MATH 372 Section S17N01
Introductory Complex Variables
Jan – Apr 2017

VANCOUVER ISLAND UNIVERSITY

Time & Location: Mon & Wed 10:30-11:30,
Fri 11:30-12:30, all in Bldg 370 Rm 111

Instructor: Glen Pugh
glen.pugh@viu.ca (This is by far the best way to reach me!)
Bldg 359 Rm 201
(250)753-3245 ext. 2752

Office Hours: Mon & Wed 11:30-1:00, Fri 12:30-1:30, or by appointment.

webpage: http://web.viu.ca/pughg/Spring2017/math372S17N01

This page will be updated regularly with announcements, handouts, homework assignments and solutions.

Prerequisite: B- or better in both Math 123 and Math 200.

Text: *Fundamentals of Complex Analysis with Applications to Engineering and Science,* third edition, by E.B. Saff and A.D. Snider

Course Outline: This is a first course in complex variables, an extension of calculus to the field of complex numbers (numbers of the form $a+ib$ where a and b are real and i is such that $i^2=-1$). This extension leads to many surprising and deep results in calculus, differential equations and number theory. Topics include

1. Complex Numbers: basic properties and algebra
2. Analytic Functions, derivatives
3. Elementary Functions
4. Complex Integration
5. Series Representations of Analytic Functions
6. Residue Theory

Homework Assignments: Approximately eight problem sets will be assigned and collected for grading. These problem sets are worth 40% of your final grade. In addition, from the textbook I will assign supplementary practice exercises which should be completed to refine your understanding. The supplementary problems will not be graded, however they may appear on the term tests or final exam. Answers to odd numbered textbook problems are in the back of the book.

Collaborative problem solving on homework assignments is permitted (encouraged even!), however your handed-in solutions must be written up independently. Evidence of plagiarism on an assignment will result in a zero grade or other measures (see **Academic Misconduct** below).

Tests: We will have two 50 minute class tests given on **Fri Feb 3 and Fri Mar 17.** Each test is worth 10% of your final grade.

Final Exam: There will be a comprehensive final exam in April worth 40% of your grade. The exam period is Apr 18-27 2017. Travel plans should not be made until the final exam schedule is released, which is at least one month before exams begin. **In no event will the final exam be rescheduled to accommodate travel plans.**

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Grading Summary:	Homework:	40%
	Class Tests (2):	20%
	Final Exam:	40%

Grading Scale:

90-100%	A+	76-79%	B+	64-67%	C+	50-54%	D
85-89%	A	72-75%	B	60-63%	C	0-49%	F
80-84%	A-	68-71%	B-	55-59%	C-		

Academic Misconduct: Incidents of cheating or other academic misconduct carry severe consequences and will be dealt with seriously. Refer to VIU Policy 99.01 and Procedure 99.01.001.

Calculators: A basic scientific (non-financial, non-calculus, non-programmable, non-graphing) calculator may be used for tests and the final exam.

Cell Phones & Music Players: Turn off and put away before class. Cell phones may NOT be used as clocks or calculators during tests.

Formula Sheets: A single double-sided letter-size "cheat sheet" containing formulae, theory and numerical values may be used for tests. The cheat sheet may not contain worked examples and must be submitted when you hand in your test.