

Math 241, Complex Manifolds

Fall 2023

From Donaldson's book :

1/24: p. 41, #9,11

1/31: p. 56, #5,6

2/7: p. 81, #2,4 For Problem 2 you want to use Proposition 14, not Proposition 12.

2/14: 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?

2/21: For $g = 0$, $g = 1$ and $g = 2$, what can you say about $h^0(D)$ as a function of d ?

2/28: p. 129, #1

3/7: p. 208, #1

From Huybrechts' book :

3/14: p. 23 #3, p. 40 # 1

3/21: p. 50, #3

4/4: p. 75, #5

4/11: p. 103, #1

4/18: p. 123, #8

4/25: p. 172, #4