MUSI 2350/4543 **Data Driven Music** **Summer 2015**

MTWRF 1:00 – 3:15 p.m.
Old Cabell Hall B011

Instructor: Jon Bellona
Office: room 211, Old Cabell Hall
Office hours: 3:15 - 4:15pm, MW
Phone: n/a
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Data Driven Music introduces you to methods and processes of data mapping for musical application. We will learn how to transform various sets of information (text, pictures, video, video game controllers, Twitter feeds) into musical sound and musical compositions. Topics include digital protocols (MIDI and OSC [Open Sound Control]), basic musical acoustics, and sonification.

We will actively listen to the world around us and design musical systems that unpack the ideas we hear and see. We will make considered choices about material and its relation to our creative intent. We will experiment with new technologies being unafraid of making things work.

Wednesday, May 20, is the last day to ADD a course; Thursday, May 28, is the last day to DROP a course; Friday, June 5, is the last day to WITHDRAW from a course.

Materials

1) An open attitude.

2) Scrap paper. Pencils, pens, erasers, rulers, etc.

3) Your voice or another musical instrument that you play. We will test our ideas in class using our instruments.

4) We will use lab computers, but you may choose to use your own. If you use your own machine, we will be using Max/MSP. Other software will be open source (e.g. Processing, online MIDI sequencers).

5) We will be using lab MIDI controllers. You may choose to bring your own or a USB video game controller as well.

Reading

No textbook will be required for this course. We will have supplementary .pdf readings, which will be assigned during class.

Attendance

I expect you to attend every class and will take attendance at the beginning of each meeting. We meet only twenty times! After two absences your attendance final grade will begin to drop (three points for each absence). I do not distinguish between excused and unexcused absences. Each late arrival to class counts as a half-absence.

If something is causing you to be consistently absent or late, please let me know by sending me an email. Whatever the content of the email may be, please begin it with "Dear Professor Bellona" and end it by signing your name (e. g. "best, Ludwig van Beethoven"). Please, no emoticons, acronyms, or slang.

Classwork, Homework, and Grading

Assignments are due at the beginning of class. We will normally spend some time in class going over assignments, so hand in whatever you have at the beginning of class, unless instructed otherwise. If you miss class but have done the homework, please submit via Collab. If the assignment is closed, please .zip up your files and immediately notify me by email with your work attached. A late assignment will be docked points commensurate with its lateness. If you need to submit an assignment via mail, my mailbox is located on the second floor of Old Cabell Hall, the same floor as my office, not in the Music Department office.

The honor code is in effect at all times. Grades will be given as percentages out of 100 and will be applied to homework, quizzes, and the final. **You will be graded on quantity as much as quality. The more risks you take, the better your grade. Sketches, prototypes, iterations all count toward the grade.**

If you know that you want to see me during my office hours, it is always best to send me an email in advance so that I can reserve that time for you. (For email correspondence etiquette, please see above.)

Students enrolled in MUSI 4543 must complete a final project commensurate of a major-level seminar. The type and scope of final project must be determined and approved by the instructor by Friday, Week 2.

Grading Breakdown

What	Value	Location/When
Assignments	6 points ea. (x10)	Listed on the syllabus as Hack, Interaction, Mapping
Daily Assessment	0.5 points ea. (x20)	Every day
Final Project Idea	2 points	Friday, Week 2
Final Project Iterations	1 points ea. (x3)	Listed as #1, 2, 3
One-Day Composition	5 points	Friday, Week 3
In-Class Compositions	2.5 points ea. (x2)	Any Composition Exercise Submit at any point in term.
Final Composition	15 points	Friday, Week 4

You will submit everything via Collab excerpt for daily feedback, in which you will hand in a physical copy at the end of each class.

