جامعة الفيصل
Alfaisal University

كلّية الهندسة
College of Engineering

Bachelor of Architectural Engineering

Professional Occupations

- Architectural Engineer
- Site Architect Engineer
- Project Manager
- Quantity Surveyors
- Site Manager
- Architectural Inspector
- Sustainable Engineer

Program Overview

Architectural Engineering combines architecture with engineering to focus on the link between design systems and construction strategies. If you are interested in building things, thinking about how things work, drawing, model design, working with your hands, working with others, then Architectural Engineering is the career for you. You will not only study architectural design, but you will also attain a technical background in structural, mechanical, electrical, plumbing design, and building services engineering. A degree in Architectural Engineering from Alfaisal University will prepare you for employment in a number of different fields in both construction and architectural.

Competitive Edge

Consistent with the mission statements of both the University and College of Engineering, the Architectural Engineering program at Alfaisal University delivers an educational program of study that prepares its graduates to become innovative and internationally recognized leaders in industry, government, and academia. Architecture Engineering students are trained to find innovative and creative solutions for complex engineering challenges through AEC education, research, and community involvement. Our faculty hold degrees from world-renowned universities, with the majority from North America. Additionally, our faculty have a high success rate in obtaining new research projects in both new and established disciplines. Furthermore, small class sizes provide students with the opportunity for individualized instruction.

College Collaborations

Admissions Requirements

For admission criteria and how to apply, visit
http://admissions.alfaisal.edu

For more information about Alfaisal's Architectural Engineering, visit:
http://coe.alfaisal.edu/departments/ae_home

Alumni Network

Our Alumni network spans some of the most influential national and international companies

- Zaha Hadid Architects
- Buro Happold
- Dar Alhandasah
- Henning Larsen Architects
- Saudi Bin Laden
- Saudi Oger
- ADL

Alfaisal University

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www.youtube.com/user/alfaisaluniv

Alfaisal University

Bachelor of Architectural Engineering | Study Plan Summary | Effective: Fall 2019

4-Year Curriculum: 152 Credit Hours Total

Freshman Year - Fall Semester		
Course Code	**Course-Title**	**CRHs**
SE 100	Programming for Engineers	3
SE 100 L	Programming for Engineers Lab	1
CHM 102	Introduction to Chemistry	3
CHM 102 L	Introduction to Chemistry Lab	1
MAT 101	Calculus I	3
PHU 103	Mechanics and Waves for Engineers	3
PHU 103 L	Mechanics and Waves for Engineers Lab	1
ENG 101	Freshman English I	3
	Total	**18**

Freshman Year - Spring Semester		
Course Code	**Course-Title**	**CRHs**
ARE 110	Architectural History and Theories	3
ARE 120	Drafting and Drawing	1
ARE 120 S	Drafting and Drawing Studio	2
ME 201	Material Science and Engineering	3
ME 201 L	Material Science and Engineering Lab	1
MAT 112	Calculus II	3
PHU 124	Electromagnetism and Optics for Engineers	3
PHU 124 L	Electromagnetism and Optics for Engineers Lab	1
ENG 112	Freshman English II	3
	Total	**20**

Sophomore Year - Fall Semester		
Course Code	**Course-Title**	**CRHs**
ARE 201	Architectural Design I	3
ARE 231	Building Materials and Construction Technology	3
ARE 232	Building Construction	3
EE 207	Foundations of Electrical Engineering	3
EE 207 L	Foundations of Electrical Engineering Lab	1
ME 203	Applied Mechanics I: Statics	3
MAT 211	Calculus III	3
	Total	**19**

Sophomore Year - Spring Semester		
Course Code	**Course-Title**	**CRHs**
ARE 202	Architectural Design II	3
ARE 220	Construction Drawing (CAD)	2
ARE 220 S	Construction Drawing (CAD) Studio	2
ARE 297	Architecture and Buildings	3
ME 206	Thermal Fluids Engineering I	3
ME 206 L	Thermal Fluids Engineering I Lab	1
ARB 101	Arabic Language and Literature I	2
ENG 222	Technical Writing	3
	Total	**19**

