

# THE UNIVERSITY OF MELBOURNE

## *Assessment and Evaluation*

- **Postgraduate Certificate in Assessment and Evaluation**
- **Master of Assessment and Evaluation**

### **ABOUT THE COURSES**

The Master of Assessment and Evaluation and the Post Graduate Certificate in Assessment and Evaluation are comprehensive specialist training programs. They provide opportunities for both local and overseas students to develop higher order skills and conceptual understanding in these areas. They are suitable for personnel employed in educational, government and industrial organisations who want to take a leadership role in the field of assessment and evaluation.

The Post Graduate Certificate provides an introduction to Assessment and Evaluation. It aims to cover the key concepts and theories underlying policy and program development, the roles of various types of evaluation, key concepts and theories of assessment and appraisal of individuals in processes and outcomes. The Masters program meanwhile aims to produce graduates who are able to design and manage assessment and evaluation programs at a high level, make effective use of associated writings and research and develop superior knowledge and understanding of assessment and/or evaluation theory and practice.

Delivery of the courses is undertaken by the Assessment Research Centre and the Centre for Program Evaluation both of which are located within the Faculty of Education.

### **OBJECTIVES OF THE COURSES**

Students completing the program will be able to:

- demonstrate a high level of competence in the management of assessment and/or evaluation programs;
- make effective use of writings and research in assessment and/or evaluation;
- obtain a depth of knowledge and understanding that will enable them to be a resource for colleagues in assessment and/or evaluation-related professional situations;
- demonstrate a superior knowledge and understanding of assessment and/or evaluation theory and practice.

### **COURSE STRUCTURES**

#### **POST GRADUATE CERTIFICATE IN ASSESSMENT AND EVALUATION**

The Post Graduate Certificate in Assessment and Evaluation consists of 50 points and is normally completed in six months full-time or one year part-time.

In order to complete the Post Graduate Certificate a student must complete two subjects from the following list (each 25 points).

482-610	Introduction to Evaluation
482-611	Introduction to Research Methods
482-612	Evaluation Project
472-642	Statistics and Software Management
476-661	Assessment Design and Analysis

**It is possible to complete the Post Graduate Certificate by online delivery using the internet.**

## MASTER OF ASSESSMENT AND EVALUATION

The Master of Assessment and Evaluation consists of 150 points and is normally completed in one and a half years full-time or three years part-time and is made up of three strands which reflect the latest theoretical understanding, research methodology and analytical tools available in the field.

The assessment specialist strand combines theoretical and practical studies that will enable students to acquire state-of-the-art skills in the design, development and application of assessment for purposes related to learning, credentialing, selection and policy development.

The evaluation strand provides opportunities for students to come to grips with the latest evaluation concepts and skills, and to undertake and /or manage policy and program evaluation studies.

The combined assessment and evaluation strand provides opportunities for students to acquire specialised methodological skills in assessment and evaluation. The generic nature of these skills will find natural applications in the social, political and behavioural sciences.

It is a requirement of the Masters course that a student complete one subject from the combined assessment and evaluation strand, and at least one subject from either the evaluation or assessment strands.

### Assessment Specialist Strand

472 611	Introduction to Assessment
472 612	Assessment Instrument Development
476 695	Assessment and Reporting for Student Learning

### Evaluation Specialist Strand

481 809	Program Evaluation: Forms and Approaches
481 810	Evaluating Large Scale Programs
481 811	Evaluation for Management and Development

### Combined Assessment and Evaluation Strand

476 661	Test and Scale Development
476 662	Competency and Performance Assessment
476 664	Item Response Modelling
476 694	Large-scale Survey Research
481 812	Qualitative Methods
481 813	Quantitative Methods
481 814	Project in Assessment and Evaluation

Students can elect to study a maximum of two 25-point subjects other than the above list with the approval of the Course Co-ordinator.

It is possible for a student to complete a one year (**100** point) Masters by undertaking one 25 point subject and thesis **or** by coursework completing four 25 point subjects. Students must have completed a Postgraduate Certificate in Assessment and Evaluation or have completed a graduate diploma **and** have a record of research and/or publications **or** at least four years of documented relevant professional experience to enter these streams.

### Coursework and Thesis Streams

In order to complete the 150 point course a participant is required to undertake two subjects (ie **50** points of coursework) from the pool of previously listed subjects and complete a major thesis of 30,000 words. Graduates of this course are eligible to apply for the PhD or Doctor of Education programs.

To complete the coursework and thesis stream (150A) a student is required to complete three subjects and a 20,000 word thesis (includes research methodology).

Staff from each Centre can advise you on subject choice, selection for specialisation and entrance into the 100 point stream option.

