

Faculty of Medicine

Curriculum Management Unit

Instructional Methods

<u>Case-Based Instruction /</u>

Learning

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Ambulatory

Clinical Experience - Inpatient

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Conference

Demonstration

Discussion, Large Group (>12)

Discussion, Small Group (≤ 12)

Games

Independent Learning

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Laboratory

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Instructional Methods

Instructional Method	Definition / More information			
Case-Based	The use of patient cases (actual or theoretical) to stimulate discussion, questioning, problem solving, and			
Instruction/	reasoning on issues pertaining to the basic sciences and clinical disciplines			
Learning	Synonymous with/Includes: Case Study Does not include: Conference; Discussion, Small Group (≤12); Patient Presentation - Faculty; Patient			
	Presentation - Learner; Problem-Based Learning (PBL); Simulation; Team-Based			
	Learning (TBL)			
	Note(s) : Distinguished from Simulation in that, in CBL, learner is not necessarily practicing the role of care provider, yet in Simulation, learner is practicing some aspect(s) of provider role.			
Clinical	Practical experience(s) in patient care and health-related services carried out in an ambulatory/outpatient			
Experience -	setting where actual symptoms are studied and treatment is given			
<u>Ambulatory</u>	Synonymous with/Includes: Clinical Reasoning; Communication Skills; Community-Based; Outpatient; Patient Care; Patient Care Activity; Problem Solving			
Clinical	Practical experience(s) in patient care and health-related services carried out in an inpatient setting where			
Experience -	actual symptoms are studied and treatment is given			
Inpatient	Synonymous with/Includes: Clinical Reasoning; Communication Skills; Patient Care; Patient Care			
Concept Mapping	Activity; Problem Solving Technique [that] allows learners to organize and represent knowledge in an explicit interconnected netwo			
	Linkages between concepts are explored to make apparent connections that are not usually seen. Concept mapping also encourages the asking of questions about relationships between concepts that may not have been presented in traditional courses, standard texts, and teaching materials. It shifts the focus of learning away from rote acquisition of information to visualizing the underlying concepts that provide the cognitive framework of what the learner already knows, to facilitate the acquisition of new knowledge			
Conference	Departmentally-driven and/or content-specific presentations by clinical faculty/professionals, residents, and/or learners before a large group of other professionals and/or learners			
	Synonymous with/Includes: Grand Rounds; Mortality and Morbidity (M & M) Conference; X-Ray; Tumor			
	Board			
	Does not include: Discussion, Large Group (>12); Lecture			
<u>Demonstration</u>	A description, performance, or explanation of a process, illustrated by examples, observable action, specimens, etc.			
	Synonymous with/Includes: Autopsy			
	Does not include: <u>Laboratory</u>			
Discussion, Large	An exchange (oral or written) of opinions, observations, or ideas among a Large Group [more than 12			
Group [>12]	participants], usually to analyze, clarify, or reach conclusions about issues, questions, or problems			
	Does not include: Conference			
Discussion, Small	An exchange (oral or written) of opinions, observations, or ideas among a Small Group [12 or fewer			
Group [≤12]	participants], usually to analyze, clarify, or reach conclusions about issues, questions, or problems			
	Does not include: Case-Based Learning/Instruction; Conference; Problem-Based Learning (PBL); Team Based Learning (TBL); Tutorial; Workshop			
Games	Individual or group games that have cognitive, social, behavioral, and/or emotional, etc., dimensions which are related to educational objectives			

