Competitive Coding Summer Class

- **Course Title:** Competitive Coding Summer Class
- **Tuition:** Free
- **Credit Hours**: Zero
- **Schedule:** Monday 3 pm to 6 pm

  May 21, 2018 - August 13, 2018 most weeks
- **Course Instructor/Coordinator:** Mr. Gregory LaKomski or invited faculty
- **Students Qualification:**

  CS 3358 with B or A , CS 2308 with A;

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  Graduate students passing CS 5301 or programming exam competent in C++.

  Any student that thinks they can hang with us and are interested in competitive coding are invited to try it out!
- **Interested Students and Registration Contact:**

  Greg Lakomski, greg@txstate.edu

  Office: Comal 210B

  https://slack.com Sign up for txstcc and leave message at #signup for mailing list
- **Course Classroom:** UAC310

- **Course Methodology:**

  Each session I will conduct a lecture covering a particular topic. We will look at a problem together that uses this topic in its solution. We will then break into teams and code a minimum of one other problem and review our attacks, problems, and solutions. As the course continues on, we will develop and start to use only a specific set of "cheat sheets" versus the Internet. There will be additional coding problems assigned every session for completion the following week.

1. Introduction to competitive coding
2. Coding practices and standards for this class
2. C++ Data Structures and Libraries
3. More data structures
4. Introduction to Algorithms
5. Problem Solving Paradigms
6. Recursion
7. Greedy Algorithms
8. Dynamic Programming
9. Binary Trees
10. Unweighted Graphs
11. Graphs
12. Mathematics
13. Strings and Text algorithms
14. Network Flow
15. Computational Geometry