

MATH 4140/5140. HOMEWORK 5  
Due Wednesday, February 23

**Note:** All numbered exercises are from Erdmann–Holm ([EH]).

- (1) Read Chapter 2 of [EH] again (you can ignore §2.5.2 for now). Make sure you understand all the examples and can state all the theorems on your own.
- (2) Parts (i), (ii) and (iii) of Exercise 2.12.
- (3) Exercise 2.15.
- (4) Exercise 2.21. For Part (c), you can ignore the first part (expressing the modules as representations of the quiver  $Q$ ). In other words, just answer the question about whether the modules are isomorphic and justify your answer.
- (5) Exercise 2.22.