

Masters of Science in Sustainability Studies (MSSS)

The University of Texas at Brownsville

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The purpose of the Masters of Science in Sustainability Studies (MSSS) program at the University of Texas at Brownsville is:

To provide advanced training in the trans-disciplinary field of sustainability. This degree program will serve a broad category of students with backgrounds in science, engineering and social sciences. Green technologies such as innovative, energy efficient building techniques, lower-impact urban development schemes, and alternative energy options are emerging; however, the Lower Rio Grande Valley (LRGV) of Texas lacks the technical workforce that is fluent both in science and in business. This program, focused on sustainable and renewable practices, will provide a trained workforce aimed at addressing this critical shortfall.

The most valuable parts of the program are:

- (i) The *multidisciplinary* aspects of the program, incorporating faculty expertise from the fields of environmental science, engineering, chemistry, biology, architecture, business, and public policy.
- (ii) The anticipated integration of *community and business* partners into the program, including participation from partners at the City of Brownsville (Urban Planning, Energy and Water Resources), several local businesses (Shipping, Clean Energy), the largest banking company along the border (IBC), US Fish and Wildlife, and Texas Parks and Wildlife.
- (iii) The *competitive employment and graduate school advantage* offered to our graduates, priming them with knowledge and research experience to address the rapidly changing global economy in which sustainability knowledge is no longer a preferred skill set for employers, but a necessity.

The most challenging issues we have faced (and expect to face) have been:

- (i) *Funding of the program.* We will likely need external funding from NSF or Dept. of Education for this program and the process is highly competitive and time consuming.
- (ii) *Current re-structuring process at UTB.* UT-Brownsville was at one time a 'partner institution' with a community college, Texas Southmost College (TSC). After 20 years of partnership, the UT System has called for the separation of what was known as UTB/TSC. Thus, the timing of introducing new programs is not optimal.
- (iii) *Sourcing students.* Almost all of the students at UTB are from the local area and are commuters. We anticipate some difficulty recruiting students and sustaining enrolment.

Our students will benefit in their future careers and graduate study by:

Training individuals at the graduate level to be employed by engineering, scientific, and technical consulting firms, government environmental agencies at all levels (federal to community), water planning groups and authorities, among others. The program will develop leaders in sustainability studies focused on environmental systems that serve as a foundation for social and economic well being in the Lower Rio Grande Valley of Texas, along the Texas-Mexico border region and across the wider United States. MSSS program graduates will interface with and support South Texas communities, governmental agencies, businesses, and non-profit agencies in making informed decisions in the face of the difficult environmental, natural resource, societal and economic challenges facing our border region.