Build Strong Bodies and Minds through Service Learning

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**PHYS 295**

**Service Learning in Outreach**
- 1-3 credits, undergraduate
- Design and pilot instructional materials and programs

**Large group presentations**
- The Force and Pressure Show
- The Cryogenics Show

**Design / pilot K-12 classroom materials**
- Do Nails Remember?
- Igor the Tiny Tiny Human
- Rockets!

**Design / lead / support informal learning programs**
- Science Clubs
- After school programs
- “Sidewalk Science”
- Saturday Morning Astro

**Learn life-skills**
- Faculty shop training
- Teamwork
- Teaching, pedagogy

**PHYS 595**

**Instructional Design in the Physical Sciences**
- 1-3 credits, graduate level / in-service teachers
- Research oriented design of instructional materials

**Research in instrumentation and design**
- "Black Box Experiment"
- "Too Cool to Resist"
- Elevator to Space – An Introduction to Nanoscale Materials

**PHYS 290**

**QuarkNet Service Learning**
- 1-3 credits, undergraduate
- Support and maximize experiences for QuarkNet teachers

**Classroom support, project development, research**
- Mentorship for teachers
- Professional development presentations
- Program implementation and research

**Common Threads**
- Students sustain Physics and Astronomy Outreach Programs.
- Students learn principles of effective instructional design, delivery and assessment.
- Students develop skills in teamwork, commitment, communication and presentation.
- Students contribute to others, developing their own knowledge and expertise.
- Students reflect personally on their experiences, in a framework of life-long learning.