Juinior Year - Fall Semester		
Course Code	**Course-Title**	**CRHs**
ARE 303	Interior Design	2
ARE 303 S	Interior Design Studio	1
ARE 355	Quantity Surveying	3
ARE 3 _ _	Technical Elective	3
ME 407	Heating, Ventilation, and Air-Conditioning	3
MAT 212	Liner Algebra	3
MAT 213	Differential Equations	3
ISL 101	Islamic Studies I	2
	Total	**20**

Juinior Year - Spring Semester		
Course Code	**Course-Title**	**CRHs**
ARE 311	Building Acoustics	3
ARE 313	Electrical Installations	3
ARE 315	Lighting Systems and Applications	3
ARE 321	Structural Mechanics	3
ARE 321 L	Structural Mechanics Lab	1
ARE 332	Building Services Engineering	3
ARE 332 L	Building Services Engineering Lab	1
ARE 341	The Built Environment	3
	Total	**20**

Junior Year - Summer Semester		
Course Code	**Course-Title**	**CRHs**
ARE 390	Architectural Engineering Summer Internship	0
	Total	**0**

Senior Year - Fall Semester		
Course Code	**Course-Title**	**CRHs**
ARE 405	Structural Analysis	3
ARE 409	Project Management and Economics	3
ARE 410	Contracts and Liabilities for Buildings and Construction	3
ARE 412	Environmental Management and Policy	3
ARE 450	Introduction to Geotechnical Engineering	3
ARE 450 L	Introduction to Geotechnical Engineering Lab	1
ARE 491	Architectural Engineering Capstone Project I	2
	Total	**18**

Senior Year - Spring Semester		
Course Code	**Course-Title**	**CRHs**
ARE 465	Management Principles in Building Engineering	3
ARE 492	Architectural Engineering Capstone Project II	2
ARE _ _ _	Technical Elective	3
ARE _ _ _	Technical Elective	3
MAT 224	Numerical Methods	3
ARB 112	Arabic Language and Literature II	2
ISL 112	Islamic Studies II	2
	Total	**18**

We create, innovate and design for the future.

جامعة الفيصل
Alfaisal University

كلّية الهندسة
College of Engineering

Bachelor of Electrical Engineering

Professional Occupations

- Electrical Engineer
- Communications Engineer
- Electrical Design/Systems Engineer
- Electronics Engineer
- Control Engineer
- Power Engineer

Program Overview

The Electrical Engineering (EE) program at Alfaisal University is a four-year program that further comprises an industrial training experience as well as a capstone project in its final year. The program is carefully designed to offer a strong starting point in the general electrical engineering discipline, and prepares the students for both becoming an industry practitioner or pursuing graduate studies. A student of the program is involved in the four main sub-disciplines, namely communications, control, electronics and power. In addition, the student is exposed to contemporary and state-of-the-art knowledge in the areas of computer architecture and computer networks. True to the University's student-centric mission, great emphasis is made throughout the program on students gaining independence and autonomy, as well as acquiring professional skills in communication and engineering practice.

Competitive Edge

Alfaisal Electrical Engineering program is uniquely designed to match the contemporary requirements of the practice. Both the program content and delivery undergo continuous review, with benchmarking to national, regional and international programs performed on an annual basis. The program's mission is strengthened by internationally trained and practising faculty members who also possess strong teaching and research profiles. The instructional and supporting staff are carefully selected to enable the highest levels of delivery. Engagement in industrial visits and field trips are also a staple of the program's activities.

College Collaborations

SABIC, BAE SYSTEMS, ABB, Osaka University, KACST, Ericsson, Boeing, Auburn University, Shell, Thales, MIT Massachusetts Institute of Technology, Lockheed Martin, IBM, Saudi Aramco, Burohappold Engineering, Oracle, AGH University of Science and Technology

Admissions Requirements

For admission criteria and how to apply, visit
http://admissions.alfaisal.edu

For more information about Alfaisal's Electrical Engineering, visit
http://coe.alfaisal.edu/departments/ee_home

Alumni Network

Our alumni network spans some of the most influential industrial and research venues, including:

- ABB
- AEC
- Alfanar

And some have pursued graduate studies at prestigious universities such as:

- American University of Beirut, Lebanon
- Georgia Institute of Technology, USA
- University of Illinois, Urbana-Champaign, USA
- University of Michigan, Ann Arbor, USA

