UNIVERSITY OF UTAH
COLLEGE OF ENGINEERING

20/20
VISION

PROGRESS REPORT
In 2014, the growth of Utah’s tech economy created an unprecedented demand for technical graduates, and meant that the college needed to grow. But how quickly and by how much? And most importantly, could the college accelerate its output of graduates without compromising quality? To develop a vision for 2020 and beyond, Engineering Dean Richard Brown met with industry leaders, advisory board members, and faculty department heads.

These thought leaders concluded that a growth rate of five percent per year was sustainable and would result in a College of Engineering that was one-third larger by 2020. Metrics were developed for enrollment, degree output and faculty size. The college would increase its footprint substantially within the university and better fulfill its mission to provide highly qualified technical graduates for Utah companies. But there were also challenges. We would need more space for the additional students and faculty, and the base budget would have to expand. Not growing was never a consideration.

With 2020 just two years away, it’s time for a progress report. Is the college on track, and are the assumptions that shaped the vision for 2020 still valid?

<table>
<thead>
<tr>
<th>ENROLLED MAJORS</th>
<th>2014</th>
<th>2017</th>
<th>2020 TARGET</th>
</tr>
</thead>
<tbody>
<tr>
<td>Undergraduate</td>
<td>3577</td>
<td>4241</td>
<td>4793</td>
</tr>
<tr>
<td>Graduate</td>
<td>1138</td>
<td>1249</td>
<td>1525</td>
</tr>
<tr>
<td>Total</td>
<td>4715</td>
<td>5490</td>
<td>6318</td>
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<tr>
<td>DEGREES</td>
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<td></td>
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</tr>
<tr>
<td>Bachelors</td>
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<td>611</td>
<td>647</td>
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<tr>
<td>Masters</td>
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<td>321</td>
<td>269</td>
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<tr>
<td>Doctoral</td>
<td>69</td>
<td>79</td>
<td>93</td>
</tr>
<tr>
<td>Total</td>
<td>753</td>
<td>1011</td>
<td>1009</td>
</tr>
<tr>
<td>FACULTY HEADCOUNT</td>
<td>190</td>
<td>221</td>
<td>240</td>
</tr>
</tbody>
</table>

(2017 is the lastest year for which verified data is available. 2018 data is released in late October.)
ON THE ROAD
from good to great

On its current trajectory, the College of Engineering will meet or exceed nearly all of the 2020 goals. In fact, the college has already surpassed the target for the annual output of degrees.

Student quality is also at an all-time high. The average high school GPA of freshman directly admitted to the college has risen to 3.9, with an average composite ACT of 31. And, 26 percent of all students in the University of Utah’s Honors program are from the College of Engineering.

The college has also gained ground on funding and space. Legislative support from Engineering Initiatives in 2015 and 2017, matched by the University, has added substantially to the number of faculty positions. Meanwhile, the modernization of the Rio Tinto Kennecott Mechanical Engineering Building and continuing renovation projects in the Merrill Engineering Building are creating new space for faculty, graduate students and labs.

FOCUSED
on the future

With 2020 on the horizon, much remains to be done. At last count, 20 percent of the University of Utah’s incoming students intend to major in engineering or computer science, compared with just 7 percent in 2005. The pipeline is now full of well-qualified students, but the college will have to continue to grow in space and faculty to accommodate them.

Utah industry continues to press for ever more engineering and computer science graduates for its 26,000 open positions. From 2016 to 2017 alone, tech-related job postings increased by an astonishing 42 percent. Net tech employment in Utah is 135,000, and the economic impact of the tech industry is an estimated $14.9 billion in direct contribution to the state’s bottom line (10.25 percent of the total).
As College of Engineering alumni, industry partners and friends, your involvement has been key to our progress. Private support since 2014 surpassed $17.4 million for scholarships and fellowships, endowed professorships, research support and capital improvements. You can take pride in the scholarships, new buildings, and the research discoveries that are leading to breakthroughs in technology and medicine. As much as your dollars, College of Engineering faculty and students are inspired by your loyalty, love for the university and personal engagement. We invite your continued involvement in creating the future, and your help with the following priorities.

STUDENT SUPPORT

With an enrollment of more than 5,500 students in the college, scholarships are needed more urgently than ever. Being at a PAC-12 school, the college competes for the best students locally and nationally; scholarships often determine which school a student chooses. For students with financial need, a scholarship makes the critical difference in completing the degree. As Utah continues to rank at the top of the nation's fastest growing tech sector, the College of Engineering must produce graduates who are prepared to succeed and compete with those from the best schools in the nation.

