## Mohawk Valley Community College Utica and Rome, NY

**Syllabus for** Science of Sound PH106 **Instructor:** Jim Fiore, Professor

Semester: Spring 2019
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**Catalog Description:** Basic concepts of sound and human hearing are introduced. Topics include the history and development of basic acoustics and electricity, microphones, loudspeakers, signal processing, monitoring and recording systems, and an introduction to current digital audio.

Pre-requisites: An appropriate score on the Math Placement Test, or MA090 Essential Math Skills, or MA091 Introductory Algebra.

# **Student Learning Outcomes:**

- The student will demonstrate an understanding of the historical development of acoustics and audio, the methodology of its measurement, and its scope and relation to other disciplines.
- The student will demonstrate a basic knowledge of the fundamental nature of acoustics and human hearing, including an understanding of basic audio testing and audio electronics.
- The student will apply algebraic and graphical techniques to solve basic problems involving acoustics and audio.
- The student will demonstrate skills in the application of audio test equipment and experimental techniques through the laboratory via individual and/or group exercises and demonstrations, to observe, measure, document, and evaluate acoustical and audio phenomena.
- The student will effectively gather experimental data via the laboratory exercises, analyze data using mathematical techniques explored in the lecture, and communicate their conclusions via presentations and/or written reports.
- The student will demonstrate the ability to work effectively as part of a team in the laboratory, to investigate, document, and analyze natural phenomena in the area of acoustics and audio.
- The student will demonstrate an understanding of the application of basic audio and acoustic principles in everyday life, including the areas of music, speech, and the variance of human hearing across populations.

Text (optional): The Science of Sound 3E, Rossing, Moore & Wheeler, Addison-Wesley

**Office Hours:** MTF 12:20-1:15, W 2:30-3:25, F 11:15-12:10

**Communication Policy:** Generally, email is the most efficient means of getting a hold of me but always feel free to stop by my office. Make sure to check my home page and the course page first (see below).

**Web:** My home page is: <a href="www.mvcc.edu/jfiore">www.mvcc.edu/jfiore</a>. Virtually everything you will need to know about this course including associated grading standards and requirements can be found on the course web page via my site (<a href="PH106 Science of Sound">PH106 Science of Sound</a> link). This includes a complete week-by-week outline of chapter readings, homework, work sheets, lab assignments and approximate test dates. My current schedule is available on my home page along with utilities, manufacturer's links, lab and class guidelines, and other useful items.

**Grading Policy:** The final grade is based upon an accumulation of points. There will be two or three one-hour, in-class tests worth 100 pts each. The final will be worth 300 pts, lab work 200 pts, and approximately 100 pts for homework, quizzes and other projects. The instructor reserves the right to add or subtract up to 20 pts to (from) the total for class and lab participation, readiness, etc. This policy will be strictly adhered to in all but the most special cases. Lab work is an integral part of this course and thus students not attending lab and failing to hand in reports will automatically fail this course, regardless of test grades. Students not taking tests without a valid excuse will receive a grade of 0 on said tests. Make-ups are given at the discretion of the instructor. Tests may be curved up or down when appropriate. It is the student's responsibility to notify the instructor of absence. It is strongly urged that students stop in before small problems become major ones. Any portion of my free time (not just office hours) is available for you. Further details on grading and class policy may be found at the link <u>Class Policy</u> on my main web page.

**Labs:** Proper safety procedures are a must and will be reviewed during the first lab. Make sure that you come prepared (books, calculator, etc.). Some labs require a write-up. These should be neat and legible. Standard technical writing style is expected along with proper grammar and spelling. On occasion, other methods of assessment will be required in lieu of the standard report.

Reports are due no later than one week following the date performed. The first half-week late creates a one letter grade loss, the second half-week causes a second letter grade loss. Reports are not acceptable beyond one week late. Detailed information regarding the format and grading standards will be given during the first lab and can be found at the link <u>Common Lab Report Format</u> on my main web page.

**Technology Usage:** In general, student use of technologies not relevant to this classroom setting is prohibited. This includes, but is not limited to, cell phones, MP3 players, and video/photo capture devices. Instructor discretion may be exercised if the technology is a component of the learning environment or by prior student notification. **Smart devices will not be allowed during tests.** 

**Academic Integrity and Civility:** Unethical or dishonest behavior may result in failure of the course or other disciplinary actions. Further, professional and civil conduct is expected in both lecture and lab.

#### **Students with Disabilities**

I would appreciate hearing from anyone in the class who has any type of disability (e.g., physical, learning, mental health, vision, hearing, etc.) which may require some special accommodation. Please see me during my office hours so that we can discuss your needs. Before services can begin, you must also contact the Office of Accessibility Resources, 315-792-5644, in Room 129E of the Information Technology Building on the Utica Campus. Staff members will review your documentation, determine your eligibility for accommodations, and decide what those accommodations will be.

### **DGV Statement**

A few years ago, MVCC initiated a program titled "Diversity-Global View" (DGV), which gave each of our graduates a chance to participate in educational experiences designed to increase awareness of intercultural perspectives. Our goal in doing so was to enhance our students' understanding of the realities faced by individuals as a result of their race, ethnicity, cultural background, gender, sexual orientation, socioeconomic status, academic abilities and interests, age, religious beliefs, and physical ability. To that end, all graduates who matriculated into programs in the fall 2008 or more recently, or who have changed their major since 2008, are now required to complete the DGV components associated with the degree or certificate program in which they are enrolled. For more information please visit http://www.mvcc.edu/dgv.

### **Sustainability Statement**

Mohawk Valley Community College is committed to development and implementation of a comprehensive sustainability plan. To that end, we are beginning by asking students, faculty, and staff to actively participate in energy conservation measures and proper recycling on campus. The green bins located in classrooms are for recycling only, not for trash. These are single source recycling containers and no sorting is required. Any materials that cannot be recycled should be placed in garbage cans. It is also important to turn off lights and computers when leaving a room. Together we can make an impact on conserving our resources. Remember to reduce, reuse and recycle!

## **Civility Statement**

Mohawk Valley Community College is committed to civility in and out of the classroom. MVCC believes everyone has the right to an environment that creates the safe opportunity for educational, professional, and social development. MVCC recognizes its responsibility to model and encourage a culture of civil behavior.

### **Title IX Statement**

Title IX states that no person in the United States shall, on the basis of sex, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any education program or activity receiving federal financial assistance. Protections also extend to sexual harassment and sexual assault or violence that impairs or interferes with access to equitable educational and employment opportunities. For more information, please visit the Title IX website at <a href="https://www.mvcc.edu/title-ix">www.mvcc.edu/title-ix</a>