

BACHELOR OF APPLIED SCIENCE

Manufacturing Engineering



THE UNIVERSITY OF BRITISH COLUMBIA

Okanagan Campus

Specialization description



Investigate the evolving world of manufacturing including additive manufacturing, advanced materials, adaptive robotics, artificial intelligence, autonomous systems, digitalization, factory planning, production management, modern manufacturing practices, and Industry 4.0.

Manufacturing Engineering combines hands-on activities with traditional academic teaching to give you the practical and analytical skills needed to become a successful engineer. Delve into subjects like: production management, modern manufacturing practices, emerging practices in digital modeling, and more.

Program highlights



The path to a Bachelor of Applied Science (BASC) degree begins at the School of Engineering in the Faculty of Applied Science with the Engineering common first year foundation rooted in project-based team learning. After first year, School of Engineering students select their program of study within engineering. Second-, third- and fourth-year students further hone their expertise by taking more specialized courses in sub-disciplines.

Your career options



Manufacturing Engineering prepares students to engineer solutions for the manufacturing sector in the technical aspects of production or production management.

Visit the "[Where can engineering take you](#)" webpage for more employment information.

Looking for support?



UBC Okanagan provides a broad range of support services from admission through to graduation. Visit [Student Support and Resources](#) for a full list. Some examples are included below:

- [Academic & Career Development](#) provides academic and career support for all undergraduate students.
- [Indigenous Programs & Services](#) offers services including academic and career advising, experiential learning opportunities, peer mentoring and tutoring for First Nations, Métis, and Inuit students
- [International Student Advising](#) supports international students with immigration, employment in Canada, and more
- [Disability Resource Centre](#) assists with disability-related accommodations and programming initiatives to help remove barriers for students with disabilities and ongoing medical conditions
- [Counsellors](#) help students examine and explore their behaviors, relationships, feelings, or thoughts that cause concern or challenges
- [Financial support](#) is available to help students learn to [budget](#), [pay tuition](#), or apply for [awards and scholarships](#)
- The [Student Learning Hub](#) offers free learning supports such as subject tutoring, learning strategies, and writing consultations

How to use the Program Plan:



Tuum est! This Program Plan is designed to help shape your UBC experience, challenge yourself to try new things, and become the person and scholar you want to be to help make your time at UBC Okanagan yours. The Program Plan offers suggestions – you don't have to do it all!

The Program Plan includes four categories:

- **Explore the Program:** Explore what you'll be studying and learning. Make connections between your program and future career or education opportunities and goals.
- **Connect and Build Community:** Making connections will help develop your support network throughout your studies and beyond.
- **Engage Locally and Globally:** Get ready for life beyond UBC by accessing programming and resources aligned with your goals, interests, and career pathways.
- **Develop Skills and Gain Relevant Experience:** Expand your capacity to understand the changing world and embrace different perspectives by seeking out new experiences and opportunities.

Legend

Experiential Education opportunities are highlighted with a symbol.

Plan ahead! Statements highlighted with a must be completed during a specific term(s) or have an associated deadline.

Getting Started

First-year standing



Explore the Program

Explore [Manufacturing Engineering](#) in the [Bachelor of Applied Science](#) program by visiting the program website or reviewing the [Academic Calendar](#).

Learn more about your program of study requirements by visiting the [Degree Planning](#) webpage and reviewing the [First-Year Planning Guides](#), and reviewing the Manufacturing Engineering [Advising Sheets](#).

Book an appointment with [Academic & Career Advising](#) to discuss academic & program questions.

Visit the [Student Learning Hub](#) throughout your degree for free supports from peers and professionals that include tutoring in math, sciences, languages, and writing.

Participate in [Supplemental Learning](#) – free, weekly, peer-facilitated study sessions.

Meet with an instructor or TA during office hours: ask a question, discuss an assignment, or go over lecture material.

Moving Through your Degree

Second-year standing

At the end of year one, [select which program](#) you would like to pursue. Consider adding a [concentration](#) to your program of study.

Review the School of Engineering [Advising Sheets](#) regularly to check your degree requirements, pre-requisite and co-requisite courses.

Consider applying to add a minor in [Arts, Management, or Computer Science](#).

Explore employment opportunities to strengthen your skills through the [Engineering Co-op Program](#). Apply in September of Year 2 or 3 of the BASc degree program.

International Students: Contact [International Student Advising](#) to review your study status.

Moving Through your Degree

Third-year standing

Explore a topic of interest in depth by participating in [Undergraduate Research](#).

Planning to enter the workforce after grad? [Attend career events and workshops](#).

Study abroad by participating in a [Go Global](#) program such as exchange, faculty-led global seminar, or research abroad.

Considering further education? Find [graduate programs at UBCO](#) and beyond. Research application requirements, admissions information, and funding options.

Consider applying for the [Dual Degree Master of Management](#).

Preparing for Graduation and Your Future

Fourth-year+ standing

Market yourself to employers by reflecting on your UBCO experience and identifying the skills and knowledge you developed through the activities you participated in.

Meet with a [Career Development Specialist](#) for help with your resume, cover letter, and job search strategy.

Work with community partners to solve real-world problems in the [4th year capstone course](#).

Submit an [APR Update Request](#) after registering for your final term(s) to confirm that all academic graduation requirements are met.

Review graduation eligibility requirements and deadlines before you [apply to graduate](#) and [learn about convocation](#).