Alfaisal University

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www.youtube.com/user/alfaisaluniv

Alfaisal University

Bachelor of Electrical Engineering | Study Plan Summary | Effective: Fall 2019

4-Year Curriculum: 137 Credit Hours Total

Freshman Year - Fall Semester		
Course Code	**Course-Title**	**CRHs**
SE 100	Programming for Engineers	3
SE 100 L	Programming for Engineers Lab	1
CHM 102	Introduction to Chemistry	3
CHM 102 L	Introduction to Chemistry Lab	1
MAT 101	Calculus I	3
PHU 103	Mechanics and Waves for Engineers	3
PHU 103 L	Mechanics and Waves for Engineers Lab	1
ENG 101	Freshman English I	3
	Total	**18**

Freshman Year - Spring Semester		
Course Code	**Course-Title**	**CRHs**
ME 201	Material Science and Engineering	3
ME 201 L	Material Science and Engineering Lab	1
MAT 112	Calculus II	3
PHU 124	Electromagnetism and Optics for Engineers	3
PHU 124 L	Electromagnetism and Optics for Engineers Lab	1
ARB 101	Arabic Language I	2
ENG 112	Freshman English II	3
	Total	**16**

Sophomore Year - Fall Semester		
Course Code	**Course-Title**	**CRHs**
EE 207	Foundations of Electrical Engineering	3
EE 207 L	Foundations of Electrical Engineering Lab	1
MAT 211	Calculus III	3
MAT 212	Linear Algebra	3
MAT 213	Differential Equations	3
ENG 222	Technical Writing	3
ISL 101	Islamic Studies I	2
	Total	**19**

Sophomore Year - Spring Semester		
Course Code	**Course-Title**	**CRHs**
EE 208	Electric Circuits	3
EE 209	Applied Electromagnetics	3
EE 210	Digital Logic Systems	3
EE 210 L	Digital Logic Systems Lab	1
MAT 224	Numerical Methods	3
STA 212	Probability and Statistics	3
ARB 112	Arabic Language II	2
	Total	**18**

Juinior Year - Fall Semester		
Course Code	**Course-Title**	**CRHs**
EE 301	Signals and Systems	3
EE 303	Intro to Electronics	3
EE 303 L	Intro to Electronics Lab	1
EE 305	Computer Networks	3
EE 305 L	Computer Networks Lab	1
EE 307	Computer Architecture	3
EE 307 L	Computer Architecture Lab	1
ISL 112	Islamic Studies II	2
	Total	**17**

Juinior Year - Spring Semester		
Course Code	**Course-Title**	**CRHs**
EE 302	Communications Theory	3
EE 302 L	Communications Theory Lab	1
EE 304	Microelectronics	3
EE 304 L	Microelectronics Lab	1
EE 306	Control and Feedback System Design	3
EE 306 L	Control and Feedback System Design Lab	1
EE 308	Electrical Energy Conversion	3
EE 308 L	Electrical Energy Conversion Lab	1
IE 315	Engineering Economy and Cost Analysis	3
	Total	**19**

Junior Year - Summer Semester		
Course Code	**Course-Title**	**CRHs**
EE 390	Electrical Engineering Summer Internship	0
	Total	**0**

Senior Year - Fall Semester		
Course Code	**Course-Title**	**CRHs**
EE 495	Electrical Engineering Capstone Project I	3
EE 405	Electric Power Systems	3
EE 413	Digital Communications	3
EE 413 L	Digital Communications Lab	1
4**TE	EE Elective	3
4**TE	EE Elective	3
4**TE L	EE Elective Lab	1
	Total	**17**

Senior Year - Spring Semester		
Course Code	**Course-Titlez**	**CRHs**
EE 496	Electrical Engineering Capstone Project II	3
4**TE	EE Elective	3
4**TE	EE Elective	3
4**TE L	EE Elective Lab	1
4**TE	EE Elective	3
4**TE L	EE Elective Lab	1
	Total	**14**

جامعة الفيصل
Alfaisal University

كلّية الهندسة
College of Engineering

Bachelor of Industrial Engineering

Professional Occupations

- Industrial Engineer
- Manufacturing Engineer
- Quality Engineer
- Human Factors Engineer
- Supply Chain Planner
- Management Engineer
- Process Engineer

