



Transfer Major Sheet
ENGINEERING

CSU Fullerton	CSU Long Beach
<p>MATH 150AF & MATH 150BF MATH 250AF & [MATH 250BF &/or MATH 250CF] PHYS 221 F & PHYS 222 F</p>	<p>MATH 150AF & MATH 150BF [PHYS 221 F or PHYS 221HF] & PHYS 222 F MATH 250AF* CSULB's ENGR 101 & 102 waived if CSU GE Area E is fulfilled (3 units)</p>
<p>For Civil Engineering, also take: CHEM 111BF ENGR 101AF & ENGR 201 F & ENGR 203 F BIOL 101 F or BIOL 101HF Basic Science Courses Option: BIOL 101 F or BIOL 101HF or ESC 100 F or ESC 105 F</p> <p>For Computer Engineering, also take: CSCI 123 F & CSCI 133 F ENGR 203 F & ENGR 203LF MATH 171 F PHYS 223 F</p> <p>For Electrical Engineering, also take: ENGR 203 F & ENGR 203LF PHYS 223 F</p> <p>For Mechanical Engineering, also take: CHEM 111AF CSCI 223 F ENGR 201 F & ENGR 203 F & ENGR 203LF</p> <p><u>Civil Engineering</u> areas of focus: structural, geotechnical, hydraulic, environmental, construction, transportation and architectural engineering.</p> <p><u>Electrical Engineering</u> provides knowledge of basic and advanced topics in areas of design and analysis of VLSI and electronic circuits, design and analysis of computer architecture, microprocessors, communication systems, signal processing and control systems.</p> <p><u>Mechanical Engineering</u> provides a foundation for professional engineering careers in private industry and government such as manufacturing, transportation, energy, food, biomedical and others.</p> <p><u>Computer Engineering</u> provides strong theoretical and practical background in computer hardware and software aspects of computer based systems, along with the engineering analysis, design and implementation skills to work between the two.</p>	<p>For Aerospace Engineering, also take: CHEM 111AF ENGR 201 F</p> <p>For Chemical Engineering, also take: CHEM 211AF & CHEM 211BF OR [BIOL 101 F or BIOL 101HF] OR [BIOL 102 F & BIOL 102LF] OR BIOL 170 F CHEM 111AF & CHEM 111BF ENGR 201 F</p> <p>For Civil Engineering, also take: [BIOL 101 F or BIOL 101HF] OR MICR 262 F CHEM 111AF ENGR 201 F</p> <p>For Computer Engineering, also take: [BIOL 101 F or BIOL 101HF] OR CHEM 111AF OR PHYS 223 F CIS 228 F CSCI 133 F ENGR 203 F *DON'T TAKE MATH 250AF for Computer Engineering major</p> <p>For Electrical Engineering, also take: ENGR 203 F & ENGR 203LF PHYS 223 F</p> <p>For Mechanical Engineering, also take: CHEM 111AF ENGR 201 F</p>
	<p>Options available: Biomedical and Clinical, AND Engineering Systems</p> <p>See www.assist.org for additional information.</p>



