Fostering Identity to Promote Entry and Persistence in Engineering for First Generation Students

Engineers from Day One

Arizona State University
ASU Charter

ASU is a comprehensive public research university, measured not by whom it excludes, but by whom it includes and how they succeed; advancing research and discovery of public value; and assuming fundamental responsibility for the economic, social, cultural and overall health of the communities it serves.
The biggest barrier to first-generation and under-represented youth entering engineering is not being able to see others like them doing engineering, which makes them assume that such roles are closed to them.
Pilot Collective Impact Alliance: Engineers from Day One
Engineers from Day One

Approach
foster engineering identity
development by enhancing
awareness,

enjoyment,

interest,

opinion formation, and

understanding

of engineering
Provide opportunities to:

• visit the university campus, tour engineering facilities
• interact with near peers during undergraduate research symposia, innovation showcase
• meet with academic advisors
• learn about online and immersion degree programs
Build self-efficacy networks for community college students

- attend residential Grand Challenges Scholars summer institute
- attend REUs at Arizona State University
- interact with near peers, academic advisors, faculty
professional identification is an essential aspect of becoming an engineer

• do engineering via Engineering Projects in Community Service
• meet ASU engineering students, staff, and advisors at engineering clubs

Foster students’ engineering identity in Community Colleges
Transfer pathway tool

MyPath2ASU:
https://admission.asu.edu/transfer/MyPath2ASU

Transfer Articulation System for the State

aztransfer
https://www.aztransfer.com/

Fully Online Accredited Degree Programs

https://start.asuonline.asu.edu/study/engineering-degrees/
MyPath2ASU: https://admission.asu.edu/transfer/MyPath2ASU

Guaranteed general admission

Guaranteed general admission to ASU and admission into major of choice if all requirements are satisfied*. Some majors have additional or higher admission requirements.

400+ on-campus and online pathways

Every student experiences a different degree path. MyPath2ASU™ includes over 400+ immersive and online pathways, so every transfer student can fuel their own college experience.

Minimize loss of credit

Use personalized course-by-course transfer maps that are curated to take the guesswork out of transfer work. MyPath2ASU™ assists you in selecting the right courses to take at your current transfer ins
MyPath2ASU: https://admission.asu.edu/transfer/MyPath2ASU

Self Service Transfer Tools
Receive direct access to my MyPath2ASU™ and the additional Transfer Guide tools that are available to assist in planning your path to ASU. You will be able to manage your Transfer Pathways, request course evaluations, review degree requirements, and plan your courses. This tool will help you ensure you're on track to transfer smoothly to ASU.

Personalized Support
Receive communication per major of choice to help you academically prepare for your ASU major. Access to ASU’s transfer specialists and pre-enrollment services and invitations to special events at ASU.

Save time and money
MyPath2ASU™ features My Transfer Guide, a personalized portal to effortlessly track your own degree progress. From the very beginning, ASU works with you to figure out how your credits will transfer a
AZTransfer develops and maintains web services and other resources directly related to operating the Arizona Transfer System and promoting transfer opportunities and programs. These tools and resources ensure faculty, staff, and students have access to transfer information from anywhere in the state. Many tools are refreshed daily while others are updated annually or as needed.
Online Degree Programs: https://start.asuonline.asu.edu/study/engineering-degrees/

Advance your technical competencies and advance your career opportunities by enrolling in an individual course or pursue a complete program. There is no on-campus residency requirement for students pursuing the online programs or courses.
<table>
<thead>
<tr>
<th></th>
<th>Immersion</th>
<th>Online</th>
<th>Total</th>
<th>Immersion</th>
<th>Online</th>
<th>Total</th>
<th>Percent Change 2014-15 to 2019-20</th>
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<tbody>
<tr>
<td><strong>Grand Total</strong></td>
<td>1,423</td>
<td>2,441</td>
<td>3,864</td>
<td>1,371</td>
<td>3,676</td>
<td>5,047</td>
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<tr>
<td><strong>URM</strong></td>
<td>336</td>
<td>492</td>
<td>828</td>
<td>399</td>
<td>996</td>
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<td>27</td>
<td>55</td>
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<tr>
<td>Black/African American</td>
<td>67</td>
<td>160</td>
<td>227</td>
<td>74</td>
<td>365</td>
<td>439</td>
<td>10% 128% 93%</td>
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<tr>
<td>Hispanic/Latino</td>
<td>236</td>
<td>300</td>
<td>536</td>
<td>302</td>
<td>611</td>
<td>913</td>
<td>28% 104% 70%</td>
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<tr>
<td>Native Hawaiian/Pacific Islander</td>
<td>5</td>
<td>5</td>
<td>10</td>
<td>4</td>
<td>7</td>
<td>11</td>
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<tr>
<td><strong>Not URM</strong></td>
<td>1,087</td>
<td>1,949</td>
<td>3,036</td>
<td>972</td>
<td>2,680</td>
<td>3,652</td>
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<tr>
<td>Asian</td>
<td>106</td>
<td>144</td>
<td>250</td>
<td>103</td>
<td>269</td>
<td>372</td>
<td>-3% 87% 49%</td>
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<tr>
<td>White</td>
<td>809</td>
<td>1,659</td>
<td>2,468</td>
<td>666</td>
<td>2,063</td>
<td>2,729</td>
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<td>Two or More Races</td>
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<td>88</td>
<td>138</td>
<td>45</td>
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<td>229</td>
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<tr>
<td>Unspecified</td>
<td>12</td>
<td>42</td>
<td>54</td>
<td>52</td>
<td>147</td>
<td>199</td>
<td>333% 250% 269%</td>
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<tr>
<td>International</td>
<td>110</td>
<td>16</td>
<td>126</td>
<td>106</td>
<td>17</td>
<td>123</td>
<td>-4% 6% -2%</td>
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</tbody>
</table>
Challenges

Transfer students need additional funding to complete their degree (in addition to Pell Grants)
Community College to University Pathways need to be more direct and lead to employment outcomes
✓ after academic associates degrees
✓ while completing their four-year degree

Need concurrent enrollment programs

Example:
https://asuonline.asu.edu/online-degree-programs/undergraduate/rn-bsn-concurrent-enrollment-bsn/
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