take that significant next step in your career, it will ensure you have the ability to keep adapting and stay relevant and successful, whatever tomorrow brings.

Personalised, ongoing support

Contemporary course content informed by strong industry partnerships

100% Online

Master of Public Health

The UTS Online Master of Public Health is designed for professionals who are passionate about creating positive change for population and community health, and who are looking to advance their skills to gain a global perspective in public health. You will develop specialist knowledge and practical skills that span health data, education and promotion, and graduate ready to develop public health programs at a local, national or global level.

Public health professionals play a critical role in monitoring and supporting population health, and demand for professionals within the healthcare industry is expected to grow by 15.8% to 2026[1].

You'll learn advanced skills applicable to a multitude of health contexts. You can select a generalist pathway or choose to major in data analytics or sub-major in leadership. Tailor your studies to align with your career goals and select from a diverse range of electives including data analytics, leadership and health services management.

Delivered 100% online with part-time study, this course enables you to work full-time while developing a comprehensive understanding of public health theory and research to inform best practice standards in the evolving global environment. Immediately apply what you learn to make a greater impact in your current role and future-proof your career.

[1] Labour Market Insights, 2021

Practical with strong theoretical and research pedigree

Gain a comprehensive understanding of public health theory and research to inform best practice standards. Immediately apply what you learn to make a greater impact in your current role and future-proof your career.

Career transformation

Tailor your studies to transform your career goals into a reality by selecting from a diverse range of electives and majors. Choose a generalist pathway or select a major in data analytics, or sub-major in leadership. Select from a range of electives that include data analytics, leadership and health services management.

World-class education to drive change and improve public health

Designed by leading health academics and delivered by the school of public health, this course provides a high calibre education at the forefront of public health.

100% online, accelerated & supported

Be supported throughout your study journey. Have the flexibility to log in to the learning platform from any device at any time, even whilst working full-time. With intakes every two months, study one subject at a time, 100% online and accelerated, and instantly add value to your career and organisation.

Global population and environmental health leadership

Learn to critically examine global health systems and explore public and population health from a planetary perspective, to prepare for future environmental and health challenges.

Health promotion and disease prevention

Learn to lead and evaluate health programs that promote and improve population health, while developing skills to prevent, detect and manage the spread of diseases. By exploring both communicable and non-communicable diseases, you'll develop the ability to provide optimal outcomes in public health practice and research.

Social, cultural and ethical perspectives

Explore diversity in health by developing a comprehensive understanding of the social, cultural and ethical perspectives of health and wellbeing services. Use your knowledge to guide health policy recommendations across a variety of communities and contexts.

Public health data and analytics

Develop an epidemiological mindset to critique, interpret and synthesise data and research findings. Learn to evaluate healthcare related practices and draw upon research to support public health, and health services planning and management decisions.

Course specialisations

Specialise in:

Core Public Health
Studying a generalist Master of Public Health pathway will provide you with a comprehensive understanding of public and population health, with the opportunity to select from a range of electives to further enhance your capabilities to improve the safety and quality of healthcare services.

Data Analytics (major)
This major provides you with the critical knowledge needed by public health practitioners and health researchers concerning epidemiology, biostatistics, qualitative research and visual analytics. Studying these subjects will provide you with the necessary skills to effectively evaluate the performance of health systems. This course also provides the opportunity to specialise in health analytics at graduate certificate level.

Leadership (sub-major)
Focused on improving the effectiveness and efficiency of health and social care by innovating and driving change, this sub-major is for those who want to develop the knowledge and skills required to lead individual staff, teams, services and/or systems.

In addition to the Masters specialisations above, students can enrol in a Graduate Certificate in Public Health and Communicable Disease, or select advanced electives in the area of Health Services Management.

Health Services Management (advanced electives)
The Master of Public Health provides an extensive range of advanced electives from the UTS Health Services Management course, allowing you to tailor your study pathway and develop the skills to align with your ultimate career goals. These skills can be used in a variety of healthcare settings and open a world of opportunity to develop a career almost anywhere in health and social care settings.

Communicable Disease (Graduate Certificate specialisation)
Before progressing to the Master of Public Health, students can commence with a Graduate Certificate in Public Health and Communicable Disease. This specialised Graduate Certificate is designed for those seeking a career in public health research or practice. By progressing to the Masters following completion of the Graduate Certificate, you will gain a wide range of public health skills from communicable disease, epidemiology and biostatistics and Indigenous health.

Course structure

The Master of Public Health comprises 12 study periods (72 credit points in total) – eight core study periods and four electives. Students undertaking Health Analytics or Leadership pathways must complete the required study periods indicated below and have the option to select from a range of additional electives to complete the total amount of credit points required for this course.

There is also the option to study the Graduate Certificate in Public Health or the Graduate Diploma in Public Health separately.

The Graduate Certificate in Public Health consists of four study period (24 credit points in total), with the option to specialise in Health Analytics or Communicable Disease.

MASTER OF PUBLIC HEALTH
Foundations in Public Health (3 CP)
Indigenous Public Health (3 CP)
Global Health Systems (3 CP)
Planetary Health (3 CP)
Social Perspectives in Public Health (6 CP)
Fundamentals of Epidemiology (6 CP)
Non-communicable Disease (6 CP)
Communicable Disease (6 CP)
Fundamentals of Biostatistics (3 CP)
Fundamentals of Qualitative Research (3 CP)
Health Promotion (6 CP)
Plus 24 credit points from electives

GRADUATE DIPLOMA IN PUBLIC HEALTH
Foundations in Public Health (3 CP)
Indigenous Public Health (3 CP)
Social Perspectives in Public Health (6 CP)
Fundamentals of Epidemiology (6 CP)
Fundamentals of Biostatistics (3 CP)
Fundamentals of Qualitative Research (3 CP)
Health Promotion (6CP)
Plus 18 credit points from electives

GRADUATE CERT. IN PUBLIC HEALTH
Foundations in Public Health (3 CP)
Indigenous Public Health (3 CP)
Social Perspectives in Public Health (6 CP)
Fundamentals of Epidemiology (6 CP)
Plus 6 credit points from electives

GRADUATE CERT. IN HEALTH ANALYTICS
Fundamentals of Epidemiology (6 CP)
Fundamentals of Biostatistics (3 CP)
Fundamentals of Qualitative Research (3 CP)
Data Visualisation and Visual Analytics (6 CP)
Plus 6 credit points from electives

GRADUATE CERT. IN COMMUNICABLE DISEASE
Foundations in Public Health (3 CP)
Indigenous Public Health (3 CP)
Fundamentals of Epidemiology (6 CP)
Communicable Disease (6 CP)
Fundamentals of Biostatistics (3 CP)
Fundamentals of Qualitative Research (3 CP)

NOTE:

Some subjects are bundled together for delivery and have been highlighted together in similar colours.

See list overpage for major, sub-major and course elective subjects.

For more information, schedule a 15-minute call with a Student Enrolment Advisor.