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Cal Poly Pomona	Cal Poly San Luis Obispo	
CHEM 111AF & MATH 150AF & MATH 150BF MATH 250AF & MATH 250BF PHYS 221 F & PHYS 222 F & PHYS 223 F	CHEM 111AF MATH 150AF & MATH 150BF & MATH 250AF & MATH 250BF PHYS 221 F & PHYS 222 F & PHYS 223 F	
<p>For Aerospace Engineering, also take: ENGR 201 F & ENGR 203 F & ENGR 203LF</p> <p>For Chemical Engineering, also take: CHEM 111BF ENGR 201 F & ENGR 203 F & ENGR 203LF</p> <p>For Civil Engineering-Environmental and General, also take: CHEM 111BF CIS 100 F <u>or</u> CIS 111 F ENGR 101AF & ENGR 105 F ENGR 110 F & ENGR 201 F</p> <p>For Civil Engineering-Geospatial, also take: CHEM 111BF CIS 100 F <u>or</u> CIS 111 F ENGR 101AF & ENGR 105 F & ENGR 201 F</p> <p>For Computer and Electrical Engineering, also take: CSCI 123 F</p> <p>For Industrial Engineering and Mechanical Engineering, also take: CHEM 111BF (only for Industrial Engineering) [DRAF 140 F & DRAF 171 F] <u>OR</u> ENGR 105 F [ECON 101 F <u>or</u> ECON 101HF] <u>OR</u> [ECON 102 F <u>or</u> ECON 102HF] ENGR 201 F & ENGR 203 F & ENGR 203LF</p> <p>For Manufacturing Engineering, also take: CHEM 111BF [DRAF 140 F & DRAF 171 F] <u>OR</u> ENGR 105 F DRAF 173 F [ECON 101 F <u>or</u> ECON 101HF] <u>OR</u> [ECON 102 F <u>or</u> ECON 102HF] ENGR 201 F & ENGR 203 F & ENGR 203LF</p> <p>See www.assist.org for other options available.</p>	<p>For Aerospace Engineering, also take: ENGR 201 F & ENGR 203 F & ENGR 203LF</p> <p>For Architectural Engineering, also take: ARCH 111 F ENGR 203 F ESC 100 F</p> <p>For Biomedical Engineering, also take: CHEM 111BF; CHEM 211AF; CHEM 211BF ENGR 201 F & ENGR 203 F MICR 262 F</p> <p>For BioResource and Agricultural Engineering, also take: CHEM 111BF CSCI 223 F DRAF 171 F ECON 102 F ENGR 201 F HORT 155 F MACH 116 F MICR 262 F</p> <p>For Civil Engineering, also take: CHEM 111BF ENGR 201 F ESC 100 F CSCI 223 F <u>or</u> ENGR 203 F</p> <p>For Computer Engineering, also take: CSCI 123 F <u>or</u> CIS 223 F <u>or</u> CIS 226 F CSCI 133 F ENGR 203 F & ENGR 203LF ENGR 201 F <u>or</u> CHEM 111BF</p> <p>For Electrical Engineering, also take: CSCI 123 F <u>or</u> CIS 223 F <u>or</u> CIS 226 F ENGR 203 F & ENGR 203LF</p> <p>Approved Engineering support electives (9 units): BIOL 101 F; CHEM 111BF; CHEM 201 F; CHEM 211AF; ENGR 201 F; MACH 116 F; WELD 121AF</p>	<p>For Environmental Engineering, also take: CHEM 111BF CHEM 201 F ENGR 201 F MICR 262 F</p> <p>For General Engineering, also take: CHEM 111BF CHEM 211AF & CHEM 211BF CSCI 123 F <u>or</u> CSCI 223 F <u>or</u> CIS 223 F <u>or</u> CIS 226 F ENGR 201 F & ENGR 203 F</p> <p>For Industrial Engineering, also take: ENGR 201 F ENGR 203 F & ENGR 203LF PSY 101 F <u>or</u> PSY 101HF WELD 121AF</p> <p>For Manufacturing Engineering, also take: CHEM 111BF ENGR 201 F & ENGR 203 F & ENGR 203LF WELD 121AF</p> <p>For Materials Engineering, also take: CHEM 111BF ENGR 201 F & ENGR 203 F & ENGR 203LF Approved Electives(8 units): BUS 241AF; CHEM 211AF; CHEM 211BF; ECON 101 F or ECON 101HF; ESC 100 F; GEOG 102 F; PSY 139 F</p> <p>For Mechanical Engineering, also take: CHEM 111BF CSCI 223 F ENGR 201 F & ENGR 203 F & ENGR 203LF MACH 116 F WELD 121AF</p> <p>For Software Engineering, take: BIOL 101 F <u>or</u> BIOL 268 F <u>or</u> MICR 262 F CSCI 123 F <u>or</u> CIS 223 F <u>or</u> CIS 226 F PSY 101 F <u>or</u> PSY 101HF</p>

