University Design Initiative

Tom Boyd
Interim Provost
Institutional Initiatives:

- **Metric-Based Budget Model**
  - Speaks to: **Resource allocation**, programmatic incentives, strategic intent (align resource deployment, expand resource base, drive program development)

- **Promotion & Tenure Expectations**
  - Speaks to: **Quality**, faculty incentives, strategic intent (faculty scholarship, curriculum development and delivery, institutional and professional service)

- **Productivity Guidelines**
  - Speaks to: **Quantity**, resource utilization and deployment, strategic intent (sponsored research, student scholarship, curriculum delivery)

- **University Design**
  - Speaks to: **Strategic Intent**, programmatic priorities (distinctiveness, size, resources, support)
Recognizing Departmental Differences

Institutional Average Cost / SCH: $398
Institutional Average Tuition / SCH: $750
Examples: Distinctive Programs

PATHS Scholarship Program
Pursue PATHS to a Bright Future...

About PATHS
Path Ambassadors to High Success (PATHS) is a new scholarship program with funding from the National Science Foundation (NSF) that offers an exciting opportunity for academically talented, low-income students in Colorado to study Computer Science (CS) at the Colorado School of Mines (Mines). PATHS creates new and strengthens existing pathways for economically challenged, high-potential CS students to thrive at Mines. In addition to providing financial awards, PATHS empowers students through on-campus communities that provide a spectrum of activities, support services, career guidance, and university resources to encourage scholars through successful completion of an undergraduate CS degree. PATHS Scholars, who successfully continue with the program will become mentors to new PATHS Scholars in later years.

The Alliance for the Development of Additive Processing Technologies (ADAPT) is a membership-based organization that solves challenges in additive manufacturing (AM) using data informatics-driven approaches. We are headquartered at Colorado School of Mines in Golden, Colorado.

Welcome to ADAPT
Context: Ensuring Uniform, High-Quality Student Experience

Example: Class Sizes
Context: Aligning Faculty Expectations

Example: Teaching and Sponsored Research
President asked Department Heads to engage in a University Design process. Intent: build an aspirational vision for Mines from the ground up.

- Fall 2016 - Department Heads (DH) define aspirational metrics (e.g., faculty size, student size, research productivity).
- Spring 2017 – Financial, enrollment, and productivity models validate overall aspirations can be supported. DHs asked to construct first draft of “Pathways of Distinction” documents.
- Summer 2017 – Provost provides feedback on Pathways documents and builds Faculty Conference as venue to engage broader campus on Pathways discussions.
- Fall 2017 – DHs work with program faculty to revise Pathways documents. Revised models re-validated.
- Spring 2018 – Engage Board on Pathways initiatives proposed by DHs, Provost provide DHs feedback.
# Design Aspirations: Staffing, Research, Advisees, and Finances

## Departmental Design aspirations

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<thead>
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### Student Head Count

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<tr>
<td>Chemical &amp; Biological Engineer</td>
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<td>Chemistry</td>
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<td>15</td>
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<tr>
<td>Electrical Engineering</td>
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<tr>
<td>Geology</td>
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### Faculty Head Count

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<tr>
<td>Mechanical Engineering</td>
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<td>Mining</td>
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<td>Petroleum</td>
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<tr>
<td>Physics</td>
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### Research

- **Raw**: $1,300,000
- **Per/TTT**: $81,250
- **Raw**: $7,500,000
- **Per/TTT**: $416,667
- **Raw**: $8,000,000
- **Per/TTT**: $400,000
- **Raw**: $10,000,000
- **Per/TTT**: $392,157
- **Raw**: $3,200,000
- **Per/TTT**: $2,000,000
- **Raw**: $1,000,000
- **Per/TTT**: $83,334
- **Raw**: $2,600,000
- **Per/TTT**: $100,000
- **Raw**: $800,000
- **Per/TTT**: $100,000
- **Raw**: $4,240,000
- **Per/TTT**: $235,256
- **Raw**: $6,500,000
- **Per/TTT**: $416,667
- **Raw**: $500,000
- **Per/TTT**: $33,334
- **Raw**: $10,000,000
- **Per/TTT**: $312,500
- **Raw**: $10,000,000
- **Per/TTT**: $900,000
- **Raw**: $3,500,000
- **Per/TTT**: $350,000
- **Raw**: $6,500,000
- **Per/TTT**: $500,000
- **Raw**: $7,350,000
- **Per/TTT**: $450,000

### Thesis Advises

- **Raw**: 40
- **Per/TTT**: 2.5
- **Raw**: 27
- **Per/TTT**: 4.3
- **Raw**: 12
- **Per/TTT**: 4.7
- **Raw**: 75
- **Per/TTT**: 2.9
- **Raw**: 46
- **Per/TTT**: 2.9
- **Raw**: 76
- **Per/TTT**: 2.2
- **Raw**: 40
- **Per/TTT**: 3.1
- **Raw**: 110
- **Per/TTT**: 2.5
- **Raw**: 312
- **Per/TTT**: 8.4
- **Raw**: 83
- **Per/TTT**: 6.9
- **Raw**: 0
- **Per/TTT**: 0.0
- **Raw**: 109
- **Per/TTT**: 3.4
- **Raw**: 128
- **Per/TTT**: 6.4
- **Raw**: 64
- **Per/TTT**: 6.4
- **Raw**: 87
- **Per/TTT**: 6.7
- **Raw**: 89
- **Per/TTT**: 4.2

**Revenue and Salary Estimates**: $150,575,841

**Total Salaries**: $57,088,405

Fraction Revenue used for Salaries: 0.38
Aspirational Research Productivity: Peer Comparison

Delaware Survey: R1/R2, PhD Granting, Expenditures per TTT (FY16)
Pathways of Distinction: Overarching Questions

- How will offerings (scholarship, research, and curricular) supported by the Department be differentiated from similarly named offerings elsewhere?
- How will these offerings connect to other programs at Mines?
- What will the Department do to contribute to the institutional objective of increase undergraduate student success?
- How will the Department grow its graduate population?
- Could defining a broadly interdepartmental, campus-level institute enable the Department to align itself more fully with the institutional mission? If so, what would be the nature of this institute?