DEPARTMENT OF ELECTRICAL ENGINEERING
(*TO BE USED FOR BULLETIN /CURRICULUMS YEARS 2022 OR AFTER)*
CAREER PLAN: B.S. IN ELECTRICAL ENGINEERING

First and Last Name : _____

Advisor : _____

Submission date : _____

What are your career objectives? i.e. "I would like to work in the automotive industry, developing power electronics for electric cars or work to develop control systems for manufacturing or work in the wireless industry developing smartphones".

Among the 300-level courses you have taken so far, which did you find the most interesting? Which do you feel most competent at? Does this influence your career objectives?

Career Plan Electives (18 hours)

Career Concentration (12 hours): This includes **all ELCT courses numbered 430 and higher** and that are supportive of the career objective described above.

Career Concentration #1 (3 CR)			**Semester**		
Career Concentration #2 (3 CR)			**Semester**		
Career Concentration #3 (3 CR)			**Semester**		
Career Concentration #4 (3 CR)			**Semester**		

Career Competitiveness (6 hours): This includes **non – ELCT courses at 300 level or higher or all ELCT courses numbered 430 and higher** that are logically consistent with and supportive of the described career objectives. In some cases, these courses might also satisfy requirements for a minor. See list of approved courses. **Please be aware that courses may have prerequisites that you may need to meet.** To request approval of courses not on this list, contact the EE dept.

Career Competitiveness #1			**Semester**		
Career Competitiveness #2			**Semester**		

The further the courses from EE/Engineering, the stronger the justification needed so explain below why these two courses are relevant to your career objective:

Student's Signature: _____ **Date:** _____
Undergraduate Director's Signature: _____ **Date:** _____

Sample Career Plans are posted online. It's your responsibility to ensure all prerequisites are satisfied. Your Career Plan can be amended at any time by filing a new form.

Return this Form to Meredith Higgs, EE Department at Fievet@cec.sc.edu to start the approval.

Sample Career Plans

Here are some sample Career Plan courses based on specialization areas. These should be considered as examples and not as rules or directions. You will receive guidance during the advisement process and we recommend speaking with one of the department's Faculty Advising Fellows about this.

For Specialization in

Wireless Communications and RF Circuits/Systems

ELCT 432	Fundamentals of Communication Systems (Offered Fall Semester)
ELCT 510	Photovoltaic Materials and Devices (Offered Spring Semester)
ELCT 521	Introduction to Microwaves (Offered Spring Semester)
ELCT 562	Wireless Communications (Offered Spring Semester; ELCT 432 is prerequisite)
ELCT 563	Semiconductor Devices for Power, Communications and Lighting (Offered Fall semester)
ELCT 564	RF Circuit Design for Wireless Communications (Offered Fall Semester)

Power, Energy and Control (Power Electronics; Control & Automation)

ELCT 530	Industrial Controls (Offered Fall Semester)
ELCT 551	Power Systems Design and Analysis (Offered Fall Semester)
ELCT 531	Digital Control Systems (Offered Spring Semester)
ELCT 554	Integration of Photovoltaics in Modern Power Systems (Offered Fall or Spring Semester)
ELCT 563	Semiconductor Devices for Power, Communications and Lighting (Offered Fall Semester)
ELCT 572	Power Electronics (Offered Fall Semester)
ELCT 533	System Health Management (Offered Spring Semester)

Electronic Devices and Materials (Microelectronics & Signal Integrity System)

ELCT 510	Photovoltaic Materials and Devices (Offered Spring Semester)
ELCT 521	Introduction to Microwaves (Offered Spring Semester)
ELCT 563	Semiconductor Devices for Power, Communications and Lighting (Offered Fall Semester)
ELCT 564	RF Circuit Design for Wireless Communications (Offered Fall Semester)
ELCT 554	Integration of Photovoltaics in Modern Power Systems (Offered Fall or Spring Semester)
ELCT 572	Power Electronics (Offered Fall Semester)

Non ELCT Courses and Other Specializations

You can develop your own specialization by choosing the appropriate ELCT career plan electives. In addition, you can take up to 6 credit hours of courses from departments outside of ELCT e.g., courses on software, business, marketing with department's approval. Non-ELCT courses that have been preapproved by the department are listed below. **Please be aware that courses may have prerequisites that you may need to meet.** To request approval of courses not on this list, contact the Electrical Engineering Department

Non-ELCT Course List

AESP 350	Aerospace Systems
CSCE 240	Advanced Programming Techniques
CSCE 317	Computer Systems Engineering
CSCE 416	Introduction to Computer Networks
CSCE 513	Computer Architecture
CSCE 516	Computer Networks
CSCE 548	Building Secure Software
CSCE 552	Computer Game Development
CSCE 567	Visualization Tools
CSCE 574	Robotics
CSCE 587	Big Data Analytics
ECHE 310	Introductory Chemical Engineering Thermodynamics

ECHE 311	Chemical Engineering Thermodynamics
ECHE 567	Process Safety, Health and Loss Prevention
ECON 421	Engineering Economics
EMCH 310	Dynamics
EMCH 354	Heat Transfer
EMCH 371	Materials
EMCH 441	Automotive System Fundamentals
EMCH 550	Introduction to Nuclear Safeguards
EMCH 552	Introduction to Nuclear Engineering
EMCH 553	Nuclear Fuel Cycles
EMCH 555	Radiation Detection and Instrumentation
EMCH 556	Introduction to Risk Analysis and Reactor Safety
EMCH 557	Introduction to Radiation Shielding and Sources
EMCH 558	Introduction to Nuclear Reactor Systems
EMCH 573	Introduction to Nuclear Materials
ENCP 460	Special Topics in Engineering and Computing
ENCP 530	Cases in Technology Feasibility Analysis
ENCP 533	Legal Aspects of Engineering and Innovation
FINA 333	Finance and Markets
MATH 344	Applied Linear Algebra
MATH 374	Discrete Structures
MATH 524	Nonlinear Optimization
MATH 526	Numerical Linear Algebra
MATH 527	Numerical Analysis
MATH 544	Linear Algebra
MATH 546	Algebraic Structures
MATH 550	Vector Analysis
MATH 574	Discrete Mathematics
MGMT 371	Principles of Management
MKTG 350	Principles of Marketing
MKTG 455	Marketing Communications and Strategy
MKTG 457	Introduction to Sales
MUSC 336	Introduction to Computer Music
MUSC 365	An Introduction to Audio Recording Techniques
PHYS 306	Principles of Physics III
PHYS 307	Introduction to Modern Physics
PHYS 599	Topics in Physics

Military Courses for those students in ROTC program.
***Only 1 course from this below list may count to fulfill the requirement.**

AERO 301 - Leading People and Effective Communication
AERO 302 - Leading People and Effective Communication II
NAVY 301 - Navigation/Naval Operations I
NAVY 302 - Navigation/Naval Operations II
NAVY 401 - Naval Leadership and Management I
NAVY 402 - Naval Leadership and Ethics
ARMY 401- The Army Officer and the Profession of Arms I
ARMY 402- The Army Officer and the Profession of Arms II