SCHEDULE A CALL

ELECTIVE SUBJECTS	
Advanced Biostatistics* (6 CP)	🟥
Advanced Epidemiology*^ (6 CP)	🟥
Foundations of the Australian Healthcare System (6 CP)	🟦
Using Health Care Data for Decision making (6 CP)	🟦
Policy, Power and Politics in Health Care (6 CP)	🟦
Contemporary Approaches to Digital Health (6 CP)	🟦
Fundamentals of Health Information Management (3 CP)	🟦
Health Systems and Change (6 CP)	🟦
Improving Safety and Quality in Healthcare (6 CP)	🟦
Leading Health and Social Care (6 CP)	🟦
Managing Quality, Risk and Cost in Healthcare (6 CP)	🟦
Organisational Management in Health Care (6 CP)	🟦
Planning and Evaluating Health Services (6 CP)	🟦
Quality and Safety Improvement Methods (6 CP)	🟦
Systems and Service Innovation (6 CP)	⬛
Foundations of Business Analytics (3 CP)	⬛
Data Processing Using SAS (3 CP)	⬛
Data Visualisation and Visual Analytics (6 CP)	⬛
Python Programming for Data Processing (6 CP)	⬛
Enabling Enterprise Information Systems (6 CP)	⬛
Database (6 CP)	⬛
Data Ethics and Regulation (6 CP)	⬛
Accounting Practices and Tools (3CP)	⬛
Sustainable Enterprise in Dynamic Systems (3CP)	⬛
Delivering Customer Value (3 CP)	⬛
Applied Financial Management (3 CP)	⬛
Foundation Studio (6 CP)	⬛
Customer Analytics (6 CP)	⬛
Machine Learning (6 CP)	⬛
Innovation Studio (12 CP)	⬛
Financial Analytics (6 CP)	⬛

For a core public health masters pathway select four elective subjects from any of the available elective options.

Certain **major, sub-major and course elective subjects** are denoted by symbols below.

🟥	Public Health (Course subjects)
🟦	Health Services Management (Course subjects)
⬛	Business Analytics (Course subjects)
••••	Data Analytics (Major)
～～	Leadership (Sub-major)

*Fundamentals of Biostatistics is a prerequisite for this subject.
^Fundamentals of Epidemiology is a prerequisite for this subject.

NOTE:

Some subjects are bundled together for delivery and have been highlighted together in similar colours.

Students may also select electives from the UTS Online Advanced Nursing course, provided they meet the specific eligibility criteria.

For more information, schedule a 15-minute call with a Student Enrolment Advisor.

SCHEDULE A CALL

Course details

Course	Number of subjects	Duration of every subject	Total course duration*	Total fees
Master of Public Health	12	7 weeks	24 months	$38,280**
Graduate Diploma in Public Health	8	7 weeks	16 months	$25,520**
Graduate Certificate in Public Health	4	7 weeks	8 months	$12,760**
Graduate Certificate in Public Health & Communicable Disease	4	7 weeks	8 months	$12,760**
Graduate Certificate in Health Analytics	4	7 weeks	8 months	$12,760**

**For domestic students only. Fees are correct for 2024 and are revised annually.

**Study plans and completion times might vary depending on commencement date, elective choice, leave and subject availability. For more information, please speak with a Student Advisor.

Duration

Each study period is seven-weeks long. You can complete the masters program in as little as two years.

Course intakes

We offer six intakes per year: January, March, May, July, August and October.

Click here to view the study calendar

Majors

- General major
- Data analytics

Sub-major

- Leadership

Advanced elective pathways

- Health analytics
- Leadership
- Health services management

Recognition of Prior Learning

Your previous studies or employment experience can be acknowledged as credit towards your online postgraduate studies, provided that it meets the relevant course requirements.

If you receive a UTS offer of enrolment, and you've undertaken previous studies at another institution, you may be eligible to apply for RPL. UTS doesn't determine recognition of prior learning until an offer of enrolment is accepted.

To see if you may be eligible to receive recognition of prior learning, speak with an Enrolment Advisor today.

FEE-HELP

To assist with all or some of your tuition fees, FEE-HELP is available for eligible students. This government-supported loan scheme is designed to help eligible full-fee paying students with their tuition fees.

To check your eligibility, feel free to speak with an Enrolment Advisor today.

The UTS Online student experience

Designed with busy, full-time working professionals in mind, studying this 100% online course will help you feel accomplished and supported at the same time. With a dedicated Student Success Advisor, get the help you need to graduate with ease. With no compulsory lectures to attend, the online learning model allows you to study whenever whenever it works best for you. With six study periods per year, delivered in seven-week blocks, study feels manageable when mixed with your already busy working schedule and life commitments.

Study part-time and complete a graduate certificate in as little as eight months or continue studying to graduate with a master's degree in an additional 16 months, without compromising your career or life commitments.

100% ONLINE AND SUPPORTED, WITH NO ON-CAMPUS COMMITMENTS

All students have access to a dedicated Student Success Advisor who is with you from the start of study until graduation. You'll also have access to academic staff who want you to succeed and are passionate about providing students with mentoring support.

Meet the Course Director

Associate Professor Jane Frawley
Course Director Master of Public Health, School of Public Health

Associate Professor Jane Frawley is a dedicated and committed public health professional. Her research primarily focuses on women's and children's health, with an emphasis on global child and adolescent well-being, equitable access to healthcare, infectious diseases, and immunization.

Jane serves as the convenor of the Women and Children's Health Collaborative within the UTS research institution INSIGHT. She also holds the position of Chair for the Advocacy Working Group in the Council of Academic Public Health Institutions Australasia (CAPHIA). Furthermore, she is a founding and ongoing committee member of the Collaboration on Social Science and Immunization (COSSI). COSSI serves as a network of researchers, clinicians, individuals involved in immunization policy and practice, and consumer representatives collaborating to enhance vaccine acceptance and uptake. Additionally, she co-chairs the Service Delivery and Program Support Working Group for the Australian Regional Immunization Alliance (ARIA).

Entry requirements

To gain entry into the Master of Public Health course, applicants must have completed a UTS-recognised bachelor's degree, or an equivalent or higher qualification, or submitted other evidence of general and professional qualifications that demonstrate the potential to pursue graduate studies.

Applicants who do not have an undergraduate degree, but who have extensive relevant work experience in a healthcare or human services field may be considered eligible.

Alternative admission pathways may be available. See admission pathways.

Eligibility for admission does not guarantee offer of a place.

English language requirements:

English language requirements apply to both international and domestic students. Please refer to the UTS English language requirements for further information on how to satisfy the requirements for the course/s.

The English proficiency requirement for local applicants with international qualifications is:

- Academic IELTS: 6.5 overall with a writing score of 6.0; or
- TOEFL: paper-based: 550—583 overall with TWE of 4.5; or
- Internet based: 79—93 overall with a writing score of 21; or
- AE5: Pass; or PTE: 58—64; or CAE: 176—184.

For more information, schedule a 15-minute call with a Student Enrolment Advisor.

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Get in touch

If you'd like to know more about the Master of Public Health, get in touch with our Student Enrolment Advisors.

studyonline.uts.edu.au

1300 477 423
enquire@studyonline.uts.edu.au

OR

Organise for us to call you

Book a 15-minute chat with our Student Enrolment Advisors.

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Subject
descriptions

090010 Communicable Disease

Subject description

The prevention, detection, management and control of communicable diseases that affect human populations is a significant public health priority. Understanding the interactions between microorganisms, animals and humans promotes knowledge of transmission dynamics, susceptibility and primary prevention of communicable diseases. Exploring the burden of disease and epidemiology of communicable diseases globally enables a more in-depth understanding of the social and ecological determinants of communicable diseases. Public health responses and challenges are examined using historical and contemporary examples, including the current global pandemic caused by COVID-19. The principles of communicable-disease control, such as surveillance, outbreak investigation, control measures and prevention, are demonstrated using case studies. Finally, the mandate for integrated, coordinated, collaborative, interdisciplinary and cross-sectoral approaches, consumer-engagement and advocacy are evaluated and discussed.

