UNIVERSIDAD DE SANTIAGO DE CHILE
FACULTAD DE INGENIERÍA
PLAN DE ESTUDIOS 2012

RESUME OF THE COURSE PROGRAM

DEPARTMENT	*Mechanical engineering*					
CAREER	*Mechanical and HVAC engineering*				CODIGO	*15202*
COURSE	*Fluid Mechanics*					
CODE: *15202*	Level: 4	T: 4	E: 2	L: 1	SCT:	Type: *Engineering science*
REQUISITES	10109 Physics II for engineering 10123 Differential equations and Numeric methods for engineering					
DEPARTMENT	*Mechanical engineering*					
AUTHOR	*Diego A. Vasco*					
VERSION: *2014*	RESOLUCIÓN FACULTAD DE INGENIERÍA: *Resolución del plan de estudios modificado en enero 2014.*					

General capabilities acquired during the course:

After coursing the fluid mechanics course, the student will be able of:

1. To describe the properties and fundamental characteristics of fluids
2. To identify the characteristics of fluids in different applications and cases
3. To Apply basic principles in the solution of problems of fluid mechanics
4. To calculate pressure loss in systems, pipeline networks and ducts
5. To selectionate appropriate pumps and fans to satisfy the specific requirements in engineering applications

RESUME OF CHAPTER – TEMATIC CONTENTS

Chapter	CONTENTS	Pedagogic hours
1	Basic concepts and properties of fluids	6
2	Pressure and fluid statics	14
3	Fluid kinematics, mass, Bernoulli, momentum, and energy equations	22
4	Flow in pipes	22
5	Flow over bodies	4
	Theory	*68*
	Exercises	*34*
	Laboratory	17
TOTAL	17 weeks	

References

1. Çengel, Yunus & Cimbala John. Fluid Mechanics: Fundamentals and Applications. McGraw-Hill Education, 2018.