VISION 2015: Building on Excellence
EFC Information Session
March 20, 2012
Dean Adel Sedra
overview

• aspiration & key priorities
• planning process
• draft plan highlights
• questions & feedback
aspiration

Waterloo Engineering aspires to be a truly world-class school of engineering.

The programs we offer, the students we graduate, and the solutions we develop will be sought after by outstanding students, employers, employees and partners.
key priorities

• Attracting, engaging and retaining outstanding people: undergraduate students, graduate students, faculty & staff

• Committing to excellence in academic programs & services

• Undertaking high-impact research, both within and across the disciplines and spanning the theoretical to the practical

• Building connections and promoting collaboration

• Fostering innovation & entrepreneurship

• Providing the world-class facilities required to support excellence in education & research
planning process

academic units

- aspiration & key priorities
- self study
- draft plan
- internal feedback
- revised draft plan
- external assessment
- final plan

administrative units

- aspiration & key priorities
- self study
- draft plan
- internal feedback
- revised draft plan
- summary for inclusion in Faculty plan
- external assessment of Faculty plan
- final plan for each unit & final Faculty plan
faculty & staff data

Growth in FTE Staff Over Time

Growth in Regular Faculty Over Time

Academic Units
Open Positions: Acad
Administrative Units
Open Positions: Admin
T/TS
Lecturers
Regular Faculty, May 1, 2011

Facility to Staff Ratio, May 1, 2011
faculty targets

Strategically Increase the Faculty Complement (+20%)

<table>
<thead>
<tr>
<th>Year</th>
<th>T/TS Faculty</th>
<th>Women</th>
</tr>
</thead>
<tbody>
<tr>
<td>2011</td>
<td>253.8</td>
<td>17.5</td>
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<tr>
<td>2012</td>
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<tr>
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<tr>
<td>2015</td>
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staff targets

Increase the Staff Complement to Appropriate Levels (+25%)
faculty & staff objectives

• Recognize and promote faculty and staff excellence
• Improve internal communications
• Support the career-long development of faculty and staff
• Fully engage all faculty members
• Establish a culture of service excellence
undergraduate studies data

Undergraduate Enrolment Over Time

Undergraduate Degrees Granted Over Time

Canadian/PR    International    Women

WATERLOO ENGINEERING
undergraduate studies data

Undergraduate Enrolment, Fall 2011

Undergraduate Degrees Granted, 2011
undergraduate studies intake targets

Maintain Relatively Stable Undergraduate Intake Targets (+3.5%)
undergraduate studies objectives

• Enhance the UG academic program
  • Improve lab equipment and experience
  • Pilot a clinic model in MME
• Support the retention of UG students
• Improve the UG student experience
  • Improve service and communications
  • Introduce an annual engagement survey
undergraduate studies objectives: co-op & accreditation

• Increase the number of co-op jobs
  • Add 2-term jobs (junior) & 8-month terms (senior)
• Provide unemployed first work term students a meaningful experience
• Support the implementation of WatPD-Engineering
• Ensure the ongoing accreditation of all programs
  • Invest in the implementation of a system of outcomes assessment
graduate studies data

Graduate Enrolment/TTS Faculty, 2011

<table>
<thead>
<tr>
<th>Subject</th>
<th>PhD</th>
<th>Research Master</th>
<th>Professional Master</th>
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<tr>
<td>TOTAL</td>
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<tr>
<td>SDE</td>
<td>2.7</td>
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<tr>
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graduate studies intake targets

Strategically Increase Graduate Enrolment
(Intake +44%)

Diplomas
Professional Master
Research Master
PhD
International
graduate studies objectives

• Strategically increase graduate enrolment
  • Introduce new programs and invest in recruitment
• Improve the graduate program
  • Foster consistently high quality supervision
  • Improve course offerings and academic rigour
• Improve graduate operations and service
• Enhance the graduate student experience
  • Conduct a comparative study of funding
  • Establish a faculty-wide graduate student association
research data

Research Funds ($M) Over Time

Funding per T/TS Faculty ($K) Over Time

- Tri-Council
- Federal Non Tri-Council
- Provincial
- Industry
- Other

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Research Funds by Sector ($M), 2010/11

- Tri-Council: $16.04
- Federal (excl Tri-Council): $7.50
- Provincial: $8.26
- Industry: $11.26
- Other: $17.30

Tri-Council Funding ($M), 2010/11

- NSERC: $15.31
- CIHR: $0.19
- SSHRC: $0.53
- Other: $0.19

Research data
research funding targets

Increase Research Funding (+33%)

<table>
<thead>
<tr>
<th>Year</th>
<th>Total Funding</th>
<th>Funding per T/TS Faculty</th>
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<td>2010/11</td>
<td>$253,689</td>
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<td>2011/12</td>
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<td>2014/15</td>
<td>$279,951</td>
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research objectives

• Establish a shared commitment to research excellence
  • Motivate increased activity (e.g. overhead)
  • Strengthen ties with industry
• Eliminate barriers to research success
  • Encourage technical research groups
  • Provide writing support for large proposals
  • Establish Associate Chairs, Research
• Celebrate research excellence
teaching objectives

• Enhance support for teaching at the faculty level
  • Establish an Associate Dean, Teaching
• Contribute to the development of faculty members and TAs as teachers
  • Encourage participation in CTE workshops (mandatory for new faculty)
  • Enhance mentoring
• Affirm the importance of teaching
outreach objectives

• Expand the scope of Waterloo Engineering outreach programs
  • Introduce high school programming
• Enhance the Waterloo Engineering community through participation in outreach
women in engineering data

Women in Engineering Programs, 2010/11

- Professors: 12.5% (Women) / 87.5% (Men)
- PhD Degrees Granted: 14.9% (Women) / 85.1% (Men)
- GRD Degrees Granted: 20.8% (Women) / 79.2% (Men)
- All GRD Students: 22.1% (Women) / 77.9% (Men)
- UG Degrees Awarded: 15.5% (Women) / 84.5% (Men)
- All UG Students: 16.7% (Women) / 83.3% (Men)
- First-year UG Class: 16.1% (Women) / 83.9% (Men)
diversity objectives

• Increase the participation of women in engineering at Waterloo
  • Increase confirmation rates on offers to women
  • Proactively seek female applicants for faculty positions
• Build an inclusive atmosphere within Waterloo Engineering
  • Establish a task force on diversity & inclusivity
International Student Metrics, 2011

- GRD Degrees Granted: 24.3%
- All Graduate Students: 37.3%
- UG Co-op Work Terms: 12.1%
- UG Degrees Granted: 3.6%
- All UG Students: 9.1%
- First-Year UG Class: 14.3%

% International
internationalization objectives

- Increase international undergraduate enrolment
- Increase international experience opportunities for undergraduates
- Increase international graduate studies and research collaborations
- Pursue targeted collaboration initiatives in India
- Support the ongoing development of UAE campus programs
entrepreneurship objectives

• Enhance initiatives to foster entrepreneurial activity and innovation
  • CBET
  • E Co-op
  • Capstone projects
  • Diploma in Advanced Management
supporting the plan

• Faculty & Staff Positions
• Budget
• Technology
• Advancement
• Space
supporting the plan
We are confident that with the continued commitment and guidance of our senior leadership and the excellent work of all our students, faculty, staff, alumni and other community members, the Vision 2015 plan will help establish Waterloo Engineering as a truly world-class school of engineering.
Questions & Feedback
THANK YOU