



**GUAM COMMUNITY COLLEGE**  
**Sustainability Office**  
**Sustainable Technologies and Environmental Education Program (STEEP)**  
**2017 Summer Event**  
**June 5, 2017 –June 27, 2017**



**Introduction**

The GCC Sustainable Technologies and Environmental Education Program (STEEP) this summer is calling all interested high school students between the ages of 14 to 17 years old to participate. The 2017 Summer Event offers sustainability education like no other, providing students with hands-on experience, technical skills training and education about sustainability related to the natural environment and relevant technologies. This event will bring subject experts together to provide valuable education and technical skills exposure in the areas of...

- ***Island Sustainability***
- ***Fossil Fuels and Renewable Energy (photovoltaic and wind energy)***
- ***Sustainable (Alternative) Building Designs***
- ***Alternative (Sustainable) Furniture***

Student Learning Outcomes (SLOs) associated with the 2017 STEEP Summer Event will be aligned with relevant GCC courses. Teaching and learning methods utilized in the program will cover an array of strategies to cover diverse learning styles and multiple intelligences. Some of the teaching methods will include, but are not limited to; In-class lecture, videos/media, hands-on experience/projects and activities.

The STEEP Summer Event seeks to enroll 25 students for a three (3) week program (16 days). This event will take place during the 2017 Summer break beginning June 05, 2017 and ending in June 27, 2017.

Below is the proposed schedule and agenda for the Winter Event. The agenda is tentative and may be subject to changes.

Day	Subject	Instructor	Time	Agenda/Schedule
Mon June/05	Environmental Biology and Island Sustainability	Kiko Palacios Anthony Sunga UOGreen/CIS	8:30-9:00 9:00-10:30 10:30-11:00 11:00-11:10 12:30-2:00 2:00- 2:30	Ice Breaker Activity (REACH for College) Island Environments- Island Formations and Ecosystems Island Sustainability Presentation (UOGCIS) Break Earth 2100 with Subtitles (Documentary Youtube) or Planet Earth Reflection Activity

Tue June/06	Island Sustainability Environmental and Marine Biology	Andrew Kang (UOG Marine Lab)	8:30-10:00 10:00-10:10 10:10-11:45 12:30-1:30 1:30-2:30	Marine Biology- Then and Now (with Marine Remotely Operated Vehicles)- Presentation – Andrew Kang Break Mission Blue Documentary- Netflix 4M Clean Water Science Activity – Water Purification Experiment Biba President- Vegetable Eating Game (Memory Exercise)
Wed 06/07	Organic Gardening and Farming  Aquaponic Systems	Kiko Palacios	8:30-9:30  9:30-10:00 10:00-11:30 12:30-2:30	Organic Gardening and Farming Presentation- Soil Science, Garden Styles, and Plant Pest and Disease Hydroponic and Aquaponic Systems Redesigning and Rebuilding STEEP Garden – Group Activity – 3-4 groups (2 for raised bed + 1 Aquaponics) <ul style="list-style-type: none"> <li>Spice and Herb Garden for Culinary Arts Course (pre-planted)</li> </ul>
Thur 06/08	Garden Continuation DIY Sauces from your Garden	Kiko Palacios	8:30-10:30 10:30-11:30 12:30-2:30	Finish up garden and clean up Food Inc. Video Documentary (Netflix) Random Recipe Group Competition
Fri 06/09	Introduction to Carpentry Eco-friendly Alternative Furniture Construction	Ronald Tenorio	8:30-9:30 9:30-11:30 12:30-2:30	Introduction to Pallet Furniture and Carpentry – Tools and Safety Alternative and Sustainable Pallet Furniture- Presentation Group Activity- Research and Design (Maximum 2 pallets) Start dismantling and cutting project pieces <ul style="list-style-type: none"> <li>Modern Coffee table with Fishbone Design</li> </ul>
Mon 06/12	Alternative Furniture Construction	Ronald Tenorio	8:30-11:30 12:30-2:30	Con't Construction of Pallet Furniture Completion of Pallet Furniture <ul style="list-style-type: none"> <li>Sanding, staining, painting, and curing</li> </ul>
Tue 06/13	Energy and Fossil Fuels	Roland Quitigua Kiko Palacios Chris Dennis	8:30-10:00 10:00-10:10 10:10-11:30 12:30-2:30	Invasive Species- Rhino Beetle Eradication Crew Fire Ants Documentary- Hawaii Energy and Fossil Fuels 101 Tour of Automotive Facility and Electric Vehicle Program (Chris Dennis) with activity/demonstration
Wed	Renewable Energy	Kiko Palacios	8:30-10:30	Renewable Energy Technologies Presentation

06/14			10:30-11:30 12:30-1:30 1:30-2:30	Wind Turbine Assembly Activity Wind Turbine Design Test Islands of the Future- Documentary (Netflix) – Orkney Ep.3 Or Gas Land
Thur 06/15	Photovoltaic Technologies	Kiko Palacios Pacific Solar and PV- Scott	8:30am-10:00 10:00-11:00 12:00-2:30	Solar Energy Technologies – Solar Electricity PV System Sizing Worksheet 55 watt Coleman Battery Back-up System Assembly Activity
Fri 06/16	Photovoltaic Technology	Kiko Palacios	8:30-9:00 9:00-11:30 12:30-2:30	Innovative Solar Inventions Video DIY Solar LED Flashlight Activity Complete Solar Flashlights – Invent your Own PV Device Group Activity
Mon 06/19	Plan A: Innovative PV Creations by Students		8:30-9:00 9:00-10:00 10:00-10:10 10:10-11:00 12:30-2:30	Group Activity- Research and Brain Storm PV Charging Products (Computer Lab) Designing Phase – Solar Charging Product Materials List Start Working on Product- Planning and Product Development Continuation.....
Tue 06/20	Alternative Sustainable Homes		8:30-9:00 9:00-10:00 10:00-10:10 10:10-11:00 12:30-2:30	Last Day to Work on Solar/PV Product/Model Development <ul style="list-style-type: none"> <li>All day</li> </ul> Completion of Product- Group Presentations
Wed 06/21	Alternative Sustainable Container Homes		8:30-9:00 9:00-10:00 10:00-10:10 10:10-11:00 12:30-2:30	Introduction to Alternative Sustainable Homes Sustainable Shipping Container Homes- (Types and Designs) Grouping Student Teams Computer Lab Research Period Phase Planning in Class for Designing and Building
Thur 06/22	Alternative Sustainable Container Homes		8:30-9:00 9:00-10:00 10:00-10:10	Building Day con't

			10:10-11:00 12:30-2:30	
Fri 06/23	Alternative Sustainable Container Homes		8:30-9:00 9:00-10:00 10:00-10:10 10:10-11:00 12:30-2:30	Building Day con't
Mon 06/26	Alternative Sustainable Container Homes		8:30-9:00 9:00-10:00 10:00-10:10 10:10-11:00 12:30-2:30	Final Day- Completion of Sustainable Container Home Models Preparation of Presentations
Tue 06/27	Alternative Sustainable Container Homes		8:30-9:00 9:00-10:00 10:00-10:10 10:10-11:00 12:30-2:30	Showcase and Judging Day (Open to the Public)  Announcement of Winners

**# of Students:** 25 (max)  
**Number of Days:** 17 days  
**Number of Hours/day:** 5 hours (8:30 am- 2:30 pm w/ 1 hour lunch)  
**Location:** GCC Multipurpose Auditorium (MPA- Building 400)  
**Check-in Area:** GCC Multipurpose Auditorium (MPA- Building 400)