### **Coursework Only Stream**

In order to complete the Master of Assessment and Evaluation (Coursework Only Stream), participants are required to undertake six subjects (ie 150 points of coursework) from the pool of listed subjects.

Students will need to select at least one subject from the combined assessment and evaluation subjects, and at least one subject must be from either the list of evaluation subjects or from the list of assessment subjects.

This Masters program provides theoretical and technique skills in assessment and evaluation, based upon the latest research findings and practice of each Centre. It is the only Masters program offered of its kind.

**It is possible to complete the Master of Assessment and Evaluation (Coursework) by online delivery using the internet.**

### **DELIVERY OF THE COURSES**

Classes are conducted in a variety of modes including day and evening sessions. Most subjects are held from 5.15-7.45pm, whilst day classes tend to be held on Saturdays. Nearly all subjects are offered on-line and students should refer to the course co-ordinators for further details.

## **SUBJECT OUTLINES**

### **POST GRADUATE CERTIFICATE**

#### **482-610 Introduction to Evaluation**

This subject provides a conceptual overview of theories, issues and recent practice in evaluation. An inductive/case study approach is employed in which recent evaluation practice is analysed using frameworks developed by the lecturers. Topics covered include: conflicting views on the nature and purpose of evaluation; alternative purposes (summative, formative, illuminative); forms and approaches adopted by external and internal evaluators; evaluation and performance auditing; responsive evaluation; links between evaluation, decision-making and action; planning evaluations; an introduction to various qualitative and quantitative evaluation techniques in data management; reporting evaluation findings; evaluation ethics and standards; and a critical appraisal of selected Australian evaluation studies.

#### **482-611 Introduction to Research Methods**

This subject will provide an introduction to the collection, processing, analysis and reporting of qualitative and quantitative data in evaluation studies. The subject begins with a consideration of the appropriateness of qualitative and quantitative methods in studies involving both small and large numbers of cases and general methodological issues of research design. For studies with small number of cases, topics will include participant observation, interviewing, focus groups and data analysis. For studies with medium or large number of units of analysis (eg surveys or enumerations) topics will include: sampling; design; development and testing of instruments for data collection, field processes; data processing; computer-based exploratory and descriptive analysis and general issues of validity and reliability. The quantitative component focuses on the development of skills based on intuitive rather than mathematical understandings.

### **482612 Evaluation Project**

This subject is designed to enable students to apply knowledge acquired in previous subjects in the Postgraduate Certificate to a social or educational problem. Students are expected to apply this knowledge to a project of relevance to them in the workplace. The substantive content varies depending on the nature of the project. It is intended that students should use process skills such as negotiating the project, managing information, using appropriate communication skills and being aware of political agendas amongst clients.

### **472-642 Statistics and Software in Measurement**

This subject is designed for students with little or no experience in the use of data entry, data management and data analysis computer software programs, although basic keyboard skills and/or experience with Microsoft Windows are an advantage. This subject provides the beginner in educational measurement and research with the basic software application skills required for data entry, cleaning, analyses and reporting results. The subject will provide students with sufficient knowledge of MS Access, MS Excel, SPSS and text editor programs to enable students to prepare, check and analyse data obtained for surveys, tests and other sources. Instruction and practical work will be integrated in all sessions of the subject. This subject will also introduce students to basic statistics and mathematics relevant to data analysis, such as the computation of frequencies, mean, standard deviation, variance, correlation and concepts relating to probability distributions. The use of mathematical symbols such as summation, indices, product and the computation of logarithms and exponentials, as well as algebraic manipulations, will also be covered in the subject.

### **476 661 Test and Scale Development**

Methods for creating, designing and developing measurement tools are explored. These tools include those used for assessment of capabilities, achievement, attitudes and preferences. The principles of scale construction and validation provide the framework for topics including domain specification and definition, assessment instrument design, validity and reliability. Use of quantitative methods, including item response theory and classical analysis to

inform the development process, is covered. assessment, test equating, and dimensions of learning.

## **MASTER OF ASSESSMENT AND EVALUATION**

### **ASSESSMENT STRAND**

#### **472-611 Introduction to Assessment**

This subject will examine the procedures associated with assessment and reporting in educational settings. Students will explore modes of data collection, recording mechanisms and interpretation frameworks. An in-depth study of the use of pupil assessment data, with specific emphasis on linking assessment results to the teaching and learning cycle and an examination of how this leads to tensions for accountability, will be examined. Practical examples of collecting and recording assessment data and its synthesis with external data sources will be presented. Collation of data to use for a range of purposes will be explored such that reports, their format and presentation is matched to the audience and information needs. A fieldwork exercise will be incorporated such that students examine both formal and informal data sets and devise methods of synthesis for a range of audiences and purposes.

