Disaster Risk Reduction (DRR) related Cluster Area Requirements (CAR) Subjects in PolyU

Cluster Area Requirements (8 subjects)

Department	Code	Title	Description	Cluster
SN	2A01	Fundamentals of disaster resilience	This subject aims to enhance students' understanding on the concept of personal and community resilience, and to develop students' ability in strengthening personal and community resilience in specific yet common disaster situations. Upon completion of the subject, students will be able to: (a) Define resilience, including personal and community resilience. (b) Describe how resilience is developed. (c) Discuss who triumphs over disaster situations and why. (d) Demonstrate basic survival skills in specific disaster situations. (e) Assess whether a person or community is at risk or resilient to crises or catastrophe situations. (f) Develop a disaster preparedness program for building the resilience capacity of a selected community.	Cluster B
SN	2B02	Disasters and Global Health Challenges	The objectives of this subject are to enhance students' knowledge and analytical understanding of concepts relevant to disaster, global health and global health governance; to enable students to appraise the impacts of different types of disaster on human health and consequential global health challenges; and to strengthen students' capacity in the application of relevant knowledge under the framework of global health governance for disaster-related health challenges. Upon completion of the subject, students will be able to: (a) Comprehend the concepts relevant to disaster, global health and global health governance (b) Analyze the nature, cause and consequence of selected natural and manmade disasters (e.g. earthquake, landslide, flooding, coal mine explosion bioterrorism,	Cluster B

			fire, pandemic flu) (c) Appraise what constitute global public goods for health and the ethical, legal and cultural challenges to achieve those goods (d) Evaluate the short and long term impacts of the selected disasters on human health and well-being (e) Discuss the roles of international organizations, governments, health agencies and partners in meeting with global health challenges caused by selected disasters (f) Review the different frameworks of global health governance for their effectiveness in disaster planning and response (g) Apply a framework of global health governance to develop strategies for constructing safer and resilient communities	
LSGI	1B02	Climate Change and Society	The subject aims to enhance students' knowledge of climate and historical climate change and to enhance students' understanding of the dependence of life on the non-living environment. Upon completion of the subject, students will be able to: (a) Understand the historical development of processes which maintain the (b) earth's climatic and ecological balance; (c) Understand the interdependence between living and non-living parts of the Earth; (d) Recognize the dependence of social development and civilizations on the particular climatic context and conditions; (e) Appreciate the fragility of the relationships between society and climate, (f) and society's response to climate change; and (g) Have a better understanding of recent greenhouse-induced climate change and our response to it in the context of previous changes in global climate.	Cluster B
ABCT	1D15	Our Endangered Earth	The objectives of this subject are to provide basic knowledge to students how human activities led to the deterioration of this planet, their consequences and possible remediation measures, and outlook of various scenarios based on differences of our everyday life choices	Cluster D

			The crisis includes natural catastrophes – Asteroid impact, earthquake, tsunami, volcanic eruption, typhoon, tornado, flood, severe drought and landslide- how likely are they, and should we be afraid?	
BSE	1D03	Intelligent Building and Associated Fire Safety	The specific objective of this subject is to enlighten students on the fundamentals of fire science and giving them a brief appreciation to fire engineering systems. Students will be equipped with the ability to apply interdisciplinary approach to understanding intelligent technologies used in modern buildings. Fire incidents will also be discussed to reinforce their understanding on the actual causes of fire. Upon completion of the subject, students will be able to: (a) understand the cause of a fire and fire science; (b) know the basic fire engineering systems and the physics behind; (c) describe major features of intelligent buildings from the four elements: places, processes, people and management; (d) understand relationships between people and buildings; (e) discuss science background of intelligent buildings and sustainable buildings; and (f) aware of the importance of fire precaution	Cluster D
BSE	1B04	Creating Sustainable Living Environment	The objectives of the subject are to enable students to understand different environments, to be aware of the needs of sustainable development, and to be aware of how individuals' needs and behaviors may impact negatively on sustainable development. Upon completion of the subject, students will be able to: (a) offer advice on measures to help create sustainable environments; (b) apply sustainable features in building designs to help mitigate climate change; (c) integrate the technological and social-economic issues for achieving sustainable development; and (d) critically consider the environmental and sustainable issues in individual and household dimensions.	Cluster D

ME	1D01	Engineering and Environmental Management	This subject aims to provide: An understanding of the global environmental problems caused by human activities; fundamental concepts of air, noise, water, solid waste and nuclear; pollution: their nature, generation and impact on the environment; current engineering technologies applied to tackle these environmental problems; fundamental concept of environmental management; opportunity to fulfill English Reading and English Writing requirements. Upon completion of the subject, students will be able to: (a) Understand the nature, origin and impact of the global environmental problems caused by human activities; (b) Understand the generation, characteristics and impact on the environment of air, noise, water, solid waste and nuclear pollution; (c) Understand the updated engineering technologies to monitor and control air, noise, water, solid waste and nuclear pollution; (d) Understand the fundamental concept of environmental management and its relationship with sustainable development of our community; and (e) Understand the roles of different sectors of our community including government, industry and engineers in the development and implementation of environmental management policies and strategies.	Cluster D
LSGI	1D03	Living on a Dynamic Earth	The objectives of this subject are to enable students to understand the dynamics of their home planet and their roles in their daily lives; to contribute to the expansion of students' intellectual capacity and interdisciplinary learning encompassing, astronomy, geology, geophysics, geodesy, geography, geomorphology, and ocean and atmospheric sciences. Upon completion of the subject, students will be able to: (a) Understand the dynamics of the Earth at the global scale; (b) Establish the scientific fundaments for students to realize the impact of human activities on the environment for social responsibility; and (c) Appreciate the role and the complexity of modern science.	Cluster D