Learning outcomes

On successful completion of this subject students should be able to:

1. Describe, with examples, the interactions between microorganisms and humans and/or animals that may be important to public health.
2. Demonstrate the epidemiological principles underpinning communicable-disease prevention and control.
3. Critically analyse the relationships between social determinants of health and outbreaks of communicable disease.
4. Analyse, interpret and develop responses to outbreak data.
5. Critically appraise the use of public health approaches to communicable-disease control.

090011 Foundations in Public Health*

Subject description

This subject is designed to provide students with an overview of the conceptual underpinnings of public health and its historical development, introduce key terms and approaches, and apply these to a range of contemporary issues that impact on health. In answering the question, 'What is health?' students first explore different conceptions of health including personal, lay, non-Western, gender-diverse, Indigenous and organisational definitions, and assess reasons why health workers and systems may need to incorporate an understanding of these in addressing health issues. Students then look at the question 'What is public health?' and consider some of its main approaches. Students are introduced to several public health processes and models that are central to public health. Finally, students examine the development of public health over time, including a discussion of some of the key historical events that led to the development of the new public health approaches from the 1980s to the present day, both in Australia and globally. Students then apply these to a range of key health challenges.

Learning outcomes

On successful completion of this subject students should be able to:

1. Appraise public health scholarship/thinking and its major components.
2. Contrast the different and comparable elements of biomedical and public health perspectives/approaches to health issues.
3. Analyse and relate the historical and disciplinary roots of contemporary public health.
4. Describe the role and contribution of different health fields to public health scholarship.
5. Recognise the importance of differential and lay understandings of health to a range of communities, including Indigenous and gender-diverse communities, and people with disabilities.
6. Apply insights from the new public health to a range of key public health challenges, both in Australia and internationally.

*Subject comprises three credit points. Refer to course structure for bundled subject delivery.

090012 Fundamentals of Biostatistics*

Subject description

The purpose of this subject is to provide students with an understanding of the fundamental concepts of biostatistics, familiarity with statistical reasoning and its application to research studies, and the ability to evaluate healthcare-related practice and research output critically. This subject introduces statistical concepts of data presentation, data management, confidence intervals, sample size and power, descriptive statistics, and bivariate statistical analyses. The subject does not focus on computing skills, but instead focuses on the interpretation of research output and the appropriate use of analysis methods. On completion of this subject, students are able to select the correct statistical analysis tests appropriate to research questions and are able to help contribute to study design by undertaking power and sample size calculations.

Learning outcomes

On successful completion of this subject students should be able to:

1. Utilise basic biostatistical concepts and analytical techniques to determine the effectiveness and/or efficacy of healthcare interventions, practices or services.
2. Compare and contrast different methods of data collection and statistical analysis.
3. Generate (using a statistical package) and interpret descriptive statistics and bivariate statistical analyses.
4. Determine the appropriate sample size and statistical power for study design.

*Subject comprises three credit points. Refer to course structure for bundled subject delivery.

090013 Fundamentals of Epidemiology

Subject description

This subject covers the essential knowledge that clinicians, project officers, health service managers and planners, and public health practitioners need concerning epidemiology and population health. It enables students to apply analytical strategies of epidemiology to the health service and public health environment, and to assess, interpret and appraise the quality of evidence of health service studies.

Topics covered include epidemiological methods and concepts, understanding epidemiological evidence and its limitations, using population health data, and how findings are used to support public health and health services planning and management decisions. Students also have an opportunity to calculate and interpret measures of disease frequency, association and impact. An emphasis is placed on linking epidemiological theory population health with application in public health and health services settings, and decision-making.

Learning outcomes

On successful completion of this subject students should be able to:

1. Evaluate and appropriately select major techniques in epidemiological and population health research, including study design, measures of disease frequency, and measures of association and impact.
2. Recommend rigorous and appropriate approaches to the collection, storage, interpretation and use of epidemiological and other population health data.
3. Discover the main sources of bias in epidemiological research and propose how these should be accounted for and addressed.
4. Explain the roles, strengths and weaknesses of randomised controlled trials and the common observational designs.
5. Create a variety of ways in which complex epidemiological and population health data and issues can be effectively communicated for a variety of target audiences.
6. Devise a basic critical appraisal of an epidemiological study.

090014 Fundamentals of Qualitative Research*

Subject description

This subject provides a practical introduction to qualitative research in health. Students build skills and knowledge concerning the role and application of qualitative research in health and the relationship between qualitative research questions, theoretical perspectives, methodological approaches, data collection and analysis. Students have the opportunity to apply their learning by developing a proposal for a qualitative study and, with the approval of the subject coordinator, undertake fieldwork, analyse data and report the subsequent findings.

Learning outcomes

On successful completion of this subject students should be able to:

1. Justify the selection of a theoretical position, qualitative data collection tool/s and a method of analysing data for a proposed study that is aligned with an appropriate research question.
2. Identify a theoretical position in qualitative health research.
3. Discuss practical and ethical issues in relation to non-probability sampling and participant recruitment, particularly in the context of research with vulnerable populations.
4. Demonstrate data analysis according to a selected approach.
5. Demonstrate rigor, trustworthiness and critical reflexivity.
6. Apply quality reporting criteria for qualitative research.

*Subject comprises three credit points. Refer to course structure for bundled subject delivery.

090015 Global Health Systems*

Subject description

This subject provides a critical understanding of the effect of economic, political, social and environmental factors and structures on the organisation and performance of health systems. Students develop an appreciation of health systems in different societies and the roles of different organisations and institutions that affect global health policy. Case studies from high-, low- and middle-income countries are used to illustrate the challenges health systems face on national, regional and global scales. Students identify and critically examine the role of public health in global health systems, and how public health research and practice can be used to inform and engage with a variety of stakeholders to strengthen health systems.

Learning outcomes

On successful completion of this subject students should be able to:

1. Examine political, economic, social and environmental forces and dynamics that affect health systems.
2. Evaluate the critical position of public health professionals and key concepts in global health systems.
3. Appraise the role of and relationships between supranational institutions, organisations, and aid programs in addressing public health priorities.
4. Apply systems thinking to the analysis of health systems across global, national and regional settings.

*Subject comprises three credit points. Refer to course structure for bundled subject delivery.

22

090016 Health Promotion

Subject description

Students undertaking this subject establish an expanded knowledge base in the theory and processes of health promotion, which can be applied in a range of settings in both the health sector and the wider community. These include pedagogical approaches to behavioural change, social learning and communication frameworks. The subject provides students with useful frameworks to plan and evaluate health education programs in their workplace and beyond.

Learning outcomes

On successful completion of this subject students should be able to:

1. Describe and critique key theories and principles including pedagogical approaches to health promotion.
2. Discuss the scientific, social, cultural and economic bases of health promotion, as well as the political and ethical issues that affect health promotion activities.
3. Critically assess research evidence and policy priorities pertaining to quality health promotion.
4. Appropriately apply the theories and frameworks, including pedagogical approaches, used in the health education of patients of all ages and their families.
5. Analyse and synthesise appropriate strategies and approaches for developing and evaluating health promotion at the individual, community and media levels of health promotion.

090017 Indigenous Public Health*

Subject description

In this subject, students develop and progress their knowledge of the health and wellbeing of Aboriginal and Torres Strait Islander peoples with a focus on contemporary Indigenous perspectives. This includes the historical context, the impact of and Indigenous responses to colonisation, Indigenous social determinants of health, and cultural dimensions of health. Examinations of the key comparative health indicators provide a context of the current and future public health needs of Aboriginal and Torres Strait Islander peoples. Students in this subject explore public health responses essential for promoting, improving and maintaining the health of Indigenous Australians and the wellbeing of their communities. The key aim of Indigenous health policy is to prioritise equity in access to healthcare services for Aboriginal and Torres Strait Islander peoples. Students examine services in the context of this policy, investigating whether health services and programs are available, accessible, affordable and acceptable to and for this population.

