PRE-APPROVED LEARNING AND ASSESSMENT PLAN

Stage 1 Physics (Medical Physics)

Pre-approved learning and assessment plans are for *school use only*.

* Teachers may make changes to the plan, retaining alignment with the subject outline.
* The principal or delegate endorses the use of the plan, and any changes made to it, including use of an addendum.
* The plan does not need to be submitted to the SACE Board for approval.

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| School |  | Teacher(s) |  |

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| SACE  School Code | | |  | Year |  | Enrolment Code | | | | |  | Program Variant Code (A–W) |
| Stage | Subject Code | | | No. of Credits (10 or 20) |
|  |  |  |  | **1** | **P** | **Y** | **I** | **10** |  |

Addendum – changes made to the pre-approved learning and assessment plan

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| Describe any changes made to the pre-approved learning and assessment plan to support students to be successful in meeting the requirements of the subject. In your description, please explain:   * what changes have been made to the plan * the rationale for making the changes * whether these changes have been made for all students, or for individuals within the student group. |

Endorsement

The use of the learning and assessment plan is approved for use in the school. Any changes made to the plan support student achievement of the performance standards and retain alignment with the subject outline.

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| Signature of principal or delegate |  | Date |  |

Stage 1 Physics (10-credits) Medical Physics

Assessment Overview

The table below provides details of the planned tasks and shows where students have the opportunity to provide evidence for each of the specific features of all of the assessment design criteria.

| **Assessment Type and Weighting** | **Details of assessment** | **Assessment Design Criteria** | | **Assessment conditions**  (e.g. task type, word length, time allocated, supervision) |
| --- | --- | --- | --- | --- |
| **IAE** | **KA** |
| **Assessment Type 1: Investigations Folio**  **Weighting**  **50 %** | **Practical Investigation Report –** See assessment task exemplars  In this task students design and perform a practical investigation to investigate hearing or vision using computer or phone apps.  Students individually deconstruct a problem then design and justify an investigation with an appropriate method, hypothesis and variables. They record, represent, and analyse data using appropriate terms and conventions. Students interpret their results using physics concepts. Students evaluate procedures and their effects on the data collected. They formulate and justify a conclusion, taking into account the limitations of the investigation. | 1, 2, 3, 4 | 1, 4 | Students will individually design the investigation testing their chosen hypothesis.  A double lesson to undertake the practical, students may get assistance from others for their data collection if needed.  Each student submits a practical report according to the guidelines in the subject outline.  Word Count: maximum of 1000 words for the introduction, analysis, evaluation and conclusion sections of the report. |
| **Science as a Human Endeavour –** See assessment task exemplars  Students research a radiotracer used in medical imaging and look at key individuals from science and medicine who interact and collaborate in either the development or implementation of the use of the radiotracer. They explain the connection with science as a human endeavour. They may negotiate topics or formats beyond those provided, e.g. oral. |  | 1, 3, 4 | 1 week to complete. Class time provided for research and to support students.  Students submit an outline for feedback.  Word Count for the final presentation is a maximum of 1000 words, if written, 6 minutes for an oral presentation, or equivalent for a multimodal product. |
| **Assessment Type 2: Skills and Applications Tasks**  **Weighting**  **50 %** | **Test – Topics 2 and 3** **–** See assessment task exemplars  Students demonstrate Physics knowledge, understanding, and application of concepts from the nuclear medicine and electrical topics in new and familiar contexts. The test will include a paragraph answer response with a Science as a Human Endeavour focus. | 2, | 1, 2, 3 | Students will individually complete under supervised test conditions. 50 minutes. |
| **Animation –** See assessment task exemplars  Students create a video of an animation of a medical imaging technique that uses sound or EM waves. They explain the physics behind the technique which links medical conditions that the technique is used to diagnose. | 3 | 1, 2, 4 | Students have access to computers and will undertake the task individually over three lessons. |

***Four assessments.*** *Please refer to the Stage 1 Physics subject outline.*