Program Overview

Engineering systems may be modelled as an interaction between subsystems such as machines, software and people. Such interactions are made of different flows of energy, materials and data. Industrial Engineering is about arranging subsystems and their interactions so they work more effectively and efficiently. Industrial engineers design systems and processes and optimize existing ones in order to improve quality, productivity and worker's safety. They work to eliminate waste of time, material, energy, and make good use of available capital like human and financial resources. While other engineers work on building systems, Industrial engineers work on making them better. Industrial engineering education is a fertile fusion between the engineering and business realms, and hence it provides opportunities to work in different fields including but not limited to: supply chain and logistics, healthcare, manufacturing, banking and financial institution and information technology.

Competitive Edge

Highly competitive world market enforces companies to continuously adopt new management philosophies to stay in business. Globalization makes the pressure even higher. The demand for industrial engineering profession is increasing rapidly where productivity and quality are the main drivers to gain a competitive edge. Industrial engineering term is not just about manufacturing as the term implies, it also comprises service industries such as shipping and logistics, healthcare, banks and government agencies. At Alfaisal University, our industrial engineering program offers students the latest industrial engineering practices. Our curriculum is developed and benchmarked with well-known western universities in the industrial engineering field. We continue to recruit outstanding faculty members and the majority of our staff are western graduates. We are proudly experiencing our success by having the majority of our graduates currently employed by top private companies and government agencies in the Kingdom

College Collaborations

سابك sabic
BOEING
IBM
BAE SYSTEMS
AUBURN UNIVERSITY
ABB
ارامكو السعودية Saudi Aramco
OSAKA UNIVERSITY
Shell
BUROHAPPOLD ENGINEERING
مدينة الملك عبدالعزيز للعلوم والتقنية KACST
THALES
ORACLE
MIT Massachusetts Institute of Technology
AGH AGH University of Science and Technology
ERICSSON
LOCKHEED MARTIN

Admissions Requirements

For admission criteria and how to apply, visit
http://admissions.alfaisal.edu

For more information about Alfaisal's Industrial Engineering, visit
http://coe.alfaisal.edu/departments/ie_home

Alumni Network

Our Alumni network spans some of the most influential national and international companies

- PWC Saudi Arabia
- SAP Saudi Arabia
- Aramex Saudi Arabia
- SMSA Express
- Saudi Mechanical Industry
- The SAUDI Fund for Development
- ERNST & Young Saudi Arabia
- McKinsey Saudi Arabia
- PepsiCo Saudi Arabia
- Boston Consulting Group Saudi Arabia

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Alfaisal University

Bachelor of Industrial Engineering | Study Plan Summary | Effective Fall 2019

4-Year Curriculum: 142 Credit Hours Total

Freshman Year - Fall Semester		
Course Code	**Course-Title**	**CRHs**
SE 100	Programming for Engineers	3
SE 100 L	Programming for Engineers Lab	1
CHM 102	Introduction to Chemistry	3
CHM 102 L	Introduction to Chemistry Lab	1
MAT 101	Calculus I	3
PHU 103	Mechanics and Waves for Engineers	3
PHU 103 L	Mechanics and Waves for Engineers Lab	1
ENG 101	Freshman English I	3
	Total	**18**

Freshman Year - Spring Semester		
Course Code	**Course-Title**	**CRHs**
ME 201	Material Science and Engineering	3
ME 201 L	Material Science and Engineering Lab	1
MAT 112	Calculus II	3
PHU 124	Electromagnetism and Optics for Engineers	3
PHU 124 L	Electromagnetism and Optics for Engineers Lab	1
ARB 101	Arabic Language and Literature I	2
ENG 112	Freshman English II	3
	Total	**16**

Sophomore Year - Fall Semester		
Course Code	**Course-Title**	**CRHs**
ME 203	Applied Mechanics I: Statics	3
ME 205	Introduction to Computer Aided Design	3
ME 305	Manufacturing and Workshop Training	3
ME 305 L	Manufacturing and Workshop Training Lab	1
MAT 211	Calculus III	3
MAT 212	Linear Algebra	3
MAT 213	Differential Equations	3
	Total	**19**