Instructional Method	Definition / More information			
Independent Learning	Instructor-/ or mentor-guided learning activities to be performed by the learner outside of formal educational settings (classroom, lab, clinic); Dedicated time on learner schedules to prepare for specific learning activities, e.g., case discussions, TBL, PBL, clinical activities, research project(s)			
	Synonymous with/Includes: Independent Study; Self-Study Does not include: Self-Directed Learning			
Journal Club	A forum in which participants discuss recent research papers from field literature in order to develop critical reading skills (comprehension, analysis, and critique)			
Laboratory	Synonymous with/Includes: Critical Reading Hands-on or simulated exercises in which learners collect or use data to test and/or verify hypotheses or address questions about principles and/or phenomena			
	Synonymous with/Includes: Autopsy; Anatomy Lab; Gross Lab; Histology Lab; Wet Lab Does not include: Demonstration			
Lecture	An instruction or verbal discourse by a speaker before a large group of learners			
	Synonymous with/Includes: Didactic; Recording of a lecture			
7.7	Does not include: Conference; Discussion, Large Group (>12)			
Mentorship	The provision of guidance, direction and support by senior professionals to learners or more junior professionals			
	Synonymous with/Includes: Advising; Career Development; Coaching; Professional Development			
	Does not include: Preceptorship			
Patient Presentation - Faculty	A presentation by faculty of patient findings, history and physical, differential diagnosis, treatment plan, etc.			
Patient Presentation - Learner	A presentation by a learner or learners to faculty, resident(s), and/or other learners of patient findings, history and physical, differential diagnosis, treatment plan, etc.			
Patient Presentation - Patient	A presentation by a patient to faculty, residents, and other learners that tells or recounts the patient's experience			
Peer Teaching	Learner-to-learner instruction for the mutual learning experience of both "teacher" and "learner"; may be "peer-to-peer" (same training level) or "near-peer" (higher-level learner teaching lower-level learner)			
	Synonymous with/Includes: Near-Peer Instruction; Peer Instruction; Peer Teaching; Peer Tutoring; Peer-Assisted Learning			
Preceptorship	Practical experience in medical and health-related services wherein the professionally-trained learner works under the supervision of an established professional in the particular field			
	Synonymous with/Includes: Externship			
	Does not include: Mentorship; Service Learning Activity			
Problem- Based Learning	The use of carefully selected and designed patient cases that demand from the learner acquisition of critical knowledge, problem solving proficiency, self-directed learning strategies, and team participation skills as those needed in professional practice			
(PBL)	Does not include: Case-Based Instruction/Learning; Discussion, Small Group (≤12); Team-Based Learning (TBL)			

Instructional Method	Definition / More information				
Reflection	Examination by the learner of his/her personal experiences of a learning event, including the cognitive, emotional, and affective aspects; the use of these past experiences in combination with objective information inform present clinical decision-making and problem-solving				
	Synonymous with/Includes: Journaling				
Research	Short-term or sustained participation in research				
Role Play /	The adopting or performing the role or activities of another individual				
Dramatization	Synonymous with/Includes: Practicing Skills (with peers)				
	Does not include: Simulation (as with Simulated/Standardized Patient) – See Resource Types)				
Self-Directed	Learners taking the initiative for their own learning: diagnosing needs, formulating goals, identifying resources, implementing appropriate activities, and evaluating outcomes				
Learning	Does not include: Independent Learning; Study Time				
Service Learning	A structured learning experience that combines community service with preparation and reflection				
Activity	Synonymous with/Includes: Community Service				
Simulation	A method used to replace or amplify real patient encounters with scenarios designed to replicate real health care situations, using lifelike mannequins, physical models, standardized patients, or computers				
	Does not include: Role Play/Dramatization				
Team-Based Learning (TBL)	A form of collaborative learning that follows a specific sequence of individual work, group work and immediate feedback; engages learners in learning activities within a small group that works independently in classes with high learner-faculty ratios				
	Does not include: Case-Based Instruction/Learning; Discussion, Small Group (≤12); Problem-Based Learning (PBL)				
Team-Building	Workshops, sessions, and/or activities contributing to the development of teamwork skills, often as a foundation for group work in learning (PBL, TBL, etc.) and practice (intreprofessional/-disciplinary, etc.)				
Tutorial	Instruction provided to a learner or small group of learners by direct interaction with an instructor				
Ward Rounds	An instructional session conducted in an actual clinical setting, using real patients or patient cases to demonstrate procedures or clinical skills, illustrate clinical reasoning and problem-solving, or stimulate discussion and analytical thinking among a group of learners				
	Synonymous with/Includes: Attending Rounds; Bedside Rounds; Bedside Teaching: Teaching Rounds; Student group visit as part of "Doctoring" or "Physical Diagnosis" course				
	Does not include: Clinical Experience - Ambulatory; Clinical Experience - Inpatient; Patient Presentation - Faculty; Patient Presentation - Learner				
Workshop	A brief intensive educational program for a relatively small group of people that focuses especially on				
	techniques and skills related to a specific topic				
	Synonymous with/Includes: Seminar				

