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Physics advanced laboratory designed for engaged learning experiences

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Designing and improving laboratories, particularly at the advanced level, is critical for preparing physics major students for professional work or graduate school. Planning a laboratory curriculum has to follow a vision for the new generation of graduates that establishes a set of learning outcomes for deeper understanding and student engagement. Selecting effective experiments that create the framework for achieving this goal has been a collective effort of the Physics department laboratory staff, students and faculty at Carleton University. For many students, the advanced laboratory becomes a turning point in their interests since it creates the bridge between the theory and physics phenomena learnt in lectures and the experimental techniques they need to observe them. The skills and expertise gained in the physics advanced laboratory are the greatest strengths of constructive knowledge physics graduates bring to their future research or work. The selection of a broad range of physics laboratory experiments has allowed students to follow their interests and gain this valuable expertise.

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