



PSYO8922

Human Factors in New Technology

Session 2, In person-scheduled-weekday, North Ryde 2023

School of Psychological Sciences

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General Information

Unit convenor and teaching staff

Unit Convener

Mark Wiggins

mark.wiggins@mq.edu.au

Contact via mark.wiggins@mq.edu.au

16 University Ave, Room 2.658

By Appointment

Credit points

10

Prerequisites

Admission to MOrgPsych

Corequisites

Co-badged status

Unit description

This unit examines the relationship between human performance and advanced technology, and the role of organisational psychologists in optimising this relationship. This unit will provide students with knowledge of theories and practical perspectives relating to the application of human factors principles in a range of operational settings. Practical components of the unit focus on the conduct of hazard analyses, task analyses, risk assessments, usability analyses, and human factors tests.

Important Academic Dates

Information about important academic dates including deadlines for withdrawing from units are available at <https://www.mq.edu.au/study/calendar-of-dates>

Learning Outcomes

On successful completion of this unit, you will be able to:

ULO1: Demonstrate knowledge by critically analysing models and theories that purport to explain human performance and technology.

ULO2: Apply and differentiate the strategies associated with proactive and reactive human performance assessment, including practical issues and challenges.

ULO3: Diagnose human factors-related issues in the context of an applied industrial environment

ULO4: Propose solutions to improve the relationship between human performance and technology.

General Assessment Information

Grade descriptors and other information concerning grading are contained in the [Macquarie University Assessment Policy](#).

All final grades are determined by a grading committee, in accordance with the Macquarie University Assessment Policy, and are not the sole responsibility of the Unit Convenor.

Students will be awarded a final grade and a mark which must correspond to the grade descriptors specified in the [Assessment Procedure](#) (clause 128).

To pass this unit, you must demonstrate sufficient evidence of achievement of the learning outcomes, meet any ungraded requirements, and achieve a final mark of 50 or better.

Further details for each assessment task will be available on iLearn.

Late Submissions

Unless a Special Consideration request has been submitted and approved, a 5% penalty (OF THE TOTAL POSSIBLE MARK) will be applied each day a written assessment is not submitted, up until the 7th day (including weekends). After the 7th day, a grade of '0' will be awarded even if the assessment is submitted. Submission time for all written assessments is set at 11.55pm. A 1-hour grace period is provided to students who experience a technical concern.

For example:

Number of days (hours) late	Total Possible Marks	Deduction	Raw mark	Final mark
1 day (1-24 hours)	100	5	75	70
2 days (24-48 hours)	100	10	75	65
3 days (48-72 hours)	100	15	75	60
7 days (144-168 hours)	100	35	75	40
>7 days (>168 hours)	100	-	75	0

Late submission of time sensitive tasks, such as timetabled tests/exams, scheduled performance assessments/presentations, scheduled practical assessments/labs, will be addressed by the unit convenor in a Special consideration application.

Special Consideration

If you are unable to complete an assessment task on or by the specified date due circumstances that are unexpected, unavoidable, significantly disruptive and beyond your control, you may apply for special consideration in accordance with the [special consideration policy](#). Applications for special consideration must be supported by appropriate evidence and submitted via ask.mq.edu.au.

Assessment Tasks

Name	Weighting	Hurdle	Due
User Experience report	50%	No	30 September, 2023
Fortnightly Quiz questions	0%	No	04 November, 2023
Examination	50%	No	5.00pm, 02 November, 2023

User Experience report

Assessment Type ¹: Report

Indicative Time on Task ²: 48 hours

Due: **30 September, 2023**

Weighting: **50%**

This assessment task involves a report in which you examine a website of your choice and provide recommendations to address any user experience or usability issues identified.

On successful completion you will be able to:

- Demonstrate knowledge by critically analysing models and theories that purport to explain human performance and technology.
- Apply and differentiate the strategies associated with proactive and reactive human performance assessment, including practical issues and challenges.
- Diagnose human factors-related issues in the context of an applied industrial environment
- Propose solutions to improve the relationship between human performance and technology.

Fortnightly Quiz questions

Assessment Type ¹: Quiz/Test

Indicative Time on Task ²: 4 hours

Due: **04 November, 2023**

Weighting: **0%**

Completion of the multiple choice questions associated with each video recording

On successful completion you will be able to:

- Demonstrate knowledge by critically analysing models and theories that purport to explain human performance and technology.
- Apply and differentiate the strategies associated with proactive and reactive human performance assessment, including practical issues and challenges.

