

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

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# Outline

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

# First Discussions



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- 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



# Pilot Pathways Program

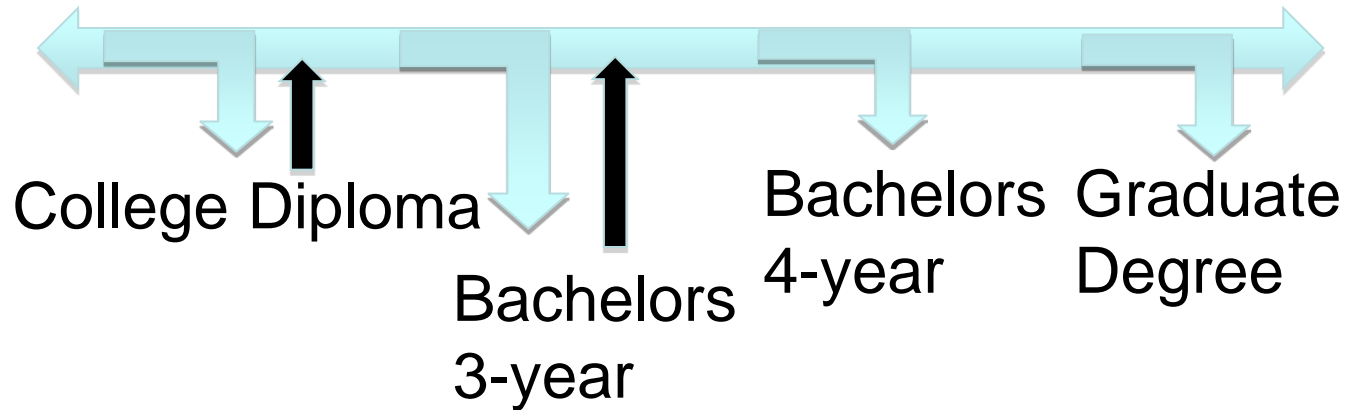
- Online bridging
- Challenge with schedule of studies due to Fanshawe co-op
- Advertising materials developed
- Visit with Fanshawe students to discuss pathways option

# 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



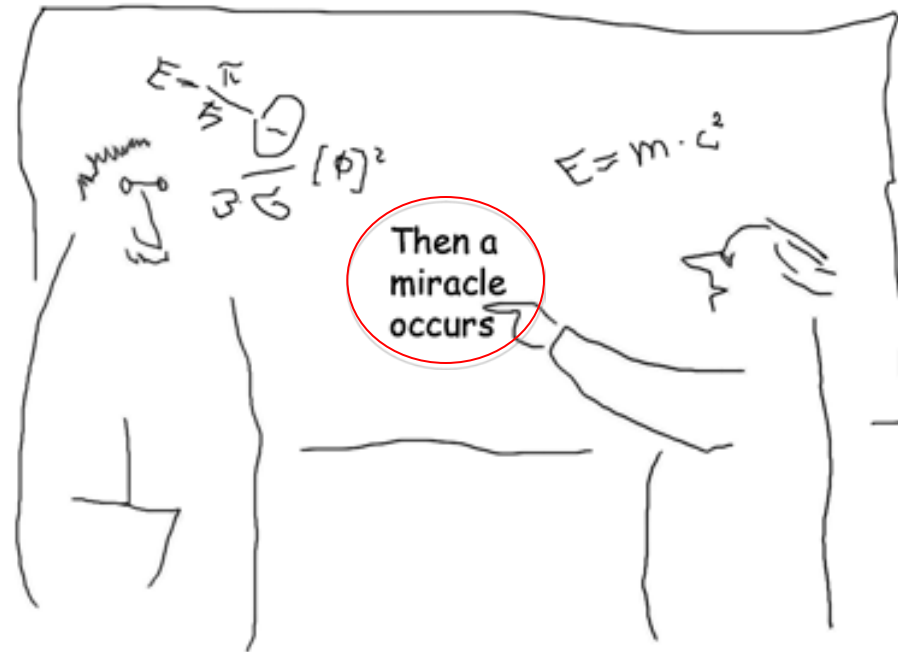
# Colleges & Universities in the Same Room!