UC Irvine	UC Los Angeles	
<p style="text-align: center;">CHEM 111AF MATH 150AF & MATH 150BF PHYS 221 F & PHYS 222 F</p>	<p>ENGL 100 F or ENGL 100HF; ENGL 102 F or ENGL 102HF or ENGL 103 F or ENGL 103HF or ENGL 104 F or ENGL 201 F or PHIL 172 F; MATH 150AF & MATH 150BF; MATH 250AF & MATH 250BF; PHYS 221 F & PHYS 222 F & PHYS 223 F</p>	
<p>For Aerospace Engineering, also take: PHYS 223 F Two courses from approved courses: BIOL 272 F or CHEM 111BF; CSCI 223 F; ECON 101 F or ECON 101HF; MATH 172 F or [MATH 250BF & MATH 250CF]; MATH 250AF; MATH 250BF; ENGR 201 F; ENGR 203 F</p> <p>For Biomedical Engineering, also take: CHEM 111BF & PHYS 223 F One course from approved courses: MATH 120 F or MATH 120HF; MATH 250AF; MATH 250BF; MATH 172 F or [MATH 250BF & MATH 250CF]</p> <p>For Biomedical Engineering-Pre Med, also take: CHEM 111BF; PHYS 223 F One course from approved courses: CHEM 211AF & CHEM 211BF; BIOL 276 F; MATH 250AF; MATH 250BF; MATH 172 F or [MATH 250BF & MATH 250CF]</p> <p>For Chemical Engineering, also take: CHEM 111BF & CSCI 223 F One approved courses: CHEM 211AF & CHEM 211BF; MATH 250AF; MATH 250BF; MATH 172 F or [MATH 250BF & MATH 250CF]</p> <p>For Civil Engineering, also take: CHEM 111BF One course from approved courses: CIS 226 F & CSCI 133 F; ENGR 201 F; BIOL 272 F; ENGR 203 F; MATH 250AF; MATH 250BF; MATH 172 F or [MATH 250BF & MATH 250CF]; ECON 101 F or ECON 101HF; ECON 102 F or ECON 102HF; ENVS 105 F & ENVS 105LF</p> <p>For Computer Engineering, also take: PHYS 223 F; CIS 226 F or CSCI 123 F; <u>Does NOT require</u> CHEM 111AF; Two courses from approved courses: CSCI 223 F & CSCI 241 F; CSCI 133 F & CIS 226 F; MATH 171 F; MATH 250AF; MATH 250BF; MATH 172 F or [MATH 250BF & MATH 250CF]</p>	<p>For Computer Science and Engineering, also take: <u>Does NOT require</u> CHEM 111AF One course from approved courses: CIS 226 F & CSCI 123 F & CSCI 133 F; ENGR 203 F; MATH 171 F; MATH 172 F or [MATH 250BF & MATH 250CF]</p> <p>For Electrical Engineering, also take: CSCI 223 F; PHYS 223 F</p> <p>For Environmental Engineering, also take: CHEM 111BF One course from approved courses: ENGR 201 F; CHEM 211AF; MATH 250AF; MATH 250BF; MATH 172 F or [MATH 250BF & MATH 250CF]; ECON 101 F or ECON 101HF; ECON 102 F or ECON 102HF; ENVS 105 F & ENVS 105LF</p> <p>For General Engineering, also take: CHEM 111BF; CSCI 223 F; Do NOT take PHYS 222 F</p> <p>For Materials Science Engineering, also take: CHEM 223 F; PHYS 223 F One course from approved courses: ENGR 201 F; ENGR 203 F; CSCI 223 F; BIOL 272 F or CHEM 211AF or MATH 120 F or MATH 120HF or PSY 161 F or ENGR 105 F; MATH 250AF; MATH 250BF; MATH 172 F or [MATH 250BF & MATH 250CF]</p> <p>For Mechanical Engineering, also take: PHYS 223 F Two courses from approved courses: BIOL 272 F or CHEM 111BF; ENGR 105 F; ENGR 201 F; ENGR 203 F; CSCI 223 F; MATH 250AF; MATH 250BF; MATH 172 F or [MATH 250BF & MATH 250CF]; ECON 101 F or ECON 101HF</p>	<p>For Aerospace Engineering, also take: CHEM 111AF & CHEM 111BF CSCI 123 F or CSCI 223 F</p> <p>For Bioengineering, also take: BIOL 170 F & BIOL 272 F & BIOL 276 F CHEM 111AF & CHEM 111BF CHEM 211AF & CHEM 211BF CSCI 123 F or CSCI 223 F</p> <p>For Chemical Engineering, also take: CHEM 111AF & CHEM 111BF CHEM 211AF & CHEM 211BF CSCI 123 F or CSCI 223 F</p> <p>For Civil Engineering, also take: CHEM 111AF & CHEM 111BF CSCI 123 F or CSCI 223 F</p> <p>For Computer Science and Engineering, also take: CHEM 111AF CSCI 123 F MATH 171 F & MATH 172 F</p> <p>For Electrical Engineering, also take: CHEM 111AF CSCI 123 F</p> <p>For Materials Engineering, also take: CHEM 111AF & CHEM 111BF CSCI 123 F or CSCI 223 F</p> <p>For Mechanical Engineering, also take: CHEM 111AF & CHEM 111BF CSCI 123 F or CSCI 223 F</p>