Assessment Methods

Assessment Method (may be	Definition / More information				
formative or					
summative) Clinical Decrementation	The review and assessment of clinical notes and logs kept by learners as part of practical training in the clinical setting				
Documentation Review	Synonymous with/Includes: Case Log; Chart Review; Clinical Encounter Log; Patient Workup Does not include: Portfolio-Based Assessment				
Clinical Performance	A non-narrative assessment tool (checklist, Likert-type scale, other instrument) used to note completion or achievement of learning tasks				
Rating / Checklist					
Exam - Institutionally Developed, Clinical Performance	Practical performance-based examination developed internally to assess problem solving, clinical reasoning, decision making, and [/or] communication skills (Includes observation of learner or small group by instructor) Synonymous with/Includes: OSCE; Virtual Patient; Practical Exam; Internal (practical) Exam; Script Concordance; Simulation Exam; MiniCEX; CEX; SCEE (Simulated Clinical Encounter Examination)				
Exam – Institutionally Developed, Laboratory, Practical	Examination activities that use hands-on or simulated exercises in which students collect or use data to test and/or verify hypotheses or to address questions about principles and/or phenomena. Synonymous with/Includes: Laboratory Practicum; Anatomy Practical				
Exam - Institutionally Developed, Written /	Examination utilizing various written question-and-answer formats (multiple-choice, short answer, essay, etc.) which may assess learners' factual knowledge retention; application of knowledge, concepts, and principles; problem-solving acumen; and clinical reasoning Synonymous with/Includes: Written Exam; Internal (written) Exam; MCQ; Multiple Choice; Quiz; Script Concordance				
Exam – Institutionally Developed, Oral	Verbal examination developed internally to assess problem solving, clinical reasoning, decision making, and[/or] communication skills				
Exam - Licensure, Clinical Performance	Practical, performance-based examination developed by a professional licensing body to assess clinical skills such as problem solving, clinical reasoning, decision making, and communication, for licensure to practice in a given jurisdiction (e.g., USMLE for the United States); typically paired with a written/computer-based component; may also be used by schools to assess learners' achievement of certain curricular objectives Synonymous with/Includes: USMLE Step 2-CS, COMLEX Level 2-PE; MCC Part II; CEFM				
Exam - Licensure, Written / Computer- based	of knowledge, concepts, and principles; problem-solving acumen; and clinical reasoning, for licensure to				
	Synonymous with/Includes: USMLE Step 1; USMLE Step 2-CK; COMLEX Level 1; COMLEX Level 2-CE; COMLEX Level 3; MCC Part I; CEFM				
Exam - Nationally Normed / Standardized,					
Subject	Synonymous with/Includes: NBME; NBME Subject Exam; NBME Shelf; COMAT Subject Exam; COMSAE; COMVEX				
Multisource Assessment	A formal assessment of performance by supervisors, peers, patients, and coworkers Synonymous with/Includes: Multi-Rater Assessment; 360-Degree Assessment				

All Assessment Methods may be formative or summative

Assessment Method (may be formative or summative)	Definition / More information			
Narrative Assessment	An instructor's or observer's written subjective assessment of a learner's work or performance; may Include: Comments within larger assessment; Observation of learner or small group by instructor Synonymous with/Includes: Observation by Instructor; Observation by Faculty; Observation by Resident Does not include: Clinical Documentation Review; Clinical Performance Rating/Checklist; Peer Assessment; Self-Assessment			
Oral Patient Presentation	The presentation of clinical case (patient) findings, history and physical, differential diagnosis, treatment plan, etc., by a learner to an instructor or small group, and subsequent discussion with the instructor and/or small group for the purposes of learner demonstrating skills in clinical reasoning, problem-solving, etc.			
Participation	Sharing or taking part in an activity Synonymous with/Includes: Attendance			
Peer Assessment	The concurrent or retrospective review by learners of the quality and efficiency of practices or services ordered or performed by fellow learners **Does not include: Multisource Assessment; Narrative Assessment**			
Portfolio-Based Assessment	Review of a learner's achievement of agreed-upon academic objectives or completion of a negotiated set of learning activities, based on a learner portfolio "a systematic collection of a student's work samples, records of observation, test results, etc., over a period of time"			
Research or Project Assessment	Assessment of activities and outcomes (e.g., posters, presentations, reports, etc.) of a project in which the learner participated or conducted research Synonymous with/Includes: Multi-Media Production			
Self- Assessment	The process of evaluating one's own deficiencies, achievements, behavior or professional performance and competencies; assessment completed by the learner to reflect and critically assess his/her own performance against a set of established criteria (NOTE: Does not refer to NBME Self-Assessment) Synonymous with/Includes: Observation of self on video Does not include: NBME Self-Assessment			
Stimulated Recall	The use of various stimuli (e.g., written records, audio tapes, video tapes) to re-activate the experience of a learner during a learning activity or clinical encounter in order to reflect on task performance, reasoning, decision-making, interpersonal skills, personal thoughts and feelings, etc. Synonymous with/Includes: Chart-stimulated recall (CSR)			

