**Dr. K. Jakob Patten, PhD**

**Curriculum Vitae**

 (480) 703-3712 | kjp@asu.edu

Education:

**Arizona State University**

Tempe, Arizona Graduated: December 2017

**Doctor of Philosophy, Psychology**

**Arizona State University**

Tempe, Arizona Graduated: December 2014

**Master of Arts, Psychology**

**Arizona State University**

Tempe, Arizona Graduated: May 2009

**Bachelor of Science, Psychology** *Cum laude*

Professional Experience:

**Lecturer**

**Speech and Hearing Courses**

**Arizona State University**

Tempe, Arizona July 2019 – Present

Planned courses, constructed lectures and in-class activities, wrote exams for multiple classes each semester. Courses taught are Exploring Communication Disorders, Anatomical and Physiological Bases of Speech and Hearing, Language Science, Speech Science, and Biostatistics. Managed multiple undergrad and graduate teaching assistants and mentored several undergraduate students on Honors projects. Presented talks and worked on research projects with interdisciplinary SAMBA and SciHub groups. Courses taught: SHS 205, 310, 367, 375; HCD 300; MTC/PSY 598

**Researcher, Statistician**

**SAMBA Group**

**Arizona State University**

Tempe, Arizona December 2017 – December 2019

As part of the core research team, I help plan our avenues of inquiry, write grants and reports, carry out laboratory studies, and manage undergraduate research assistants. I also design our research so the resulting data is in the best format to answer our questions and use my statistics knowledge to analyze said data. When current methods of analysis and visualization are not what we need, I invent new methods that allow us to understand our data and easily convey that knowledge to an audience.

**Adjunct Lecturer**

**Research Methods**

**Arizona State University**

Tempe, Arizona January – December 2018

Planned course, constructed lectures and in-class activities, wrote exams for a total of 175 students in two sections. Managed 7 teaching assistants. Wrote a statistics manual for undergraduate students and beginning graduate students. Focused class lessons on principles of research and statistical inquiry that will be useful in all scientific disciplines, business, industry, and daily life/community science. Taught SAS, SPSS, and Excel statistical applications.

**President**

**Cognition, Action, and Perception Graduate Student Association**

**Arizona State University**

Tempe, Arizona August 2014 – December 2017

In charge of planning, organizing, budgeting, and running bi-annual conference between ASU and U of A. Aided in organizing several workshops and seminars focusing on working memory, narrative, and dynamic brain analysis. Began planning a conference between the ASU Psychology Department and a branch of the US Military’s PSYOPS group to discuss analysis techniques and theories (and am currently assisting with this conference in a non-official role).

**Teaching Assistant**

**Psychology 290**

**Arizona State University**

Tempe, Arizona August 2011 – August 2017

Teach lab section to a class of 25. Areas of instruction include scientific writing, APA style, sentence construction, grammar, research design, critical thinking, statistical theory, using statistics programs (such as SAS, SPSS, and Excel), statistical reporting, and oral presentation skills. I use a combination of lecture and hands-on examples to illustrate concepts. Student mastery is assessed through quizzes, in-class guided practice, and independent work.

**Director of Lab Operations**

**PEARL Lab**

**Arizona State University**

Tempe, Arizona January 2012 – August 2017

Manage all undergraduate research assistants (usually between 5 and 9), mentor RAs in proper conduct of research and data analysis, ensure honors and PGS 499 projects are progressing according to plan, field lab inquiries, lab upkeep. I also aid RAs in constructing posters, talks, and papers.

**Green Lab Coordinator**

**PEARL Lab**

**Arizona State University**

Tempe, Arizona August 2011 – August 2017

Enact new green policies, reduce carbon footprint of lab, educate lab members on recycling, etc. In this position I have increased the amount of waste recycled and reduced the amount of non-recyclable materials put into recycling containers. I have instituted a battery recycling center that RAs and grad students use to recycle batteries both from the lab and from their homes. The PEARL Lab is now a Level II Green Office and a Green Lab as per ASU EHS requirements.

**Teaching Assistant**

**Arizona State University**

Tempe, Arizona August 2010 – May 2017

Assisted with several in-person and online courses including Intro to Psychology, Statistics, Quirky and Mad Science (critical thinking class), Dog Behavior, Neurophysiology, and Neuropsychology. Managed class sizes of up to 450 students. Wrote exams, planned class activities and homework assignments, held regular office hours, and led monthly tutoring sessions.

