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A New format for Reporting in a First Year Physics Laboratory

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A new approach for the preparation and submission of laboratory reports for a first year Physics course has been developed at the University of Manitoba. Students are able to complete the data collection and analysis as well as the preparation and submission of the lab report during the three hour lab period. The students are provided with a template prepared in Microsoft Excel to help analyze their data and organize the report. The template includes separate tabs for each of the required sections of the lab report. One lab report per group of two students is submitted allowing the students more time to discuss the results, thereby enhancing the understanding and learning process. The lab report is saved as a PDF file and submitted via the Desire to Learn (D2L) system. Teaching Assistants download the lab report and mark it by adding their comments to the file. The marked lab report is uploaded using the feedback option in D2L. With this new approach the students are more aware of the purpose and outcome of the experiments. Late and missing lab reports are no longer a problem and the number of complaints included in the course evaluation has decreased significantly. The average lab mark has also shown an increase from previous years as the result of the modified format. The format is being adapted for the laboratory component of the other first year Physics courses.

The new format will be illustrated with examples from experiments that are currently being done by the first year Science and Engineering students at the University of Manitoba. The outcome of the labs before and after introducing the modified format will be presented.

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