Examination

Assessment Type ¹: Examination

Indicative Time on Task ²: 48 hours

Due: **5.00pm, 02 November, 2023**

Weighting: **50%**

Examination of course material

On successful completion you will be able to:

- Demonstrate knowledge by critically analysing models and theories that purport to explain human performance and technology.
- Apply and differentiate the strategies associated with proactive and reactive human performance assessment, including practical issues and challenges.
- Diagnose human factors-related issues in the context of an applied industrial environment
- Propose solutions to improve the relationship between human performance and technology.

¹ If you need help with your assignment, please contact:

- the academic teaching staff in your unit for guidance in understanding or completing this type of assessment

- the [Writing Centre](#) for academic skills support.

² Indicative time-on-task is an estimate of the time required for completion of the assessment task and is subject to individual variation

Delivery and Resources

As a student enrolled in this unit, you will engage in a range of online and face-to-face learning activities, including readings, workshops exercises and videos. Details can be found on the iLearn site for this unit.

Recommended Readings

Wiggins, M.W. (2022). *An Introduction to Human Factors for Organisational Psychologists*. Boca Raton, FL: CRC Press.

Technology Used

Active participation in the learning activities throughout the unit will require students to have access to a tablet, laptop or similar device. Students who do not own their own laptop computer may borrow one from the university library.

Unit Schedule

Date	Topic	Mode	Reading Requirements	Assessments
July 27 (6.00pm – 8.00 pm)	Introduction to Human Factors Mark Wiggins	Online	Chapter 1 Chapter 4	
August 3 (5.00pm - 7.00pm)	Human Factors in Organisations Mark Wiggins	On-Campus	Chapter 2 (See Topic Notes)	Multiple Choice Questions
August 10 (5.00pm - 7.00pm)	User Experience and Usability Mark Wiggins	Online	Chapter 20 (See Topic Notes)	Multiple Choice Questions
August 17 (5.00pm - 7.00pm)	Human Factors and Information Processing Mark Wiggins	On-Campus	Chapter 8 (See Topic Notes)	Multiple Choice Questions
August 24 (5.00pm - 7.00pm)	Human Factors and Workload Mark Wiggins	Online	Chapter 9 (See Topic Notes)	Multiple Choice Questions

August 31 (5.00pm - 7.00pm)	Human Factors and Systems Design Mark Wiggins	On-Campus	Chapter 6 (See Topic Notes)	Multiple Choice Questions
September 7 (5.00pm - 7.00pm)	Human Factors Testing Mark Wiggins	Online	Chapter 27 (See Topic Notes)	Multiple Choice Questions
September 28 (5.00pm - 7.00pm)	Human Factors Assessment Mark Wiggins	On-Campus	Chapter 28 (See Topic Notes)	Multiple Choice Questions
October 5 (5.00pm - 7.00pm)	Human Factors and Ergonomics Mark Wiggins	Online	Chapter 21 (See Topic Notes)	Multiple Choice Questions
October 12 (5.00pm - 7.00pm)	Human Factors and System Safety Mark Wiggins	On-Campus	Chapter 5 (See Topic Notes)	Multiple Choice Questions
October 19 (5.00pm - 7.00pm)	Human Factors and Advanced Technology Mark Wiggins	Online	Chapter 22 (See Topic Notes)	Multiple Choice Questions
October 26 (5.00pm - 7.00pm)	Human Factors in Practice Mark Wiggins	On-Campus	Chapter 30 (See Topic Notes)	
November 2 (5.00pm - 7.00pm)	Examination	Online		

Policies and Procedures

Macquarie University policies and procedures are accessible from [Policy Central \(https://policies.smq.edu.au\)](https://policies.smq.edu.au). Students should be aware of the following policies in particular with regard to Learning and Teaching:

- [Academic Appeals Policy](#)
- [Academic Integrity Policy](#)
- [Academic Progression Policy](#)
- [Assessment Policy](#)
- [Fitness to Practice Procedure](#)

- [Assessment Procedure](#)
- [Complaints Resolution Procedure for Students and Members of the Public](#)
- [Special Consideration Policy](#)

Students seeking more policy resources can visit [Student Policies](https://students.mq.edu.au/support/study/policies) (<https://students.mq.edu.au/support/study/policies>). It is your one-stop-shop for the key policies you need to know about throughout your undergraduate student journey.

To find other policies relating to Teaching and Learning, visit [Policy Central](https://policies.mq.edu.au) (<https://policies.mq.edu.au>) and use the [search tool](#).

