Agenda

- Enrollment
- Growing with Quality
- Faculty Growth – hiring plans
- Research
- Sources of Income
  - Development Activities
  - SSIE’s Manhattan Program
  - Engineering Professional Development
- Alumni and Career Connections
- International Collaborations
- Opportunities and and Challenges
- Looking Ahead
Enrollment

*Fall 2013 enrollment as of October 28, 2013, per OIRA Fall 2013 Enrollment Report – Day 40
Fall 2013 Graduate Update

- Applications - ↑ 83.97%
- Offers - ↑ 39.65%
- Deposits - ↑ 39.86%

*as of 7/23/2013

<table>
<thead>
<tr>
<th>Department</th>
<th>2013</th>
<th>2012</th>
</tr>
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<tbody>
<tr>
<td>Biomedical Engineering</td>
<td>77</td>
<td>44</td>
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<tr>
<td>Computer Science</td>
<td>825</td>
<td>443</td>
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<tr>
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<td>558</td>
<td>260</td>
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<tr>
<td>Mechanical Engineering</td>
<td>183</td>
<td>117</td>
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<tr>
<td>Systems Science and Industrial Engineering</td>
<td>309</td>
<td>208</td>
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<td><strong>Grand Total</strong></td>
<td>1952</td>
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<table>
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<td>Computer Science</td>
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<tr>
<td>Electrical and Computer Engineering</td>
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<td>158</td>
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<td>Mechanical Engineering</td>
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<td>57</td>
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<td><strong>Grand Total</strong></td>
<td>958</td>
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<td>26</td>
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<td>Systems Science and Industrial Engineering</td>
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<td>79</td>
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<td><strong>Grand Total</strong></td>
<td>421</td>
<td>301</td>
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</table>

(same period last year)
Growing with Quality

Watson
Freshmen Average SAT Scores
Fall 2002 - Fall 2013

Fall 2013 Average High School GPA*: 94.3

* Unofficial fall 2013 data as of August 29, 2013

Source: Office of Enrollment Management, Office of Institutional Research & Assessment, Binghamton University
# Growing with Quality

## Preliminary Statistics by School

<table>
<thead>
<tr>
<th>Overall GPA</th>
<th>Overall SAT (M + V)</th>
<th>Overall SAT (M+V+W)</th>
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<tr>
<td>93.8</td>
<td>1290</td>
<td>1908</td>
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### By School

<table>
<thead>
<tr>
<th>School</th>
<th>GPA</th>
<th>SAT (M+V)</th>
<th>SAT (M+V+W)</th>
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<tr>
<td>CCPA</td>
<td>94.2</td>
<td>1230</td>
<td>1844</td>
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<td>Harpur</td>
<td>93.5</td>
<td>1276</td>
<td>1889</td>
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<td>SOM</td>
<td>94.5</td>
<td>1344</td>
<td>1986</td>
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<td>SON</td>
<td>97.5</td>
<td>1292</td>
<td>1900</td>
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<tr>
<td>Watson -</td>
<td>94.3</td>
<td>1341</td>
<td>1960</td>
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<tr>
<td>Overall</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Watson-CS</td>
<td>93.8</td>
<td>1360</td>
<td>1995</td>
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<tr>
<td>Watson-Eng</td>
<td>94.5</td>
<td>1335</td>
<td>1950</td>
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Source: Office of Enrollment Management, Office of Institutional Research & Assessment, Binghamton University, Aug. 30, 2013
Full-Time, Part-Time and Tenure Track Faculty

- Full-Time
- Part-Time
- Tenure Track

<table>
<thead>
<tr>
<th>Year</th>
<th>Full-Time</th>
<th>Part-Time</th>
<th>Tenure Track</th>
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<td>2006</td>
<td>72</td>
<td>14</td>
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<td>2007</td>
<td>81</td>
<td>13</td>
<td>66</td>
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<td>2008</td>
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<td>68</td>
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<td>2009</td>
<td>82</td>
<td>21</td>
<td>68</td>
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<td>2010</td>
<td>74</td>
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<td>76</td>
<td>17</td>
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<td>2012</td>
<td>78</td>
<td>22</td>
<td>67</td>
</tr>
<tr>
<td>2013</td>
<td>83</td>
<td>19</td>
<td>72</td>
</tr>
</tbody>
</table>
Fall 2013 Update