Professional Affiliations:

Founding Member – Science of Art, Music, and Brain Activity (SAMBA)

Planning Committee Member – Science, the Arts, and Possibilities in Perception (on-hold since 2021)

Planning Committee Member – Auditory Perception, Cognition, and Action Meeting (2015 – Present)

Visiting Faculty Advisor – UArizona Legal Empiricism and Discussion Society (LEADS)

Students Mentored:

Honors Students

Jalen Jackson – 2022, Undergraduate Honors Committee Co-Chair

Anna Tesch – 2022, Undergraduate Honors Committee Chair

Bidur Pantha – 2021, Undergraduate Honors Committee Member

Eli Greenstein – 2019, Undergraduate Honors Committee Member

Theresa Lobato – 2019, Undergraduate Honors Committee Member

Lily Ludwig – 2019, Undergraduate Honors Committee Member

Meghan Franco – 2015, Undergraduate Honors Committee Member

Alicia Meshkow – 2014, Undergraduate Honors Committee Member

Gabriella Kissinger – 2013, Undergraduate Honors Committee Member

Undergraduate Research Assistants

Izzy Graham – 2023

Evan Fuess – 2023

Publications:

Baxter, L. C., Limback-Stokin, M., Patten, K. J., Cabello Arreola, A., Locke, D. E. C., Hu, L., Zhou, Y., & Caselli, R. J. (2023). Hippocampal connectivity and memory decline in cognitively intact APOE ɛ4 carriers. *Alzheimer’s & Dementia*.

Durojaye, C., Knowles, K. L., Patten, K. J., Garcia, M. J., & McBeath, M. K. (2021). When music speaks: An acoustic study of the speech surrogacy of the Nigerian dundun talking drum. *Frontiers in Communication*.

Patten, J. & McBeath, M. (2020). *The difference between shrieks and shrugs: Spectral envelope correlates with changes in pitch and loudness.* In Zacharakis, A., Saitis, C., & Siedenburg, K. (Eds.), Proceedings of the 2nd International Conference on Timbre (Timbre 2020), online conference.

Burdick, K. J., Bell, A. S., McCoy, M. C., Samuels, J. L., Jolly, A. S., Patel, S. S., Balas, J. B., Patten, K. J., & Schlesinger, J. J. (2020). Using multisensory haptic integration to improve monitoring in the intensive care unit. *Auditory Perception and Cognition,* 1-19.

Patten, K. J., Greer, K., Likens, A. D., Amazeen, E. L., & Amazeen, P. G. (2020). The trajectory of thought: Heavy-tailed distributions in memory foraging promote efficiency. *Memory and Cognition*, *48*, 772-787.

Patten, K. J., McBeath, M. K., & Baxter, L. C. (2019). Harmonicity: Behavioral and Neural Evidence for Functionality in Auditory Scene Analysis. *Auditory Perception and Cognition, 1*(3-4), 150-172.

Mennenga, S. E., Baxter, L. C., Grunfeld, I. S., Brewer, G. A., Aiken, L. S., Engler-Chiurazzi, E. B., Camp, B. W., Acosta, J. I., Braden, B. B., Schaefer, K. R., Gerson, J. E., Lavery, C. N., Tsang, C. W. S., Hewitt, L. T., Kingston, M. L., Koebele, S. V., Patten, K. J., Ball, H., McBeath, M. K., & Bimonte-Nelson, H. A. (2014). Navigating to new frontiers in behavioral neuroscience: Traditional neuropsychological tests predict human performance on a rodent-inspired radial-arm maze. *Frontiers in Behavioral Neuroscience*, *8*, 294.

In Press

Knowles, K. L., Patten, K. J., Durojaye, C., Dada, B. O., & McBeath, M. K. (2023). Yorùbá Speech Surrogacy with the Dùndún Talking Drum: Recognition Accuracy is a Function of Language Familiarity and Musical Training. *Music Perception.*

Patten, K. J. & McBeath, M. K. (2023). Scat Singing Reveals Natural Regularities in the Fundamental Frequency of Vowel Phonemes. *Auditory Perception and Cognition.*

Submitted Manuscripts:

Patten, K. J. (2021). Spatial cross-recurrence quantification analysis for multi-platform contact tracing and epidemiology research. Submitted to *Annals of Epidemiology.*

Patten, K. J., (2020). A better baseline: Pink noise is preferred to other commonly used auditory noise sources. Submitted to *Auditory Perception and Cognition.*

Funded Grants:

NEA Sound Health Network ASU internal submission (2019). Secured ASU limited submission slot.

