



SENIOR MATERIALS TESTING OFFICER

DEPARTMENT/UNIT	Civil Engineering
FACULTY/DIVISION	Faculty of Engineering
CLASSIFICATION	HEW Level 7
WORK LOCATION	Clayton campus

ORGANISATIONAL CONTEXT

There's a certain feeling you get from working at Monash University. It's the feeling that you're a part of something special. Something significant. So if you're looking for the next chapter in your career, it's here. You'll be given the opportunity to challenge yourself, build on your skills, and make a significant contribution to a workplace that's filled with energetic and inspiring people. Talent thrives here – and so do truly satisfying careers. Discover more at www.monash.edu.

The Faculty of Engineering is one of the largest in Australia, renowned worldwide for the quality and calibre of our teaching, research and graduates. We offer a comprehensive range of undergraduate, graduate, postgraduate and higher degree by research programs in a wide range of engineering disciplines. Our research activities provide a platform for establishing a thriving educational enterprise and our staff are committed to creating a dynamic learning environment. The research activities range from fundamental studies to research with a strong applications orientation. To learn more about the Faculty of Engineering, please visit our website: www.eng.monash.edu.au/.

The Department of Civil Engineering aims to provide high quality education, research and professional services globally for the mutual benefit of the students, the staff, the University, industry, the profession and the wider community. We offer several undergraduate degrees as well as postgraduate coursework degrees via Off-Campus Learning. The Department actively pursues innovative and significant multi-disciplinary research to address the challenges for engineering in the 21st century. For more information about us and the work we do, please visit our website: www.eng.monash.edu.au/civil/.

POSITION PURPOSE

The Senior Materials Testing Officer is required to perform a range of significant research-related activities that play a key role in supporting the provision of structural and materials testing and data - acquisition. This includes the instruction and training of students and staff, testing machine control and providing expert technical input. The Senior Materials Testing Officer will be the principal operator of a number of servo-hydraulic, pneumatic and electromechanical testing machines.

Reporting Line: The position reports to the Laboratory Manager under broad supervision

Supervisory Responsibilities: HEW 5, Postgraduates and casual staff

Financial Delegation: Not applicable

Budget Responsibilities: Not applicable

KEY RESPONSIBILITIES

1. Draw on substantial experience, knowledge and expertise in data-acquisition equipment and transducers to ensure that all concurrent testing needs are provided for, having sound knowledge of the principals behind and acceptable usage of various transducers to measure fundamental properties of materials
 - Provide specialist advice for student/stakeholders, when required, on the most practical, safest, efficient and cost saving mode to set up complex experiments to achieve the desired results
2. Performs calibration and/or linearisation of all equipment necessary to perform a specific task. This will include report writing, analysis and preparing results in the event of commercial calibrations. Drawing on expertise and applying it in new and innovative ways to achieve outcomes
3. Write customised computer programs to automate and control test procedures and/or data-acquisition, to enable real-time viewing, calculation and interpretation of data
 - In conjunction with specific transducers, design or modify apparatus to increase measurement capabilities of the laboratory
 - Responsible for the high speed data acquisition systems used with the Departments crash/impact testing research programs
5. Assist students by providing coaching on the correct methodology of sensor calibration and strain gauge installation for various materials, to deliver high-quality output
6. Manage the operations of a research laboratory, including maintaining laboratory equipment and materials, waste disposal and supply ordering. Where appropriate, educate and train students and/or staff on the safe usage of testing machines and/or data acquisition with an emphasis on OHS&E compliance
7. Keep abreast of developments, activities and protocols in area of expertise through liaison with staff and peers, reading relevant literature and attending meetings and seminars and providing advice accordingly. Responsible for keeping up to date with modern technology and test methodology relating to upgrading current laboratory capabilities
8. Comply with University policy, procedure and protocols relevant to the structural and materials testing areas. By developing and modifying of work safe operating procedures and practices in accordance with current OHS standards
9. Contribute to the planning, management and effective implementation of continuous improvement activities relating to Structural and Materials testing practices, protocols, quality assurance standards and customer service excellence

KEY SELECTION CRITERIA

Education/Qualifications

1. The appointee will have:
 - A degree/tertiary qualification in a relevant field with extensive relevant experience; or
 - an equivalent combination of relevant experience and/or education/training

Knowledge and Skills

2. Excellent problem solving skills, with the ability to apply/use high-level analytical and diagnostic skills, discretion, innovation and professional expertise to solve complex problems
3. Excellent communication skills, including the ability to prepare professional documentation for various audiences and interact with, advise and negotiate with a diversity of stakeholders with an emphasis on technology transfer
4. Outstanding organisational skills with the ability to plan and prioritise multiple tasks and meet deadlines

5. Demonstrated leadership skills, including the ability to lead, motivate and develop staff and plan and allocate work to meet objectives
6. Highly developed computer literacy with respect to operating systems, data manipulation, interpretation and representation
 - Ability to learn and adopt new software packages as required
 - Specific experience with control software competence and programming techniques, such as development of customised software for automation of testing in a laboratory environment
7. Demonstrated knowledge and high-level proficiency in the use/application of data acquisition, transducers and experience with servo controlled systems in a research environment

OTHER JOB-RELATED INFORMATION

- Travel (e.g. to other campuses of the University) may be required
- Shift work, overtime and out of hours work (including evenings, weekends and public holidays) may be required
- On-call (including rostered on-call requirements) may be required
- There may be peak periods of work during which the taking of leave may be restricted
- Possession of a current Victorian driver's license is desirable.

LEGAL COMPLIANCE

Ensure you are aware of and adhere to legislation and University policy relevant to the duties undertaken, including: Equal Employment Opportunity, supporting equity and fairness; Occupational Health and Safety, supporting a safe workplace; Conflict of Interest (including Conflict of Interest in Research); Paid Outside Work; Privacy; Research Conduct; and Staff/Student Relationships.