

Math 241, Complex Manifolds

Fall 2017

From Donaldson's book :

9/1: p. 41, #9,11

9/8: p. 56, #5,6

9/15: p. 81, #2,4 For Problem 2 you want to use Proposition 14, not Proposition 12.

9/22: Given a compact connected Riemann surface  $Y$  of genus  $h$ , what are the numbers  $g$  so that there is a compact connected Riemann surface  $X$  of genus  $g$  along with a nonconstant holomorphic map  $f : X \rightarrow Y$  having no critical points?

9/29: For  $g = 0$ ,  $g = 1$  and  $g = 2$ , what can you say about  $h^0(D)$  as a function of  $d$ ?

10/6: p. 117, #1

10/13: p. 208, #1

From Huybrechts' book :

10/20: p. 75, #5,8

10/27: p. 96, #1, p. 103, #1

11/3: p. 40 #1, p. 111 #7

11/13: p. 123, #4,8

11/17: p. 131, #7,8

11/27: p. 172, #5, p. 181, #1

12/1: p. 191, #1,10