



## A TRANSFORMATIONAL GENERAL EDUCATION PROJECT THAT INTEGRATES TECHNOLOGY FOCUSED COMPETENCIES

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**UMET** | UNIVERSIDAD  
METROPOLITANA  
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ANA G. VÉNDEZ

## SHORT BIO

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**Karen V. González** has a doctorate in Biology from Kansas State University. Her scientific expertise is related to the Protein Kinase C and its function in the formation of cataracts in the processes related to diabetes. Dr. González completed two post-doctoral projects, one on the evolution and development of the beetle *Tribolium castaneum* and the other project focused on the biochemistry of the cytoskeleton in yeast cells. She has published more than ten articles in academic journals like *Proceedings of the National Academy of Sciences* and *Cell* as a result of this research. As Dean of the School of Science and Technology at UMET, she has become interested in research related to diversity and retention and has presented her work on this topic at the *2016 AAC&U Diversity, Learning, and Student Success*. Dr. González co-presides UMET's General Education Commission and recently co-wrote and was awarded a \$2.7 M USDE/HIS Title V Grant.

## SHORT BIO

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**Roxanna Domenech** has a PhD in History of Puerto Rico and the Caribbean from the *Centro de Estudios Avanzados de Puerto Rico y el Caribe*. She has been an Assistant Professor in the Humanities Department at UMET since 2010. On January 2015 she became the department's Associate Dean. Dr. Domenech has presented her research on Women's History in Nicaragua and the United Kingdom (*Women's oral histories as part of Puerto Rico's emerging eco-pedagogy*). In 2015 and 2016 she presented an essay titled *El impacto Lupita: Raza, género y algunas manifestaciones de los estándares de belleza a través de las redes cibernéticas* at the VIII Seminario de la Asociación Latinoamericana de Investigadores de la Comunicación and at the first Congreso de Afrodescendencia de Puerto Rico. In 2016 she wrote a chapter for the book titled Mujeres, Historias y Sociedades: Latinoamérica, Siglos XVI al XXI (México, 2017). She is also an ongoing contributor in *Cruce* one of UMET's online magazines. Dr. Domenech co-presides UMET's General Education Commission and recently co-wrote and was awarded a \$2.7 M USDE/HIS Title V Grant.

