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General Education Reflection Essay

My college years have benefited from general education courses that have widened my field of study in international, social, and economic systems that influence how engineers operate in the real world. While my engineering coursework has introduced me to the fundamentals of cyber and computer engineering, my general studies courses which include, FSHN 3420: World Food Issues, ARC 3210: History of the American City, CJ 240: Criminal Justice, and ECON 1020: Principles of Macroeconomics, have enhanced my ability to consider engineering problems from a societal and human perspective.

In World Food Issues, I learned about the global problems regarding food security, population, and sustainable agriculture. Understanding how technology, politics, and economics interact to influence food availability helped me understand how engineering innovation such as energy-saving food processing systems or more effective data collection for agricultural planning can have an immediate world impact. The class also addressed ethics in decision-making and global awareness, which are both essential to engineers as they design solutions that will impact different communities.

History of the American City helped me understand better how design of the city, infrastructure, and social systems evolve in a cumulative way. The course examined how transportation systems, housing policy, and technological innovation have shaped modern cities. Being an engineer, I was interested in understanding how design decisions of decades ago continue to shape energy use, environmental sustainability, and accessibility today. This

perspective will make me consider long-term social impacts in designing future systems or technology that becomes part of urban landscapes.

In Criminal Justice, I discovered how the justice system, public policy, and law enforcement function as integral systems within society. From this class, I learned the fundamentals of justice, ethical responsibility, and fairness. For example, as cybersecurity and data privacy become ever more crucial, engineers must provide mechanisms to secure the rights of the users and ensure justice, much like the legal principles discussed in the course.

Finally, Principles of Macroeconomics also imparted that aggregate economic conditions such as inflation, unemployment, and government policy affect industries and innovation. Learning about market forces and international trade expanded my horizons on why engineering solutions must not only be technically possible but also economically viable. For instance, the adoption of renewable energy technologies depends not only on technical feasibility but also on economics and policy structures.

Together, these courses have taught me that engineering is embedded in an intricate web of human, social, and economic systems. Assembling the ideas of these classes into context with real-world global problems such as climate change, sustainable development, and equitable access to technology has enabled me to gain a more holistic perspective. This information will aid me in the future in solving engineering challenges as technical dilemmas, but also as opportunities to create solutions that are ethical, sustainable, and socially responsible.