Patten, K. J., Gardner, J. T., McClure, S., & McBeath, M. K. (2018). *Neuroscience of Music.* Submitted to ASU Institute for Social Science Research. $8,000.

Reviewed Articles:

Unknown (2023). Age-related differences in decision-making: Evidence accumulation is more gradual in older age. *Experimental Aging Research.*

Unknown (2023). Triggering misophonia: The importance of spectral information, temporal information, and action identification. *Auditory Perception & Cognition.*

Willimek, D. & Willimek, B. (2022). Revealing the mystery of emotions in sounds: The theory of musical equilibration explains the impact of ordered sounds as the listener’s identification with process of will. *Auditory Perception & Cognition.*

Buxó-Lugo, A. & Slevc, L. R. (2020). Do minor thirds characterize the prosody of sad speech? *Auditory Perception & Cognition*.

Caselli, G., Cecchi, G., Malacarne, M., & Masetti, G. (2020). Analysis of violin combination tones and their contribution to Tartini’s third tone. *The Journal of the Acoustical Society of America Express Letters.*

Bell, A. S., McCoy, M. C., Samuels, J. L., Jolly, A. S., Patel, S. S., Balas, J. B., & Schlesinger, J. J. (2019). Using multisensory haptic integration to improve monitoring in the intensive care unit. *Auditory Perception & Cognition*.

Jelnov, P. (2019). Comparison dimensions and similarity: Addressing individual heterogeneity. *Journal of Neuroscience, Psychology, and Economics.*

Liu, G. K. (2018). Evaluating gammatone frequency cepstral coefficients with deep neural networks for emotion recognition from speech. *The Journal of the Acoustical Society of America Express Letters.*

Published Abstracts:

Franco, M. E., Patten, K. J., da Silva, F., Holloway, S. R., & McBeath, M. K. (2013, April). Sensitivity to Sudden-Onset Stimuli and Sports Expertise. *Southwestern Psychological Association 2013 Meeting.* http://www.swpsych.org/conv\_program\_report.php#submission502

Patten, K. J., Holloway, S. R., & McBeath, M. K. (2012, November). Channeling the Cocktail Party: Soft Assembly Modulates Performance in a Dichotic Listening Task. *11th Annual Auditory Perception, Cognition, and Action Meeting Program* http://apcam.us/APCAM%202012%20Program.pdf

Patten, K. J. (2011, November). Last but not Least: Kahneman's Pleasure/Pain Function in the Domain of Music. *10th Annual Auditory Perception, Cognition, and Action Meeting Program.*

  http://apcam.us/APCAM2011Program.pdf

Research Manuscripts in Progress:

Patten, K. J. & McBeath, M. K. (2021). Dirty linguistics: Swear words exhibit sound symbolism that correlates with perceptual and neuroscientific findings of harmonicity.

Patten, K. J. & Crawford, T. M. (2020). Noise reduces noise: Acoustic broadband noise enhances motor performance*.* Submitted to *Auditory Perception and Cognition.*

Patten, K. J. (2020). Perceptual differences in afterimage hue in suspected tetrachromats.

Patten, K. J., McClure, S., McBeath, M. K. (2020). Statistical distribution of note structure in bird songs and their relationship to human music*.*

Patten, K. J., Da Silva, F., McBeath, M. K. (2020). RotCorr: An optimization technique for multidimensional scaling.

Patten, K. J., Landfair, J. (2020). What’s in a voice? Primary dimensions of preference across voices.

Johnson, A., Patten, K. J., McBeath, M. K. (2020). The Effects of Loudness Change on Tempo Perception and Action in Percussion.

Conference Talks:

Patten, K. J. (November, 2020). *Dirty linguistics: Swear words exhibit sound symbolism that correlates with perceptual and neuroscientific findings of harmonicity.* Presented at the 19th annual Auditory Perception, Cognition, and Action Meeting, virtual conference.

Patten, K. J. (October, 2020). *Good Moaning, America: Differentiating moans of pleasure and pain with acoustic features.* Presented at the 2nd ZAMM Conference, virtual conference.

Patten, K. J. (2018, November). *Mapping cognition with MDS, RotCorr, and MDStat*. Presented at the Society for Computers in Psychology yearly meeting in New Orleans, Louisiana.