Sophomore Year - Spring Semester		
Course Code	**Course-Title**	**CRHs**
EE 207	Foundations of Electrical Engineering	3
EE 207 L	Foundations of Electrical Engineering Lab	1
ME 206	Thermal Fluids Engineering I	3
ME 206 L	Thermal Fluids Engineering I Lab	1
ME 208	Mechanics of Materials I	3
ME 208 L	Mechanics of Materials I Lab	1
MAT 224	Numerical Methods	3
STA 212	Probability and Statistics for Engineers	3
	Total	**18**

Juinior Year - Fall Semester		
Course Code	**Course-Title**	**CRHs**
IE 301	Operations Research I	3
IE 304	Production and Service Systems Planning I	3
IE 307	Work Systems Analysis & Design	3
IE 307 L	Work Systems Analysis & Design Lab	1
IE 309	Human Factors and Ergonomics	3
IE 309 L	Human Factors and Ergonomics	1
ENG 222	Technical Writing	3
ISL 101	Islamic Studies I	2
	Total	**19**

Juinior Year - Spring Semester		
Course Code	**Course-Title**	**CRHs**
IE 302	Operations Research II	3
IE 305	Production and Service Systems Planning II	3
IE 315	Engineering Economy and Cost Analysis	3
IE 330	Simulation	3
IE 330 L	Simulation Lab	1
ME 308	Advanced Manufacturing Processes	3
ME 308 L	Advanced Manufacturing Processes Lab	1
	Total	**17**

Junior Year - Summer Semester		
Course Code	**Course-Title**	**CRHs**
IE 390	Industrial Engineering Summer Internship	0
	Total	**0**

Senior Year - Fall Semester		
Course Code	**Course-Title**	**CRHs**
IE 401	Network Models and Project Management	3
IE 415	Production Information Systems	3
IE 4 _ _	Technical Elective	3
IE 4 _ _	Technical Elective	3
IE 495	Industrial Engineering Capstone Project I	3
ISL 112	Islamic Studies II	2
	Total	**17**

Senior Year - Spring Semester		
Course Code	**Course-Title**	**CRHs**
IE 406	Quality Engineering	3
IE 450	Management for Engineers	3
IE 4 _ _	Technical Elective	3
IE 496	Industrial Engineering Capstone Project II	3
ME 306	Instrumentation and Control Engineering	3
ME 306 L	Instrumentation and Control Engineering Lab	1
ARB 112	Arabic Language and Literature II	2
	Total	**18**

Taming technology and disseminating knowledge is what we do. Engineering innovative software to make the world better IS WHAT YOU›LL DO.

جامعة الفيصل
Alfaisal University

كلّية الهندسة
College of Engineering

Bachelor of Mechanical Engineering

Professional Occupations

- Design Engineer
- Production Engineer
- Manufacturing Engineer
- Fabrication Engineer
- Research & Development Engineer
- Tooling Engineer
- Maintenance Engineer
- Process Engineer
- Quality Engineer
- Mechanical Engineer
- Power Engineer
- Consulting Engineer
- Test Engineer
- Sales Engineer
- Analytical Engineer

Program Overview

Mechanical Engineering is concerned with the design, development and manufacturing of machines/mechanical parts and components, based on the principles of engineering, physics and material science. It is one of the oldest and the broadest of the engineering disciplines. Subjects in mechanical engineering overlap with various other engineering branches such as aerospace, architecture, biomedical, civil, chemical, computer, electrical, electronics and communications, industrial, instrumentation, materials, metallurgical, nuclear and petroleum engineering to varying amounts. The engineering field requires an understanding of core concepts including mechanics, kinematics, thermodynamics, material science, structural analysis and power. Mechanical engineers use these core principles along with tools like computer-aided engineering and product life cycle management to design and analyse manufacturing plants, industrial equipment and machinery, heating and cooling systems, transport systems, aircraft, watercraft, robotics, medical devices, military equipment and others.

Competitive Edge

The Mechanical Engineering program at Alfaisal University is concerned with up to-date technology, applications, and current industrial needs. The program focuses on producing high-quality graduates and prepare them to the current tough conditions in the field and challenges in the industry. The ME program focuses on three major disciplines; Power, Manufacturing, and Design. These three disciplines (based on the principles of engineering, physics and material science) cover energy conversion, power plant technology, air conditioning, renewable energy systems, energy efficiency, development and manufacturing of machines and components, and materials. Our faculty hold degrees from world-renowned western universities as well as a high-research output in both new and established disciplines; furthermore, small class sizes provide students with the opportunity for individualized instruction.

