Contact information
James Bernhard • jbernhard@pugetsound.edu • Thompson Hall 390G

See the course website for my office hours. My office phone number is 253.879.3812, but the phone is usually one of the slowest ways to reach me. Email is usually much faster. (All of my email is forwarded to another account, so you may receive email from me at that account as well.)

The course website is the best resource for information about the course. Among other things, it contains a complete calendar for the semester, including all assignments. Also, if you email me a password when I request one, you will be able to access your grade-to-date any time during the semester via the course website.

Learning objectives
The main goal of this course is to develop an understanding of mathematics as a cultural activity. As a unifying theme to help you develop this understanding, we will investigate the mathematics of symmetry. We will learn about not only the mathematics itself but also about the history of the subject and the cultural contexts in which it developed.

Prerequisites
The only prerequisite for this course is admission into the Honors Program.

Course materials
The required texts for this course are:

• *Groups and Symmetry: A Guide to Discovering Mathematics* by David W. Farmer
• *The Equation That Couldn’t Be Solved: How Mathematical Genius Discovered the Language of Symmetry* by Mario Livio
• *Why Beauty is Truth: A History of Symmetry* by Ian Stewart

All three of these books are available at the campus bookstore. You don’t need any particular specialized technology for this course.
Coursework

The coursework consists of:

- Approximately weekly *reading assignments*, which will prepare you for our class discussions and will help you create your symmetry timeline.
- Approximately weekly *homework assignments*, which are designed to help you learn about the actual mathematics of symmetry.
- A *take-home test*, in which you analyze the symmetry of some patterns.
- A *symmetry timeline*, in which you will communicate what you have learned about the history of the mathematics of symmetry.
- A *project*, in which you will write a paper about symmetry in a setting that we have not covered in class.

Grading

Your grade will be based on my assessment of your understanding of the material. By default, I will weight the various components of the course as follows:

<table>
<thead>
<tr>
<th>Component</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reading assignments</td>
<td>10%</td>
</tr>
<tr>
<td>Homework assignments</td>
<td>20%</td>
</tr>
<tr>
<td>Take-home test</td>
<td>25%</td>
</tr>
<tr>
<td>Timeline</td>
<td>20%</td>
</tr>
<tr>
<td>Project</td>
<td>25%</td>
</tr>
</tbody>
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However, these weights are subject to change due to individual circumstances, so if you believe the above components do not accurately represent your understanding of the material, please let me know. If the circumstances dictate, I can work with you to find another way to demonstrate your understanding of the material.

Late work policy

I will not accept late work without an appropriate reason, which you should explain to me before the work is late if possible. If you are falling behind or need to turn something in late, please see me so that we can discuss it.

Attendance policy

I will not be taking attendance in this class. You are responsible for the material that we cover in class whether or not you are in attendance. Since it is extremely difficult to keep up in the course without attending regularly, I expect absences to be rare. I do not
ordinarily give make-up quizzes or tests, so if you must be absent during one of those, please let me know as early as possible so that we can discuss the situation.

**Academic honesty**

You are not allowed to work with anyone on the reading assignments. You are allowed to work with others (including each other, tutors, and me) on the homework problems in any way that helps you learn the material, but your write-up must be your own (and not copied directly from anyone else’s). You are not allowed to work with anyone on the take-home test, the timeline, or the project. You should not discuss your test, timeline, or project with anyone until the entire class has completed it and turned it in. If you have any questions on any of these, you are allowed to ask me but no one else.

For general information on issues of academic honesty, see the official University of Puget Sound academic honesty policy at:

http://www.pugetsound.edu/student-life/student-resources/student-handbook/academic-handbook/academic-integrity/

**University emergency response procedures**

Please review university emergency preparedness and response procedures posted at [www.pugetsound.edu/emergency/](http://www.pugetsound.edu/emergency/). There is a link on the university home page. Familiarize yourself with hall exit doors and the designated gathering area for your class and laboratory buildings.

If building evacuation becomes necessary (e.g. earthquake), meet your instructor at the designated gathering area so she/he can account for your presence. Then wait for further instructions. Do not return to the building or classroom until advised by a university emergency response representative.

If confronted by an act of violence, be prepared to make quick decisions to protect your safety. Flee the area by running away from the source of danger if you can safely do so. If this is not possible, shelter in place by securing classroom or lab doors and windows, closing blinds, and turning off room lights. Lie on the floor out of sight and away from windows and doors. Place cell phones or pagers on vibrate so that you can receive messages quietly. Wait for further instructions.

**Disabilities**

If you have a physical, psychological, medical or learning disability that may impact your course work, please contact Peggy Perno, Director of the Office of Accessibility and Accommodation, 105 Howarth, 253.879.3395. She will determine with you what accommodations are necessary and appropriate. All information and documentation is confidential.
Other

Feel free to contact me with any questions you have regarding the course. I look forward to an enjoyable class with you this semester!