FACULTY SUPPORT

Accelerated recruitment has attracted a new generation of extraordinary faculty members. In a highly competitive world, we must create an environment where faculty want to build lasting careers. At present, the College of Engineering has only six endowed chairs/professorships for more than 200 faculty members, less than half the number in the colleges of Business, Law and Nursing, and at the bottom of PAC-12 peers. We need your help to put the College of Engineering on par with its national peers by rewarding the scholarly performance and incentivizing further achievement of our rising faculty stars through named professorships and chairs.
BUILDING PRIORITIES

To prepare for 2020 and beyond, the College of Engineering must address the need for additional space and stay current with changing technology. Among the building priorities for the next five years are:

- Constructing a new computer science building
- "Infilling" the north side of the Rio Tinto Kennecott Mechanical Engineering Building to create more space for faculty offices and student labs
- Modernizing the heavily used teaching labs in Electrical and Computer Engineering, Civil and Environmental Engineering and Chemical Engineering

Engineers and computer scientists from the U are filling leadership roles in Utah and across the country. Our faculty are engaged in innovative research that brings new products to market. And our alums, more than 20,000 strong and growing, inspire us to provide an excellent engineering education to more and more students each year.

You are vital to our progress through your donations, your volunteer service, and your legislative and community advocacy. We couldn’t do it without the millions of dollars in donations we receive each year from our loyal alums and generous corporate partners.
Alumni sponsored scholarships are often an expression of appreciation for an education that enabled a lifetime of professional success. For David Jorgensen, EE ’61, supporting engineering students is a labor of love. Through the David and Annette Jorgensen Foundation, Dave and his wife are currently sponsoring 22 students at full tuition for the length of their undergraduate degree. Since 2013, 17 Jorgensen Scholars have graduated and 55 students have received full or partial support.

To the students, Dave is a mentor, cheerleader, friend and confidante. Each year, he travels to campus from California to meet with his scholars in person, and their personal hardships can be heartbreaking: the sudden loss of parental support; a child with a life-threatening heart condition; the burden of supporting an extended family. For students who are struggling, knowing their education can continue is nothing short of a godsend. They perceive their 80-year-old benefactor as a blend of fairy godfather and guardian angel.

Between visits, which typically end in hugs and tears, Dave exchanges emails, offers career advice, and even provides bonuses for exceptional academic progress. He has secured the program in perpetuity through a generous estate gift. So for now, and for generations to come, the Jorgensen Scholars Program will provide a lifeline of help and hope.
Like Dave and Annette Jorgensen, you can make a difference in the life of a student by putting your name on a scholarship. While gifts at all levels are welcome, the matching scholarship challenge will turn your $1,000 gift or pledge into a $2,000 award. If you work for a matching gift company, your donation has even greater impact.

So far, 160 grateful alums have named scholarships in their honor or the name of a parent or loved one. Scholarship recipients and donors enjoy getting acquainted at the annual scholarship awards banquet, where the students learn the value of paying it forward.

The goal of the scholarship challenge is to inspire future generations of scholarship donors.
A great community of Utah engineers was created in 2005 when the Engineering Alumni Association (EAA), was launched by Dean Richard Brown, who is himself an alum. Since then, some 2,100 engineering and CS graduates have signed up as EAA members.

Their success is due to the volunteer leadership of its officers, past and present, including: Rich Nordlund, Matt Hirst, JoAnn Lighty, Sue Dintelman, Bob Kessler, Bob Hitchcock, Jonathan Richards, Pete Ashdown, Whit Johnson, Brett Matsumura, Jeff Johns, Becky Marquette, Austin Van Otten, and Tony Curtis, among others.

Their first accomplishment was the EAA website: https://www.coe.utah.edu/alumni/eaa-about/. Members receive a monthly e-newsletter, updates from the college, and announcements regarding EAA activities. In addition to social events, EAA has been actively involved in career-building activities for current students.

Recently, the EAA took on a fund-raising project to create a scholarship endowment. Thanks to countless donors, the endowment reached its $25,000 minimum goal. The Board invites alumni to continue to build the endowment so that more students may benefit.

Visit the EAA website to sign up for your free membership. We are proud of you and want you to take pride in your alma mater.