Student Code of Conduct

Macquarie University students have a responsibility to be familiar with the Student Code of Conduct: <https://students.mq.edu.au/admin/other-resources/student-conduct>

Results

Results published on platform other than [eStudent](#), (eg. iLearn, Coursera etc.) or released directly by your Unit Convenor, are not confirmed as they are subject to final approval by the University. Once approved, final results will be sent to your student email address and will be made available in [eStudent](#). For more information visit ask.mq.edu.au or if you are a Global MBA student contact globalmba.support@mq.edu.au

Academic Integrity

At Macquarie, we believe [academic integrity](#) – honesty, respect, trust, responsibility, fairness and courage – is at the core of learning, teaching and research. We recognise that meeting the expectations required to complete your assessments can be challenging. So, we offer you a range of resources and services to help you reach your potential, including free [online writing and maths support](#), [academic skills development](#) and [wellbeing consultations](#).

Student Support

Macquarie University provides a range of support services for students. For details, visit <http://students.mq.edu.au/support/>

The Writing Centre

[The Writing Centre](#) provides resources to develop your English language proficiency, academic writing, and communication skills.

- [Workshops](#)
- [Chat with a WriteWISE peer writing leader](#)
- [Access StudyWISE](#)
- [Upload an assignment to Studiosity](#)
- [Complete the Academic Integrity Module](#)

The Library provides online and face to face support to help you find and use relevant information resources.

- [Subject and Research Guides](#)
- [Ask a Librarian](#)

Student Services and Support

Macquarie University offers a range of [Student Support Services](#) including:

- [IT Support](#)
- [Accessibility and disability support](#) with study
- Mental health [support](#)
- [Safety support](#) to respond to bullying, harassment, sexual harassment and sexual assault
- [Social support including information about finances, tenancy and legal issues](#)
- [Student Advocacy](#) provides independent advice on MQ policies, procedures, and processes

Student Enquiries

Got a question? Ask us via [AskMQ](#), or contact [Service Connect](#).

Equity support

Students with a disability are encouraged to contact the [Disability Service](#) who can provide appropriate help with any issues that arise during their studies.

IT Help

For help with University computer systems and technology, visit http://www.mq.edu.au/about_us/offices_and_units/information_technology/help/.

When using the University's IT, you must adhere to the [Acceptable Use of IT Resources Policy](#). The policy applies to all who connect to the MQ network including students.

Inclusion and Diversity

Social inclusion at Macquarie University is about giving everyone who has the potential to benefit from higher education the opportunity to study at university, participate in campus life and flourish in their chosen field. The University has made significant moves to promote an equitable, diverse and exciting campus community for the benefit of staff and students. It is your responsibility to contribute towards the development of an inclusive culture and practice in the areas of learning and teaching, research, and service orientation and delivery. As a member of the Macquarie University community, you must not discriminate against or harass others based on their sex, gender, race, marital status, carers' responsibilities, disability, sexual orientation, age, political conviction or religious belief. All staff and students are expected to display appropriate behaviour that is conducive to a healthy learning environment for everyone.

Professionalism

In the Faculty of Medicine, Health and Human Sciences, professionalism is a key capability embedded in all our courses.

As part of developing professionalism, students are expected to attend all small group interactive sessions including clinical, practical, laboratory, work-integrated learning (e.g., PACE placements), and team-based learning activities. Some learning activities are recorded (e.g., face-to-face lectures), however you are encouraged to avoid relying upon such material as they do not recreate the whole learning experience and technical issues can and do occur. As an adult learner, we respect your decision to choose how you engage with your learning, but we would remind you that the learning opportunities we create for you have been done so to enable your success, and that by not engaging you may impact your ability to successfully complete this unit. We equally expect that you show respect for the academic staff who have worked hard to develop meaningful activities and prioritise your learning by communicating with them in advance if you are unable to attend a small group interactive session.

Another dimension of professionalism is having respect for your peers. It is the right of every student to learn in an environment that is free of disruption and distraction. Please arrive to all learning activities on time, and if you are unavoidably detained, please join activity as quietly as possible to minimise disruption. Phones and other electronic devices that produce noise and other distractions must be turned off prior to entering class. Where your own device (e.g., laptop) is being used for class-related activities, you are asked to close down all other applications to avoid distraction to you and others. Please treat your fellow students with the utmost respect. If you are uncomfortable participating in any specific activity, please let the relevant academic know.

Changes since First Published

Date	Description
11/07/2023	Updated Policies and Procedures as per Faculty Guidelines and changed a date for the submission of an assessment from a Sunday deadline to Saturday.