

Discipline	STATICS and DYNAMICS of SHIPS-2 code: 38		2nd Semester Third Year
Specialty	NAVAL ARCHITECTURE AND MARINE TECHNOLOGY		
ECTS credits: 6	Form of assessment: EXAM		
Lecturer	Assist. prof. Yordan Denev Room 418a M Phone: +359 52 383 384 E-mail: y.denev@tu-varna.bg		
Department	Department of Naval Architecture, Marine Engineering		
Faculty	Faculty of Shipbuilding		
Learning objectives:			
/ANNOTATION/			
The discipline introduces students, after gained knowledge in fluid mechanics and basic naval architecture disciplines, to the principles of statics and dynamics of ships, drilling and oil platforms, etc.			
Attention is paid to the static and dynamics analysis, equations applied to solve problems for vessels stability, dynamics of floating structures in operating conditions, oscillation of floating bodies, vessel's maneuvering, etc.			
Laboratory exercises are dedicated to experimental approaches to attain vessel's stability.			
Course work is oriented to provide knowledge how to apply in practice formulas and methods to assure vessel's stability in various conditions.			
CONTENTS:			
Operating conditions			
General formulas and methods to assure stability in various exploitation conditions			
Oscillation of floating bodies			
Ship maneuvering			
Dynamics and stability of drilling platforms, oil platforms and other marine structures			
Models in experimental tank – preparation, measurements, calculations. Fluid analogy			
Total: 30 hours lectures and 15 hours lab exercises as well as 15 hours course work.			
ECTS credits: 6			