College Collaborations

سابك sabic
BOEING
IBM
BAE SYSTEMS
AUBURN UNIVERSITY
ABB
ارامكو السعودية Saudi Aramco
OSAKA UNIVERSITY
Shell
BUROHAPPOLD ENGINEERING
مدينة الملك عبدالعزيز للعلوم والتقنية KACST
THALES
ORACLE
MIT Massachusetts Institute of Technology
AGH AGH University of Science and Technology
ERICSSON
LOCKHEED MARTIN

Admissions Requirements

For admission criteria and how to apply, visit
http://admissions.alfaisal.edu

For more information about Alfaisal's Mechanical Engineering, visit
http://coe.alfaisal.edu/departments/me_home

Alumni Network

The College of Engineering has established strong strategic relations with various reputable institutions and organizations including:

- Advisory Committee consisting of senior faculty members of MIT and Cambridge
- BAE Systems
- Boeing
- KACST
- Lockheed Martin
- Raytheon
- Saudi Aramco
- SWCC (Saline Water Conservation Company)
- Thales
- ABB Saudi Arabia
- Shell Saudi Arabia
- Auburn University

Alfaisal University

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Alfaisal University

Bachelor of Mechanical Engineering | Study Plan Summary | Effective Fall 2019

4-Year Curriculum: 134 Credit Hours Total

Freshman Year - Fall Semester		
Course Code	**Course-Title**	**CRHs**
SE 100	Programming for Engineers	3
SE 100 L	Programming for Engineers Lab	1
CHM 102	Introduction to Chemistry	3
CHM 102 L	Introduction to Chemistry Lab	1
MAT 101	Calculus I	3
PHU 103	Mechanics and Waves for Engineers	3
PHU 103 L	Mechanics and Waves for Engineers Lab	1
ENG 101	Freshman English I	3
	Total	**18**

Freshman Year - Spring Semester		
Course Code	**Course-Title**	**CRHs**
ME 201	Material Science and Engineering	3
ME 201 L	Material Science and Engineering Lab	1
MAT 112	Calculus II	3
PHU 124	Electromagnetism and Optics for Engineers	3
PHU 124 L	Electromagnetism and Optics for Engineers Lab	1
ARB 101	Arabic Language and Literature I	2
ENG 112	Freshman English II	3
	Total	**16**

Sophomore Year - Fall Semester		
Course Code	**Course-Title**	**CRHs**
ME 203	Applied Mechanics I: Statics	3
ME 205	Introduction to Computer Aided Design	3
ME 305	Manufacturing and Workshop Training	3
ME 305 L	Manufacturing and Workshop Training Lab	1
MAT 211	Calculus III	3
MAT 212	Linear Algebra	3
MAT 213	Differential Equations	3
	Total	**19**

Sophomore Year - Spring Semester		
Course Code	**Course-Title**	**CRHs**
ME 206	Thermal Fluids Engineering I	3
ME 206 L	Thermal Fluids Engineering I Lab	1
ME 208	Mechanics of Materials I	3
ME 208 L	Mechanics of Materials I Lab	1
EE 207	Foundations of Electrical Engineering	3
EE 207 L	Foundations of Electrical Engineering Lab	1
MAT 224	Numerical Methods	3
STA 212	Probability and Statistics for Engineers	3
	Total	**18**

Juinior Year - Fall Semester		
Course Code	**Course-Title**	**CRHs**
ME 307	Thermal Fluids Engineering II	3
ME 307 L	Thermal Fluids Engineering II Lab	1
ME 311	Applied Mechanics II: Dynamics	3
ME 312	Mechanics of Materials II	3
ME 312 L	Mechanics of Materials II Lab	1
ME 315	Machine Design	3
ENG 222	Technical Writing	3
	Total	**17**

Juinior Year - Spring Semester		
Course Code	**Course-Title**	**CRHs**
ME 306	Instrumentation and Control Engineering	3
ME 306 L	Instrumentation and Control Engineering Lab	1
ME 308	Advanced Manufacturing Processes	3
ME 308 L	Advanced Manufacturing Processes Lab	1
ME 310	Mechanical Component Design	3
ME 310 L	Mechanical Component Design Lab	1
ISL 101	Islamic Studies I	2
ARB 112	Arabic Language and Literature II	2
	Total	**16**