Learning outcomes

On successful completion of this subject students should be able to:

1. Examine political, economic, social and environmental forces and dynamics that affect health systems.
2. Evaluate the critical position of public health professionals and key concepts in global health systems.
3. Appraise the role of and relationships between supranational institutions, organisations, and aid programs in addressing public health priorities.
4. Apply systems thinking to the analysis of health systems across global, national and regional settings.

*Subject comprises three credit points. Refer to course structure for bundled subject delivery.

090018 Non-communicable Disease

Subject description

Students explore the increasing prevalence of non-communicable diseases (NCDs) and global demands for a health workforce with the capacity to appropriately address the increasing burden of diabetes, cancers, cardiovascular and respiratory diseases, and mental health problems at local, national and international levels. Students contextualise international and local social and economic drivers associated with this unprecedented epidemiological change. Students critically examine current global, national and regional policies for the prevention, treatment and management of chronic disease and comorbidities. Students weigh up evidence on major approaches for NCD prevention, such as primordial and population-level prevention activities, broad and targeted population screening, health education, guidance and counselling, and health promotion. The subject also discusses the health professional's role in implementing primordial, primary, secondary, and tertiary prevention, as well as providing care at the individual level for people with challenging and complex chronic illnesses.

Learning outcomes

On successful completion of this subject students should be able to:

1. Consider current definitions of NCDs and how these may affect opportunities for cross-sectoral engagement.
2. Examine trends in the burden of NCDs across developed and developing countries, and the transition from infectious disease.
3. Evaluate the relationship between downstream risk factors for NCDs and their association with social, environmental and biological determinants of health.
4. Analyse and critique current primordial, primary, secondary and tertiary strategies for NCD prevention with particular regard to evidence on the effectiveness of screening, guidance and counselling, health promotion, and population-level interventions.
5. Consider key practices and principles of NCD care, delivered across varied healthcare settings for different patient populations with particular regard to preventing the emergence of comorbidities.
6. Consider the role of professional practice in NCD prevention and management.
7. Describe how NCDs disproportionately affect members of vulnerable groups, as well as their families, and identify evidence-based solutions to manage those impacts.

090019 Planetary Health*

Subject description

Human activity is rapidly changing the structure and function of the Earth's natural systems in a way that presents significant risk to human health. Disruption to the ecosystems on which human health depends includes biodiversity loss, climate change, freshwater depletion, deforestation and urban development.

The public health community is inadequately prepared to address the challenges of a rapidly changing environment and the significant impacts on human health. These health impacts include increases in heat-related deaths, infectious disease, malnutrition, psychological distress and trauma, and pollution-related illnesses. These health impacts will be amplified in disadvantaged communities that are less able to adapt to environmental challenges. Planetary health builds on ecological public health principles broadening the definition of health to include human civilisation, recognising that human health is dependent on the health of the environment on which it depends.

This subject will introduce students to the concept of planetary health and related research, policy and practice issues. Students will consider the challenges and opportunities for public and population health from a planetary health perspective at both a global and local level. Students will also examine the need for public health professionals to use knowledge, technology and policy in novel ways to address environmental and health challenges that are characterised by surprise and uncertainty.

Learning outcomes

On successful completion of this subject students should be able to:
1. Describe and discuss the concept of planetary health, the direct and indirect pathways that connect human health and ecosystems, and how they relate to sustainable development goals.
2. Critically assess the impact of environmental change on intergenerational health equity, vulnerability and resilience, and how these relate to environmental justice and ecological sustainability with consideration of Australian Indigenous ways of knowing, being and doing.

*Subject comprises three credit points. Refer to course structure for bundled subject delivery.

3. Critically appraise the role of public health practitioners and the broader health care system in addressing planetary health challenges and opportunities.
4. Identify the complex systems involved in environmental change and human health outcomes and prioritise areas for intervention.
5. Develop practical interventions that provide co-benefits for human and environmental health with consideration for interdisciplinary and transdisciplinary approaches.

090020 Social Perspectives in Public Health

Subject description

Social science concepts and perspectives are essential for understanding health issues and the responses to them as individuals and as a society. This subject examines different theoretical perspectives to explore the human experience of illness and the social structuring of health and disease. The impact of wider social processes upon the health of individuals and social groups is also examined, including processes that produce social inequalities, professional relationships, knowledge and power, and consumption and risk. Students investigate contemporary issues to explore how the social determinants of health can inform the complex challenges of technological, economic and social change in communities and societies.

Learning outcomes

On successful completion of this subject students should be able to:
1. Define key concepts in health inequalities.
2. Critically appraise research findings relevant to social determinants and health inequalities.
3. Evaluate explanations for socially determined health inequalities in relation to selected public health issues.
4. Examine the impact of social norms and behaviour on access to health services, care and information and health policy and practice examples in healthcare in a range of Australian Indigenous, national and global settings.
5. Apply theoretical perspectives on health inequalities to policy options for public health.

Elective subject descriptions

090021 Advanced Biostatistics**

Subject description

This subject is designed to extend students' knowledge of a range of statistical methods, providing in-depth knowledge of three commonly used regression models, namely linear regression, logistic regression and proportional hazards (Cox) regression. Concepts, such as interpretation of regression model output, model building strategies, assessment of model fit, and model diagnostics, are explored. Practical hands-on experience of data analysis using a statistical computer package supports further learning and skill development in this area.

Learning outcomes

On successful completion of this subject students should be able to:

1. Discuss key elements of a number of regression models commonly used and encountered in the health/medical literature.
2. Determine when it is appropriate to use particular regression models.
3. Demonstrate an ability to undertake regression modelling using a statistical package.
4. Articulate the philosophy and practice of the regression approaches to data analysis.
5. Critically examine the regression models to ensure that they meet the required assumptions.
6. Correctly interpret output from analyses.

**Elective subject for general major and core subject in Data Analytics major.

09022 Advanced Epidemiology**

Subject description

This subject covers the critical knowledge that public health practitioners and health researchers need concerning epidemiology. It enables students to develop a detailed understanding of and skills in epidemiological study designs that are necessary to conduct public health research and appraise public health literature. Topics covered in this subject include the major study designs of descriptive studies, cohort studies, case control studies, and randomised controlled trials. There is also a focus on the synthesis of research data, including systematic reviews and meta-analyses. The subject helps students build their knowledge and skills in interpreting and applying research methods for policy and practice in public health contexts.

Learning outcomes

On successful completion of this subject students should be able to:

1. Appraise the various types of descriptive studies including cross-sectional and ecological designs.
2. Articulate the relative merits of various sampling methods to minimise sampling bias.
3. Articulate the importance of selecting appropriate measurements in epidemiological studies to minimise measurement bias.
4. Appraise the main design features of case control studies, cohort studies and randomised controlled trials.
5. Summarise the current literature relevant to a research question using systematic reviews and meta-analysis.

**Elective subject for general major and core subject in Data Analytics major.

320146 Data Visualisation and Visual Analytics^

Subject description

This subject covers the core data visualisation and visual interaction (or navigation) technologies that support visual analytics and the decision-making process. Students study the latest data visualisation articles, the practice of cutting-edge data visualisation and visual analysis software. The subject provides an essential understanding of the procedure (loop) and the methodology of visual data analytics. It discusses the human involvement (or input) in the loop of analytical reasoning facilitated by interactive visual interfaces. On successful completion of this subject, students are capable of designing and evaluating various advanced visualisation interfaces that can be directly applied into the loop of visual data mining or visual analytics to enable them to become data visualisation designers and visual data analysts.