Patten, K. J. (2018, October). *28 Shrieks Later: The sonic component of fear*. Presented at the Zombie Apocalypse Medicine Meeting in Tempe, Arizona.

Patten, K. J., McBeath, M. K. (2015, December). *To the core: Optimizing multidimensional scaling with RotCorr.* Presented at 5th annual ASU/U of A Cognitive Science Symposium in Tucson, Arizona.

Patten, K. J., McBeath, M. K., Krynen, R. C. (2015, November). *Why do eeks sound high and ohs sound low? Patterns of speech and song confirm a functional relationship between timbre and pitch.* Paper presented at the 14th annual Auditory Perception Cognition, and Action Meeting in Chicago, Illinois.

Patten, K. J. (2013, January). *Channeling the Cocktail Party: Monaural Modulation of Dichotic Listening.* Talk given at the 3rd annual ASU/U of A Cognitive Science Conclave in Tempe, Arizona.

Patten, K. J. (2012, November). *Channeling the Cocktail Party: Soft Assembly Modulates Performance in a Dichotic Listening Task.* Talk given at the 11th annual Auditory Perception, Cognition, and Action Meeting in Minneapolis, Minnesota.

Patten, K. J. (2011, November). *Last but not least: Kahneman’s pleasure/pain function in the domain of music.* Talk given at the 10th annual Auditory Perception, Cognition, and Action Meeting in Seattle, Washington.

Patten, K. J. (2010, April). *The Harmonics of Hades.* Talk given at the Towards a Science of Consciousness Conference in Tucson, Arizona.

Poster Presentations:

Tesch, A., Patten, K. J., Becker, V., & Knowles, K. (2022). *Sexual selection for human improvisational musical ability in the context of cognitive fitness*. Presented at 63rd Annual Meeting of the Psychonomic Society.

Patten, K. J. & McBeath, M. K. (November, 2020). *The pink punk problem: Natural regularities between spectral characteristics and fundamental frequency govern the perception and production of vowel sounds.* Presented at 61st Annual Meeting of the Psychonomic Society.

McBeath, M. K. & Patten, K. J. (November, 2020). *F you, A hole! Swear words more likely to contain vowels low in harmonicity and tone height.* Presented at 61st Annual Meeting of the Psychonomic Society.

Patten, K. J. & McBeath, M. K. (September 2020). *The difference between shrieks and shrugs: Spectral envelope correlates with changes in pitch and loudness.* Presented at Timbre 2020 virtual conference.

Patten, K. J. (November, 2018). *Singing variations of the same tune: Similarities in human and bird song structure*. Presented at the 17th annual Auditory Perception, Action, and Cognition Meeting in New Orleans, Louisiana.

Landfair, J., Patten, K. J. (November, 2018). *Beauty is in the ear of the be-listener: Primary dimensions of preference in voices*. Presented at the 17th annual Auditory Perception, Action, and Cognition Meeting in New Orleans, Louisiana.

Krynen, R. C., McBeath, M. K., Patten, K. J., Gory, S. D. (May, 2018). *Weems vs Wums: Random Shapes with Distinct Edges and Fast Motion are More Often Classified as “Weems”, and One’s that are Blurry and Slow as “Wums”.* Presented at VSS 2018.

Patten, K. J. (December, 2017). *Timbre as an Acoustic Natural Regularity.* Presented at the 2017 ASUA Cognitive Science Conclave.

Patten, K. J., McBeath, M. K. (2016, March). *To the core: Optimizing multidimensional scaling with RotCorr.* Presented at the ISSR Graduate Poster Competition 2016.

Patten, K. J., McBeath, M. K. (November, 2015). *To the core: Optimizing MDS with RotCorr.* Presented at the 2015 ASUA Cognitive Science Conclave.

Johnson, A., Patten, K. J., McBeath, M. K. (November, 2014). *The Effects of Loudness Change on Tempo Perception and Action in Percussion.* Presented at the 2014 Auditory Perception, Cognition, and Action Meeting.

Wilkinson, Z., Patten, K. J., McBeath, M. K. (November, 2014). *Human Auditory Biases Match Natural Regularities Found with Animal Calls.* Presented at the 2014 Auditory Perception, Cognition, and Action Meeting.

Holloway, S. R., Patten, K. J., McBeath, M. K. (November, 2014). *Ipsilateral processing of words and tones.* Presented at 2014 Psychonomic Society Meeting.

