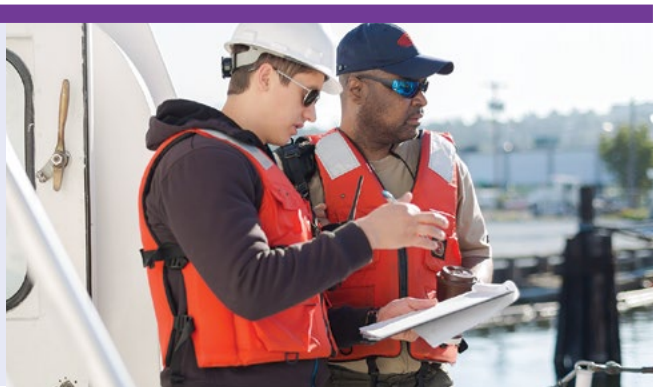
SOUTH SEATTLE COLLEGE

Pathway: **Civil, Environmental, and Mechanical Engineering**

Area of Study: **Science, Technology, Engineering, and Math (STEM)**

Suggested Schedule to Earn an Associate Degree

The schedule below meets the requirements to earn an Associate in science major related program degree with an emphasis in Civil, Environmental, and Mechanical Engineering. This allows you to transfer in as a junior at most four-year institutions. If classes listed don't fit your schedule or interests, you can take alternate classes. Visit this website for instructions: www.southseattle.edu/pathway-map-help.



Year One

Quarter One *Credits*

- ☐ MATH102/&141 College Algebra and Precalculus I 10
- ☐ ENGR110: Intro to Engineering 2

Quarter Two

- ☐ MATH&142: Precalculus II 5
- ☐ ENGL099: Supporting College Writing 5
- ☐ ENGL&101: English Composition I 5

Quarter Three

- ☐ MATH&151: Calculus I 5
- ☐ CHEM&139: General Chemistry Prep 5
- ☐ ART111: Drawing or HUM105: Intercultural Communication 5

Year Two

Quarter Four

- ☐ MATH&152: Calculus II 5
- ☐ CHEM&161: General Chemistry with Lab I 6
- ☐ ECON&201: Micro Economics, ENVS170: Energy and Resources: Now and Future **-or-** CMST&230: Small Group Communication ... 5

Quarter Five

- ☐ MATH&163: Calculus III 5
- ☐ CHEM&162: General Chemistry with Lab II 6
- ☐ ART111: Drawing, or HUM105: Intercultural Communication 5

Quarter Six

- ☐ MATH220: Linear Algebra 5
- ☐ PHYS&221: Engineering Physics I 5
- ☐ CHEM&163: General Chemistry with Lab II **-or-** ENGL235: Technical Writing ..... 5 or 6

Year Three

Quarter Seven

- ☐ MATH238: Differential Equations 5
- ☐ PHYS&222: Engineering Physics II 5
- ☐ ENGR&214: Statics 5

Quarter Eight

- ☐ CSC110: Intro to Computer Programming 5
- ☐ PHYS&223: Engineering Physics III 5
- ☐ ENGR&215: Dynamics 5

Quarter Nine

- ☐ CSC142: Computer Programming I 5
- ☐ ENGR&225: Mechanics of Materials 5
- ☐ ENGR&204: Electrical Circuits, MATH224: Vector Calculus, ENGL235: Technical Writing **-or-** BIOL&211: Majors Cell Biology ... 5

Total Credits Required: 135

To Do List

Quarter 1

- ☐ Make an Ed Plan with an advisor
- ☐ Get involved on campus thru Student Life
- ☐ Tour the ctcLink class schedule/student portal

Quarter 2

- ☐ Apply for funding through FAFSA or WASFA
- ☐ Attend a transfer fair and research options
- ☐ Apply for Ready Set Transfer

Quarter 3

- ☐ Attend your major's info sessions at a transfer institution
- ☐ Attend a resume workshop at several transfer institutions

Quarter 4

- ☐ Update your Ed Plan with an advisor
- ☐ Attend transfer events, including personal statement workshops
- ☐ Meet with a Engineering Faculty member like Albert Engel (albert.engel@seattlecolleges.edu)