Learning outcomes

On successful completion of this subject students should be able to:

1. Articulate background knowledge of data and information visualisation technologies in the context of visual data analytics.
2. Use data visualisation methods to represent and navigate large information spaces.
3. Critique and evaluate different data visualisation approaches.
4. Apply multi-dimensional visualisation techniques to the process of visual data analytics.
5. Design and evaluate efficient visual interaction techniques.
6. Conduct visual data analytics using practical skills.

^Core subject for Data Analytics major.

96329 Health Systems and Change^^

Subject description

Health systems worldwide are facing increasing pressure to improve their efficiency and effectiveness, while delivering safe, high-quality, patient-centred care. Most countries accept that existing models of healthcare delivery will not be sustainable in the future, resulting in modern health services engaging in large systematic changes. This subject helps students develop their knowledge and skills so that they can guide health systems to achieve efficiency and effectiveness. The subject initially examines a range of change theories that can be applied to the healthcare environment, as well as relevant leadership theories within the context of change. Finally, the subject focuses on national health reform and a range of service improvement approaches and tools, such as lean thinking, clinical process mapping and patient flow analysis. A number of recent initiatives are presented that explain how to implement change at national, state-wide and organisational level.

Learning outcomes

On successful completion of this subject students should be able to:

1. Critically appraise relevant strategies to implement individual or organisational change in the healthcare environment based on validated theories and models.
2. Analyse the contextual factors that act as a stimulus for change, resistance to change and successful change in healthcare.
3. Propose fundamental leadership skills necessary to implement organisational change and act as a change agent.
4. Create a variety of ways in which complex issues can be effectively communicated for a variety of target audiences.

^^Core subject for Leadership sub-major.

96327 Leading Health and Social Care^^

Subject description

Health and social care are full of calls for and programs on improved leadership capabilities. In this subject we will not only consider leadership theories, capabilities and competencies, but also explore the deeper question of "If leadership is the answer, then what is the question?"

The subject will start with an examination of major failures in health and social care services around the world. Using the texts and reports from patient safety and social care service inquiries we will look at the aspects of management and leadership that failed to protect patients and staff. We will then critically examine key leadership and management theories, exploring them through a series of guided readings and a practical application of concepts utilising scenarios and case studies.

We will then consider what leadership means at an individual, team and organisational level, drawing on traditional and cutting-edge theories. Participants will consider their own leadership capabilities and a development map for their career. We will then consider what team leadership means, and what is required to ensure its development. Next, we will consider what it takes – individually and collectively – to lead not just any organisation but a health and social care organisation specifically.

Learning outcomes

On successful completion of this subject students should be able to:
1. Review and evaluate leadership theories and practices relevant to health and social care.
2. Critically analyse problems in health and social services that require leadership as part of their solution.
3. Examine their own leadership assumptions, approaches and preferences and the implications for their own current or future role as a leader.
4. Review leadership theories, models and approaches, and consider the issues associated with their application in health and social care contexts.
5. Consider the implications of ethical leadership.

^^Core subject for Leadership sub-major.

92638 Foundations of the Australian Healthcare System

Subject description

In this subject, students tackle practical challenges at the cutting edge of health service design and management. Undertaking research in realistic and professionally relevant projects, students develop innovative solutions to the structure and management of a range of health services.

Students will work to develop and refine their knowledge of the major structural and functional components of healthcare systems by examining the Australian system. By understanding how health systems and other service provision models develop, evolve and perform, students acquire a foundation for leading and influencing the direction of healthcare.

Working on a challenge brief from a portfolio of health sector projects, students conduct valuable research and generate meaningful solutions for the sector. The projects share a common focus on the changing relationships between healthcare providers, the insurance sector, government and the wider community. Industry partners may include public, private, primary and tertiary care, as well as payers, providers and suppliers.

Learning outcomes

On successful completion of this subject students should be able to:

1. Appraise the structural and functional components of the Australian healthcare system, and the roles and responsibilities of the differing levels of government.
2. Explain trends and the structure and functional challenges in service provision models, health system performance and health service outcomes and outputs within the Australian healthcare system.
3. Create a variety of ways in which complex issues can be effectively communicated for a variety of target audiences
4. Reflect on the impact of ongoing colonisation and its pervasive discourse on Indigenous Australians and their health and wellbeing for the design, delivery and management of the Australian healthcare system.
5. Examine the role of person-centred care in the Australian healthcare system.
6. Demonstrate online collaboration and contribution to other students' learning.

96342 Using Health Care Data for Decision Making

Subject description

This subject provides a supervised experience for graduate students to learn about making health service decisions using data. Students learn how to explore and manipulate data that are assembled to replicate real patient data to both generate and answer questions. The focus may be managerial or clinical, or an integration of the two. Students analyse the assembled patient dataset to generate and interpret health statistics, and translate them into health information and knowledge for decision-making. Students completing this subject develop the ability to explore health data and provide recommendations based on the findings.

Learning outcomes

On successful completion of this subject students should be able to:

1. Access and manipulate supplied data in order to generate reports and make recommendations.
2. Identify and compare the relationship between data, information, knowledge and wisdom and how these elements inform practice, management, and policy in the context of international trends.
3. Examine and discuss the relationship between datasets and information literacy.
4. Explain the data elements in contemporary health data terminologies.
5. Create a variety of ways in which complex issues can be effectively communicated for a variety of target audiences.

92050 Policy, Power and Politics in Health Care

Subject description

This subject aims to provide students with the essential knowledge and skills relevant to policy and the political environments in which health services operate. It is important for clinicians, health service managers, health service planners and those intending to work in the health service environment to understand the political environment in which decisions are made, how government health policies are formulated and enacted, and how they are received. This subject covers the ideological frameworks underpinning public policy development, the policy formulation process, power differentials in the development and acceptance of health policies, how the health and political systems manage complex and grey issues, facilitators and challenges to policy implementation, and the influence of stakeholders and the media.

Learning outcomes

On successful completion of this subject students should be able to:

1. Examine how government policy is formulated within legal and ethical frameworks.
2. Differentiate between the political ideologies that underpin the delivery of healthcare services.
3. Judge the implications of the use of power in public policy decision-making.
4. Assess and apply the competencies and skills required to effectively evaluate existing and emerging health policies in the management and planning of health services.
5. Evaluate the role of senior management, governments and interest groups (advocacy organisations, media, health professions/coalitions, private sector) in managing emerging issues, setting the health policy agenda and in policy development.
6. Create a variety of ways in which complex issues can be effectively communicated for a variety of target audiences.

36

92664 Contemporary Approaches to Digital Health

Subject description

Digital technology and health interventions offer a great opportunity to improve clinical outcomes and address current healthcare challenges. An appreciation of the complex socio-technical challenges associated with the adoption and use of digital health interventions enables health professionals to successfully integrate these technologies into practice. The introduction of digital technology into existing practice also carries with it some risks. Those working in the healthcare sector, particularly those in management and leadership roles, require a robust understanding of the potential benefits and opportunities that digital health interventions can provide and a keen awareness of the new risks that might be associated with their introduction.

In this subject, students will explore the range of digital health interventions currently being implemented or developed globally to improve the quality and efficiency of healthcare systems. Students will examine the foundational tenets for the introduction of digital health technologies and gain an understanding of where consensus on the benefits and risks currently lies. The differences between data and knowledge will be examined in the context of understanding how digital health technologies can assist in the advancement of patient safety and service improvement. Practical examples of digital health technology introduction around the world in a range of contexts will be explored to understand the complex socio-technical requirements that support successful implementation. Students will also explore the potential and emerging understanding of the risks associated with the use of digital health technology and the importance of data strategy to optimise intended outcomes.

