CHEE901 – Principles and Applications of Polymer Rheology
Winter 2017
ONE HUNDRED AND TWENTY THIRD SESSION

Prof. Giacomin
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Office Hours (by appointment):
Professor Giacomin, giacomin@queensu.ca (W 16:30-17:30h, F 15:30-17:30h)

Lectures: Wednesday or Thursday 19:00-21:50h, 311 Dupuis Hall

Required Text: Bird, R.B., R.C. Armstrong, and O. Hassager, "Dynamics of Polymeric Liquids. Vol. 1. Fluid Mechanics", **FIRST EDITION**, John Wiley & Sons, New York, 1977 (Available at Campus Bookstore)

Prerequisite (or corequisite): Undergraduate transport phenomena

Grading:
Class participation 100 points

Conversion to letter grades:

A+≥90, A≥85, A−≥80, B+≥77, B≥73, B−≥70,
C+≥67, C≥63, C−≥60, D+≥57, D≥53, D−≥50, FR≥40, F≥0%

SYLLABUS
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Week	Class Date	Assigned Chapter Readings	Subject	Assigned Problems
1	W 3/1	1, A 2	Newtonian Fluid Dynamics Structure of Polymeric Fluids	Illustrative Examples
2	W 3/8	3 4 5, B	Flow Phenomena in Polymeric Fluids Material Functions for Polymeric Liquids Generalized Newtonian Fluid	Illustrative Examples
3	W 3/22	6	General Linear Viscoelastic Fluid	Illustrative Examples
4	W 3/29	7	Quasilinear Corotational Models	Illustrative Examples
5	R 4/6	8	Nonlinear Corotational Models	Illustrative Examples
6	W 4/19	9	Codeformational Models	Illustrative Examples

Important Dates

First Class 3/1
Last Class 4/19

CLASS PARTICIPATION INFORMATION
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This course is taught using the Socratic method. This means that students will learn by answering questions. To earn a full score for class preparation, students must prepare for class by completing the assigned readings, and then, by preparing at least two questions provoked by these readings. They must also be prepared to answer questions on the assigned readings. Students must also demonstrate critical thinking, when called upon, by analyzing their classmate's answers. Students can expect to be called upon every time the class meets.