

Sustainability Theme in Multidisciplinary Capstone Projects

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Multidisciplinary capstone projects at the University of Prince Mugrin's College of Engineering provide students with the opportunity to tackle complex challenges while focusing on sustainability. In one project, students from architectural and electrical engineering programs collaborated to develop an automated hydroponic system for indoor use, promoting sustainability by reducing water usage and food transportation emissions. The project included farm visits, problem definition, research, and design phases, culminating in a self-contained unit with built-in LED grow lights and automated watering, suitable for in-house use. Faced challenges included communication difficulties among team members from different disciplines and the need for continued development after graduation. The proposal to implement the system in hotels and commercial spaces faced similar challenges. Institutional reliance on key individuals and rigid administrative procedures further hindered progress. Effective support from various departments and clear communication are crucial for the success of such multidisciplinary projects.