All Assessment Methods may be *formative* or *summative*

Resource Types

Resource	Definition / More information			
Animation	A series of visual representations imparting an impression of motion when shown in succession. Includes visual output from a simulation. (http://purl.org/dc/dcmitype/MovingImage) Does not include: Film/Video			
Audience Response System	An electronic communication system that allows groups of people to vote on a topic or answer a question. Each person has a remote control ("clicker") with which selections can be made; Typically, the results are instantly made available to the participants via a graph displayed on the projector.			
Audio	Devices or applications used to acquire or transfer knowledge, attitudes, or skills through study, instruction, or experience using auditory delivery Synonymous with/Includes: Podcasts Does not include: Recordings of lectures			
Cadaver	A human body preserved post-mortem and "usedto study anatomy, identify disease sites, determine causes of death, and provide tissue to repair a defect in a living human being" Synonymous with/Includes: Corpse; Dissection; Prosection; Prosection Specimen; Skeleton			
Clinical Case	Clinical information provided for teaching and assessment. May provide a complete patient description (with findings) or represent a brief description of a presenting situation or finding. (CI Standardized Vocabulary Subcommittee) Does not include: Standardized Patient, Virtual Patient, Clinical Case Module			
Distance Learning - Asynchronous	Education facilitated through communications media (often electronic), with little or no classroom or other face-to-face contact between learners and teachers, and which "does not occur in real time or involve simultaneous interaction on the part of participants. It is intermittent and generally characterized by a significant time delay or interval between sending and receiving or responding to messages"			
	Synonymous with/Includes: Computer-Assisted Learning (CAL); Computer-Assisted Instruction (CAI)			
Distance Learning - Synchronous	Education facilitated through communications media (often electronic), with little or no classroom or other face-to-face contact between learners and teachers, "in real time, characterized by concurrent exchanges between participants. Interaction is simultaneous without a meaningful time delay between sending a message and receiving or responding to it. Occurs in electronic (e.g., interactive videoconferencing) and non-electronic environments (e.g., telephone conversations)"			
	Synonymous with/Includes: Computer-Assisted Learning (CAL); Computer-Assisted Instruction (CAI)			
Educational Technology	Mobile or desktop technology (hardware or software) used for instruction/learning through audiovisual (A/V), multimedia, web-based, or online modalities; Sometimes includes dedicated space (see Virtual/Computerized Lab)			
	Synonymous with/Includes: Computer; Desktop Computer; Laptop; iPad; Netbook, Smartphone; E-reader; Web Portals; Collaboration Tools (Wikis, Blogs); Simulation Tools (see also, Mannequin, Searchable Electronic Database, Standardized/Simulated Patient, Task Trainer, Virtual Patient, Virtual/Computerized Lab); Audio/video Casting; e-Portfolios (see also, Portfolio-Based Assessment)			
Electronic Health / Medical Record (HER / EMR)	An individual patient's medical record in digital formatusually accessed on a computer, often over a network[M]ay be made up of electronic medical records (EMRs) from many locations and/or sources. An Electronic Medical Record (EMR) may be an inpatient or outpatient medical record in digital format that may or may not be linked to or part of a larger EHR			
Film/Video	Devices or applications used to acquire or transfer knowledge, attitudes, or skills through study, instruction, or experience using visual recordings (see "Electronic Learning,"			
	Does not include: Recordings of lectures or other Instructional/Educational activities—Use appropriate method from Instructional Methods list and Resource, e.g., Distance Learning or Educational Technology			
Key Feature	An element specific to a clinical case or problem that demands the use of particular clinical skills in order to achieve the problem's successful resolution; Typically presented as written exam questions, as in the Canadian Qualifying Examination in Medicine			
	Synonymous with/Includes: Patient Management Problems (PMPs); Clinical Decision Making (CDM) exam			