Johnson, A., McBeath, M. K., Glenberg, A., Yost, W., Patten, K. J. (April, 2014). *The Effects of Loudness Change on Tempo Perception and Action in Percussion.* Presented at the Barrett Honors Research Symposium.

Meschkow, A., Schweitzer, N., Robert, J., Patten, K. J. (April, 2014). *Measuring the Double Edged Sword: Use of Neuroscience Evidence in the Courtroom.* Presented at the Barrett Honors Research Symposium.

Wilkinson, Z., Patten, K. J., McBeath, M. K. (April, 2014). *Human Auditory Biases Match Natural Regularities Found with Animal Calls.* Presented at the Barrett Honors Research Symposium.

Cooley, C., Holloway, S. R., Patten, K. J., McBeath, M. K. (2013, November). *Absolute Pitch is not Related to Pitch Discrimination.* Poster session presented at the Society for Neuroscience Conference in San Diego, California.

Cooley, C., McMaken, M. R., Patten, K. J., McBeath, M. K. (2013, April). *Changing Channels: Differential Performance in Monaural and Binaural Conditions in a Dichotic Listening Task.* Poster session presentation at the 2013 Southwestern Psychological Association convention.

McMaken, M. R., Puglisi, C., Patten, K. J., da Silva, F., McBeath, M. K. (2013, April). *Contaminating the Pool: Repeated Dichotic Listening does Not Hurt Performance in a Cocktail Party-type Task*. Poster session presentation at the 2013 Southwestern Psychological Association convention.

Patten, K. J., Likens, A., Puglisi, C. (2012, May). *Walk this way: Ecological attenuation of facing bias in PLWs.* Poster presented at the 24th Annual Association for Psychological Science Conference in Chicago, Illinois.

Patten, K. J., Likens, A., Puglisi, C. (2011, December). *Attenuation of Facing Bias in Point Light Walkers.* Poster presented at 2nd annual ASUA Conclave in Tucson, Arizona.

Patten, K. J., McBeath, M. K. (2011, January). *The Harmonics of Hades.* Poster session presentation at the 2011 Auditory Cognitive Neuroscience Society, Tucson, Arizona.

Patten, K.J., Patten, S., Gallagher, S., Holloway, S. R., McBeath, M. K. (2011, January). *Vision vs Audition: The Struggle for Dominance with Ambiguous Harmonic Stimuli.* Poster session presentation at the 2011 Auditory Cognitive Neuroscience Society, Tucson, Arizona.

Patten, K. J., Brimhall, S., Holloway, S. R., Graham, N., McBeath, M. K. (2011, January). *The Fleeting Fundamental: The Disappearance of Virtual Pitch in a Dichotic Listening Task.* Poster session presentation at the 2011 Auditory Cognitive Neuroscience Society, Tucson, Arizona.

Patten, K.J., Patten, S., Gallagher, S., Holloway, S. R., McBeath, M. K. (2010, August). *Vision vs Audition: The Struggle for Dominance with Ambiguous Harmonic Stimuli.* Poster session presentation at the 2010 APA Conference, San Diego, California.

Patten, K. J., Brimhall, S., Holloway, S. R., Graham, N., McBeath, M. K. (2010, August). *The Fleeting Fundamental: How Virtual Pitch Virtually Disappears.* Poster session presentation at the 2010 APA Conference, San Diego, California.

Patten, K. J., Brimhall, S., Holloway, S. R., Graham, N., McBeath, M. (2009, April). *The Mysterious Missing Fundamental.* Poster session presentation at the 2009 College of Liberal Arts and Sciences Undergraduate Research Symposium, Tempe, Arizona.

Patten, K. J., Brimhall, S., Holloway, S. R., Graham, N., McBeath, M. (2009, March). *The Fleeting Fundamental.* Poster session presentation at the 2009 Psi Chi Undergraduate Research Fair, Tempe, Arizona.

Technical Publications:

Patten, K. J. [kjpatten@asu.edu]. (2020, March 25). *How to Use OBS Studio for Screencapture/Picture-in-Picture Lectures* [Video]. YouTube. <https://youtu.be/fbpsi0DsUe8>

Patten, K. J. [kjpatten@asu.edu]. (2020, April 18). *How to Use PsychoPy Experiment Building Software* [Video]. YouTube. <https://youtu.be/xmsHq7yL-tI>

Patten, K. J. (2018). *Statistical Analysis and Reference Managers for Research, Second Edition*. Unpublished technical manual, PEARL Lab, Arizona State University, Tempe, Arizona.

