

History and Design of Pinball
IGME-590.03
Spring 2025, Room MSS 2150
M,W,F @ 2:00-2:50

Professor Stephen Jacobs
Office MSS-3104

email: sj@mail.rit.edu
Office Hours: by appointment

Course Description:

This seminar course introduces the student to the history and design of the pinball industry and the related cultural and artistic aspects of American (and other) culture. The students in the course will take a field trip to The Strong National Museum of Play to look at (and play) some of the items in their collections, will attend several guest lectures during class time (most in person, some via the Internet), watch documentaries and entertainment films related to pinball, and build cardboard and software prototype games and play test them. Additional field trips may be added.

Important RIT deadlines:

Last day of add/drop is **January 21, 2025.**

Last day to withdraw with a grade of "W" is **April 4th, 2025.**

NOTE: Department policy states students have one semester to **challenge** any **grade**. After that, grades cannot be challenged.

Readings:

All materials external to class lecture, except where notified elsewhere in the syllabus and/or in lecture, will be provided and distributed electronically whenever possible. Students should come to class prepared to discuss all of the assigned readings.

Materials/Lab Fee:

Your professor has bulk purchased [Pinbox 3000 kits](#) for the class ahead of time. Be prepared to pay a \$55 directly to him for your kit the first week of classes. You will be given a receipt for the money you give him. Cash or Venmo please.

General Course Goals

1. Students will be able to describe the history of Pinball as a game and an industry.
2. Students will be able to describe the different aspects of Pinball machines and their mechanics

3. Students will develop physical and software game prototypes of Pinball games
4. Students will develop and improve Pinball playing skills as documented in course writing assignments

Course Content (Subject to change)

During the first portion of the course, students will primarily build their background knowledge of the history of the industry and the design of the games through lectures, documentaries, readings, and visits to The Strong National Museum of Play. During the second portion of the course, students will build a range of physical prototypes using the Pinbox 3000 cardboard kits and a set of additional playfields (Purchase of these is covered in the lab fee for the course, as mentioned above). Students may choose to make further purchases of small arts and crafts, 3D printing materials, electronics, or other supplies to complete their designs based on their choices of what to make. During the course's final section, students will build a software prototype of one of their physical pinball machines using Visual Pinball. Students will install this Free and Open Source package on their machines. Throughout the semester, students will write blog posts; topics for each post will be assigned in class.

Rather than taking a final exam, students will participate in a final capstone experience, playtesting their pinball prototypes at The Strong Museum, on a weekend date during the last week of classes or finals week, TBD, and then writing a final blog post on the results of the playtests to be submitted on the official final exam date.

Week	Topics	Events	Out of Class Work
Jan 13th	Student Intros, Pinball Kit Handoff and Pinball History Overview	TBD	Play some pinball
Jan 20th	Monday and Wednesday No Class.	Friday 24th Trip to Strong Collection with Jeremy and Martin @ The Strong	Play more Pinball @ The Strong
Jan 27th	SHED Visit Pinbox Overview, Pinball Documentary	Professor out Friday. Watch This Pinball History documentary on your own time before Monday's class	
Feb 3rd	Build Day(s)		Pinbox Bagatelle

			Designs submitted by Tuesday night the 11th.
Feb 10th	Guest Lecture, Bagatelle designs , Pinball is of the Body and Tommy info.	Guest Lecture. Joel Rosen, "Pinball as Information Design" on the 10th	
Feb 17th	Wednesday & Friday Bagatelle workdays	There is no class Monday, Tommy movie in Wegmans Theater Tuesday 6-10	
Feb 24th	Play bagatelles and Post Mortems		
Mar 3rd	A festival of guest speakers, Intro to VP	Monday, Greg Grillo of Flower City Amusements. Professor out Weds mar 5th, Friday the 7th George Gomez, EVP and Chief Creative Officer of Stern Pinball, will be dropping in via Zoom 😊	
Mar 10th	No Class, RIT Break	No Class, RIT Break	
Mar 17th	VP tutorial sessions all week	Professor at GDC	
Mar 24th	Pitch and build week for Pinbox Pinball Machines Possible speaker		Pinbox Pinball Designs submitted by Sunday Night the 23rd
Mar 31	Pinbox Playtest One and Tweak week Possible speaker	Pinball Artist and Restorer Ashley Ludwig Guest Lecture 4/4	Pinbox Bagatelle Blog Submitted by Sunday Night the 30th

Apr 7	Final Pinbox Playtest and VP start		PinBox Pinball Blog Post Due Sunday the 13th at Midnight
Apr 14	VP build and play days and Imagine and Strong Museum Scheduling		
Apr 21	VP tweak days	There is no class Friday the 25th, Imagine shift instead on 26th.	VP Pinball Blog Post Due Sunday the 27th at Midnight
Monday, Apr 28th	Final play test & run through day side by side	Stations with your Pinbox and Laptop. Kai and I will each come by 7 stations for you to practice a five minute demo/talk on your stuff	
Finals Week	Strong Play Test/Demo May 3rd during Pinball Day at The Strong		Demo Days Blog Post on the Imagine and Strong Museum experiences Due Midnight May 7th

Assignment Weights:

Blogs:	15%
Pinbox 3000 work	25%
Visual Pinball work	20%
Playtesting	15%
Public Demos	15%
Participation	10%

Use of Externally Created Art and/or IP in This Class:

Use of copyrighted material in this course is acceptable, as long as it falls under the provisions of [fair use](#). Sources must be documented on the blog posts about the projects you make.

Use of Artificial Intelligence in This Class:

You may use AI for the creation of graphics for your cardboard and virtual pinball machines. A brief paragraph on the prompts and engine(s) you used must be part of your blog posts on your projects for the course. If you run through several iterations of prompts and art, those must be included as well. If it is based on externally created art and/or ip you must cite the sources as above.

Your blog posts are about your experiences in doing the work that you did. As such, it has to be your own writing. Use of <https://www.grammarly.com/> to help with spelling, grammar and to make suggestions to clean up awkward syntax is acceptable.

Academic dishonesty:

In addition to the guidelines above, names of all other contributors should be listed in your blog posts. Any deviation from this requirement and the ones above **will** earn you an “F” for the course.

Attendance:

Much of the class's value will occur in the interactions during the class period and fully participating in all activities. Students are expected to attend all class sessions. Class participation will count for a large percentage of the grade. Repeated absences and tardiness will count strongly against the class participation assignment.

Use of English:

English writing and reading are prerequisite skills for this course. All written material in the course should be considered an English language deliverable and should be of the quality one might give to a client or an employer.

Assignment due dates and turn-in process:

All assignment due dates are noted under the assignment. Written assignments should be turned in electronically as specified by the instructor.

Grades of "Incomplete":

May be awarded to students, for an assignment or the course, who:

- Have been doing high-quality work since the beginning of the quarter.
- And
- Who are unable to complete the assignment or quarter due to documented circumstances beyond their control (health, death of a family member, etc.)

Class participation involves being present and prepared for class and engaging in discussion by actively listening and speaking.

Journals/Blogs involve keeping a weekly blog post related to class activities or project work

Assignments, like the rest of this syllabus, are subject to change.