Learning outcomes

On successful completion of this subject students should be able to:

1. Discover how ePortfolio-based learning can contribute to personal and continuing professional development by evincing employability skills and graduate attributes.

2. Explain why data standardisation and data exchange are fundamental components of a digital health environment.
3. Formulate effective responses to issues regarding current and future privacy, confidentiality, security and data integrity.
4. Deconstruct the current and future local, national and international digital health innovations that have the potential to empower and engage consumers, improve health outcomes and reduce the cost of health services.
5. Predict how healthcare analytics can improve effectiveness and efficiency, enhance sustainability, mitigate risk and demonstrate value for individuals and populations receiving health services.

92489 Fundamentals of Health Information Management

Subject description

The last three decades have witnessed a phenomenal information revolution as a consequence of the internet and other information technologies. The worldwide demand for healthcare reform has led to health services moving from paper to electronic records, which has resulted in the need for more and better information. The amount of information generated by one person during an encounter with the health service is formidable, and the management of this information and its exchange between health professionals is integral to any healthcare system. The transformation to digital records requires accurate coding of clinical content to support patient safety and quality improvement. This subject exposes the student to three major components of health information management – the patient record, major documentation principles, and relevant clinical communication and information exchange systems. The foundation for a successful health information system rests on the content, organisation, reliability and appropriateness of its data. Students are shown how this view of information management applies to patient-related data. Lastly, students gain an appreciation of how to create and exchange health information with ease and flexibility so that information is available when it is needed for the right purpose and at the right time.

Learning outcomes

On successful completion of this subject students should be able to:
1. Analyse the key functions, roles, requirements and expectations of the patient health record in the contemporary healthcare environment.
2. Evaluate general and specific documentation guidelines for a selected range of common health record forms and views.
3. Critically appraise strategies available to health services to maximise data quality within its information ecosystem.
4. Review and explain contemporary challenges in clinical communication and information exchange inherent in healthcare delivery.
5. Interpret and apply the legal obligations of health information within the Australian healthcare environment.
6. Effectively communicate health information to audiences from different backgrounds.

92022 Improving Safety and Quality in Healthcare

Subject description

This subject covers the essential knowledge that clinicians, health service managers and project officers need concerning error management and safety and quality improvement. It enables students to appreciate why errors occur in healthcare delivery, and the contemporary approaches to reducing errors and improving the safety and quality of health services. Topics covered include the origins of error and risk; the management of error and risk from human factors and health systems perspectives; the elements of clinical governance; the relationship between clinical cultures, quality and adverse events; the monitoring, analysis and investigation of incidents from national, state and local perspectives; incident reporting systems and the processes used in Australian healthcare settings; and lessons learned from healthcare inquiries. Team-based, personal and interpersonal skills in open disclosure are addressed, as well as complaint management and the importance of patient and family engagement, and appropriate organisational communication following errors. International approaches to safety and quality in healthcare delivery are also discussed. An emphasis is placed on error reduction and meeting national standards within health services settings.

Learning outcomes

On successful completion of this subject students should be able to:

1. Critically appraise contemporary legal, ethical, regulatory and professional frameworks and strategies designed to maintain or improve patient safety within the healthcare environment.
2. Propose improvements in safety at an international, national, state and local level through error analysis, risk management and error-reduction techniques.
3. Determine relevant and contemporary techniques and tools for analysing, reporting and managing error in healthcare delivery.
4. Create a variety of ways in which complex issues can be effectively communicated for a variety of target audiences.

92603 Managing Quality, Risk and Cost in Health Care

Subject description

This subject provides an essential grounding for clinicians, managers and planners of health services who seek to improve the quality, risk and cost outcomes of care within the context of expectations of clinical and corporate governance, organisational performance and workplace change.

The subject examines each of the three components of quality, risk and cost by engaging students in the process of designing, organising and managing healthcare delivery systems to create and capture value for the patient and the community.

The subject aims to build core skills in new thinking in healthcare delivery by focusing on the way healthcare is designed, organised, managed and delivered in relation to quality, risk and cost. Students develop a critical view of the organisation of healthcare, measurement and delivery of outcomes from the patient and population perspective as well as organisational accountability for cost and quality.

The subject focuses on current approaches to quality and safety, healthcare management accounting and financial management, commonly recognised issues within healthcare delivery systems, as well as different ways of organising and managing healthcare. Alongside this material, students also develop key skills in engaging with conflict, resolving disputes and managing other situations that require facilitation and negotiation. Students work with experienced negotiation practitioners to develop a repertoire of skills to engage in the challenge of progressing improvement and reform to healthcare management in the context of conflict and change in the broader healthcare system.

Learning outcomes

On successful completion of this subject students should be able to:

1. Consider the key imperatives for meeting health service objectives related to safety, quality, cost-effectiveness and jurisdictional legislative requirements within a governance context.
2. Critically appraise contemporary strategies and frameworks designed to manage quality, risk and cost within the healthcare environment.

41

3. Propose improvements in safety, quality and cost-effectiveness at a local healthcare organisational level by identifying issues, considering ethical implications, offering policy direction and formulation and recommending priorities for action.
4. Create a variety of ways in which complex issues can be effectively communicated for a variety of target audiences.

92887 Organisational Management in Health Care

Subject description

This subject provides students with the knowledge of organisational theory and behaviour necessary to manage people and processes effectively in a health service organisation. Health service managers are required to meet (and enhance) organisational performance, attract (and retain) talented staff, and manage change effectively. Accomplishment of these challenging goals requires managers to learn how to alter organisational dynamics via strategies relating to organisational structure and culture, along with the psychology of individual staff members. Legal and corporate governance, consumer engagement in organisational decision-making, and financial management in organisations are also addressed in this subject from a health service perspective.

Learning outcomes

On successful completion of this subject students should be able to:
1. Explain the interaction between effective management practices and organisational structures, cultures and processes.
2. Analyse the consequences of organisational effectiveness on performance and outcomes.
3. Critically appraise the roles and impact of specific aspects of organisational management that may influence performance and outcomes, including human resource management, financial management, and consumer engagement in decision-making.
4. Communicate complex organisational issues effectively for a variety of target audiences by using diverse techniques, modes and strategies.

92847 Planning and Evaluating Health Services

Subject description

This subject aims to provide students with the necessary knowledge and skills to understand and apply the major concepts involved in health services planning and evaluation. Topics covered include the relationship between evaluation and planning, the importance of assessing need, understanding data and data sources, the perils of healthcare forecasting, whole of nation and beyond-hospital-walls planning, and the challenges ahead for futuristic planning. Workforce planning and service-capability frameworks are also addressed, as well as planning capital infrastructure for health services. How to evaluate and implement a health services plan is also described.

In order to highlight the complexities of health services planning and provide an opportunity for students to evaluate the strengths and weaknesses of selected health services approaches, a range of case studies are utilised covering an existing health service, a new purpose-built facility, primary and community health service, disease type, age type, and service model type. An emphasis is placed on the importance of stakeholder consultation and engagement within the health services planning environment.

Learning outcomes

On successful completion of this subject students should be able to:
1. Evaluate local circumstances and use evidence-based health planning principles, frameworks and processes.
2. Identify and assess community health status, demographics and social conditions that impact health.
3. Determine the issues impacting health planning and health plan evaluation, including enabling and impeding factors.
4. Effectively communicate complex health service planning issues.

