| Purpose | Bachelor of Medical Laboratory Science qualifies individuals who apply a broad and coherent body of knowledge in a range of contexts to undertake professional work and as a pathway for further learning. | Graduates of the Bachelor of Medical Laboratory Science will have a broad and coherent specialised knowledge in diagnostic medicine and research in both normal physiological and pathological clinical biochemistry, haematology with coagulation and immuno-haematology, transfusion science, histology and histopathology, microbiology, molecular diagnostics, pharmacology, molecular medicine & point of care laboratory testing. |
| Knowledge | Graduates of a Bachelor Degree will have a broad and coherent body of knowledge, with depth in the underlying principles and concepts in one or more disciplines as a basis for independent lifelong learning. | Graduates of the Bachelor of Medical Laboratory Science will have a broad and coherent specialised knowledge in diagnostic medicine and research in both normal physiological and pathological clinical biochemistry, haematology with coagulation and immuno-haematology, transfusion science, histology and histopathology, microbiology, molecular diagnostics, pharmacology, molecular medicine & point of care laboratory testing. |
| Skills | Graduates of a Bachelor Degree will have:  
• cognitive skills to review critically, analyse, consolidate and synthesise knowledge  
• cognitive and technical skills to demonstrate a broad understanding of knowledge with depth in some areas  
• cognitive and creative skills to exercise critical thinking and judgement in identifying and solving problems with intellectual independence  
• communication skills to present a clear, coherent and independent exposition of knowledge and ideas | Graduates of the Bachelor of Medical Laboratory Science will be able to apply a range of diagnostic procedures in a clinical pathology laboratory. They will have skills in analysis and knowledge integration which is relevant to their area of specialisation and also:  
Technical capability to:  
• apply a range of diagnostic technologies and methodologies relevant to the fields of Clinical Biochemistry, Haematology, Histopathology, Cytology or Microbiology and to identify pathological changes which deviate from the normal physiological range  
• describe the principles, procedures, and techniques of all routine and selected special laboratory procedures  
• recognise acceptable specimens collected for laboratory procedures  
• perform relevant checks for sample integrity and understand principles and policies behind rejection policy  
• perform satisfactorily as a medical laboratory scientist with a minimal amount of orientation to any clinical laboratory  
• correlate obtained patient data with other laboratory results and make judgments about the validity of laboratory data  
• establish and monitor a quality control program; know the parameters and purposes of quality control. |
control and apply these in reporting test results

- draw on the basic principles of instruments commonly utilised in the clinical laboratory to develop and perform preventive/corrective maintenance of laboratory instruments
- apply high level analytical skills to the chosen area of clinical laboratory specialisation.

Cognitive skills to:

- use logical and systematic thinking to solve problems with diagnostic techniques and procedures
- recognise, identify, and solve technical problems relating to clinical laboratory methodology, including problems related to both procedures and instrumentation
- anticipate potential problem areas and develop alternative solutions by utilising and critically engaging with knowledge gained through theoretical learning
- know how to access information about current trends and modern techniques in biomedical science and their impact on diagnostic healthcare
- understand the role and value of audit procedures in professional practice
- use and interpret descriptive, quantitative and technical information in tabular and graph forms that conform to scientific convention.

Organization and communication skills to:

- know and recognise the role of the clinical laboratory as it relates to patient care
- understand the roles and relationships of other professional groups in the clinical setting
- take relevant action to co-ordinate your contribution with the requirements of others
- describe and apply the basic principles of management as they apply to the clinical laboratory
- communicate with individuals including physicians and other health professionals as well as groups within the diagnostic laboratory environment
- cooperate effectively with service users by providing appropriate advice and assistance
- communicate knowledge and ideas by using a range of media in professional and academic settings.
<table>
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<tr>
<th>APPLICATION OF KNOWLEDGE &amp; SKILLS</th>
<th>Graduates of the Bachelor of Medical Laboratory Science will demonstrate the application of knowledge and skills by being able to:</th>
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| Graduates of a Bachelor Degree will demonstrate the application of knowledge and skills: | • apply practice in line with current trends in diagnostic pathology  
• contribute to professional work practices through hands on real diagnostic work during clinical practice  
• perform relevant assessment/analysis to prescribed protocol and prepare data in suitable format for interpretation  
• provide a factual report at a level of detail that meets the needs of the intended recipients  
• apply theoretical knowledge gained to explain the terms: linearity, cross-reactivity, sensitivity and clinical audit, with regard to the evaluation of a new laboratory technique  
• implement strategies to be responsible, self-managed independent worker and reflect regularly to improve self and practice  
• demonstrate interpersonal skills which support constructive interactions with individuals and teams  
• understand the ethical and legal framework that underpins the field of diagnostic pathology. |
| • with initiative and judgement in planning, problem solving and decision making in professional practice and/or scholarship |  
• to adapt knowledge and skills in diverse contexts  
• with responsibility and accountability for own learning and professional practice and in collaboration with others within broad parameters |
| By reflecting on experiences in relation to theory and established work practices to: | • analyse and critically evaluate the information provided and generated by laboratory  
• know the relevant protocols and reference ranges for investigating a range of disease processes relevant to their scope of practice  
• understand clinical significance and relevance of normal and abnormal findings in relation to investigations performed  
• diagnose technical pre and post analytical problems or identify opportunities of efficacy in a diagnostic laboratory  
• develop and test problem-solving strategies within the diagnostic environment  
• know how to apply research outputs clinically and analytically  
• reflect on personal skill deficiencies which require continuing professional development. |
By demonstrating affective traits by:

- showing compassion, concern, and cooperation for all patients, co-workers, and allied health personnel
- honouring the confidentiality of patient information by adhering to strong ethical principles
- exhibiting a strong sense of responsibility by maintaining excellent attendance and by following the regulations of the institution
- recognising his/her educational limitations and taking appropriate corrective action and knowing when to request assistance
- seeking opportunities for continuing education through voluntarily attending lectures and seminars and sharing knowledge with others, and reading professional journals regularly
- taking responsibility and demonstrating a willingness to apply principles of responsibility and leadership within his/her assigned role
- acting in accordance with health and safety legislation and safety policies applicable to the working environment
- understand the responsibilities of and statement of conduct for, medical scientists as per Australian Institute of Medical Scientists and the requirements for competency standards.