

A210: Enabling Technology

Portfolio Evidence Checklist (tick in the appropriate column where you have evidenced each Learning Outcome)

Centre Number:		Candidate Number:						
Content	Learning Outcome	Case Study	Data base	Fact sheet	Investigations	Reports	Others	
16.1 Equipment used in modern medicine	16.1.1 identify equipment used in: <ul style="list-style-type: none"> • patient monitoring (for example electrocardiogram (ECG) and electroencephalogram (EEG) machines); • fertility (for example ultrasound scanner, in vitro fertilisation (IVF) egg collection and fertilisation equipment); • medical laboratory (for example colorimeter and chromatograph); and • prosthetics (for example artificial limbs and hearing aids); 							
	16.1.2 describe how these pieces of equipment have improved the monitoring, decision-making, workflow and/or patient outcomes;							
	16.1.3 explain the purpose of the equipment;							
	16.1.4 choose one piece of equipment and describe any previous methodologies or equipment that it has replaced; and							
	16.1.5 provide a clear description of how the equipment works.							
16.2 Workflow in a medical laboratory	16.2.1 describe three tests performed in a medical laboratory, including: <ul style="list-style-type: none"> • the nature of each test; and • the work procedure that occurs from request to return of information; 							
	16.2.2 identify the staff involved in the three tests chosen in 16.2.1;							
	16.2.3 describe any specialist equipment involved in the tests chosen in 16.2.1; and							
16.3 Medical monitoring case study	16.3.1 carry out a case study of a patient (real or hypothetical) who has a medical condition that requires ongoing use of medical monitoring equipment, including: <ul style="list-style-type: none"> • a statement of the name, gender, age, occupation and any other information that may be of medical note about the individual (either real or hypothetical); • a description of the medical condition they are suffering from, its effects on the individual (biologically and on quality of life) and long-term prognosis; • a clear discussion about the nature of the medical equipment used and how it works (both mechanically and when operated by the user); and • how the information gathered is reviewed and potentially used. 							
16.4 Data collection and filtering	16.4.1 collect medical information from a group of individuals (at least five), including their: <ul style="list-style-type: none"> • name; • age; • gender; • pre-existing medical conditions; • resting pulse rate (pre- and post-intervention); • mass (pre- and post-intervention); • height; • body mass index (BMI); • blood pressure; • body temperature; and • peak expiratory flow; 							
	16.4.2 develop a simple, moderate exercise regime to be followed by each individual which is appropriate for them;							
	16.4.3 collect and record quantitative information obtained about the exercise via technology (for example steps taken using a pedometer, distance run using a Global Positioning System (GPS) watch or smartphone, and calories burned) and any other suitable measurable data;							
	16.4.4 build a database of the collected medical information;							
	16.4.5 update the database regularly over a period of six weeks to assess the health effects of moderately increased exercise;							
	16.4.6 build into the database sufficient fields to allow for storage of old data (so it is possible to search for body temperature on Week 1 as well as Week 2, and so on); and							
	16.4.7 query the database to filter and extract information about particular patients or groups of patients of the same type (for example of the same age or same pre-existing medical conditions).							
	16.4.8 compare information from the same patient and across multiple patients; and							
	16.4.9 discuss the benefits and dangers of holding large amounts of health data on the population as a whole							