#### **476 661 Assessment Design and Analysis**

This subject is intended to provide an understanding of, and practical skills in, assessment design, analysis, reporting and monitoring. Topics include: assessment strategies, assessment instrument design; domain specification and definition; test preparation, assessment task development; scoring approaches, strengths and weaknesses, item response theory (one, two and three parameter models) analysis, application, and interpretation of item response and classical analyses of data, using data to improve instruction, designing data bases, item banks, adaptive testing, assessment systems, competency based on assessment, test equating, and dimensions of learning.

#### **476 664 Advanced Measurement & Psychometrics**

This subject is intended to provide an advanced understanding of item response modelling and psychometric theory. The subject will require advanced skills in assessment design and analysis, test equating and interpretation, and will examine item response theory from an advanced perspective, including the development of single and multiple parameter models, their specification, estimation and evaluation. This unit will focus on procedures for calibration and banking tasks based on rating and criterion referenced scales, constructed response and judgement based assessments, as well as multiple choice tasks. Computer applications linked to item response models will include test equating, adaptive and on-line assessments. A high level of statistical and mathematical skills would be required.

#### **476 694 Education Measurement, Assessment & Evaluation**

This subject provides an overview of the nature of educational measurement, assessment and evaluation by contrasting various perspectives, purposes, models and procedures. It provides an introduction from a conceptual and practical viewpoint, covering such areas as: classical test theory; test bias, reliability and validity; test and assessment task construction; normative and criterion referenced assessments; formative, summative and diagnostic assessment; item response theory; and the design implementation, analysis and evaluation of assessment procedures. Recent international trends will be used to provide a conceptual basis for critical evaluation of some contemporary initiatives in the field. Both qualitative and quantitative aspects of measurement will be addressed and emphasis will be placed on the appreciation of quality measurement through practical exercises.

#### **476 695 Assessment and Reporting for Student Learning**

This subject focuses on the relationship between learning and assessment procedures and how, by building on this relationship, both learning and assessment may be improved. It will begin with an exploration of the varying purposes,

principles and policies of assessment and reporting and consider trends and perspectives at local, systemic and national levels. Innovations in assessment and reporting, such as authentic, profiling and responsive and portfolio assessment will be investigated and evaluated in terms of their congruence with the promotion of student learning through the delivered curriculum. Shifting conceptions of validity and reliability that incorporate notions of equity, curriculum fidelity, manageability and public credibility will be examined. Ways that assessment practices can be utilised to strengthen the links between improved learning outcomes and quality and excellence will also be examined. Students will then apply the lessons of their critical evaluation of assessment and reporting to the design and evaluation of a particular instance of assessment and reporting of an educational program within their own context.

### **EVALUATION STRAND**

#### **481 809 Program Evaluation: Forms and Approaches**

This subject will provide a conceptual overview of theories, issues and recent practice in evaluation. An inductive/case study approach will be used in which recent evaluation practice will be analysed using frameworks developed by the lecturers. Topics covered include: conflicting views on the nature and purposes of evaluation; alternative purposes (summative, formative, illuminative); forms and approaches adopted by external and internal evaluators; evaluation and performance auditing; responsive evaluation; links between evaluation, decision-making and action; planning evaluations; an introduction to various qualitative and quantitative evaluation techniques in data management; reporting evaluation findings; evaluation ethics and standards; and a critical appraisal of selected Australian evaluation studies.

#### **481 810 Evaluating Large Scale Programs**

This subject comprises a critical analysis and application of the “theory-based”

approach to evaluating large-scale education and social programs. Topics will include: the social and political context of large-scale interventions; explication of the “normative” theory of large-scale programs using concept mapping and related approaches; factors affecting program implementation in multi-level systems; research designs for evaluating large-scale programs; program monitoring and the appropriate uses of performance indicators; and development and testing of “causative” program theories using quasi-experimental, causal modelling and case-study approaches.

#### **481 811 Evaluation for Management and Development**

This subject is based on an assumption that leaders and managers need timely, systematic information for use in decision-making about programs (and policies) for which they are responsible. The focus is on internal evaluations within organisations (for example schools, government agencies and businesses) which have adopted a learning organisation focus. Students will be exposed to program planning techniques such as logical framework analysis, program logic and evaluability assessment. Other topics include evaluative techniques to develop and improve programs. These include: needs assessment; translation of policy into local action; development of policy from innovative practice; and various approaches to implementation including action research. Students will be exposed to a range of data management approaches and reporting, via case studies presented during class sessions.