Junior Year - Summer Semester		
Course Code	**Course-Title**	**CRHs**
ME 390	Mechancial Engineering Summer Internship	0
	Total	**0**

Senior Year - Fall Semester		
Course Code	**Course-Title**	**CRHs**
ME 403	Finite Element Methods	3
ME 403 L	Finite Element Methods Lab	1
ME 405	Engineering Safety and Risk Analysis	3
ME 407	Heating, Ventilation, and Air-Conditioning	3
ME 495	Mechanical Engineering Capstone Project I	3
ISL 112	Islamic Studies II	2
	Total	**16**

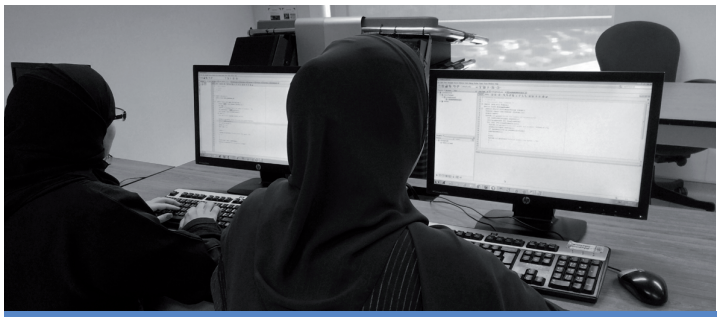
Senior Year - Spring Semester		
Course Code	**Course-Title**	**CRHs**
ME 314	Vibration and Damping	3
ME 4 _ _	Technical Elective	3
ME 4 _ _	Technical Elective	3
ME 496	Mechanical Engineering Capstone Project II	3
IE 315	Engineering Economy and Cost Analysis	3
	Total	**15**

Smart, desirable, feasible, marketable innovation to make the world better is what we do.
IT's WHAT YOU'LL DO.

جامعة الفيصل
Alfaisal University

كلّية الهندسة
College of Engineering

Bachelor of Software Engineering



Professional Occupations

- Software Engineer
- Software Analyst
- Software Developer
- Software Architect
- Software Project Manager
- Software Quality Manager

Program Overview

Software Engineering is the study and application of engineering principles to the design, development, and maintenance of software systems. It combines computing science, engineering, and mathematics into a unique and potent blend. The demand for software engineers has been high worldwide and is still on the rise. At Alfaisal, the Software Engineering curriculum will prepare you with both theoretical and applied expertise in this technically challenging and highly competitive field. Students build problem-solving skills to develop market-driven innovations and to be leaders in software systems development and maintenance. They are exposed to the business and management side of engineering: project management, e-commerce, economics and management for engineers. This exposure develops excellent entrepreneurship skills and offers employment opportunities, especially in the fast growing sector of software companies.

Competitive Edge

Our Software Engineering program is designed to provide a solid foundation in the main topics of the software engineering body of knowledge. This foundation allows our graduates to excel in the design, development, operation, and maintenance of complex software systems. Our faculty hold degrees from world-renowned western universities; additionally, our faculty have a high success rate in obtaining new research projects in both new and established disciplines. Furthermore, small class sizes provide students with the opportunity for individualized instruction.

College Collaborations

SABIC, BOEING, IBM, BAE SYSTEMS, AUBURN UNIVERSITY, ABB, Saudi Aramco, OSAKA UNIVERSITY, Shell, BUROHAPPOLD ENGINEERING, KACST, THALES, ORACLE, MIT Massachusetts Institute of Technology, AGH University of Science and Technology, ERICSSON, LOCKHEED MARTIN

Admissions Requirements

For admission criteria and how to apply, visit
http://admissions.alfaisal.edu

For more information about Alfaisal's Software Engineering, visit
http://coe.alfaisal.edu/departments/se_home

Alumni Network

Our Alumni network spans some of the most influential national and international companies and institutions

- Microsoft
- Boston Consulting Group (BCG)
- IBM
- SADAD
- National Commercial Bank (NCB)
- Saudi Ministry of Health
- Thales
- Oracle

Software Engineering Tracks

Two new optional tracks are available for software engineering students in the areas of:

- **Cybersecurity**
- **AI & Big Data**

Students will be able to tailor their senior-level technical electives to study new emerging technologies in these areas. More details are available on the department's website.

