

Contact Information

Instructors:	Kris Nairn	Lynn Zielger	Jim Crumley
Office:	239 PE	215 PE	107 PE
Email:	knairn@csbsju.edu	lziegler@csbsju.edu	jcrumley@csbsju.edu

Course Information

Class: 8 am Days 6
 Web Sites: <http://www.users.csbsju.edu/~jcrumley/281/>
<https://moodle.csbsju.edu/course/view.php?id=1276>

Course Goals

This course is meant to give you a chance to work on interesting things that you wouldn't get to do in a typical, math computer science, or physics course. You will be work on cross-displinary problems and learn skills from all three fields

You will generally work on the problems in groups. After your solutions are done, your group will present its solution to the class. You will often get more than one cycle to work on a problem.

On some class days we will have observers from the MapCores FYS class who will come to listen to your solutions.

Course Goals

In this course you will gain:

- experience working in cross-disciplinary teams on problems;
- research skills relevant to mathematics, computer science, and physics;
- proficiency in presenting your results.

Grading

The grade for this course will be based on your group's solutions to the problems and your presentations of those solutions.

Course Schedule

Cycle	Date	Topics	Due	
1	W	9/01	Introduce Python programming, brain teasers	—
2	F	9/10	Programming	present brain teasers
3	M	9/20	Programming and Geometry (handouts)	—
4	T	9/28	Programming (assign rabbits and foxes) and Geometry	present shapes
5	W	10/06	Introduce soldering	—
6	M	10/18	finish soldering	present soldering
7	T	10/26	Introduce Lego robots	present rabbits and foxes
8	W	11/03	Work on robots	present robots
9	R	11/11	Introduce mass extinction, Mathematica	—
10	F	11/19	Work on mass extinction	—
11	R	12/02	Work on mass extinction	—
12	F	12/10	—	present on mass extinction