Resource	Definition / More information		
Mannequin	A life-size model of the human body that mimics various anatomical functions to teach skills and procedures in health education; may be low-fidelity (having limited or no electronic inputs) or high-fidelity (connected to a computer that allows the robot to respond dynamically to user input)		
Medical Images	Medical images of anatomic structures through the use of electromagnetic radiation or sound waves. Medical imaging techniques include radiographys, fluroscopy, CT scans, PET scans, MRIs, and ultrasonograms. (adapted from http://medical-dictionary.thefreedictionary.com/radiology by Curriculum Inventory Standardized Vocabulary SubCommittee) Synonymous with/Includes: Radiologic Imaging; See also sonogram.		
Mobile Application	A mobile application, most commonly referred to as an app, is a type of application software designed to run on a mobile device, such as a smartphone or tablet computer. Apps are generally small, individual software units with specific function. (Adapted from www.techopedia.com by Curriculum Inventory Standardized Vocabulary SubCommittee)) Synonyms: app, Web app, online app, or smartphone app		
	Does not include: Audio, Film/Video		
Patient – Receiving Clinical	An actual clinical patient with whom the student is involved for clinical documentation, care, and / or treatment. (CI Standardized Vocabulary Subcommittee) Does not include: Simulated Patient, Standardized Patient, or Patient-teaching		
Care Patient - Teaching	An actual clinical patient with whom students interact to learn about a specific clinical condition, symptom, or finding, the patient's experience with illness, or interaction with the healthcare system (CI Standardized		
	Vocabulary Subcommittee) Does not include: Simulated Patient, Standardized Patient, or Patient-receiving clinical care		
Plastinated Specimens	Organic material preserved by replacing water and fat in tissue with silicone, resulting in "anatomical specimens [that] are safer to use, more pleasant to use, and are much more durable and have a much longer shelf life"; see also: Wet Laboratory		
<u>Scenario</u>	A written outline of a postulated sequence or development of events in a real or simulated clinical setting for use in instructional and assessment simulations. (CI Standardized Vocabulary Subcommittee)		
Searchable Electronic Database	A collection of information organized in such a way that a computer program can quickly select desired pieces of data Synonymous with/Includes: PubMed		
Standardized /	Individual trained to portray a patient with a specific condition in a realistic, standardized and repeatable		
Simulated Patient (SP)	way (where portrayal/presentation varies based only on learner performance) Synonymous with/Includes: Gynecological Teaching Associates (GTA); Male Urogenital Teaching Associates (MUTA)		
Task Trainer	A physical model that simulates a subset of physiologic function to include normal and abnormal anatomy; such models which provide just the key elements of the task or skill being learned		
	Synonymous with/Includes: Plastic IV Arm, Airway Management Head, Urinary catheter trainer, Pelvic examination trainer; Virtual reality endoscopic devices		
<u>Ultrasound</u>	Ultrasound is used by faculty and students for therapeutic purposes and /or to create Images using high-frequency sound waves to identify and examine organs and structures such as the heart; blood vessels; kidneys; liver; and, during pregnancy, fetus(es) (adapted from http://www.nlm.nih.gov/research/umls/).		
Virtual Patient	An interactive computer simulation of real-life clinical scenarios for the purpose of medical training, education, or assessment		
T77 / 170 11/	Does not include: Educational Technology; Virtual/Computerized Lab		
Virtual Reality	A virtual environment which allows the participant to experience a sense of presence in an immersive, computer-generated, three-dimensional, interactive environment [adapted from MeSH for "virtual reality exposure therapy"]		
Virtual / Computerized Laboratory	A practical learning environment in which technology- and computer-based simulations allow learners to engage in computer-assisted instruction while being able to ask and answer questions and also engage in discussion of content; also, to learn through experience by performing medical tasks, especially high-risk ones, in a safe environment		
	Synonymous with/Includes: Computer Assisted Instruction; Biochemistry; Microbiology; Molecular biology; Cell biology; Tissue culture laboratory; Pathology; Organic Chemistry; Physical Chemistry		
	Does not include: Educational Technology		

Wet Laboratory	Facilities outfitted with specializ working with solutions or biolog	ed equipment* and bench space or adjustable, flexible desktop space for ical materials
	Synonymous with/Includes:	Biochemistry; Cell Biology; Histology Slides; Microbiology; Molecular Biology; Tissue Culture Laboratory; Organic Chemistry; Pathology; Physical Chemistry; Preserved Specimens (not <u>Cadavers</u> , Prosected Specimens, or <u>Plastinated Specimens</u>)
Written or Visual	Reference materials produced or selected by faculty to augment course teaching and learning	
Media (or Digital Equivalent)	Synonymous with/Includes:	Handouts; Fiction or non-fiction Books; Poetry; Professional Journal Articles; Textbooks; Syllabi

These taxonomies have been adapted by the UBC FoM from the AAMC Curriculum Inventory Standardized Instructional and Assessment Methods and Resource Types. MedBiquitous Curriculum Inventory Working Group Standardized Vocabulary Subcommittee. (2012). Curriculum Inventory standardized instructional and assessment methods and resource types (September 2012 version). Washington, CD: Association of American Medical Colleges.