



PHYSICS

Analytical Chemistry

Basic Circuits and Instrumentation

203-925-DW (all sections)
Fall 2017

Teacher	Jaime Sandoval 7A.18, local 4016, j.sandoval@dawsoncollege.qc.ca						
Pre-requisites	High School Sec IV Science 558-404 or 402, or Physical Science 436 or CEGEP 982-003-50						
Co-requisites	None						
Ponderation	1-2-1 (1 hour of lecture, 2 hours of labs, and 1 hour of work outside class per week)						
Course objectives	<p>This is the second physics course for students in the Analytical Chemistry program. The primary aim of the course is to acquaint students with the basic concepts of electrical measurement, DC circuits, and basic principles of electronics in order to identify electronic components and to understand schematic diagrams of equipment used in chemical analysis, as specified in the manufacturer's technical manuals.</p> <p>Detailed information regarding the objectives and standards for the competencies related to this course and the specific performance criteria is available at https://www.dawsoncollege.qc.ca/oad/professional-development/analytical-chemistry-program-documents/.</p>						
Course competencies	<p>This course will allow the student to partially achieve the competency:</p> <p>O1DR: To understand how equipment operates.</p> <ol style="list-style-type: none">1. To interpret the schematic of equipment.2. To describe the operation of simple electric circuits.3. To identify electronic components of equipment.						
Evaluation	<p>The Institutional Student Evaluation Policy (ISEP) is designed to promote equitable and effective evaluation of student learning and is therefore a crucial policy to read and understand. The policy describes the rights and obligations of students, faculty, departments, programs, and the College administration with regard to evaluation in all your courses, including grade reviews and resolution of academic grievance. ISEP is available on the Dawson website.</p> <table><tr><td>Assignments</td><td>15%</td></tr><tr><td>Laboratory activities and projects^y</td><td>25%</td></tr><tr><td>Class tests^y</td><td>60%</td></tr></table> <p>^yYour teacher will provide a detailed breakdown of these components and a tentative test schedule during the first week of class.</p> <p>In order to pass the course, students must show a basic understanding of the course material at the level covered in the lectures and in the lab. This is achieved by attaining a final grade of at least 60%, calculated according to the evaluation scheme above. Note: course work not submitted by the due date may be penalized at the teacher's discretion.</p>	Assignments	15%	Laboratory activities and projects ^y	25%	Class tests ^y	60%
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Reference materials	<ol style="list-style-type: none">1. College Physics by Serway, Faughn & Vuille, 8th edition, Brooks Cole.2. College Physics by Urone, Thomson Publishing.3. Additional notes supplied by instructor.						
Teaching methods	The material will be presented using a mix of active learning activities, lectures, in-class problem solving, laboratory experiments and demonstrations. Laboratory periods will be used for experiments as well as class tests and lectures.						

Attendance & participation

Although class attendance is not compulsory, students should make every effort to attend all classes. In the event that a class is missed, the student is responsible for all material covered or assigned during that class. **Attendance during laboratory experiments and for class tests is however compulsory.** In the rare event that a student for valid reason (*e.g.* due to an intensive course, illness, *etc.*) is or anticipates to be absent during a laboratory experiment or for a class test, the student **must**, where possible, inform the teacher and provide the necessary documents before the absence or, at the latest, on the day of their

**Questions
outside class**

All regular day program teachers will be available in their respective offices to their students during posted office hours. In the first week, your teacher will inform you of their schedule and will post it outside their office.

Room 7A.1 is the physics study room. At scheduled times, a teacher or peer tutor will be on duty there to answer your questions. The schedule of teachers and peer tutors will be posted outside of 7A.1 in the 2nd or 3rd week of term.