Patten, K. J. (2013). *PsychoPy Manual for Perceptual Science*. Unpublished technical manual, PEARL Lab, Arizona State University, Tempe, Arizona.

Patten, Jake. (2005; Updated 2006 & 2007). *News Department Guide to ProTools and Quick Reference Sheet.* Unpublished technical manual, The Blaze 1260 AM, Arizona State University, Tempe, Arizona.

Patten, Jake. (2007). *Production Department Expanded Guide to ProTools, Production Room, and Studio Equipment.* Unpublished technical manual, The Blaze 1260 AM, Arizona State University, Tempe, Arizona.

Invited Lectures:

**Teaching Online** (SHS graduate seminar)

**Arizona State University** Tempe, Arizona

September 2020

Discussed tips and tricks for effective online teaching, with a focus on enhancing instructor presence. Also discussed tools that can make classes more interactive for students and easier for instructors.

**Demystifying Stats with Crime, Music, and Beer** (LEADS seminar)

**University of Arizona** Tucson, Arizona

September 2020

Walked through the basics of statistics and data science, how they can be used in science, business, and law, and how they can add to and change our insights in any given field. Used interesting examples from the history of statistics such as Al Kindi’s first recorded use of central tendency, Gossett’s development of the *t*-test at Guinness, and my own work with crime and weather data.

**Introduction to PsychoPy and Pavlovia.org** (SAMBA seminar)

**Arizona State University** Tempe, Arizona

September 2019

Taught the basics of PsychoPy and Pavlovia.org to grad students and researchers by walking them through construction of a simple Stroop task. Provided templates and text-based guides for constructing an experiment. Fielded questions about other types of experiment construction.

**Natural Regularities in Sound and Music** (Psychology of Music)

**Arizona State University** Tempe, Arizona

February & September 2019

Introduced the concept of natural regularities with concrete examples from vision science. Moved on to demonstrate auditory natural regularities and the illusions that they can give rise to such as the difference between the true Doppler Shift and the Doppler Illusion. Then I went into my work of finding new natural regularities by examining existing illusions such as the illusorily higher pitch of the *i* phoneme relative to the *ʌ* phoneme.

**Multidimensional scaling** (Grad-level Sensation and Perception, SAMBA)

**Arizona State University** Tempe, Arizona

 Feb 2016, Jan 2018, Sept 2019

Introduced the dimension reduction method called multidimensional scaling (MDS) and the underlying theories. Outlined current use in research, promoted additional uses and benefits. Introduced an MDS optimization procedure I developed that elevates MDS from data visualization and dimension reduction to real statistical analysis tool. Outlined similarities and differences between MDS, principal components analysis, and factor analysis.

**Experimental Design** (Research Methods)

**Arizona State University** Tempe, Arizona

February 2017

Explained several types of experimental design including the benefits and logistical concerns of between- and within-subjects designs, pretest and posttest designs, and repeated measures designs. Used multi-modal examples to engage students and cement concepts.

**Auditory Neuropsychology** (Cognitive Neuroscience)

**Arizona State University** Tempe, Arizona

November 2016

Traced the perception of sound from a pressure wave in the air through the ear to the auditory cortex. Used a combination of visual and auditory demonstrations to explain mechanical, neural, and cognitive processes. Connected concepts from the book to my own research to show trajectory of current science.

**Visual and Auditory Illusions** (Sensation and Perception)

**Arizona State University** Tempe, Arizona

April 2016

Discussed several visual and auditory illusions, the science and theories behind them, and the theoretical perspectives of cognition that explain them. Used a combination of images, sounds, and tactile modalities.

**Neurophysiology of Schizophrenia** (Neurphysiology)

**Arizona State University** Tempe, Arizona

April 2016

Introduced schizophrenia from an observer’s standpoint, then delved into the neurophysiology underlying the positive, negative, and cognitive symptoms of the disorder. Discussed causes from genetic and epidemiological standpoints.

**Sensation and Perception** (Psychology 101)

**Florence State Prison Inmate Education** Florence, Arizona

September 2015

Discussed the basics of perception through various illusions and engaged students in a discussion about perception being learned through natural regularities (invariants) or partly innate. Student reports of the lecture were extremely favorable.