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UC Riverside

CHEM 111AF
MATH 150AF & MATH 150BF
MATH 250AF & MATH 250BF
PHYS 221 F & PHYS 222 F & PHYS 223 F

See www.assist.org for GE Breadth Requirements

For **Bioengineering**, also take:
BIOL 170 F & BIOL 272 F
CHEM 111BF
CHEM 211AF & CHEM 211BF
CSCI 123* F or CSCI 223 F (preferred)
ENGR 203 F & ENGR 203LF

For **Chemical Engineering**, also take:
BIOL 272 F
CHEM 111BF
CHEM 211AF & CHEM 211BF
CSCI 123* F or CSCI 223 F

For **Computer Engineering**, also take:
BIOL 101 F or BIOL 101HF or BIOL 272 F
CSCI 123* & CSCI 133*
CSCI 241 F
ENGR 203 F & ENGR 203LF

For **Electrical Engineering**, also take:
BIOL 101 F or BIOL 101HF or BIOL 272 F
CIS 223 F or [CSCI 123 F* & CSCI 133*]
CSCI 123* F or CSCI 223 F
CSCI 241 F
ENGR 203 F & ENGR 203LF

For **Environmental Engineering**, also take:
BIOL 272 F
CHEM 111BF
CHEM 211AF & CHEM 211BF
CSCI 123* F or CSCI 223 F
ENGR 201 F

For **Materials Science and Engineering**, also take:
BIOL 101 F or BIOL 101HF or BIOL 272 F
CHEM 111BF & CHEM 211AF
CSCI 123* F or CSCI 223 F
ENGR 201 F
ENGR 203 F & ENGR 203LF

For **Mechanical Engineering**, also take:
BIOL 272 F
CHEM 111BF
ENGR 201 F
ENGR 203 F & ENGR 203LF

*Recommended for Computer Science

University of Southern California (USC)

CHEM 111AF; ENGR 201 F;
ENGL 103 F or ENGL 103HF or ENGL 104 F or
ENGL 201 F or PHIL 172 F;
MATH 150AF & MATH 150BF & MATH 250AF;
PHYS 221 F & PHYS 222 F & PHYS 223 F

For **Biomedical Engineering**, also take:
BIOL 170 F & BIOL 272 F
CHEM 111BF & CHEM 211AF & CHEM 211BF

For **Chemical Engineering**, also take:
CHEM 111BF & CHEM 211AF
CHEM 211BF (may take for technical elective)

For **Civil Engineering & Computer Engineering**, also take:
BIOL 170 F & BIOL 272 F

For **Environmental Engineering**, also take:
CHEM 111BF & CHEM 211AF
CHEM 211BF for Track II
BIOL 170 F & BIOL 272 F for Track I

For **Industrial & Systems Engineering**, also take:
ECON 101 F or ECON 101HF
MATH 250BF
ENGR 201 F **NOT REQUIRED**

No additional courses for:

- **Aerospace Engineering**
- **Astronautical Engineering**
- **Electrical Engineering – ENGR 201 F NOT Required**
- **Mechanical Engineering**

Category IV of G.E. is not required. Take an additional course from Category I, II, or V. Minimum of 30 transferable units with a “B” average.

Consult with a USC counselor for additional details.

USC School of Engineering
Call (800) 526-3347
<http://viterbi.usc.edu>

<http://viterbi.usc.edu/admission/transfer/guides.htm>

www.assist.org

Please access the above website for the most updated articulation information

SUBJECT TO CHANGE WITHOUT NOTICE

COUNSELORS: Almodóvar-Solé / Armani / Domínguez / Dr. Peterson / Pimentel

Updated by Dr. Lee / KTran (1/2016)