### **COMBINED ASSESSMENT AND EVALUATION STRAND**

#### **481 812 Qualitative Methods**

Approaches to the collection, display and analysis of qualitative data in education and social programs will be examined using current models. Topics will include: orientations to, and criticisms of, qualitative approaches; planning qualitative data collection using particular strategies and methods of data collection (such as interviews, focus groups, participant observation, case study, literature and document analysis, and the use of visual

media); the use of systematic methods of data reduction, display and content analysis (using both hand methods and appropriate computer packages); and issues of the rigour and trustworthiness of conclusions drawn from qualitative analysis. Methods by which qualitative findings can be reported to various audiences will also be considered.

#### **481 813 Quantitative Methods**

The subject is based upon an examination of various methods of collection, display and analysis of quantitative data. Topics will include: design of quantitative research strategies consistent with evaluation objectives; sampling; development and testing of data collection instruments; issues of reliability and validity; data processing; some descriptive and inferential methods of statistical analysis including multi-variate techniques; the use of standard micro computer packages for data management and analysis; the complementary use of qualitative and quantitative data in evaluation; and methods by which uni- and multi-variate quantitative data can be displayed and reported to various audiences.

#### **481 814 Project in Assessment and Evaluation**

This subject is designed to enable students to apply knowledge acquired in previous subjects to a social or educational problem. Students apply this knowledge to a project of relevance to them in the workplace. The substantive content varies depending on the nature of the project. All students are expected to use process skills such as: negotiation, managing information, using appropriate communication skills, and being aware of political agendas amongst clients.

#### **476 645 Multivariate Methods**

A good understanding of basic statistics will be assumed in this subject and the application of multivariate analysis methods will be a strong focus of the subject. Particular emphasis will be on such techniques as MANOVA, multi level modelling and covariance structure analyses (causal modelling) as well as on the interdependence of measurement, design, and analysis. Practical aspects of data management and analysis, literature

searching, and report writing will be included in the laboratory component. The importance of theory underlying hypothesis testing will also be high-lighted. A “model comparison” approach will be used to enhance understanding of the links between theory, data and conclusions. Contrasts between traditional approaches and the model comparison approach will be illustrated through consideration of specific data sets.

## **ENTRANCE REQUIREMENTS**

### **Post Graduate Certificate in Assessment and Evaluation**

Applicants must have:

- an appropriate undergraduate degree and/or teaching qualification **or**
- an appropriate degree in a social or human science and either a record of research and/or publication equivalent to year four in education **or** at least two years of documented relevant professional experience.

### **Master of Assessment and Evaluation**

Applicants must have:

- an appropriate undergraduate degree and/or teaching qualification; **or**
- an appropriate degree or graduate diploma in a social or human science and either a record of research and/or publication equivalent to year four in education or at least two years of documented relevant professional experience.

## **THE UNIVERSITY OF MELBOURNE**

The University of Melbourne is the first choice study destination for students of outstanding ability nationally and internationally. Over 33,000 students are currently enrolled at the University, more than 2,000 of whom are overseas students from 70 countries studying at both undergraduate and post graduate levels. As well as having first class research and training facilities for students, the University of Melbourne is well served by

public transport and is only 15 minutes walk from Melbourne’s central business district.

## **ASSESSMENT RESEARCH CENTRE**

The Assessment Research Centre (ARC) has developed a strong research culture and an international reputation for its work in assessment research, development and teaching. The Centre’s mission is to promote change and improvement in the fields of assessment, reporting and applied measurement. To achieve this mission, the Centre undertakes research, consultancies and development projects, and participates in higher and vocational training in both award and non-award programs. The ARC is currently pursuing a program of assessment research, development and dissemination that will inform policy, provide leadership and improve assessment practices and interactions among those who use assessment information. The Centre provides national and international leadership in new and innovative assessment areas. Areas of specialisation include value-added research, assessment of literacy, profiling, assessment of pre-employability competencies and vocational competencies.

## **CENTRE FOR PROGRAM EVALUATION**

The Centre for Program Evaluation (CPE) is an evaluation and research centre in The University of Melbourne. It undertakes commissioned evaluations on a consultancy basis, teaches post-graduate courses in evaluation and research methods, and provides specialised developmental activities, such as specialised training courses for clients outside the University. It has developed an international profile in evaluation through its publications and links with other specialised evaluation centres.

## APPLICATIONS AND COURSE ADVICE

Application forms for admission to the Assessment and Evaluation courses are available from

Faculty Office

Telephone: (+61 3) 8344 8285, 8344 8319 or 8344 8317

Fax: (+61 3) 8344 8529

Email: [enquiries@edfac.unimelb.edu.au](mailto:enquiries@edfac.unimelb.edu.au)

## ACADEMIC ADVICE

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