The Hong Kong Polytechnic University

Subject Description Form

Please read the notes at the end of the table carefully before completing the form.

Subject Code	SO2D01
Subject Title	Eyes on Vision
Credit Value	3
Level	2
Pre-requisite / Co-requisite/ Exclusion	Nil
Objectives	It is said that our eyes are "Windows to our souls". Indeed, vision is one of the most crucial elements in the way we comprehend our world. The objectives of this subject are to • educate students on the basic structures and functions of the eye • guide students to apply concepts about vision and eye care to daily life • encourage students to evaluate the accuracy of information about the eye and vision from a variety of sources in the era of technological advancements • enhance students' ability to learn-to-learn through self-reflection, peer-assessment and exploration of relevant generative artificial intelligence and technological advances in assignments Students will be more knowledgeable about their own eyes and be able to share advice about eye protection with family and friends. They will also be adequately equipped to debunk myths about the eyes and vision.
Intended Learning Outcomes *(Note 1)*	Upon completion of the subject, students will be able to: a. acquire a general knowledge of the human eye structures and functions b. estimate the resolution capability of the human eye and describe how vision can be measured c. recognize how deficiency in depth perception and colour vision will affect our daily lives d. identify common eye conditions and eye diseases including refractive errors and ways of corrections e. apply approaches to protect the eyes from injury, improve general eye hygiene and take good care of the eyes f. employ a variety of ethical strategies and advanced technologies to research, design, construct, and disseminate knowledge on a topic related to eyes or vision, while upholding the principles of technological social responsibility and academic integrity g. evaluate information from a variety of sources and debunk myths about the eyes and vision
Subject Synopsis/ Indicative Syllabus *(Note 2)*	• Basic anatomy and physiology of the human eye • Resolution capability of the eye • Perception of depth and colour • Introduction to refractive errors of the eye - Short-sightedness

	- Long-sightedness
	- Astigmatism
	• Methods for correcting refractive errors
	  - Spectacles: selecting frames and lenses
	  - Contact Lenses: general indications & contraindications of lens wear; Do's and Don'ts
	• Eye protection from UV radiation and sports
	• How to take good care of the eyes
	• Introduction to Primary Eye Care
	• Myths about the eyes and vision
	• Multimedia (eg. Video/Powerpoint show) Project
	  - Group work
	  - Presentation on a topic of choice to deliver a message which can be a set of instructions, information, advice, or debunking myths on the eye or vision

Teaching/Learning Methodology *(Note 3)*	**Online component:** This subject will be delivered in a blended-learning approach. Students will enroll in a Massive Open Online Course (MOOC) 'How We See the World: Visual Function and Eye Health' developed by PolyU School of Optometry. The MOOC consists of reading materials, virtual labs, knowledge checks, assignments and reflective writings which are designed to help students understand vision, how visual functions relate to their daily lives and how they can take better care of their eyes. Students are required to complete each module according to the timetable described in the teaching schedule. Self-paced practical sessions will be facilitated by the 3D Eye Model App developed by PolyU School of Optometry. The Eye Model can be installed in students' digital devices to encourage active learning and consolidate understanding. **Face-to-face component:** Mini-lectures and tutorials will be used to explore and clarify key issues of the main topics and host hands-on in-class activities. The face-to-face component will be the primary forum for staff to encourage critical thinking using cases, real-life examples and evidence from the literature. This platform will also encourage students and staff to explore ideas together where appropriate to facilitate staff-student partnership and co-creation of the curriculum. **Online small-group tutorials/discussions** will be a platform for students to play an active role in their learning by reflecting, discussing and/or debating on issues. They will interpret and evaluate information from different resources and employ appropriate analysis to solve problems. Students will learn to take responsibility for their own learning and cultivate their desire for life-long learning **Multimedia Project (e.g. Video or Powerpoint show)** will give students the opportunity to discuss, design, and produce different modes of presenting information, instructions or advice. This will also allow students to collaborate, to work as a team to plan what to do and design and produce the best strategy to deliver the product of their collaboration.

Assessment Methods in Alignment with Intended Learning Outcomes *(Note 4)*	Specific assessment methods/tasks	% weighting	Intended subject learning outcomes to be assessed (Please tick as appropriate)						
			a	b	c	d	e	f	g
	1. Assignments and reflective writings	30	✓	✓	✓	✓	✓	✓	✓
	2. Quiz	25	✓	✓	✓	✓	✓		
	3. Class participation	10	✓	✓	✓	✓	✓	✓	✓
	4. Project	35	*	*	*	*	*	✓	✓
	(* depending on the topic selected by the students, these objectives may also be applicable)								
	Total	**100**							

Explanation of the appropriateness of the assessment methods in assessing the intended learning outcomes:

Assignments and reflective writings. Assignments will assess students' ability to understand the course materials. Students will be asked to reflect on what they have learned and how the knowledge has impacted their lives by reflective writings.

Quiz will be conducted to encourage students to learn as they progress. MCQs will be used to assess students' mastery of details and specific knowledge.

Class participation will encourage students to actively engage in class activities, discussions and idea exchange. It promotes students' sense of relatedness and assesses whether students can transform information into knowledge and knowledge into judgement to debunk myths.

Multimedia Project. Apart from staff assessment, peers will be invited to grade the final product of each project. Students will be encouraged to design creative ways to demonstrate what they have learned from their discussion and online research. Knowing that their audience may extend beyond the staff to peers will promote student ownership of their work. This will be a motivation for students to produce a good quality or a higher-standard product on their selected topic.

Student Study Effort Expected	Class contact:	
	• Online/face-to-face lectures	18 Hrs.
	• Online/face-to-face tutorials/small-group discussions	17 Hrs.
	• Project presentation	4 Hrs

	Other student study effort:	
	• Assignments and reflective writings	10 Hrs.
	• Meetings/ Self study/Online search for information	60 Hrs.
	Total student study effort	109 Hrs.
Reading List and References	• Atchison DA, Smith G. Optics of the human eye. Oxford: Butterworth-Heinemann, 2000 • Grierson I. The eye book: eyes and eye problems explained. Liverpool University Press, England 2000 • Oyster CW. The human eye: structure and function. Sunderland, Mass. Sinauer Associates, 1999. + selected Journal articles	

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