**EEL 6908 Syllabus**

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| **Faculty Mentor** | **Dr. Chinwendu Enyioha** |
| **Department** | **Computer and Electrical Engineering** |
| **Office** | **HEC-416** |
| **Phone** | **(407) 823-0122** |
| **Email** | **cenyioha@ucf.edu** |

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| --- | --- |
| **Course Title** | **Directed Independent Research (6908)** |
| **Semester/Year** | **Fall 2025** |
| **Credit hours** | **3** |
| **Course Description** | **Continuation of research in the field of speech reconstruction and enhancement algorithms.** |
| **Learning Outcomes** | Practical understanding of optimal estimation, cepstral analysis, and multi-agent sensor fusion |
| **Meeting Location** | HEC-416 |
| **Meeting Frequency** | **Biweekly** |
| **Requirements** | Submit manuscript to IEEE |
| **Evaluation Criteria** | **Paper Acceptance** |

**Course Overview:**

Tobiah Bower will be working on a research project/paper.

**Student Learning Outcomes: (select those that apply and add others)**

**Students will:**

Strengthen oral and written communication of research

Develop critical thinking skills

Improve their information fluency skills

Strengthen peer reviewing skills

Gain an awareness of ethical issues in research

Strengthen their ability to formulate appropriate research questions

Evaluate primary and secondary literature sources

Synthesize literature

Learn how to use research related equipment or technology

Gain skills in quantitative or qualitative data analysis

Improve knowledge of academic writing conventions of the discipline

Learn about different dissemination modes

**Deliverables:**

Research Paper

**Timeline (experienced researcher, preparing to publish):**

|  |  |
| --- | --- |
| Week | Due |
| 1 | Research Contract due |
| 2 | Meet with research librarian |
| 3 |  |
| 4 | Background section due |
| 5 |  |
| 6 | Methods section due |
| 7 |  |
| 8 | Results/discussion section due |
| 9 |  |
| 10 | Conclusion and abstract section(s) due |
| 11 |  |
| 12 | Draft 1 of whole manuscript due |
| 13 |  |
| 14 |  |
| 15 | Submit manuscript to IEEE |

[**FCTL Syllabus Design Checklist**](http://www.fctl.ucf.edu/TeachingAndLearningResources/CourseDesign/Syllabus/content/syllabuschecklist.pdf)

[**FCTL Syllabus Statements Page**](http://www.fctl.ucf.edu/TeachingAndLearningResources/CourseDesign/Syllabus/statements.php)

**Campus Resources: Include any of these that you so choose.**

**The Office of Undergraduate Research**

Undergraduate Research (OUR) offers workshops to help students get started and develop skills needed for success in research, like designing research posters, writing proposals, and communicating their work. OUR Peer Mentors also offer individualized assistance for topics such as presenting and publishing research. For more information, visit <http://our.ucf.edu>.

**Showcase of Undergraduate Research Excellence (SURE)**

SURE is a poster-based forum for UCF undergraduates to present their research and creative projects to the broader university community. Undergraduates from all disciplines are encouraged to present current or recently completed academic projects, showcasing the diversity of topics, approaches, and interests at UCF.

**Florida Undergraduate Research Conference (FURC)**

FURC is an annual, multidisciplinary conference open to all undergraduate researchers to present their research in a poster forum. Every year, the conference will be hosted at a different university in the state. In addition to research presentations, there are also exhibitors from graduate programs and other opportunities to expand your research resume. Registration and travel costs for student accepted to this conference can be covered by the FURC Travel Award.

**The Pegasus Review: UCF Undergraduate Research Journal**

*The Pegasus Review: UCF Undergraduate Research Journal* solicits contributions from undergraduate students in all disciplines. Submissions are double-blind reviewed by faculty members—a process that provides students with a first look at the process of converting research and creative projects into publishable scholarly work. Journal articles are cataloged through EBSCO, which makes the research available to library databases. For more info visit <http://urj.ucf.edu>.

**Honors in the Major (HIM) Undergraduate Thesis**

HIM is an undergraduate research program that provides eligible students from all majors the opportunity to engage in independent and original research. It is modeled after the Master’s degree level thesis, in which students develop their own research question, conduct research, and then write and defend their thesis with the help of a faculty committee.

This program requires that students enroll in at least two courses: Directed Readings I (4903H) and Thesis I (4970H). Students have the option to enroll for up to four semesters. Upon successful completion of the program, students earn the Honors in the Major distinction on their diplomas and transcripts.

Note: These courses typically count as upper-division electives, but make sure to consult your degree plan and catalog. For more information about this program, visit the [The Burnett Honors College](https://honors.ucf.edu/research/).

**Degree program elective credit?**

This course may count as an upper-division elective for some majors. For more information, please visit your academic advisor.

**Integrity and Ethics**

Academic research is an inquiry or investigation that makes an original intellectual or creative contribution to the discipline. The importance that research be original cannot be understated. Plagiarizing another researcher’s work as one’s own or falsifying or misrepresenting a study’s results reflects poorly on everyone involved in the research. This means the student, the faculty member(s), and the University as a whole could come under negative scrutiny for plagiarizing research.

Similarly, it is important to maintain ethical standards when conducting research. The Institutional Review Board (IRB) is the University organization that ensures that all research involving human subjects meets ethical standards.

**UCF Cares**

As you conduct academic research, you may experience challenges, such as finding a balance between your research and your classes, work, and personal well-being. UCF has a multitude of resources available to all students. Please visit [UCFCares.com](http://ucfcares.com/) if you are seeking resources and support. Free services and information are included for a variety of student concerns, including but not limited to alcohol use, bias incidents, mental health concerns, and financial challenges. You can also e-mail [ucfcares@ucf.edu](mailto:ucfcares@ucf.edu) with questions or for additional assistance. You can reach a UCF Cares staff member between 8 a.m. and 5 p.m. by calling 407-823-5607. If you are in immediate distress, please call Counseling and Psychological Services to speak directly with a counselor 24/7 at 407-823-2811, or please call 911.

**University Writing Center**

The University Writing Center (UWC) offers writing support to students from first-year to graduate in every discipline. Tutors provide help at every stage of the writing process, including understanding assignments, researching, drafting, revising, incorporating sources, and learning to proofread and edit. The UWC’s purpose is not merely to fix or edit papers, but to teach writing strategies that can be applied to any writing situation. Consultations are available for individuals and small groups. You may schedule a 45-minute appointment by clicking the *Success Resources* tab on Webcourses, calling the UWC at 407-823-2197, or through the UWC website, <http://uwc.cah.ucf.edu>.

**Library Resources**

Since conducting research requires literature searches and reviews, you are expected to know how to use the library's resources. If you are not familiar with using the library, please ask for assistance from the library's personnel, take workshops provided by the library, or visit the library's website (<http://library.ucf.edu>).

**Student Resources**

Conducting thorough research can require a substantial time commitment, so **it is recommended that you schedule about <X> hours per week to devote to your research**. Your background knowledge/experience and other variables may require you to spend additional time. Please plan accordingly by scheduling time on your calendar now. Several factors influence student academic performance and long-term learning. UCF offers a wide range of free academic resources to support student success, including services offered by [SARC](http://sarc.sdes.ucf.edu/services) (Student Academic Resource Center), [UCF Libraries](https://library.ucf.edu/services/services-for-undergrads/), and the [University Writing Center](http://uwc.cah.ucf.edu/).