- 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

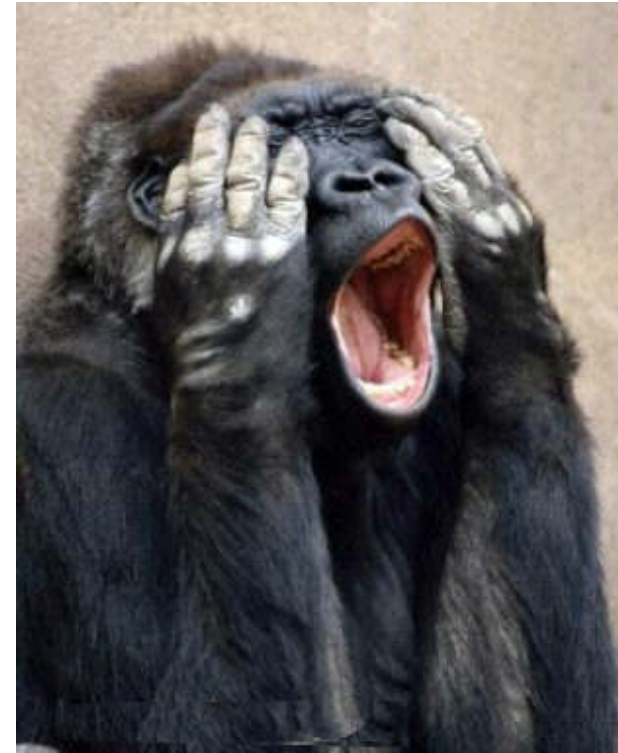
Step 2.  
Identification of  
Programs



# College Diplomas

- 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.

- 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)

# In the beginning – 2012 admission

- 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

Summer 2012	Fall 2012	Winter 2013
Conditional offer of admission issued for Fall 2012	Registered at U of G and Fanshawe concurrently	Applicant begins B.Comp. program at U of G
Applicant completes co-op Fanshawe semester	Applicant completes final Fanshawe semester and two U of G bridge courses	

# In the beginning – 2012 challenges

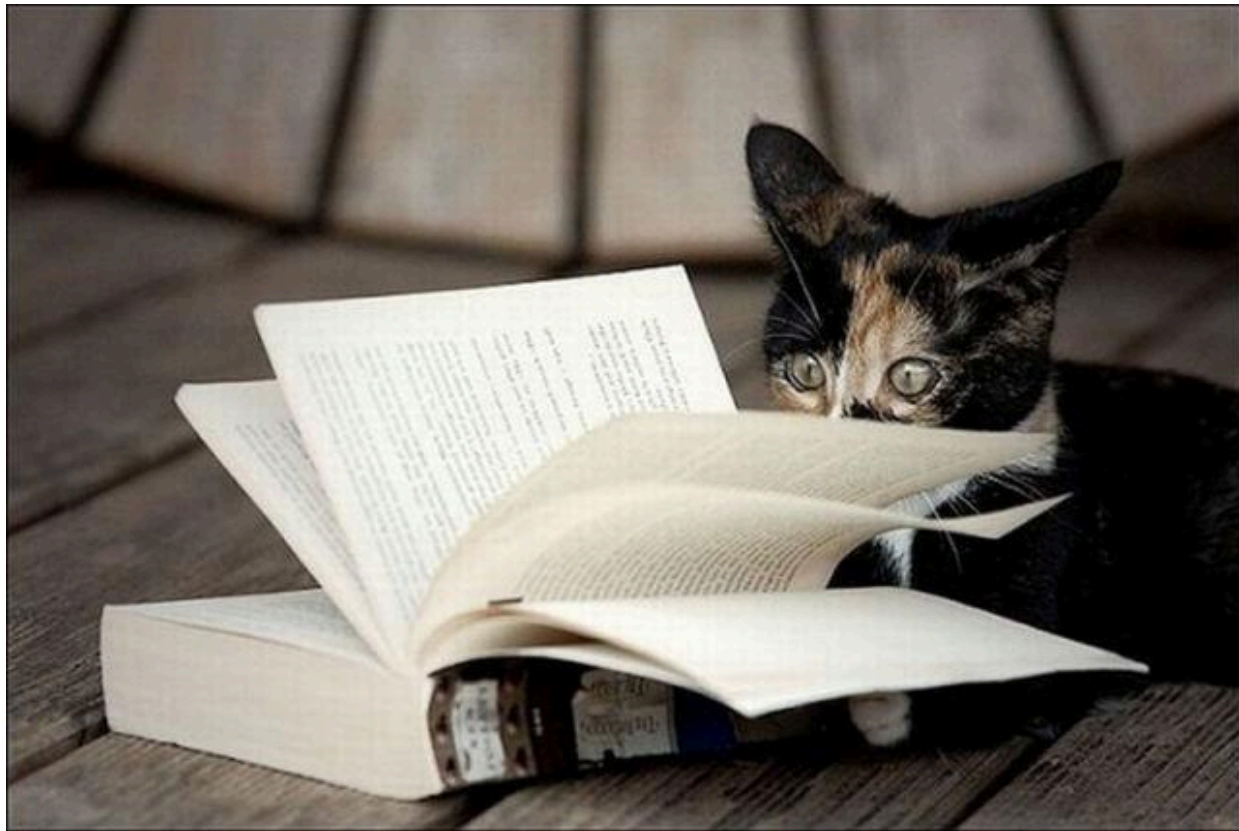
- Monitoring applicants
  - Early timing of conditional offer creates ongoing responsibility of reassessment
- Creation of a back-up plan
  - What if applicants were unsuccessful with bridge courses, or if they did not want to take bridge courses?
- Complex academic histories
  - Adjudication of applicants – 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)

