David L. Largent  
Associate Lecturer of Computer Science  
dllargent@bsu.edu

BALL STATE UNIVERSITY  
2000 W. University Avenue  
Muncie, Indiana 47306  
765-285-8641

CS1 course overview

Students
Mostly CS majors or minors  
Significant minority of other majors  
Mostly first-year students

Course sections
3-5 sections per semester  
20-30 students per section

Pedagogical approach
Since fall 2013:  
Python  
Media computation  
Peer instruction  
Pair programming

Semester progression
Introduce computational and programming concepts in the context of image manipulation  
Project: Introductory  
Project: Image manipulation  
Project: Image collage and art show  
Revisit similar skills and concepts but apply to sound  
Project: Sound manipulation  
Revisit similar skills, but apply to text, and reading from and writing to files  
Final project: incorporates images, sounds, text, files, and user interaction into a text-based game

Image collage project
Third project, occurring in middle of semester  
Program creates a collage of modified images  
Open-ended: student may create any image they want  
Becomes part of art shows

Art shows
Section: Every submitted project collage is displayed and judged by students from that section.  
Public: Best collages from each section advance to public all-section art show. Judges determine awards for best collages.

Art show goals
Highlight ability to be creative in CS.  
Allow students to showcase their work to peers and others.  
Motivate students to be creative and engaged.  
Raise department visibility within university.  
Hope of attracting students to CS major or minor.

Judging
Section Show: Students in section vote in two rounds.  
Public Show: Judges are CS faculty and graduate assistants, other faculty, administrators, and students from specific upper-division CS course.  
All judges evaluate aesthetic quality. Judges with programming background evaluate code quality.  
Multiple awards are presented.

Public Art Show Logistics
Poster: Includes student's name, collage title, 8.5” x 11” color print of collage, small print of original image(s), and program code. Items are printed on paper and mounted on 20” by 30” foam-core poster board.  
Show handout: Compilation of show entries. Contains thumbnail of collage image, collage title, student's name, major, and brief artist statement.  
Web pages: Provides same information as handout. A winners page is created after the show.  
Winner posters: We create and post 21” by 36” printed posters displaying top all-section show winners for each semester. Recent semesters' posters are posted in highly-visible hallway display case. Older posters are framed and hanging in a CS classroom.

Student opinions

| The possibility of having my collage selected for the art show enticed me to work harder on the project than I might have otherwise. | Strongly Agree | Strongly Agree | Strongly Agree | Strongly Agree | Strongly Agree | Strongly Agree | Strongly Agree | Strongly Agree | Strongly Agree | Strongly Agree |
| The art show project was a turning point for me during the semester. | Strongly Agree | Strongly Agree | Strongly Agree | Strongly Agree | Strongly Agree | Strongly Agree | Strongly Agree | Strongly Agree | Strongly Agree | Strongly Agree |
| I have an above average interest and understanding of art. | Strongly Agree | Strongly Agree | Strongly Agree | Strongly Agree | Strongly Agree | Strongly Agree | Strongly Agree | Strongly Agree | Strongly Agree | Strongly Agree |
| I was impressed with the exhibited work. | Strongly Agree | Strongly Agree | Strongly Agree | Strongly Agree | Strongly Agree | Strongly Agree | Strongly Agree | Strongly Agree | Strongly Agree | Strongly Agree |
| I was surprised at how engaged I became while working on the art show project. | Strongly Agree | Strongly Agree | Strongly Agree | Strongly Agree | Strongly Agree | Strongly Agree | Strongly Agree | Strongly Agree | Strongly Agree | Strongly Agree |
| I appreciate having the art show web pages for each semester available for viewing. | Strongly Agree | Strongly Agree | Strongly Agree | Strongly Agree | Strongly Agree | Strongly Agree | Strongly Agree | Strongly Agree | Strongly Agree | Strongly Agree |

Judge opinions

| The art show project increased or reaffirmed my desire to continue taking computer science courses. | Strongly Agree | Strongly Agree | Strongly Agree | Strongly Agree | Strongly Agree | Strongly Agree | Strongly Agree | Strongly Agree | Strongly Agree | Strongly Agree |
| I consider myself an artist. | Strongly Agree | Strongly Agree | Strongly Agree | Strongly Agree | Strongly Agree | Strongly Agree | Strongly Agree | Strongly Agree | Strongly Agree | Strongly Agree |
| I was surprised at how engaged I became while working on the art show project. | Strongly Agree | Strongly Agree | Strongly Agree | Strongly Agree | Strongly Agree | Strongly Agree | Strongly Agree | Strongly Agree | Strongly Agree | Strongly Agree |
| I consider myself an artist. | Strongly Agree | Strongly Agree | Strongly Agree | Strongly Agree | Strongly Agree | Strongly Agree | Strongly Agree | Strongly Agree | Strongly Agree | Strongly Agree |

Conclusion

The addition of an art show has a generally positive impact on our students, the department, and how others view us.