43

96330 Quality and Safety Improvement Methods

Subject description

Few people would disagree that health systems could improve the quality and safety of their services. The question is of course, how? In this subject we will explore models and methods for improving the quality and safety of health and social care.

Drawing on local and international expertise, we will review the development of the quality and safety movement over the last two decades, examining in detail its progression to the systems approach to patient safety. Students will examine a range of quality and safety improvement theories and strategies, and review both the causes and consequences of breakdowns in quality and safety in health and social care. We will then examine and use a range of quality improvement and safety improvement tools, how they have been utilised, and the evidence for their effectiveness.

This subject helps students build their knowledge and skills in assessing, improving and embedding quality and safety within health and social care systems and services. It will examine a range of theories and frameworks that can be used in diagnosing shortfalls in the quality and safety of care, identifying appropriate remediation programs and tools, developing strategies for their implementation, and understanding how to build an evidence base for their efficacy.

Learning outcomes

On successful completion of this subject students should be able to:

1. Discuss how the quality and safety movement has developed over the last two decades.
2. Examine what is meant by systems thinking in health and social care, and how it applies to patient safety.
3. Examine strategies that foster an innovation culture within teams, services and systems.
4. Gain an appreciation for the variety of tools that can be utilised to improve the quality and safety of care.
5. Develop a quality and/or safety improvement strategy, along with an evaluation framework.

96328 Systems and Services Innovation

Subject description

This subject is designed to assist students in developing and delivering patient-centred innovations that improve the safety and quality of health and social care. Disruptive innovation is on everyone's minds, but few know how to approach it and execute it in a timely way.

As the healthcare landscape evolves and AI and automation change the interaction between patients and clinicians, there is a need to embrace and implement new ways of working by understanding the role of technology in future healthcare as part of quality and safety activities. This subject introduces disruptive innovation and the need to understand the intersection between its design, development and its application to users. To do this, building strong individual and organisational capabilities is essential to the delivery of health services.

This subject helps students build their knowledge and skills in bridging the gap between health service need, delivery and innovation. It will examine a range of theories that can be used in analysing the challenges in delivering innovation in healthcare, understand where innovative ideas come from and how new ways of working can be built into strategy, through applying leadership within complex adaptive systems and reviewing workplace boundaries based on needs.

Learning outcomes

On successful completion of this subject students should be able to:

1. Understand how problems are represented and how this informs safety and quality decision-making.
2. Gain an appreciation for innovation through reviewing contemporary examples of innovation disrupters and using these cases to analyse the challenges in its adoption in healthcare.
3. Develop an appreciation for the role of other sectors in the design of innovation and technologies and appraise design thinking, value proposition and customer journey mapping.
4. Confidently develop an innovation strategy aligned to a service strategy or work plan that reflects changes to the work boundaries.
5. Examine strategies that foster an innovation culture within teams and organisations.

260776 Foundations of Business Analytics*

Subject description

Business analytics is concerned with the use of data, quantitative analysis, predictive models and fact-based management to create value for organisations. With the tremendous growth in the amount of data being generated by organisations, government and society, it is crucial that the leaders of tomorrow understand the proper tools to be able to make evidence-based decisions. In Foundations of Business Analysis, students are provided with the foundations of business analytics, as well as an introduction to the techniques and methods required to undertake practical problems. Students can ultimately gain the necessary knowledge to initiate and conduct small-scale business analytics projects and professionally communicate their findings to a diverse set of stakeholders.

Learning outcomes

On successful completion of this subject students should be able to:

1. Demonstrate methods to locate, prepare and analyse data in order to be able to make predictions.
2. Communicate the results of a business analytics project.
3. Relate ethical principles of the collection, storage and use of data by business and government.

*Subject comprises three credit points. Refer to the course structure for bundled subject delivery.

260777 Data Processing Using SAS*

Subject description

In the fourth industrial revolution, data has become one of our most precious goods. It's available, cheap and holds promise for enterprises that want to gain a competitive edge. However, raw data is also commonly incomplete, unstructured and inconsistent. The subject Data Processing with SAS looks at how this widely used tool can transform a raw dataset into valuable information for exploring business performance and for decision making. SAS is the market-leading software for analytics, used by more than 83,000 business, government and universities around the world, including 92 of the top 100 companies on the 2018 Fortune Global 1000®. This subject provides the fundamentals required for the SAS Base Programming Specialist certificate. Students learn about data validation and manipulation. Data validation is the process of converting raw data into quality data by addressing issues such as missing values. Data manipulation, using methods such as coding, makes data easier to read and analyse. Finally, students learn how to apply the appropriate statistical tools to extract valuable information from real datasets.

Learning outcomes

On successful completion of this subject students should be able to:

1. Access and import different types of data within the SAS environment.
2. Explore, validate and manipulate data for analyses.
3. Run simple analyses, export the results and create reports.

*Subject comprises three credit points. Refer to the course structure for bundled subject delivery.

47

430031 Python Programming for Data Processing

Subject description

The subject focuses on the basics of python programming with practical application to data processing and analysis. Students learn basic programming concepts, simple visualisation, how to write custom programs using iPython notebooks and perform exploratory data analysis. Additionally, this subject introduces the usage of the Numpy package to pre-process data, and machine learning techniques are introduced to facilitate further exploration of the Python language capabilities.

Learning outcomes

On successful completion of this subject students should be able to:

1. Write custom programs using the Python language for data analysis.
2. Source data from multiple sources and manipulate data for analysis and visualisation.
3. Apply statistical tests and data visualisation techniques to analyse data and interpret the results.

320557 Enabling Enterprise Information Systems

Subject description

This subject introduces students to the uses of information systems in generating business value for organisations. It deals with the different types of enterprise information requirements, application of information systems to business problems, and recent developments and technologies in the marketplace. The emphasis is on organisational strategies for information systems, mobile, cloud and social computing, and design activities including working in design teams.

Learning outcomes

On successful completion of this subject students should be able to:

1. Evaluate the different uses of information systems in supporting organisational values.
2. Apply their skills in information requirements gathering, business analysis and design.
3. Assess and identify management issues relating to information systems activities within an enterprise.
4. Evaluate the responsibilities of information systems professionals.

3206060 Database

Subject description

This subject introduces students to basic database design, implementation concepts,
database design techniques, and using a relational design via an entity-relationship diagram, including how to interpret an entity relationship diagram. Students learn how to access a database via structured query language (SQL) to retrieve data from the database. The code required to implement a database is also covered.

Learning outcomes

On successful completion of this subject students should be able to:

1. Design an Entity-Relationship (E-R) model from specifications and transform a conceptual model into corresponding logical data structures.
2. Construct Structured Query Language (SQL) statements and maintain a simple database.
3. Critically evaluate database designs and the role databases play in effective software applications.
4. Effectively communicate database designs.

570100 Data Ethics and Regulation

Subject description

This subject focuses on the regulation and ethics of data practices in the digital environment. Students gain a deeper appreciation of the moral and ethical foundations of privacy, security and accountability, and apply them to topics, such as the ethics and regulation of data collection activities, algorithmic accountability and the biases inherent in data analytic tools.

Learning outcomes

On successful completion of this subject students should be able to:
1. Distinguish between the characteristics and significance of ethics versus regulation.
2. Analyse the ethical considerations that have arisen from the widescale collection and processing of data from and about individuals and social groups.
3. Compare national and international data regulations.
4. Apply knowledge of ethics and regulations to understand the impact on organisations, individuals and society.