# SHOWCASE HIGHLIGHTS:

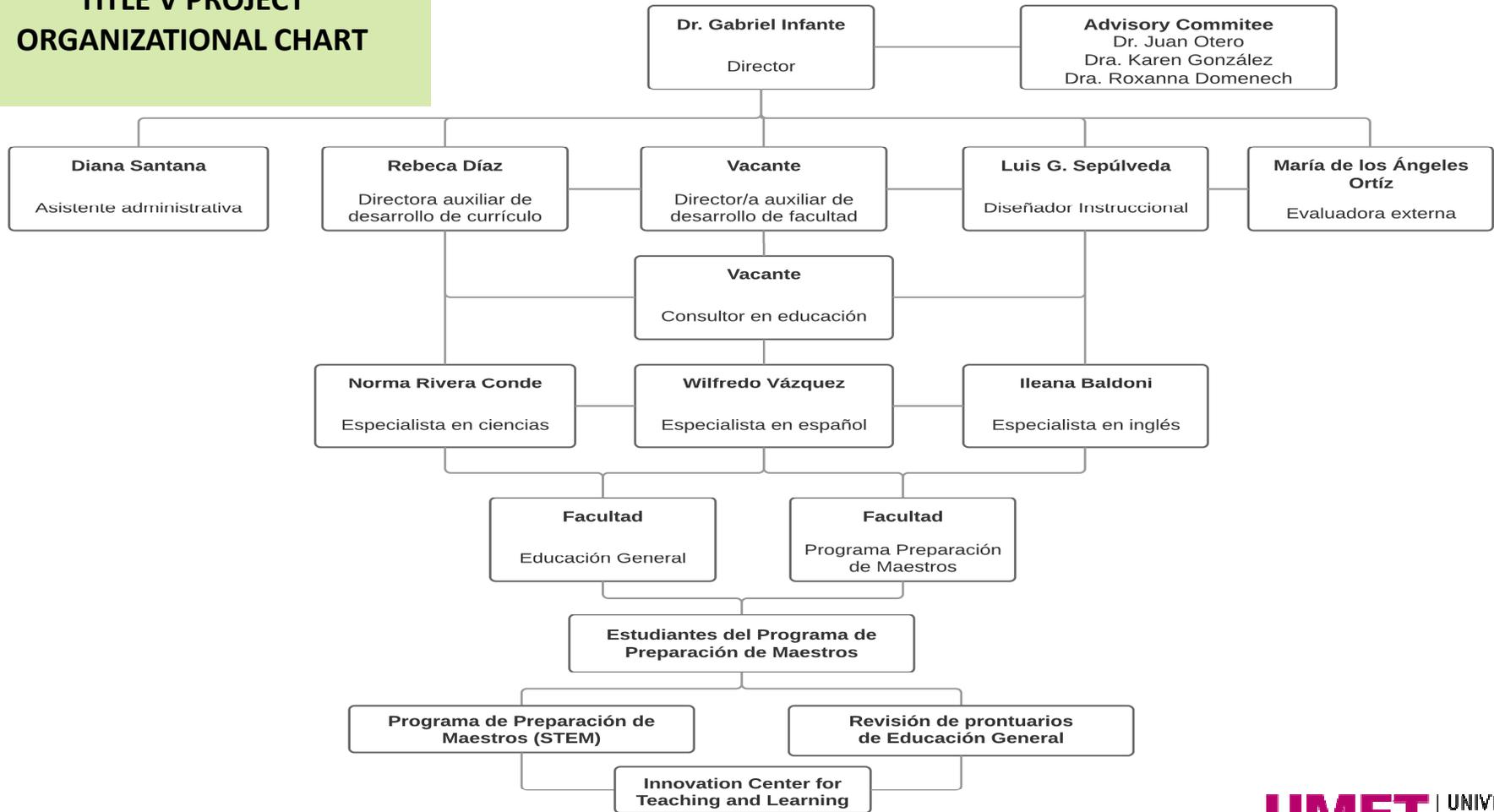
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Innovative project that integrates all disciplines through the development of an **enhanced General Education (GE) competencies** across the university's curricula.

An **institution wide initiative** that establishes GE competencies including informational literacy and the use of technology, as well as effective communication, and development of competencies that value diversity and local and global civic responsibilities, among others.

A well-planned and cost effective project (*Improving Newly Accredited Teacher Preparation Programs and creating a new STEM Teacher Preparation Program with Linguistic and Cultural Competencies Project*) that was submitted and approved as a Title V \$2.7 grant that will benefit overall **student academic success, faculty development** and the **effective use of technology**.

**TITLE V PROJECT  
ORGANIZATIONAL CHART**



## PROJECT GOALS:

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- The creation of a **teacher preparation program** (TPP) for secondary students in science and mathematics (STEM).
- Revise the General Education component of the TPP to a **competency focused approach**.
- **Faculty training** in competency focused education and **active learning**.
- Space renovation including the *Teaching and Learning Innovation Center (TLIC)*.
- The implementation of an annual **Teaching and Learning Symposium** for faculty and TPP students.

## STEM TPP GOAL:

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- **Existing TPPs** for Preschool Education; Elementary Education (K-3); Elementary Education (4 -6); Special Education (K-12); Physical Education (K-12); and Secondary Education in Spanish, English, History.
- **New TPPs** for Secondary Education in Chemistry, Biology and Mathematics (STEM).
- Council for the Accreditation of Education Preparation (**CAEP**) from October 24, 2016 until December 31, 2023.

## GE GOAL:

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UMET embarked in 2012 on a **transformational project** to revise its GE component.

The **comprehensive faculty-lead process** resulted in ten (10) GE competencies aligned to the university's mission statement.