Quarter 5

- ☐ Finalize your three top choices for transfer institutions and programs
- ☐ Apply to your transfer school
- ☐ Reapply for FAFSA or WASFA
- ☐ Apply for summer research or internship opportunities

Quarter 7

- ☐ Update your Ed Plan with an advisor

Quarter 8

- ☐ Reapply for FAFSA or WASFA if transferring
- ☐ Apply for summer research or internship opportunities

Quarter 9

- ☐ Apply for Associate degree from South
- ☐ Order cap and gown; attend graduation

Pathway: **Civil, Environmental, and Mechanical Engineering**

Civil, Environmental, and Mechanical Engineering

Civil engineers plan, design, and construct major facilities, including highways, transit systems, airports, dams, water and wastewater treatment systems, tunnels, energy facilities, harbors, canals, buildings, and bridges. Civil engineers work on projects ranging from single homes to complex transportation networks and city planning. Civil Engineering and Environmental Engineering is typically offered as a joint degree, with students specializing later in their educational and professional careers.

Environmental engineers manage our air, water, and energy resources, and protect society from natural catastrophes such as earthquakes, and human-caused hazards such as toxic waste. If you enjoy focusing on solutions to make human activity more sustainable, safer, and more efficient, civil and/or environmental engineering may be the right career path for you.

Mechanical engineering is the study of maintaining, analyzing, designing, and manufacturing machinery. The scale of projects ranges from designing the tiny parts of machines, to the handling of large-scale machinery. Mechanical engineers train to become experts in material science; understanding the chemical and mechanical properties of each material and how they interact.

Through this pathway, students can also prepare for further education and careers in aerospace engineering, with a focus on the design, development, testing, and production of aircraft, spacecraft, and related systems and equipment

Students completing the Civil, Environmental and Mechanical Engineering MRP pathway receive the foundational knowledge to pursue a bachelor's or higher degree in this area while also gaining valuable skills in problem-solving, systems design, and data modeling. You will study areas such as calculus, physics, engineering, and chemistry, but you will also take courses in English, social sciences and humanities to better understand how to design for diverse populations and cultures. You will also get the opportunity to design, develop and test challenging projects with peers outside of the classroom in the SSC Rocket Club and the MakerSpace (a free collaborative work space for students).

Length of Program

135 credits = 9 quarters if you take 15 credits* each term.

Students who take 15 credits each quarter earn their degree faster, qualify for more financial aid, and earn more money over their lifetime because they complete their schooling faster.

Which Quarter Can I Begin?

Fall, Winter, Spring, or Summer.

Class Times/Delivery Format?

Classes and labs are generally offered M-TH (two days or four days a week) from 8am-4pm. We offer on-campus, online, or hybrid (part on-campus, part online) formats.

Career Opportunities

- Civil Engineer
- Environmental Engineer
- Design Engineer
- Project Manager
- Structural Engineer
- Water Engineer
- Construction Manager
- Urban Designer
- Environmental Consultant
- Mechanical Engineer
- Industrial Engineer
- Aerospace Engineer
- Materials Engineer
- Production Manager
- Automotive Engineer

A bachelor's degree or higher degree is typically required for the careers listed above. For current employment and wage estimates, visit the Engineering program pages on South's website at https://southseattle.edu/programs/college-transfer/program-pathways

Future Education Opportunities

Once you complete this associate degree, additional education opportunities include:

- A bachelor's degree in Civil, Environmental, Material Science, Engineering Technology, Mechanical Engineering, Aerospace Engineering

Program and admissions requirements vary from college to college. Contact an advisor to create an educational plan tailored to transfer to the institution of your choice.

Approximate Costs Each Quarter

Tuition*.....$1,550
Books, supplies, and miscellaneous fees.....$250

Tuition based on WA resident rates. Rates for international students and non-residents may vary.

Apply for Financial Aid

Did you know that the average student at South spends 3 hours applying for financial aid and gets more than $4000 per year?

Visit **www.southseattle.edu/financial-aid** to apply for financial aid, including grants and scholarships you don't have to pay back.

Find Out More

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