Introduction

The Department offers a Bachelor of Science degree in Physics. The BS includes the opportunity to obtain concentrations in Applied Physics Concentration, Atmospheric Physics Concentration, Medical Physics Concentration, Pre-Med Concentration, and Secondary Education 7-12 Physics/Mathematics Certification.

Students may not apply to the Educator Preparation Program until they meet the following requirements:

1. Have a UTEP overall GPA of at least 2.75
2. Have a UTEP majors GPA of at least 2.75
3. Pass the UTEP math content qualifying exam with a score of at least 80%

Programs

Bachelor of Science

• BS in Physics (http://catalog.utep.edu/archive/2019-2020/undergrad/college-of-science/physics/physics-bs/)

Minor

• Minor in Physics (http://catalog.utep.edu/archive/2019-2020/undergrad/college-of-science/physics/physics-minor/)

Fast Tracks

• BS in Physics to MS in Physics (http://catalog.utep.edu/archive/2019-2020/undergrad/college-of-science/physics/fast-track/bs-physics-ms-physics/)

• BS in Physics with Applied Physics Concentration to MBA (http://catalog.utep.edu/archive/2019-2020/undergrad/college-of-science/physics/fast-track/bs-physics-applied-physics-conc-to-mba/)

CHAIR: Dr. Cristian Botez (http://facultyprofile.utep.edu/default.aspx?ID=cbotez/)

Professor

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Education: BS, University of Texas at El Paso; MS, University of Texas at El Paso; Ph D, Texas A&M University
Research Interests: Nuclear physics, nuclear matter, neutron star matter, heavy ion reactions, equation of state, phase transitions, nuclear pasta, symmetry energy, neutrino oscillations, astrophysics, X ray spectroscopy of materials, XPS, Auger, UPS, photovoltaic cells, materials (I have equipment), Studies of underground radon, Medical Physics, GEANT4 studies of gamma ray sources and detectors, Social Sciences, studies of electoral data, migration, education.

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Education: BS, University of Bucharest; Ph D, The State University of New York at Buffalo

Associate Professor

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Education: BS, Peking University; MS, Chinese Academy of Sciences; Ph D, Princeton University

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Education: BS, University of Bucharest; Ph D, State University of New York at Buffalo
Research Interests: BioMedical Statistics - Statistical inferences/predictions/estimations at low sample numbers (Dimensionality Reduction, Maximum-Likelihood Methods, Multivariate Statistical Analysis, Survival Analysis) Water-Mediated Macromolecular Interactions (Polar and Hydrophobic Interactions, Specific Ion Effects, Thermal Fluctuations, Polymer Brushes) Medical Imaging (Computed Tomography Image Reconstruction, Spectral Reconstruction, Monte-Carlo path/dose simulations)

Contact Information: raravelo@utep.edu (mtcortez@utep.edu); 915-747-5620
Education: BA, University of California, Santa Cruz; MS, Boston University; Ph D, Boston University
Research Interests: Understanding electronic structure of nanomaterials using quantum mechanical theories; development of efficient computational schemes within density functional theory; boron nanostructures; fullerenes; organic photovoltaics; clusters

Assistant Professor

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Education: BS, New Mexico State University; Ph D, New Mexico State University; Postdoc, Oak Ridge National Laboratory
Research Interests: Interested in the physicochemical properties of nanoscale fluid-solid interfaces in the areas of energy storage and conversion, natural resource management, environmental science, and nanomedicine. Interested in understanding the molecular-scale structural and dynamic properties of interfaces in nanostructured materials in order to help inform theoretical models, bring about predictive capabilities, and lead to transformative advances in the aforementioned science areas.

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Education: Ph D, Heidelberg University
Research Interests: Nanomaterials, Magnetism, Hyperthermia for cancer treatment, contrast agent for MRI, Data storage, Permanent magnets, magnetocaloric for magnetic refrigeration.

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Education: BA, Huazhong University of Science and Technology; Ph D, Huazhong University of Science and Technology
Research Interests: Computational Biophysics, Computational Biology, Bioinformatics, Protein interactions, Virus capsid assembly, molecular motor.

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Research Assistant Professor

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