# Beginning transition

- 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”*

- 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.”*

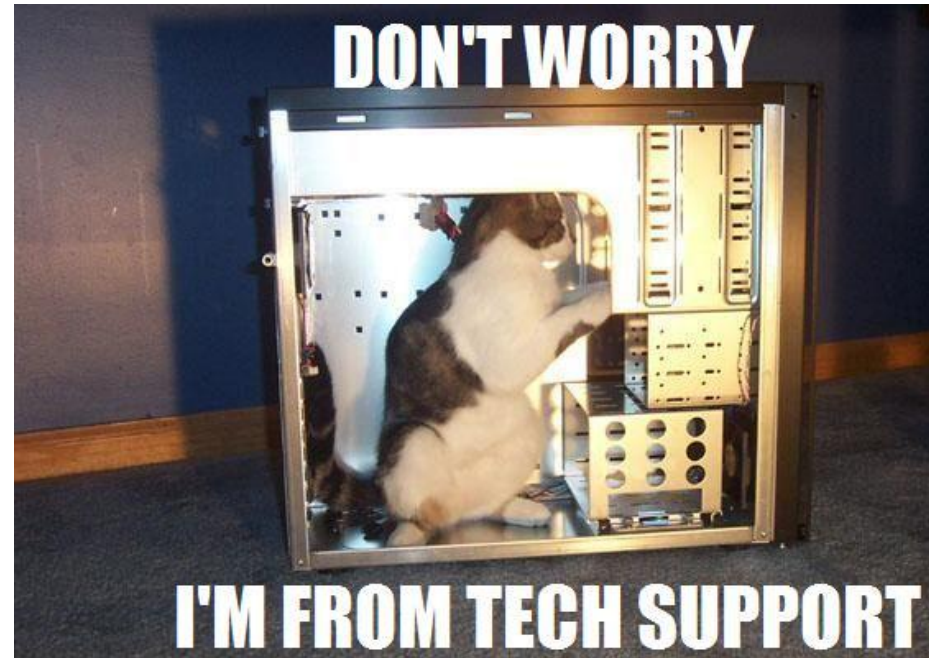
# Missing breadth requirements

- 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



# Breadth requirements

- 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 senior 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

- 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?