Explore Experiential Education

Participate in hands-on, immersive learning experiences.



Explore high-impact, “learn-by-doing” experiences that take your education beyond the classroom. Whether on- or off-campus, paid or volunteer, participating in directed experiences and focused reflection helps to increase knowledge, develop skills, clarify values, and build your capacity to contribute to your communities.

Experiential Education opportunities are highlighted with a  symbol.

Most opportunities highlighted below can be pursued at any time. Opportunities with timelines or deadlines are noted with a  symbol.

Visit the [Experience & Involvement Hub](#) to explore these opportunities and more!

Connect your experiences



Whether you’re new-to-UBCO or nearing graduation, reflect on the questions below to help connect your values, interests, and education to your future career or personal goals. Practicing reflection can help deepen your learning, strengthen your connections, and encourage life-long learning. These questions are meant to help you build a UBC Okanagan experience that is unique to you.

- What are you hoping to learn as you progress through your degree?
- What kind of career are you interested in after completing your degree?
- How will the skills and knowledge you acquire during your studies help you in your career after graduation?
- What relationships and experiences are you hoping to gain from your time at university?

A Career Development Specialist can help guide you through the reflection process to bolster the connections between your experiences, skills, and goals. For a deeper reflection, track your experiences in the [Experience & Involvement Hub](#).

Getting Started:

Explore new opportunities and interests.

Develop Interests and Broaden Perspectives:


Get more involved and build your skills and connections.

Immersive Experiences:

Take part in unique opportunities and programs. Find ways to immerse yourself in your experiences.



Connect & Build Community

New to UBC?  Participate in [orientation and transition programming](#) to connect with other students and get involved in the campus community.

Find on-campus events to meet new people and get involved with the campus community using the [Events Calendar](#).

Follow [@UBCOStudents](#) on Instagram for campus tips, opportunities, and event updates. Follow [@ubcosoe](#) for content specific to School of Engineering.

[Attend a Heat Varsity Athletics game](#). Admission is free with your student UBCcard.

Build your network by participating in the [UBC Mentorship program](#) to develop impactful relationships with industry professionals and other students.

Branch out, get involved in student life, and have fun by joining an [engineering design team, club, or association](#) like the [Engineering Society at UBCO](#) or another Student Union Okanagan (SUO) [student association](#) to meet peers and participate in events and activities.

Attend the [School of Engineering Industry Nights](#) to network with local industry partners.

Commuting? Visit the [Collegia](#) spaces on campus to relax, study, and socialize with others.

Planning to live on campus?   [Apply to join a Living Learning Community](#).

Explore professional associations such as [Engineers and Geoscientists BC](#) for more information about potential careers, networking and professional development opportunities, and more.

Give back to the campus community by volunteering or applying to work on campus: [Student & Alumni Job Board](#).

[Create your own student association](#), study group, or social club to connect with peers.




Develop Skills & Gain Relevant Experience


Use the [Events Calendar](#) to find on-campus opportunities for personal and professional development.

Connect with the [Academic & Career Development team](#) for support with exploring opportunities that will help you achieve your career or education goals.

Looking to volunteer, intern, or gain work experience? Assess what experience you have and fill any gaps by participating in [Career Development workshops](#) and finding opportunities on the [Student & Alumni Job Board](#).

Forge networks, enhance written and verbal communication skills, emotional intelligence and inclusive leadership abilities by exploring the hands-on learning opportunities on the [Professional Development and Experiential Learning website](#).



Apply to the  [Work Study](#) program to build skills and grow your professional network with paid on-campus positions that work around your class schedule.

 Visit [Innovation UBC](#) to explore how you can turn ideas into impact through research partnerships, entrepreneurship, commercialization and more.

Book an appointment with a [Learning Strategist](#) at any stage in your degree for help with study skills and learning strategies.

Investigate requirements for full-time jobs or other opportunities related to careers of interest by looking at job boards and employer websites.

Apply to the [Professional Activities Fund \(PAF\)](#) to help subsidize co-curricular projects and activities like competitions, conferences and prototyping.

Find [other work opportunities](#) or apply to the   [Co-op Program](#) to strengthen your resume.

Summarize and organize your academic and out-of-classroom experiences and accomplishments in a resume, CV, or portfolio using the available [resources](#) or help from the [Academic & Career Development team](#).

Gain leadership experience by running for an executive position in a student association or the [Student Union Okanagan \(SUO\)](#).



Engage Locally & Globally

Learn about [UBCO's commitments](#) to Truth and Reconciliation and Indigenous initiatives.

Explore [course options and electives](#) that broaden your own perspectives and worldviews.

Learn about programs and supports available through the [Equity & Inclusion Office](#).

Participate in cross-cultural initiatives organized by the [Global Engagement Office \(GEO\)](#) to increase cultural awareness and grow professionally.

[Get involved with Student Union Okanagan \(SUO\) resource groups:](#)

- Indigenous Peoples Collective (IPC)
- Peer Support Network (PSN)
- Pride Resource Centre (PRC)
- Women's Resource Centre (WRC)
- Disability United Collective Okanagan (DUC-O)

Attend [Kelowna community events](#) to get connected and learn about different cultures, activities, and experiences that make the Okanagan unique.

Engage with your community in a meaningful way and help to create social change by participating in the   [Community Service Learning](#) program.