- Hired 7 new tenured/tenure-track faculty
- Hired 7 new lecturers + 1 Research Assistant Professor*
  - Bioengineering – Weili Cui
  - Computer Science – Jason Gallia, Jessica Hartog
  - Electrical & Computer Engineering – Kyle Temkin, Tara Dhakal*
  - Mechanical Engineering – Shari Klotzkin, Kirill Zaychik
  - Systems Science & Industrial Engineering – Jack Riley
- New advisor - Watson Advising Office
- Changes
  - Prof. Daryl Santos (SSIE) – Vice Provost for Diversity
  - Associate Prof. Sarah Lam (SSIE) – Associate Dean of the Graduate School
  - Distinguished Teaching Prof. James Pitarresi (ME) – Assistant Provost and Executive Director, Center for Learning and Teaching

16 new hires for 2014
New Watson Faculty – Spring 2013/Fall 2013

Bioengineering

Weili Cui
Lecturer

Guy German
Assistant Professor

Kaiming Ye
Professor & Chair
New Watson Faculty – Spring 2013/Fall 2013

Electrical and Computer Engineering

Tara Dhakal
Research Assistant Professor

Kyle Temkin
Lecturer

Ning Zhou
Assistant Professor
New Watson Faculty/Staff – Spring 2013/Fall 2013

Mechanical Engineering

Shari Klotzkin
Lecturer

Sherry Towfighian
Assistant Professor

Ryan Willing
Assistant Professor

Kirill Zaychik
Lecturer
New Watson Faculty/Staff – Spring 2013/Fall 2013

Systems Science & Industrial Engineering

Erin Hornbeck
Assistant to the Chair

Huiyang Li
Assistant Professor

Tamara Lindow
Department Secretary

Mark Poliks
Professor

Jack Riley
Lecturer
New Watson Staff – Spring 2013/Fall 2013

Watson Institute for Systems Excellence

Megan Smey
Administrative Assistant

Watson School Advising Office

Brad Gordon
Academic Advisor

Watson Career and Alumni Connections

Olivia Schofield
Coordinator
Faculty Hiring - 2014

- 16 Hires - Largest number ever for the Watson School
  - Assistant Professor of Computer Science - 4 positions
    - 3 positions in Cyber Security
    - 1 position in Embedded Systems
  - Assistant Professor of Electrical and Computer Engineering - 4 positions
    - 2 positions in Cyber Security
    - 2 positions in Power/Energy Systems
  - Assistant Professor of Mechanical Engineering – 2 positions
    - 1 position in Mechanics
    - 1 position in Energy
  - Assistant Professor of Systems Science and Industrial Engineering - 4 positions
    - 2 positions in Healthcare Systems Engineering
    - 1 position Manufacturing Systems using new technologies
    - 1 position in Smart Grids/Operations Research
  - Associate/Full Professor of Systems Science and Industrial Engineering: Electronics Packaging/Manufacturing
    - 1 position in Electronics Packaging/Manufacturing
Watson Research Expenditures
2004 - 2013

- 2004-05: $6,254,403
- 2005-06: $8,281,249
- 2006-07: $10,154,470
- 2007-08: $10,214,374
- 2008-09: $12,028,347
- 2009-10: $13,346,386
- 2010-11: $12,836,413
- 2011-12: $14,282,506
- 2012-13: $11,069,766
Research

- 32% of University Research Awards Received in 2010-2011 and 34% in 2011-2012 (7/1 thru 6/30); 32% of University Research Expenditures in 2012-2013 (7/1 thru 6/30)

- $42 million research proposals submitted for 2012-13 (7/1 thru 6/30); 38% of University Research Proposals Submitted

- Among the top ten for research expenditures – 2012-13
  1. Psychology
  2. Publ Arch Facility
  3. Chemistry
  4. Computer Science
  5. Systems Science & Industrial Engineering
  6. Mechanical Engineering
  7. Electrical & Computer Engineering
  8. Graduate School of Education
  9. Decker School of Nursing
  10. Social Work

Bioengineering – over $1 million in awards received in last 6 months
## Watson Advisory Board

