

## OVERVIEW

### WE ARE ONE TEAM!

How can Engineering students and Business students collaborate effectively on a Senior Design Project?

We want to share our experiences with you.



Beehive Project Team

Dr. Vargas and Dr. Robles have been collaborating for 5 years on Mechanical Engineering Senior Design projects.

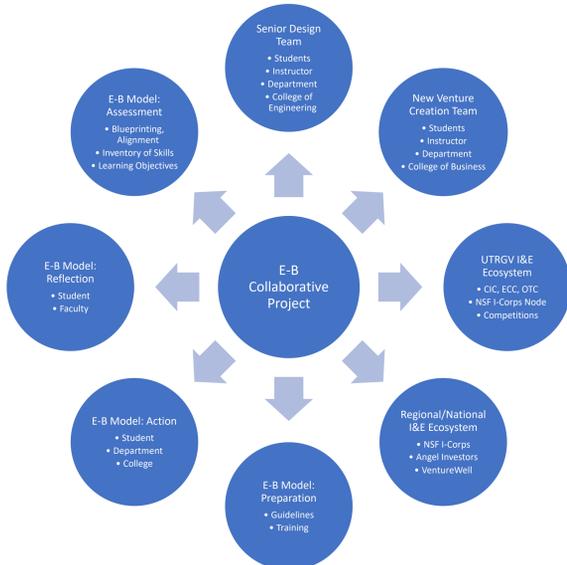
Two Colleges, two worlds (Engineering – Business), plenty of challenges.

Our “one team” philosophy allows us to transcend disciplines by acknowledging our contributions.

Check out our paper for more details and contact us to share your experiences.

## SUPPORTING THEORY

We used the PARE (Preparation, Action, Reflection and Evaluation) model to describe our collaboration since it focuses on Service Learning (SL) experiences as most of our projects are identified as SL.



For more details, see our paper.



Engineering – Business Teams

## RULES OF ENGAGEMENT

Through years of collaboration have refined simple yet fundamental rules for student collaboration, here are some of them:

- Start with a kickoff meeting including both engineering and business student teams, project stakeholders, and instructors.
- Define points of contact in both teams to facilitate communication.
- Define periodical meetings (weekly or biweekly)
- CC the instructors (Dr. Robles and Dr. Vargas) in every email communication between the teams.
- Any patent related to the project will be based on individual technical claims.
- Each team must share all their project information with the other team.
- The flow of information between teams is crucial and teams must report any issues immediately to the instructors.
- Both sides must understand that information sometimes is not readily available.
- The objective of the collaboration is mutual help, always acknowledge each other when presenting project work.
- Learning from each other’s perspective will strengthen the project and prepare you for the professional world.
- We are one team!

## HOW TO START

- You need two faculty that are convinced of the benefits of collaboration and daring enough to face the challenges.
- Talk to Chairs and Deans to get their support.
- Start with one pilot project and make it work.
- Showcase the collaboration, explain the relevance and impact of the collaboration.
- Do not get discouraged by the many issues you will face and the criticism from your own units.



Dr. Sylvia Robles



Dr. Noe Vargas

## STRUGGLES AND OPPORTUNITIES

These are some of the struggles we faced. And how we transformed them into opportunities for improvement:

Lack of role models of underrepresented minorities in entrepreneurship. Minorities can be resilient, innovative, and entrepreneurial.

Hit & miss historical collaboration between Engineering and Business Colleges. We started with a clean slate; mutually acknowledging our contributions.

Incipient Innovation & Entrepreneurship (I&E) ecosystem in the Rio Grande Valley region. We are growing with the region, and we can influence the creation of the ecosystem.

The courses’ curricula is already busy to add I&E. We must be efficient and conscious of the students’ workload.

Participating faculty, especially tenure-track, can be affected by the additional I&E work. Having translational research can enrich traditional research work.

Even without I&E experiences, our students obtain good job offers. Having an entrepreneurial mindset can help further the students’ professional goals.

## OUR ACHIEVEMENTS

These are some of our achievements:

- Our Engineering-Business teams have participated at National NSF I-Corps cohorts and the Hispanic Serving Institution (HSI) Battle of the Brains (2020 Champions).
- We have refined our collaboration and communication model.
- Students develop critical multidisciplinary skills.
- We foster an emerging UTRGV and RGV Entrepreneurship Ecosystem.



← 2022 HSI Battle of the Brains

2021 Texas Business Hall of Fame →



## CONCLUSIONS

Dr. Vargas and Dr. Robles continue learning from each other and improving this collaboration model.

Join the conversation!

Share your collaboration experiences with us.



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THANKS!

