

NCSU

ACI Student Chapter

The logo for NC State University, featuring the text "NC STATE UNIVERSITY" in white, bold, sans-serif capital letters, centered within a solid red rectangular background.

NC STATE
UNIVERSITY

Planning & Partnering for an Outstanding Educational Experience in Panama

Detroit, MI

March 27th, 2017

Planning

- Select student team members
- Get students to obtain ACI G1 CTC
- Initiate fundraiser effort
- Develop Panama partners
- Develop USA partners
- Schedule program
- Arrange travel logistics
- Secure site visits
- Organize parallel ACI G1 CTC
- Organize parallel technology transfer seminars
- Organize fun activities





Partners

- **Panama**
 - Apacreto
 - Universidad Tecnologica de Panama
 - Panama Canal Authority
 - CH2M Hill
 - Grupo Unidos por el Canal
 - Fall Line Testing
 - Secretaria del Metro de Panama
 - Tocumen International Airport
 - Dr. Ing. Oscar Ramirez
 - Dr. Ing. Brenda Serracin
 - Ing. Julio Davis

Partner

“Program Management for the Panama Canal Expansion Project”

- Ing. Joseph Cazares
- Cultural Impacts in a Megaproject
- Leadership and Politics
- Immigration
- Cost control
- Communication skills



Partner

“Design and Construction of High Rise Reinforced Concrete Buildings in Panama”

- Dr. Ing. Oscar Ramirez
- Chancellor, Universidad Tecnologica de Panama
- Lead Structural Consultant in Panama



Partners

- **USA**

- NC State University - Civil Engineering Department
- NC State University – Construction Extension
- NC State University – Alumni, Faculty & Friends
- ACI North Carolina Chapter
- ACI NCSU Student Chapter
- Crowder Construction Company
- IQ Contracting, LLC

Results

Year	NCSU Students	Faculty	Panama G1 CTC
2009	12	2	20
2011	14	3	21
2013	15	5	27
2016	14	4*	22
*3 Faculty + 1 ACI Director of Chapters			

Technology Transfer Impacts

- “Pervious Concrete”
- “Semi-Destructive & Non-Destructive Testing”
- “Evaluation of Low Strength Events”
- “Concrete Troubleshooting & Quality Control”
- “Seismic Design of Tall Reinforced Concrete Buildings”
- “Design & Construction of Concrete Slabs on Grade”
- “Construction Safety in Accordance to OSHA”
- “Preparation for ACI G1 CTC”
- “Concrete Construction Specifications”
- “Launch ACI Panama Chapter”

Impacts

“Semi-Destructive and Non-Destructive Evaluation of Concrete”

- Ing. Roberto Nunez
- Faculty NC State University
- Director of CCEE Extension Programs



Impacts

“ACI Grade 1 Concrete Field Testing Technician Certification”

- Instructed 27 Panamanian technicians and engineers
- Conducted written and field examinations as proctors



Lessons





Thank you, NCSU!