



## **2:00 - 2:20 p.m. Mathematics**

### **Mixed-Design ANOVA Approach to Investigating Larval Fish Distortion**

Fish are most sensitive and vulnerable to changes in their immediate environment during the larval stages of their development. Data obtained from measuring the total length deformation of post-ossification larval fathead minnows fixed in a 10% formalin solution for a varying number of hours prior to preservation in a 90% alcohol solution was analyzed using a mixed-design ANOVA with treatment groups as the between-subjects factor and time as the within-subjects factor. Results showed that time spent in the fixing solution significantly influences the total length deformation across treatment groups. Therefore, utmost care must be taken when choosing a fixative and/or preservative method, as each significantly impacts the utility of fish larvae analysis.

Presenter: Endora Roberts  
*Faculty Sponsor: Lidia Dobria*

## **2:20 - 3:00 p.m. Chemistry**

### **The Health of the Chicago River: Factors Affecting Eutrophication**

Eutrophication is a process where a body of water is enriched with nutrients, resulting in algae and cyanobacterial growth, a depletion of oxygen supply, and ultimately decreased aquatic life. Urban agriculture, industrial and human waste, are the main factors for increasing nitrates and phosphates levels in the Chicago River. Our hypothesis is that an increase of nitrates and phosphates concentrations, along with an increase in temperature and decrease in participation, lead to an increase in eutrophication. Using Data Mining techniques, we collected seventeen years of precipitation and chlorophyll data from MyNASA, MWRD (Metropolitan Water Reclamation District), and NOAA (National Oceanic and Atmospheric Administration). We also gathered nitrates and phosphates data from six sites of the Chicago River, downstream and upstream of MWRD. Our results show that the increase of eutrophication is directly correlated with an increase of water temperature, nitrate and phosphate concentration, and is inversely proportional with precipitation.

Presenters: Yousef Abushalbak, Kimberly Bolanos, Francisco Calderon, Truc Lam,  
Musa Musa, Jesse Ramos  
*Faculty Sponsor: Doris Espiritu*

**Thursday, April 11**

**9:00 a.m. – 3:00 p.m. S-247**

9:00 – 9:30 a.m. Welcome and Refreshments

**9:30 - 10:15 a.m. Literature 115**

**Love and Lust in Early Modern and Romantic Poetry**

In this presentation, students will discuss the theme of Love and Lust in British Literature. The works under discussion include Shakespeare's Sonnets, John Donne's secular and religious poems, and various Romantic writers." Specifically, among other things students will discuss the foci of their mid-term and final research papers and any other salient topics from their research for class projects and presentations.

Presenters: Hedaya Askar, Lileana Calvillo, Megan De Guzman, Olivia Dunleavy, Louis Khan, Arhat Luna, Izaki Metropoulos, Roberto Pacheco, and Evelia Pedroza

*Faculty Sponsor: Michael Petersen*

**10:20 - 10:50 a.m. English 102**

**Trauma on the brain: A Psychoanalysis and Neuropsychological Study of Shakespeare's Characters.**

This project presents a modern psychoanalysis and neuropsychological study of Shakespeare's characters. Many of his characters (ex. Macbeth) have been riddled with guilt and confusion, consequently from their wrongdoings and deviation in society. These experiences have also led to moral ambiguity and confusion, as well as prolonging negative behavior. Although behavioral changes can easily be observed through dialogue and plot, I aim to consider—other than external influence from other characters—the primary contributor of it that cannot easily be recognized by the naked eye: neurological damage and alterations. In a study completed by Harvard Medical School, researchers discovered how toxic stress can change a brain's architecture, specifically lessening connections between neurons. The lack of connections can later cause cognitive and critical thinking issues, leading to an inevitable negative change in behavior. By completing my analysis, I hope to offer an alternative, modern perspective on the minds of Shakespeare's characters.

Presenter: Sophia Metropoulos

*Faculty Sponsor: Michael Petersen*

**11:00 – 11:50 a.m. Speech 101**

**Exploring Intersectional Feminist Approaches to Peacebuilding part I**

What kind of world do you want to create? Join us in this interactive session as we apply intersectional feminist concepts to generate inclusive and transformative visions of peace and justice to decrease the prevalence of street harassment and sexual assault.

