

# CSCI 3323 (Principles of Operating Systems), Fall 2020

## Reading Quiz 2

**Credit:** 10 points.

### 1 Reading

Be sure you have read, or at least skimmed, sections 2.1 through 2.3 of Chapter 2.

### 2 Instructions

Answer the questions below using *only* the course textbook (i.e., no Web searches). Please work independently rather than in groups, and include the Honor Code pledge in what you turn in, either the full pledge or just the word “pledged”.

You may write out your answers by hand and scan them, or you may use a word processor or other program, but please submit a PDF or plain text via e-mail to my TMail address. (No links to shared files on Google Drive please.) Please use a subject line that mentions the course and the assignment (e.g., “csci 3323 quiz 2” or “O/S quiz 2”).

### 3 Questions

1. (2 points) What’s the difference between a program and a process?
2. (2 points) Figure 2-4 in the textbook lists fields in a typical process-table entry. The first five are processor-related (registers through stack pointer). Why is it likely important or even necessary to include them? (Hint: Think about the “virtual CPU” idea of section 2.1.1.)
3. (2 points) What’s the difference between processes and threads?
4. (2 points) What’s a race condition?
5. (2 points) The textbook presents several solutions to the mutual exclusion problem. The one using TSL is the first that actually solves the problem for an arbitrary number of processes. Why discuss other solutions? why not always use this one?