TOPICS SCHEDULE

Week 1: The Analog World

			Activities/Assignments
Mon.	What is Data Driven Music?		Reading: Berlioz, Holmes
	Developing Creativity		Listening: Pärt, Trapp
	Parameters of Sound		
Tues.	Acoustic Instruments	ROOM B012	Mapping I: Piano
	Traditional Scores		Listening: Mumma
	Data Extraction I		Reading: Khan
Wed.	Sonification		Listening: Murray Schafer, Cage
	Graphic / Text-Based Scores		Reading: Nyman
Thur.	Documentation		Hack 1: mp3/score/video
	Working/Listening to Iterative Design		
Fri.	Discrete vs. Continuous Control		Interaction I: Buttons/Faders
	Max/MSP introduction		Reading: Puckette
			Resources: Giri, Winkler

Week 2: The Digital World

		Activities/Assignments
Mon.	No School. Memorial Day.	
Tues.	Wavetables	Reading: Holmes
	Final Project Idea	Final Project Idea
Wed.	Protocols: MIDI	Mapping II: Sequencer
	Sequencer	Listening: Waisvisz
	Pitch Set Theory	Reading: Eno
Thur.	Digital Instruments	Hack II: Controller
	USB Controllers	Listening: Xenakis (UPIC)
	Parametric Support	
Fri.	Record, Save, Playback	Final Project Iteration #1
	Final Project Idea	

Week 3: Listening/Transforming

		Activities/Assignments
Mon.	Protocols: OSC (Open Sound Control)	Interaction II: OSC network
	Data Extraction II	Reading: Reas
Tues.	Arrays	Mapping III: Iterative Sequence
	Loop Loop Loop	
	Patterns	
Wed.	Troubleshooting	Reading: John Luther Adams
		Listening: JLAdams
Thur.	Text Manipulation	Hack III: choice A: RSS
	RSS feeds (Rich Site Summary)	
Fri.	Twitter API (Application Programming Interface)	Hack III: choice B: Twitter

Node.js   Final Project Iteration #2

Week 4: Putting It All Together   Activities/Assignments

Mon.   One-Day Data Composition!

Tues.   Granular Synthesis   Listening: Xenakis, Modell 5
        Final Project Idea   Reading: Reas
                                                 Final Project Iteration #3

Wed.   Image Processing   Mapping IV: Pixel Music

Thur.   Interactivity   Interaction III: Video
        Video Processing (Quartz Composer or CCV)

Fri.   Final Projects (Sandbox Day)

FINAL – presentation of final projects. Saturday, June 13, 1:00 – 3:30pm
        http://www.virginia.edu/summer/calendar/exam.html

Activities/Assignments are given on the date listed. Unless specified all assignments are due at
the beginning of the next class period.

Additional Resources

Processing	http://processing.org
Open Sound Control	http://opensoundcontrol.org/introduction-osc
Pure Data	https://puredata.info/
Max/MSP	https://cycling74.com/

Special Needs: It is the policy of the University of Virginia to accommodate students with disabilities in accordance with federal and state laws. Any SCPS student with a disability who needs accommodation (e.g., in arrangements for seating, extended time for examinations, or note-taking, etc.), should contact the Student Disability Access Center (SDAC) and provide them with appropriate medical or psychological documentation of his/her condition. Once accommodations are approved, it is the student's responsibility to follow up with the instructor about logistics and implementation of accommodations. Accommodations for test taking should be arranged at least 14 business days in advance of the date of the test(s). Students with disabilities are encouraged to contact the SDAC: 434-243-5180/Voice, 434-465-6579/Video Phone, 434-243-5188/Fax. Further policies and statements are available at www.virginia.edu/studenthealth/sdac/sdac.html

For further policies and statements about student rights and responsibilities, please visit www.scps.virginia.edu/audience/students

If at any time, you have additional concerns, or you do not feel comfortable speaking with me, you may contact your Association Dean in the Office of the Dean of Students (924-7133). The Association Deans in Monroe Hall all have daily office hours.

The University also provides the following resources:

On Grounds Help:
Counseling & Psychological Services (CAPS): 434-243-5150
Maxine Platzer Lynn Women's Center: (434) 982-2252; Monday through Thursday, 9 AM to 5 PM; http://womenscenter.virginia.edu/counseling/
Mary D. Ainsworth Psychological Clinic: Phone: 982-4737; 108 Gilmer Hall; Email: ainsworth@virginia.edu

Off Grounds Help:
SARA (Sexual Assault Resource Agency): 434-977-7273
SHE (Shelter for Help in Emergency): Phone: (434) 963-4676;
Email: info@shelterforhelpinemergency.org;
Website: www.shelterforhelpinemergency.org