Physics

PHYS 513  **Quantum Optics & Information**  credit: 4 hours.
Experimental and theoretical fundamentals of quantum information, using nonclassical features of quantum physics (wave-particle duality, superposition, and entanglement) to surpass the information-processing capabilities of classical systems. Underlying fundamental quantum phenomena, including tests of nonlocality, quantum erasers, the quantum Zeno effect, squeezed light, multi-particle interference, state transformations of the Bloch sphere, and decoherence; quantum cryptography and teleportation; quantum information theory; quantum computation algorithms and techniques for error correction; experimental "qubit" systems. Prerequisite: Recommended: PHYS 580.

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<td>53201</td>
<td>Lecture</td>
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<td>158 - Loomis Laboratory</td>
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