Course Number and Title  EEL3112: Circuits II

1. **Catalog Description** (4 Cr.) – Continuation of EEL 3111 with emphasis on circuit-enabled applications of convolution, Fourier series, and Laplace and Fourier transforms

2. **Pre-requisites and Co-requisites** - EEL 3111-Circuits 1, EEL 3135-Introduction to Signals & Systems, EEL 3105-Analytical Methods in Electrical Engineering

3. **Course Objectives** - The topics in this course are part of the fundamental theory of electrical engineering and provides an in-depth analysis, design, and implementation skills in those areas of electrical engineering needed to solve problems in the domain of electrical engineering.

4. **Contribution of course to meeting the professional component** - Develop design and analysis skills and capabilities as they apply to basic electrical engineering circuit theory, practice, and applications.

5. **Relationship of course to program outcomes**: - EE1, EE2, a. k.

6. **Instructor  Dr. Fred J. Taylor**
   a. 441 NEB
   b. (352) 392-2692
   c. fjt@ece.ufl.edu
   d. Course Web Site: Sakai (lss.at.ufl.edu)
   e. Office hours: Open

7. **Teaching Assistant - not assigned at this time**
   a. Office location
   b. Telephone
   c. E-mail address
   d. Office hours

8. **Meeting Times**  
   Period 5

9. **Class/laboratory schedule,**  
   Three (3) in-class sessions of 50 minutes per week - MWF  
   One (1) 50 minute recitation/review session per week - Thur.

10. **Meeting Location**  
    MWF NEB 202  
    Thur. MCCA G186

11. **Material and Supply Fees**  
    None
12. **Textbooks and Software Required**
   a. Title: Electric Circuits, Prentice Hall (Pearson)
   b. Author: Nillson and Riedle,
   c. 2011, 9th edition
   d. ISBN: 13-978-0-3-611499-4

13. **Recommended Reading**
   None

14. **Course Outline**
   - Introduction to continuous-time signals and systems and EEL3111 topics
   - Continuous-time linear systems: zero-state and zero-input responses, impulse response and convolution
   - Lumped-parameter systems and circuits – differential equations: solution in the time domain, natural modes, impulse response. BIBO stability
   - Spectra of periodic signals: Fourier series. Response of LTI systems to periodic signals: frequency response
   - Spectra of a periodic signals: Fourier transform. Frequency response of LTI systems and impulse response
   - Frequency response of systems and circuits modeled by diff eqs; passive one-ports, impedance functions
   - Laplace transform and its application to circuits and system analysis: system function, poles, zeros, natural modes, stability

15. **Attendance and Expectations** - Attendance not required. Academic honor code strictly enforced.

16. **Grading** – 4 in-class Exams (96%), auto-graded homework (4%), optional final.

17. **Grading Scale** (90-100 A, 85-89 B+, 80-84 B, etc.)
   A C- will not be a qualifying grade for critical tracking courses. In order to graduate, students must have an overall GPA and an upper-division GPA of 2.0 or better (C or better). Note: a C- average is equivalent to a GPA of 1.67, and therefore, it does not satisfy this graduation requirement. For more information on grades and grading policies, please visit: [https://catalog.ufl.edu/ugrad/current/regulations/info/grades.aspx](https://catalog.ufl.edu/ugrad/current/regulations/info/grades.aspx)

18. **Make-up Exam Policy**
   Requires a verifiable medical excuse or certification of official University business.

19. **Honesty Policy** – All students admitted to the University of Florida have signed a statement of academic honesty committing themselves to be honest in all academic work and understanding that failure to comply with this commitment will result in disciplinary action. This statement is a reminder to uphold your obligation as a UF
student and to be honest in all work submitted and exams taken in this course and all others.

20. **Accommodation for Students with Disabilities** – Students Requesting classroom accommodation must first register with the Dean of Students Office. That office will provide the student with documentation that he/she must provide to the course instructor when requesting accommodation.

21. **UF Counseling Services** – Resources are available on-campus for students having personal problems or lacking clear career and academic goals. The resources include:
   - UF Counseling & Wellness Center, 3190 Radio Rd, 392-1575, psychological and psychiatric services.
   - Career Resource Center, Reitz Union, 392-1601, career and job search services.

22. **Software Use** – All faculty, staff and student of the University are required and expected to obey the laws and legal agreements governing software use. Failure to do so can lead to monetary damages and/or criminal penalties for the individual violator. Because such violations are also against University policies and rules, disciplinary action will be taken as appropriate. We, the members of the University of Florida community, pledge to uphold ourselves and our peers to the highest standards of honesty and integrity.