Alfaisal University

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Alfaisal University

Bachelor of Software Engineering | Study Plan Summary | Effective: Fall 2019

4-Year Curriculum: 133 Credit Hours Total

Freshman Year - Fall Semester		
Course Code	**Course-Title**	**CRHs**
SE 100	Programming for Engineers	3
SE 100 L	Programming for Engineers Lab	1
CHM 102	Introduction to Chemistry	3
CHM 102 L	Introduction to Chemistry Lab	1
MAT 101	Calculus I	3
PHU 103	Mechanics and Waves for Engineers	3
PHU 103 L	Mechanics and Waves for Engineers Lab	1
ENG 101	Freshman English I	3
	Total	**18**

Freshman Year - Spring Semester		
Course Code	**Course-Title**	**CRHs**
SE 117	Software Practice and Society	3
SE 120	Object-Oriented Programming I	3
SE 120 L	Object-Oriented Programming I Lab	1
MAT 112	Calculus II	3
PHU 124	Electromagnetism and Optics for Engineers	3
PHU 124 L	Electromagnetism and Optics for Engineers Lab	1
ENG 112	Freshman English II	3
	Total	**17**

Sophomore Year - Fall Semester		
Course Code	**Course-Title**	**CRHs**
SE 201	Introduction to Software Engineering	3
SE 214	Algorithms and Data Structures	3
SE 214 L	Algorithms and Data Structures Lab	1
SE 220	Object-Oriented Programming II	3
SE 220 L	Object-Oriented Programming II Lab	1
MAT 212	Linear Algebra	3
ENG 222	Technical Writing	3
	Total	**17**

Sophomore Year - Spring Semester		
Course Code	**Course-Title**	**CRHs**
SE 212	Discrete Structure for Software Engineers	3
SE 225	Software Requirements	3
SE 225 L	Software Requirements Lab	1
EE 210	Digital Logic Design	3
EE 210 L	Digital Logic Design Lab	1
MAT 224	Numerical Methods	3
STA 212	Probability and Statistics for Engineers	3
	Total	**17**

Juinior Year - Fall Semester		
Course Code	**Course-Title**	**CRHs**
SE 310	Software Design and Architecture	3
SE 312	Database Management Systems	3
SE 312 L	Database Management Systems Lab	1
SE 314	Operating Systems	3
SE 314 L	Operating Systems Lab	1
EE 305	Computer Networks	3
EE 305 L	Computer Networks Lab	1
ISL 101	Islamic Studies I	2
	Total	**17**

Juinior Year - Spring Semester		
Course Code	**Course-Title**	**CRHs**
SE 322	Internet of Things Application Development	3
SE 324	Web Application Development	3
SE 324 L	Web Application Development Lab	1
SE 328	Mobile Application Development	3
SE 328 L	Mobile Application Development Lab	1
SE 330	Introduction to Cybersecurity	3
ARB 101	Arabic Language and Literature I	2
EE 308 L	Electrical Energy Conversion Lab	1
	Total	**15**

Junior Year - Summer Semester		
Course Code	**Course-Title**	**CRHs**
SE 390	Software Engineering Summer Internship	0
	Total	**0**

Senior Year - Fall Semester		
Course Code	**Course-Title**	**CRHs**
SE 412	Software Testing & Quality Assurance	3
SE 414	Software Project Management	3
SE 4 _ _	Technical Elective	3
SE 4 _ _	Technical Elective	3
SE 495	Software Engineering Capstone Project I	3
ISL 112	Islamic Studies II	2
	Total	**17**

Senior Year - Spring Semester		
Course Code	**Course-Title**	**CRHs**
SE 423	Software Construction and Processes	3
SE 4 _ _	Technical Elective	3
SE 4 _ _	Technical Elective	3
SE 496	Software Engineering Capstone Project II	3
ARB 112	Arabic Language and Literature II	2
	Total	**14**

Smart, desirable, feasible, marketable innovation to make the world better is what we do. IT's WHAT YOU'LL DO.