

<b>Web Page:</b>	<a href="https://studyinmexico.tec.mx/">https://studyinmexico.tec.mx/</a>
<b>Contact Information:</b>	<a href="mailto:studyinmexico@itesm.mx">studyinmexico@itesm.mx</a>

### Undergraduate Research Program

<b>Project Name</b>	Indefinite Causal Order in Quantum Teleportation: theoretical proposals before its experimental deployment
<b>Campus &amp; Location in Mexico</b>	Estado de México
<b>Faculty</b>	Engineering and Sciences
<b>Research Area</b>	Physics and Mathematics Department: Photonics and Quantum Systems
<b>Research Responsible</b>	Francisco Javier Delgado-Cepeda
<b>Description of the Project</b>	Indefinite Causal Order in Quantum Teleportation has been recently analyzed to improve the imperfections being present in such communication process. The identification of notable imperfect quantum entangled states in order to improve such communication have been identified together with a complementary strategy based on post-measurement and weak-measurement. In the current stage of the Project, we are depicting how to traduce such entire strategy into an experimental proposal based on some quantum foundations paradigm.
<b>Training Provided</b>	We will begin with an introduction to the topic in order to understand the further development. Quantum physics knowledge in quantum information is required.

### Offered during:

SUMMER

☒

WINTER

☐

SEMESTER

☒

### Student

<b>Tasks/Responsibilities</b>	Theoretical analysis, development of proposals and some computer modelling (possible).
<b>Required Language Proficiency</b>	English
<b>Required Skills and Abilities</b>	Wide knowledge and dominon on Quantum Information theory.
<b>Other Documents</b>	2) Accumulative grade point average (GPA) 2.5 3) Official Transcript 4) 2 letters of recommendation of faculty members 5) Resume 6) Letter of intention explaining the reason why you would like to participate in the research program