<table>
<thead>
<tr>
<th>Name</th>
<th>Company/Position</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amarjit Rai</td>
<td>BAE Systems</td>
</tr>
<tr>
<td>Gerald Trant</td>
<td>GE Central Research Center</td>
</tr>
<tr>
<td>Kerin Flannery</td>
<td>IBM Corporation</td>
</tr>
<tr>
<td>Koen Gieskes</td>
<td>Universal Instruments Corporation</td>
</tr>
<tr>
<td>John M. Carrigg, MBA '83</td>
<td>United Health Services (UHS)</td>
</tr>
<tr>
<td>Joseph M. Kolly '88</td>
<td>National Transportation Safety Board</td>
</tr>
<tr>
<td>Barbara Kane</td>
<td>Corporate Case Management, Inc.</td>
</tr>
<tr>
<td>Steve Betza (Chair)</td>
<td>Lockheed Martin Systems Integration</td>
</tr>
<tr>
<td>Robert Wuestner</td>
<td>Rockwell Collins</td>
</tr>
<tr>
<td>Steve Medwin, MBA '05</td>
<td>The Raymond Corporation</td>
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<tr>
<td>Terry Walsh '83</td>
<td>Maines Paper &amp; Food Service</td>
</tr>
<tr>
<td>Linda Shumaker, PE</td>
<td>Shumaker Consulting</td>
</tr>
<tr>
<td>Rich Brauer</td>
<td>McFarland Johnson</td>
</tr>
<tr>
<td>Bob Kump '83</td>
<td>Iberdrola USA</td>
</tr>
</tbody>
</table>
Increasing Cash Donations

The Development Plan has moved fundraising activities forward with progress in major gifts and planned (estate) gifts.

* As of November 20, 2013
Executive Master of Science in Health Systems – Manhattan

• Positioning
  • Eight programs in the entire country with a somewhat similar track have been identified
  • Health sector’s transformational growth and change offers compelling opportunity and challenges for emerging managers and leaders
  • The only Executive MS in Health Systems Program being offered in Manhattan

• Program Structure
• Course Instructors
• Location – SUNY Global Center, 116 Esst 55th Street (55th & Lexington)
# First (Current) Cohort


<table>
<thead>
<tr>
<th>Student Information</th>
<th>*# Applying</th>
<th># Accepted</th>
<th>Prev./# Withdrawn</th>
<th>Post./# Dropped</th>
<th># Paid $500 Orientation Fee</th>
</tr>
</thead>
<tbody>
<tr>
<td>MS SS</td>
<td>24</td>
<td>16</td>
<td>1</td>
<td>2</td>
<td>15</td>
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<tr>
<td>MS ISE</td>
<td>24</td>
<td>23</td>
<td>5</td>
<td>0</td>
<td>18</td>
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<tr>
<td><strong>Total</strong></td>
<td><strong>48</strong></td>
<td><strong>39</strong></td>
<td><strong>6</strong></td>
<td><strong>2</strong></td>
<td><strong>33</strong></td>
</tr>
</tbody>
</table>

**Remaining current students:** 31

*Note: 28 of accepted applicants are BU alums
14 Watson School
  9 BS ISE
  3 Bioengineering
  1 Mechanical Engineering
  1 Computer Science

Additional Sample Educational Backgrounds:
- Mathematics
- Geology
- Economics
- Psychology
- Chemistry
- English Literature
- Philosophy
## First Cohort Budget

- **$35,000 per student** (including $500 orientation deposit)
  - $500 – due < 1 month after admission/before orientation
  - $11,500 – due 3/05/13
  - $11,500 – due 8/01/13
  - $11,500 – due 12/01/13

<table>
<thead>
<tr>
<th>Budget Item</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Revenue (31 Students)</td>
<td>$1,085,000</td>
</tr>
<tr>
<td>Manhattan Program Costs</td>
<td>$579,622</td>
</tr>
<tr>
<td>BU Alumni Association (5% of Gross)</td>
<td>$54,250</td>
</tr>
<tr>
<td>BU Administration (5% of Gross)</td>
<td>$54,250</td>
</tr>
<tr>
<td>BU Provost’s Office (10% of Net)</td>
<td>$39,688</td>
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<tr>
<td>Watson Dean’s Office (20% of Net)</td>
<td>$79,376</td>
</tr>
<tr>
<td>SSIE Department (70% of Net)</td>
<td>$277,815</td>
</tr>
<tr>
<td><strong>Total New Funds Generated for BU</strong></td>
<td><strong>$505,378</strong></td>
</tr>
</tbody>
</table>

*Note: $35,000 per student includes a $500 orientation deposit.*
Public Courses

- **Annual Flight and Ground Vehicle Simulation - Jan 20-24, 2014**
  - 25 attendees registered to date (11 - US, 6 - Sweden; also 5 other countries)
  - Goal 75 Attendees (73 - 2013, 72 - 2012, 42 - 2011)
    - Slightly ahead of last year for International Attendees
    - Lower for US Government Agencies - sequestration could be affecting

- **Professional Engineer Offerings**
  - 6 Offerings to date (over 90 Attendees)
    - Engineering: An Ethical Profession with Professor George Catalano – November 2013
    - Technical Risk Management with Cheryl Monachino – June 2013