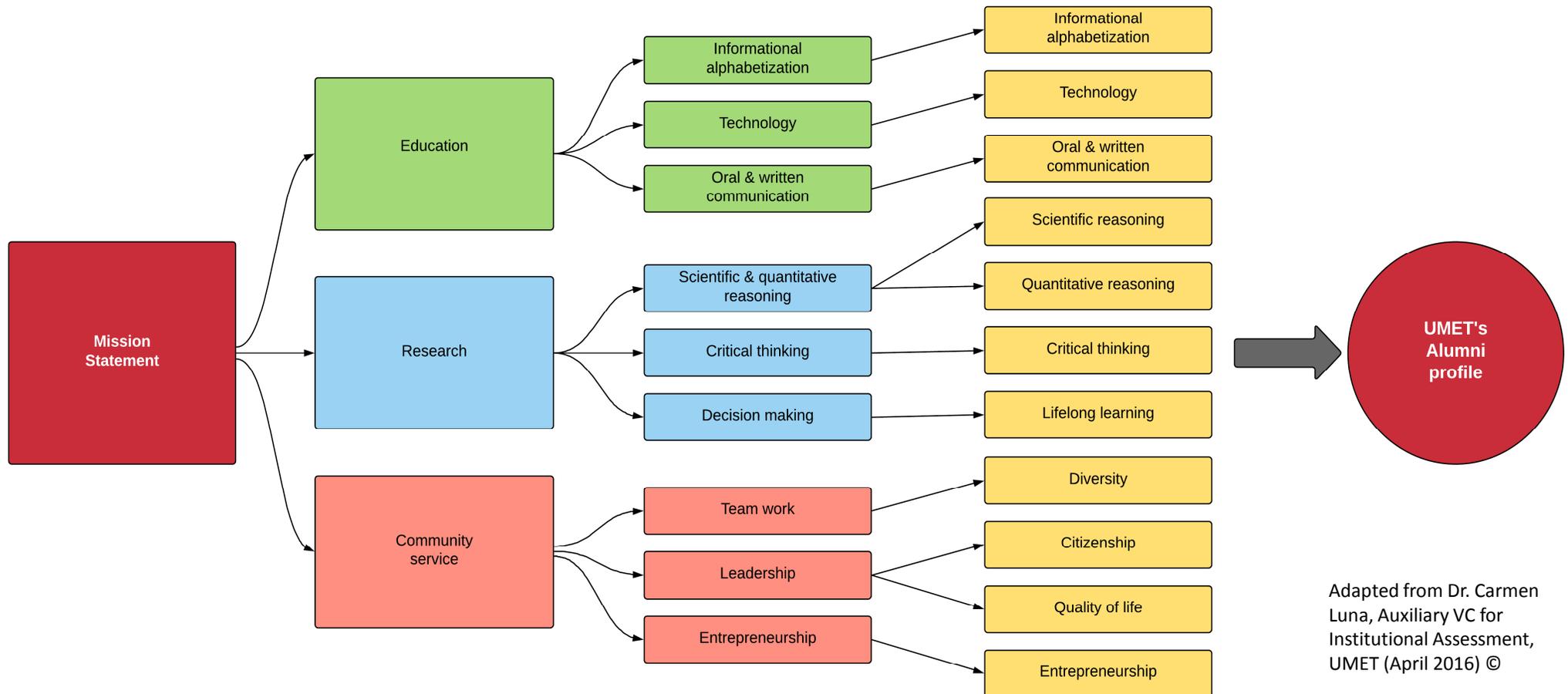
**Technology** is an integral part of this revision, as one of the competencies and as an important tool in teaching and assessing student learning.

In addition, UMET's Mission Statement proposes and directs the development of **humanistic, ecological and civic competencies**.

This project has resulted in a **Policy for General Education** that provides the university's community with a clear route to implement this component throughout the curriculum.

Establish and align **UMET's alumni profile** to the university's Mission Statement.

