Graduate Certificate in Finance and Sustainability

Climate Change and Adaptation

Adaptation: the process of adjusting to the effects of climate change, such as rising sea levels, increasing temperatures, and changing weather patterns. Adaptation can involve changes to physical infrastructure, changes to policies and regulations, and changes to the way we live and work.

Carbon Footprint: the total amount of greenhouse gases, such as carbon dioxide, that are produced as a result of human activities, such as burning fossil fuels for energy or transportation. A carbon footprint can be measured for an individual, an organization, or a country.

Climate Change: the long-term changes in the average weather patterns that have come to define Earth’s local and regional climates. These changes are primarily caused by human activities, such as the burning of fossil fuels and deforestation, which increase the concentration of greenhouse gases in the atmosphere.

Climate Finance: the financing for climate change mitigation and adaptation projects and initiatives. This can include funding from governments, international organizations, private investors, and other sources.

Climate Risk: the potential for financial losses, damage to physical assets, or negative impacts on society and the environment due to climate change. Climate risk can affect a wide range of sectors, including agriculture, energy, transportation, and real estate.

Decarbonization: the process of reducing the amount of carbon dioxide and other greenhouse gases that are emitted as a result of human activities. This can be achieved through a variety of methods, such as switching to renewable energy sources, increasing energy efficiency, and reducing waste.

Emissions Trading System (ETS): a market-based approach to controlling greenhouse gas emissions. Under an ETS, governments set a cap on the total amount of greenhouse gases that can be emitted by a certain sector or industry, and then allow companies to buy and sell allowances to emit a certain amount of greenhouse gases.

Energy Efficiency: using less energy to perform the same task or function. Energy efficiency can be achieved through a variety of methods, such as using more efficient appliances, improving insulation, and reducing waste.

Fossil Fuels: fuels, such as coal, oil, and natural gas, that are formed from the remains of ancient plants and animals. When fossil fuels are burned for energy, they release large amounts of carbon dioxide and other greenhouse gases into the atmosphere.

Green Bonds: bonds that are issued specifically to fund projects that have positive environmental impacts. Green bonds can be issued by governments, corporations, and other organizations.

Greenhouse Gases: gases, such as carbon dioxide, methane, and nitrous oxide, that trap heat in the

atmosphere and contribute to climate change.

Mitigation: the process of reducing greenhouse gas emissions in order to slow the pace of climate change. Mitigation can involve a wide range of activities, such as switching to renewable energy sources, increasing energy efficiency, and reducing waste.

Paris Agreement: an international agreement adopted in 2015 that aims to limit global warming to well below 2 degrees Celsius above pre-industrial levels. The agreement has been signed by nearly 200 countries, including the United States and China.

Renewable Energy: energy that comes from sources that are naturally replenished, such as solar, wind, and hydro power. Renewable energy sources do not release greenhouse gases when they are used to generate electricity.

Resilience: the ability to withstand and recover from adverse events, such as those caused by climate change. Resilience can be increased through a variety of measures, such as building infrastructure that is designed to withstand extreme weather events, diversifying the economy, and improving emergency response and preparedness.

Sustainability: the ability to meet the needs of the present without compromising the ability of future generations to meet their own needs. Sustainability involves balancing economic, social, and environmental considerations.

Sustainable Finance: the integration of environmental, social, and governance (ESG) considerations into financial decision-making. Sustainable finance aims to support the transition to a low-carbon, sustainable economy.

Transition Risk: the potential for financial losses or negative impacts on business operations due to the shift to a low-carbon, sustainable economy. Transition risk can affect a wide range of sectors, including energy, transportation, and real estate.

Unburnable Carbon: the portion of fossil fuel reserves that cannot be burned if the world is to limit global warming to well below 2 degrees Celsius above pre-industrial levels, as set out in the Paris Agreement. Unburnable carbon includes reserves of coal, oil, and natural gas that cannot be extracted and burned without causing dangerous levels of climate change.

Voluntary Carbon Market: a market for the buying and selling of carbon credits that are not required by regulations or laws. Companies and individuals can purchase carbon credits to offset their own emissions or to support climate change mitigation and adaptation projects.