- **Lean Six Sigma**
  - Green Belt – Recorded via Echo 360 in January 2013 (105 students) live in-person and asynchronous via recording
    - Reoffered May 2013 (75 students), January 2014 (12 registered to date), and May 2014 – Prerecorded version only
    - Attracting a mix of current students, alumni and non-profit/industry attendees
  - Black Belt - Recorded via Echo 360 in August 2013 (39 students) – Available Asynchronous
    - To be reoffered in Summer 2014
  - White / Yellow Belt Leadership Training - Spring 2013
    - Develops future market for subsequent Green Belt and Black Belt
  - Health Care Lean Six Sigma – Fall 2014
    - Develops future market for Executive Masters Healthcare Systems Engineering
Engineering Professional Development

Custom Courses

- Lean Leader
  - Broome County Department of Social Services - Binghamton, NY - May 2013
- Process Capability
  - ADI - Wilmington, MA – August 2013 (webinar)
- Labview
  - Unison - Norwich, NY – January 2014
- Mechatronics
  - IBM - 1Q 2014
- Ergonomics
  - BAE – Endicott, NY - 1Q 2014

Conference Support

- Innovation Day – April 2012, 2013
- OPEX with SSIE - October 2012, 2013
- I3P Consortium – October 2013
Career & Alumni Connections

• Fall 2013 Update
  • Launched the year long 30th celebration of the Watson School (June 2013-2014)
  • Held Alumni Events – San Jose, Boston, Seattle, New York City
  • Hosted Student Visit at Lockheed Martin
  • Homecoming: Tau Beta Pi – Watson Alumni Roundtable
  • Industry Panel: Watson Career Secrets day prior to the Career Fair
  • Internship and Employment Opportunities with companies such as Universal, Raymond, Rockwell Collins, Ipreo, Mattel, Lourdes, EY, KPMG, Corning, Dow Jones, Turner Construction, Syska
  • Held Classroom and Club Seminars: Interviewing, Resume & Cover letter prep, Promoting Yourself, Networking
  • Launched Student Career and Alumni Website in Fall 2013
  • Created biweekly newsletters for Watson students containing such topics as scheduled events and job opportunities
  • Created brochure to inform and collaborate with Industry / Alumni

• Upcoming Activities
  • “Ready for Takeoff - Process for Launching Your Engineering Career” – Providing students the professional skills for a successful career
    • Non credit course – pilot Spring 2014 – capacity reached, offering second session in Spring semester
  • NYC facility tours week of Jan 13th & Metro Career Fair Jan 15th
  • Engineers Week 2014
  • PI Day to Recognize Graduating Students and build bridge to Alumni Network
International Collaborations

• Fall 2013 Update
  • Programs: India Student Trip, Korea - Samsung 10 student internship (funded), Germany - UAS7- 1 student research internship (Govt funded)
  • Visits: VIT, Anna University, VI, IIT Bombay, PES Institute of Technology (India); several industry visits in Bangalore India, UEC in Tokyo (1 student here now)
  • Alumni Events – Bangalore, India, August 2013; Taipei, November 2013
  • Website Launch

• Upcoming Activities
  • International Internships: India (industry), ME work/study
  • Student Trips: India (Winter ‘14), Turkey (Summer ‘14)
  • Research/Internship/Academic Exchange: Global E3
  • Conference participation by Watson School Faculty – India, January 2014
  • Research and Academic Cross Cultural Program
Opportunities

• Transdisciplinary Areas of Excellence & other hires for 2014
  • 16 total hires – largest ever for the Watson School
    • 7 of 34 University wide TAE hires allocated to Watson
    • 9 additional hires

• New department leadership
• International partnerships
• Growth of graduate programs
• Career and Alumni Connections
• Road Map Initiatives
• Listening Tour
• Mentoring
Challenges

• Faculty Allocation 2014-15
  • Startup funds
• Development
• Research funds
• Succession planning – developing leaders
• Graduate/Undergraduate recruitment
  • Application pool
  • Recruitment staff
• Funding
  • TA/GA stipend amounts
  • RPAs
  • Improvement of quality for 2014
• Gaps: (i) Person in-charge of diversity; (ii) communication and marketing at Watson level.
Looking Ahead

• 30\textsuperscript{th} Anniversary Year
• Engineers Week 2014
• International collaborations
• Industrial Outreach
  • SPIR
  • Professional/Continuing Education
  • 30\textsuperscript{th} year of annual Flight & Ground Vehicle Simulation workshop
• Distance Education – University wide initiative
• Mentoring program
• Reorg of Dean's Office – benchmarking study
• Resources
• Graduate/Undergraduate recruitment
• Listening tour