# General education competencies alignment with Mission Statement



Adapted from Dr. Carmen Luna, Auxiliary VC for Institutional Assessment, UMET (April 2016) ©

## JUSTIFICATION FOR THE GE REVISION:

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For the past five years institutional studies related to student success have indicated that the acquisition/development of **students' skills had to be reviewed**.

UMET's Policy for **Assessment of Student Learning** (2013), which assesses four main criteria: content, critical thinking, writing, and use of technology:

- indicates that **students' reading and writing skills in Spanish and English need to improve**.

Furthermore, in UMET's *Estudios de Candidatos Próximos a Graduarse* (2013), and the *Estudio de Patronos y Egresados* (2013), participants perceived that the areas that need improvement are:

- **development of oral and written communication skills in English** (17.9% graduates/ 52.8% alumni);
- **development of technological skills** (10.7% graduates)
- **development of mathematical/logical skills** (8.4% graduates and 67.3% alumni, 2013).

## GE REVISION:

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The Commission for General Education:

- **permanent commission**, integrated by faculty from all the academic schools.
- will participate in the **continuous revision** of curricula and the assessment of the competencies aligned to the institution's mission statement.
- provide **recommendations for the continuous improvement** of this component.

## GE REVISION:

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In order to implement the GE Policy, a strong **faculty development component** has been established and initiated through this Project (Title V grant: \$2.7 M USDE/HIS).

The Teaching and Learning Innovation Center (TLIC) will provide training in:

- **competency focused education**
- **competency focused teaching**
- **competency focused syllabus revision**
- **competency focused assessment**
- **education research through the use of various technologies**

## DESCRIPTION OF THE TECHNOLOGIES USED

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- A **Wi-Fi enabled campus** that supports the use of internet platforms in the classroom
- **Hybrid courses** within the institutions GE component (Sistema de Educación Universitaria Externa, SEDUE)
- The use of **Blackboard** as the standard. UMET has dedicated personnel to provide Blackboard technical support to the faculty.
- All classrooms are enabled with **projectors** for internet and computer assisted use of platforms such as PowerPoint, video, among others.
- The TLIC has an **instructional designer** who will work alongside faculty, students and academic administrators in the integration of various technological tools throughout the enhancement of UMET's academic programs

# DESCRIPTION OF THE TECHNOLOGIES USED

UMET also has a series of **teaching laboratories** that promote the use of diverse technologies as part of the teaching and learning process:

- Education
- Computer Sciences
- Math
- Natural Sciences
- TV Studio
- Audio and Digital Production
- Language and Writing Labs



# THE LANGUAGE LABORATORY AND WRITING CENTER

Provides students with the opportunity to:

- **listen**
- **understand**
- **speak**
- **read**
- **write**

In the target language while using:

- **computer programs**
- **internet tools**
- **earphones**
- **microphones**
- **smart boards**
- **other devices**



## INSTITUTION'S BENEFITS IN TERMS OF ACCESS

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This Project impacts the lives of the **socioeconomically challenged students** that UMET serves to spearhead their education with competencies that promote their academic and professional success.

The students will be presented with multiple strategies to demonstrate attainment of these competencies, this will help to further their opportunities to be **successful in their personal lives as well as their academic and professional careers.**

The **faculty training component** will benefit the GE component through the professional development of all the faculty through the enhancement of skills and methodologies to **improve the teaching and learning process.**

The education research component provides a platform to convert UMET into a **competency focused education hub** that will impact the training of hundreds of faculty, students in TPP's, and in service teachers.

## BEST PRACTICE

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This project aims to continue facilitating a **broader access** of diverse academic experiences through the **use of technology** in disadvantaged populations.

It integrates the development of **technological competencies** throughout the GE component that impacts all students.

These and other GE competencies will be presented through **active learning methodologies** and will be developed and assessed throughout each **students' academic experiences** at the basic or introductory level, intermediate, advanced and capstone levels.

Finkelstein et al. (2016) recommend to follow “best practices in higher education which connect student success with **active learning, collaborative engagement**, and student-faculty interactions for **effective teaching and learning**.”

**An annual symposium** where the project's participating students and faculty will present their **curricular products, best practices, and research findings**.