Development & Offering of B.Comp. College to University Pathways Program at UofG

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First discussions
Pilot Pathways program
ONCAT initiative
Admissions and credits
Student experiences
Future considerations
First Discussions
First Discussions

- Summer 2010

- Request for summary of current credit transfers
First Discussions

- Collaborations with Colleges already established

- Examples:
  - Guelph-Humber
  - Applied Pharmaceutical Chemistry (Seneca and UofG)
First Discussions

- Meeting with multiple Colleges
- Computer Science one area of focus
- Feasible pathway from 3 year diploma to degree in computer science
- Major commitment at all levels at both Fanshawe and UofG
Pilot Pathways Program
Pilot Pathways Program

- Pilot project established with Fanshawe
- Detailed curriculum information received from Fanshawe
- Gap analysis performed
- 2 bridge courses identified
- One of these was a course developed specifically for Diploma graduates
• Online bridging
• Challenge with schedule of studies due to Fanshawe co-op
• Advertising materials developed
• Visit with Fanshawe students to discuss pathways option
ONCAT Initiative

Bridging the Gap Between College and University
A Continuum of Study

- Multiple entry and exit points
- Accommodates students entering from high school or mature students such as recent immigrants
- Potential even for increasing the number of graduate students
Steps in the Process

Step 1. The Participants
Colleges & Universities in the Same Room!

- Colleges: Centennial, Fanshawe, Sheridan
- Universities: Algoma, Guelph, UOIT, York

Project Lead
Dr. Anthony Vannelli, Dean of the College of Physical & Engineering Science at the University of Guelph

Colleges ➔ Realistic
Universities ➔ Flexible
Both ➔ Respect

"I think you should be more explicit here in step two."
Steps in the Process

Step 2. Identification of Programs
It was decided that this pathway would be focused on 3 year diploma programs in computer science/information technology.

Computer Programmer Analyst and Software Engineering Technology.

Both require three (3) years of study.

Although this pathway was developed by the three participating colleges, it applies to all diplomas of these types at Ontario colleges.
The University Problem

- What type of degree?
  - BA, BSc, BComp
- Honours (4 years) or General (3 years)?

Issues

- Breadth of Honours degrees (lack of breadth courses at colleges) – not a problem that can be solved in isolation by one program!
- # of semesters to complete: 2, 3, 4, more?
The University “Solution”

- Start with 3 year General university degrees that can be achieved in 2 semesters after a set of bridging courses.
- Not applicable to all universities.
- Honours degree issue has to be explored in more depth!
- Universities have to revisit some of their programs to look for flexibility.
Steps in the Process

Step 3.
The Bridge
Distributed Bridging

- Bridge courses are Discrete Math and Data Structures
- Both in-class and distance formats at multiple universities
  - More student choice and more offerings

*Flexibility!!*
Admission and Credits:
Computer Programmer Analyst Diploma to 3-year Bachelor of Computing (General)
Admission requirements and transfer credit

- Admission requirements
  - 75% average upon completion of CPA diploma
  - 4U Calculus & Vectors or equivalent
  - 2 bridge courses must be completed with 60% average
- Receive 10.0 transfer credits
- Complete 5.25 credits at Guelph (includes 1.0 credit from bridge)
A new way of thinking for U of G
- Credit issued is based on learning outcomes
Addition of OUAC section
Conditional offers of admission issued well in advance of entry point

<table>
<thead>
<tr>
<th>Summer 2012</th>
<th>Fall 2012</th>
<th>Winter 2013</th>
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<tbody>
<tr>
<td>Conditional offer of admission issued for Fall 2012</td>
<td>Registered at U of G and Fanshawe concurrently</td>
<td>Applicant begins B.Comp. program at U of G</td>
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<tr>
<td>Applicant completes co-op Fanshawe semester</td>
<td>Applicant completes final Fanshawe semester and two U of G bridge courses</td>
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In the beginning – 2012 challenges

- Monitoring applicants
  - Early timing of conditional offer creates ongoing responsibility of reassessment
- Creation of a back-up plan
  - What if applicants were unsuccessful with bridge courses, or if they did not want to take bridge courses?
- Complex academic histories
  - Adjudication of applicants – why can’t it be simple?
And now – 2014

- Challenges still exist, but we are better prepared to address them
- Extension of Pathway
  - Graduates from all Ontario Colleges offering Computer Programmer Analyst and Software Engineering Technology Diploma programs now included
- Fall and Winter entry points
- Development of new resource materials
- Next: direct admission to Honours Bachelor of Computing?
Student Experience
Student goals

- Desire additional credentials and knowledge for more career options: teacher, researcher, software developer; don’t want to be limited to programming

- Focused on working towards the Honours degree (college + 2 years), not the quicker General degree (college + 1 year)
First offering timing not ideal – finishing college courses while completing the bridging courses

Challenge of online courses, especially for the more theoretical Discrete Math course, “I feel that some of the concepts would be much easier to convey in a physical classroom”

Anxiety over uncertainty of meeting admission requirements
Switching to Guelph

- Quickly select courses (weeks before classes start, not months like other students)
- Electives in subjects other than computing for breadth requirement
Adjusting to Guelph

- Move to and adjust to new city, new university, classroom locations, computer labs, new operating systems
- Less support in place than for first year students
- "My professor has been terrific in helping me to access and use the remote Linux consoles and now the course is going very well"
New class format, workload

- Lecture lab separate vs. lecture and lab combined, workload
- “Fanshawe students who don't know to ask for help would have trouble with this course.”
- “University semesters have fewer courses but heavier work loads, so I've found that I need to start assignments much earlier, and allocate more time to them than I'm used to.”
Missing breadth requirements

- University students take electives outside of computer science to give them a well rounded education, and give them experience with problems in other fields – can computer science help solve them?
- “I'm again having some trouble finding general elective courses that I have the necessary pre-requisites for”
Strong technical skills

- Missing pre-requisite for computer science course, professor response to request:
  - “Your background is more than adequate. Greg can sign you into the course.”
Future Changes and Challenges
Elective transfer credits – working with colleges to introduce more electives in Pathways student’s education before coming to university

Provides transfer credits to specific courses, helping Pathways students start seniour level electives when they change to university
Smoother change

- Clearer communications on course selection, course options, deadlines
- Option to take bridging courses earlier
- Pathways admission package
- Fall and Winter admission
Co-op employment greatly benefits students by giving them relevant work experience and giving them a chance to experience working for a variety of companies.

Pathways students would benefit from taking Co-op at college, great preparation for university.
Co-op Pathways?

- University of Guelph Co-op: 5 year degree, students spend 5 semesters working
- Not a good option for Pathways students at university – too long (college + 4 or more years?)
Thank you!

Questions?