220788 Accounting Practices and Tools*

Subject description

This subject offers students a solid grounding in financial and management accounting. This knowledge allows candidates to understand the financial opportunities and challenges inherent in any business endeavour. Candidates will subsequently better understand the position and performance of initiatives undertaken in the context of the broader strategies and objectives of an organisation. Such an understanding will help students make critical cost-benefit decisions.

Learning outcomes

On successful completion of this subject students should be able to:

1. Investigate and analyse financial statements in practice.
2. Apply financial ratios for the purposes of understanding and synthesising business position and performance.
3. Apply a range of management accounting techniques to generate and evaluate complex ideas and concepts to improve decision-making governance.

*Subject comprises three credit points. Refer to the course structure for bundled subject delivery.

210954 Sustainable Enterprise in Dynamic Systems*

Subject description

This subject provides students with systems frameworks, tools and sustainable business models to analyse business opportunities arising from complex issues related to grand sustainability challenges. It equips students to systematically understand and analyse the dynamic interrelationships and interdependencies between business, society and the natural environment. Conceptualising business as a multi-scalar activity system, students are encouraged to explore new sustainable business models that generate value for the natural environment, society and the economy. Such sustainability transitions are positioned as opportunities for business to proactively engage with sustainability issues. Capabilities for leading transitions are identified and students reflect on how such approaches could be implemented within existing corporations and small-medium sized organisations.

Learning outcomes

On successful completion of this subject students should be able to:

1. Analyse systemic and sustainable business models.
2. Apply the principles and tools of complex systems thinking to sustainable business challenges and/or opportunities.
3. Apply key concepts and techniques of voluntary reporting, sustainable business models and certification systems that could progress organisations towards social and environmental sustainability.

*Subject comprises three credit points. Refer to the course structure for bundled subject delivery.

220789 Delivering Customer Value*

Subject description

This subject helps students understand the customer and the value they add to an enterprise as well as how an enterprise can benefit a customer. The subject introduces theories and techniques of marketing analytics in the context of various marketing decision-making environments. Students will explore the nature and role of digital and social marketing for generating customer value. The subject will introduce students to customer analytics and methods of segmentation to determine a customer's lifetime value to an enterprise. Topics in the subject are reinforced by the use of actual marketplace data and analytics to measure and estimate the effects of an enterprise marketing effort.

Learning outcomes

On successful completion of this subject students should be able to:

1. Explain the importance of customer value for an organisation.
2. Apply quantitative methods to assess customer value.
3. Evaluate customer responses to new and modified product offerings.

*Subject comprises three credit points. Refer to the course structure for bundled subject delivery.

250720 Applied Financial Management*

Subject description

All managers must have a basic understanding of financial management concepts, capital markets and instruments, as well as the trade-offs between financial risk versus gain. This subject provides students with the understanding of the latest tools and techniques in financial management. The main goal of the subject is to prepare students for responsible and sustainable leadership using the financial management perspective.

This subject develops a framework around financial analysis and modelling, as well as business, risk, and investment evaluation by focusing on four main areas:
(1) the assessment of an organisation's financial health,
(2) the planning of the organisation's future financial performance,
(3) the financing of the organisation's operations, and
(4) the evaluation of business and investment opportunities for the organisation.

Emphasis is placed on the application of tools and techniques to real-world problems in financial management to enable students to solve related problems in their places of work.

Learning outcomes

On successful completion of this subject students should be able to:

1. Describe the role of financial management in evaluating the financial health and performance of an organisation.
2. Apply financial management techniques to financial analysis and financial modelling problems.
3. Assess financial decisions relating to investment, financing and risk management.

*Subject comprises three credit points. Refer to the course structure for bundled subject delivery.

230709 Foundation Studio

Subject description

The Foundation Studio provides an opportunity for students to put the skills they learned in their initial programming and core subjects into practice. The studio will be managed by an academic and industry partner and will take place in real-world analytics setting. Students will identify business problems and stakeholders; collect information from the stakeholders; present a business case for analysing information considering the ethical, social and sustainable issues; analyse the information; and communicate their preliminary findings efficiently to the stakeholders.

Learning outcomes

On successful completion of this subject students should be able to:

1. Apply analytics in specified contexts.
2. Utilise advanced skills in collaborating with colleagues from diverse technical backgrounds.
3. Convey analytical results effectively to professional audiences.

240753 Customer Analytics

Subject description

This subject helps students understand the customer and the value they add to an enterprise as well as how an enterprise can benefit a customer. The subject introduces theories and techniques of marketing analytics in the context of various marketing decision-making environments. Students will explore the nature and role of digital and social marketing for generating customer value. The subject will introduce students to customer analytics and methods of segmentation to determine a customer's lifetime value to an enterprise. Topics in the subject are reinforced by the use of actual marketplace data and analytics to measure and estimate the effects of an enterprise's marketing efforts.

Learning outcomes

On successful completion of this subject students should be able to:

1. Identify customer acquisition and/or retention challenges and opportunities.
2. Analyse data to identify trends and generate insights.
3. Use customer data and insights for decision-making to deliver customer value.
4. Communicate the findings of analytical results effectively.

320513 Machine Learning

Subject description

Data analytics is an exciting new field combining databases, artificial intelligence, machine learning and visualisation, among others. It is applied in many fields of business, industry and science to discover new information and knowledge. Central to data analytics are the algorithms themselves. This subject builds on previous data analytics subjects to give an understanding of how basic as well as more powerful and subtle algorithms work. It takes a research-inspired approach so that students learn to apply state-of-the-art algorithms to their professional practice. It also introduces data analytics approaches for specific domains such as social network analysis and text mining.

Learning outcomes

On successful completion of this subject students should be able to:
1. Describe the scope, limitations and application of several machine learning methods.
2. Apply machine learning methods.
3. Design an approach to machine learning problems in specialised domains.
4. Critically assess the impact of machine learning.

420048 Innovation Studio***

Subject description

The Innovation Studio focuses on a self-directed industry project approached independently by multi-disciplinary teams. Students will identify a business problem and design an approach to build a solution that meets the stakeholders' needs. Students will critically evaluate and reflect on their process and effectively implement innovative outcomes to facilitate change.

Learning outcomes

On successful completion of this subject students should be able to:

1. Clearly define an industry problem with an appropriate set of objectives.
2. Assess, adapt and recommend the most suitable methodology to guide the industry project and plan to achieve defined objectives.
3. Synthesise a range of tools and techniques in order to design and develop creative and innovative solutions to the identified industry problem.
4. Construct written, spoken and visual communication with accuracy and clarity to effectively communicate innovative outcomes.
5. Critically evaluate, peer-review, reflect and communicate the learning process.

***Subject comprises twelve credit points.

220789 Financial Analytics

Subject description

Financial analytics develops new insights and understanding of financial and non-financial performance by continuous iterative examination of large datasets pertaining to past financial and non-financial information and events. This subject also explores the many areas in which accounting data provides insight into other business areas including consumer-behaviour predictions, corporate strategy, risk management, optimisation and more. Students are taught the skills to analyse accounting data to address accounting-related and other business problems. Students are expected to obtain an understanding of the different types of data analytics methods, and how to apply these methods to analyse accounting-related problems.

Learning outcomes

On successful completion of this subject students should be able to:

1. Apply data analysis methods using spreadsheets and other tools.
2. Evaluate the role and impact of business analytics for accounting, reporting and decision-making.
3. Apply appropriate quantitative analytical techniques to organisational decision-making using appropriate technology.
4. Effectively interpret results and assumptions of data analysis and analytical modelling and communicate them – verbally and in written form – to relevant stakeholders.

Get in touch

If you'd like to know more about the Master of Public Health, get in touch with our Student Enrolment Advisors.

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