Facilitators: Speech 101 Women's and Gender Studies (WGSS) Students

*Faculty Sponsor: Susan Colon*

11:50 a.m. - 12:10 p.m. Break

**12:10 - 1:25 p.m. English 102: Slavic Literature in the Late 20<sup>th</sup> Century: Becoming Postmodern**

**1) How to Interpret a Novel**

This presentation will elaborate and defend character-centric analysis, as opposed to author-centric analysis. The character-centric analytical method is derived from Milan Kundera's *The Unbearable Lightness of Being*, published in 1984, and is applied to Kundera's other work, *Identity*, published in 1998. This analytical method invigorates the study of what it means *to be*.

Presenter: Trevor Knepp

*Faculty sponsor: Natasha Todorovich*

**2) *The Inner Side of the Wind* by Milorad Pavić**

This presentation will analyze *The Inner Side of the Wind* by Milorad Pavić and elaborate how the work challenges literary structure through ambiguity. The talk will discuss the narrator-audience connection, analyze the themes of time and gender while demystifying the significance of duality and pairing.

Presenter: April McGlashon

*Faculty sponsor: Natasha Todorovich*

**3) Postmodernism and the Break of Structure in *The Inner Side of the Wind* and *On the Road to Babadag***

This presentation will discuss *The Inner Side of the Wind* by Milorad Pavić and *On the Road to Babadag* by Andrzej Stasiuk. The presenters will elaborate how these two postmodern literary works challenge the concept of linear time and geographic borders.

Presenters: Thahabeia Ayyad and Pahola Mercedes Nova

*Faculty sponsor: Natasha Todorovich*

**1:30 p.m. – 1:50 p.m. Speech 101**

**Exploring Intersectional Feminist Approaches to Peacebuilding part II**

Join Speech 101 students in a conversation about everyday violence, its causes, and ways to stop it. This discussion is an extension of class assignments that encourage students to articulate their visions of peace.

Facilitators: Speech 101 Women's and Gender studies (WGSS) Students

*Faculty Sponsor: Susan Colon*

2:00 - 3:00 p.m. Literature 111 and Literature 121

### **1) An Intersectional Analysis of the Protagonists of Nella Larsen's *Quicksand* and Zora Neale Hurston's "Sweat"**

Through an intersectional lens, specifically examining the intersections of geographic location, class, and color in African American female protagonists, this project will compare the experiences of Helga Crane in *Quicksand* and Delia from "Sweat." This is a work in progress.

Presenter: Stephanie Maier  
*Faculty sponsor: Helen Doss*

### **2) Abstract Poetry: Evocative Rule Breaking, e.e. cummings, and his Contemporaries**

The project will analyze two of examples of abstract poetry—poetry that tries to break established conventions, ideologies, and structures to evoke specific states of mind or emotions in its poet and reader. The work of e.e. cummings will be the basis for the presentation with his contemporaries serving as points of contrast and comparison, e.g., in the context of shifting poetic priorities and styles. This is a work in progress.

Presenter: Stuart Arias  
*Faculty sponsor: Helen Doss*

### **3) Maya Angelou and Rupi Kaur: Resilience, Power, and Transformation through Poetry**

This project is an exploration of the resilience, power, and impact of transformational women's poetic writing. In particular, this project will analyze and compare the works of Maya Angelou and Rupi Kaur. This is a work in progress.

Presenter: Irma Lucelly Carvajal  
*Faculty sponsor: Helen Doss*

### **4) Frida Kahlo's Poetry and Art: An Exploration of Resistance to Social Injustices**

This project will explore the ways the art and poetry of Frida Kahlo reveal strategies for resisting social injustices such as police brutality and socioeconomic disparities. Ultimately, this project seeks to examine the ways Kahlo indicates in words and visually the possibility of perseverance. This is a work in progress.

Presenter: Sophia Valdez  
*Faculty sponsor: Helen Doss*

### **5) Women's Empowerment in Poetry**

This project will explore the evolution of women's rights and progress despite multiple obstacles and challenges. Ultimately, this project sees the works of contemporary women of color poets as both guide posts for and evidence of women's resilience. This is a work in progress.

Presenter: Ashley Lopez  
*Faculty sponsor: Helen Doss*

All presentations will be held in the Science Building (S-247)

*Event Coordinators: Profs. Natasha Todorovich and Susan Colon*

*Honors Program Coordinators: Profs. Susan Colon and Natasha Todorovich*

*Faculty sponsors: Professors Tanveer Azmat, Susan Colon, Lidia Dobria, Helen Doss,  
Doris Espiritu, Michael Petersen, Natasha Todorovich*

*Thank you to our student presenters and to our faculty sponsors!*

