

UC Riverside

2021-2022 Majors and Curriculum Updates

New Major

Major

Text

Majors with Name Changes

No change.

New Concentrations

No Change.

Change to College/School

The School of Education (formally Graduate School of Education) received name change approval.

Curriculum

New Courses Added to Assist Database (Spring 2021)

CS 015 - Intro to Data Science (4)

New Courses Added to Assist Database (FALL 2021)

DNCE 012 - Dance and Popular Culture (4)

EDUC 052 - Black Brilliance Matters (4)

EE 016 - Data Analysis in Engineering Applications (4)

EE 020A - Fund Math Methods in Electrical and Computer Engineering (4)

EE 020B - Linear Methods Engineering Analysis and Design Using MATHLAB (4) *Previously EE 020*

EE 030A - Fundamentals of Electric Circuits I (3) *Previously EE 001A*

EE 030B - Fundamentals of Electric Circuits II (4) *Previously EE 001B*

EE 030LA - Fundamentals of Electric Circuits I (1) *Previously EE 001LA*

STAT 004 - Elements of Data Science (4) *Previously STAT 040*

STAT 008 - Statistics for Business (5) *Previously STAT 048*

STAT 010 - Intro to Statistics (5)

STAT 011 - Intro to Statistics (5)

Removed from Assist Database (FALL 2021)

CS 13 - Intro to Computer Science for Engineering Majors (4)

EE 020 - Linear Methods Engineering Analysis and Design Using MATHLAB (4)

EE 001A – Fundamentals of Electric Circuits I (3)
EE 001B – Fundamentals of Electric Circuits II (4)
EE 001LA – Fundamentals of Electric Circuits I (1)
HIST 026 – Civilization before Greece and Rome (4)
STAT 040 – Elements of Data Science (4)
STAT 048 – Statistics for Business (5)

New Courses (Spring 2021)

CS 015 – Intro to Data Science (4) 4 Units, Lecture, 3 hours; laboratory, 3 hours. Prerequisite(s): CS 009P. Provides an introduction to data science with an emphasis on empirical analysis of real-world data sets through computation. Explores critical concepts and skills in computer programming and statistical inference. Covers the Data Science life-cycle including data collection, data cleaning and integration, visualization, and analysis.

New Courses Added (FALL 2018)

DNCE 012 – Dance and Popular Culture (4)

4 Units, Lecture, 3 hours; discussion, 1 hour; written work, 2 hours. Prerequisite(s): none. Introduces students to dance in popular culture and explores its various social, political, and cultural functions and impacts. Examines popular dance practices across various sites including screens both big and small, fitness studios, dance competitions, dance clubs, and protests.

EDUC 052 – Black Brilliance Matters (4)

4 Units, Lecture, 3 hours; discussion, 1 hour. Explores historical and contemporary issues faced by Black students, faculty, staff, and administrators in higher education. Topics include history and importance of, theoretical and conceptual frameworks related to, and challenges and opportunities experienced by Black institutional stakeholders in higher education.

EE 020A – Fund Math Methods in Electrical and Computer Engineering (4)

4 Units, Lecture, 3 hours; discussion, 1 hour. Prerequisite(s): MATH 007B or MATH 009B or MATH 09HB with a grade of C- or better; or equivalent. Covers complex variables and ordinary differential equations in engineering applications. Introduces Laplace transform, Fourier series, and Fourier transform. Applies Laplace and Fourier transforms to linear ordinary differential equation solutions, system analysis, and design. Considers applications in electric and electronic circuits, signal processing, communication and control systems, and pattern recognition.

EE 020B – Linear Methods Engineering Analysis and Design Using MATHLAB (4) *Previously EE 20*

4 Units, Lecture, 3 hours; discussion, 1 hour. Prerequisite(s): CS 010A; MATH 008B or MATH 009A or MATH 09HA. Introduces MATLAB programming and linear methods for engineering analysis and design. Topics include formulating engineering problems as linear systems of equations; methods for finding their solutions; vector and matrix representations of signals and systems; matrices computations; and linear programming for system analysis and design. Credit is awarded for one of the following EE 020B or MATH 031.

EE 030A – Fundamentals of Electric Circuits I (3) *Previously EE 001A*

3 Units, Lecture, 3 hours. Prerequisite(s): concurrent enrollment in EE 030LA; EE 020A; EE 020B, may be taken concurrently; PHYS 040C, may be taken concurrently or PHYS 040HC, may be taken concurrently. Covers Ohm's law and Kirchhoff's laws; nodal and mesh analysis; network theorems;

properties of capacitors and inductors; transient analysis of RC, RL, and RLC circuits; and modeling of electric circuits with Spice.

EE 030B – Fundamentals of Electric Circuits II (4) *Previously EE 001B*

4 Units, Lecture, 3 hours; laboratory, 3 hours. Prerequisite(s): EE 030A, EE 030LA. Covers steady-state analysis of electric circuits using phasors and Laplace transform. Discusses Fourier series, frequency response, Bode plots, and passive filters. Also includes current-voltage characteristics and small-signal approximations of non-linear devices such as diodes, bipolar-junction transistors, and field-effect transistors. Addresses modeling of electric circuits with Spice.

EE 030LA – Fundamentals of Electric Circuits I (1) *Previously EE 001LA*

1 Unit, Laboratory, 3 hours. Prerequisite(s): concurrent enrollment in EE 030A; EE 020A; EE 020B, may be taken concurrently; PHYS 040C, may be taken concurrently or PHYS 040HC, may be taken concurrently. Provides laboratory experiments tied to the lecture material of EE 030A. Covers resistive circuits, network theorems, operational amplifiers, and transient response. Includes application of SPICE to circuit analysis.

STAT 004 – Elements of Data Science (4) *Previously STAT 040*

4 Units, Lecture, 3 hours; discussion, 1 hour. Prerequisite(s): none. Explores basic concepts, algorithms, and techniques of data science with simulation and data visualization. Topics include summarizing and visualizing data using R or Python, causality, randomness, decision making in the presence of uncertainty, prediction, and classification. Credit is not awarded for STAT 004 if it has already been awarded for STAT 008, STAT 010, or STAT 011.

STAT 008 – Statistics for Business (5) *Previously STAT 048*

5 Units, Lecture, 3 hours; discussion, 1 hour; laboratory, 3 hours. Prerequisite(s): CS 008; MATH 004 or MATH 005 or MATH 006B or MATH 007A or MATH 009A or MATH 09HA; or equivalent. An introduction to statistics using business applications. Topics include descriptive statistics; probability; discrete and continuous distributions; Bayes' theorem; random variables; estimation and confidence intervals; hypothesis testing; and simple linear regression. Credit is awarded for one of the following STAT 008 or STAT 010.

STAT 010 – Intro to Statistics (5)

5 Units, Lecture, 3 hours; discussion, 1 hour; laboratory, 3 hours. Prerequisite(s): MATH 005 or MATH 006B or MATH 009A or MATH 09HA or MATH 007A. A general introduction to descriptive and inferential statistics. Topics include histograms; descriptive statistics; probability; normal and binomial distributions; sampling distributions; hypothesis testing; and confidence intervals. Credit is awarded for one of the following STAT 010 or STAT 008.

STAT 011 – Intro to Statistics (5)

5 Units, Lecture, 3 hours; discussion, 1 hour; laboratory, 3 hours. Prerequisite(s): STAT 008 with a grade of C- or better or STAT 010 with a grade of C- or better. Topics include linear regression, correlation, analysis of variance, and simple experimental designs.