

PRESENTERS

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**Was unable to participate due to the birth of
twins (Congrats!)**

Canadian College/University Acceptance

- There is no SAT/Entrance Exam of any kind (not even for graduate schools)
- Students are accepted based on the merit of their marks and extracurricular activities
- LSAT/MCAT are required for Professional schools; GRE for graduate schools abroad

Colleges

- Colleges offer 2-4 year programs ranging from Certificates to Diplomas, including post-University college programs
- Programs are for practical fields of occupation
- There are many bridging programs to university in Ontario, but many other provinces (states) allow direct transfer from colleges to universities
- There are 5-6 college models in Canada

Universities

- Universities are distinct from Colleges
- Ryerson University in Toronto was once a polytechnic college, but was given a university accreditation based on their new academic focus
- Universities are primarily for 3/4-year Diplomas that can lead to Graduate/Professional schools

Secondary (High) School

There are two streams:

- Applied courses are for College stream
- Academic courses are for University stream
- A hybrid of College/University courses in Grade 11 for those who want to change their stream
- For most programs with first-semester College math, Grade 11 Math credit is required

College Mathematics Project (CMP) 2010 Findings

- In 2009, all 24 colleges in Ontario participated in the project
- Of the 79,533 students who attended colleges, over 40% took Math (31,806), and about 1/3 of them were at risk—mark below 60% in their course
- Around 50% who have finished grade 9/10 applied math were at risk
- 45-50% of those who finished grade 11 and around 40% of those who did grade 12 Applied were at risk
- http://collegemathproject.senecac.on.ca/cmp/en/pdf/FinalReport/2009/CMP_2009_Annual_Report_Final%20-%2009Mar10%20pmh.pdf

Post-Admissions Assessment

- Colleges already knew of this problem, and used post-admission Math assessment tests
- GBC uses 5 different Post-Admissions Math Assessment tests:
 1. 2 Accuplacer (ACAR and ACEA)
 2. 2 Compass (COPA and COAL)
 3. 1 OMHS (for Health Programs)

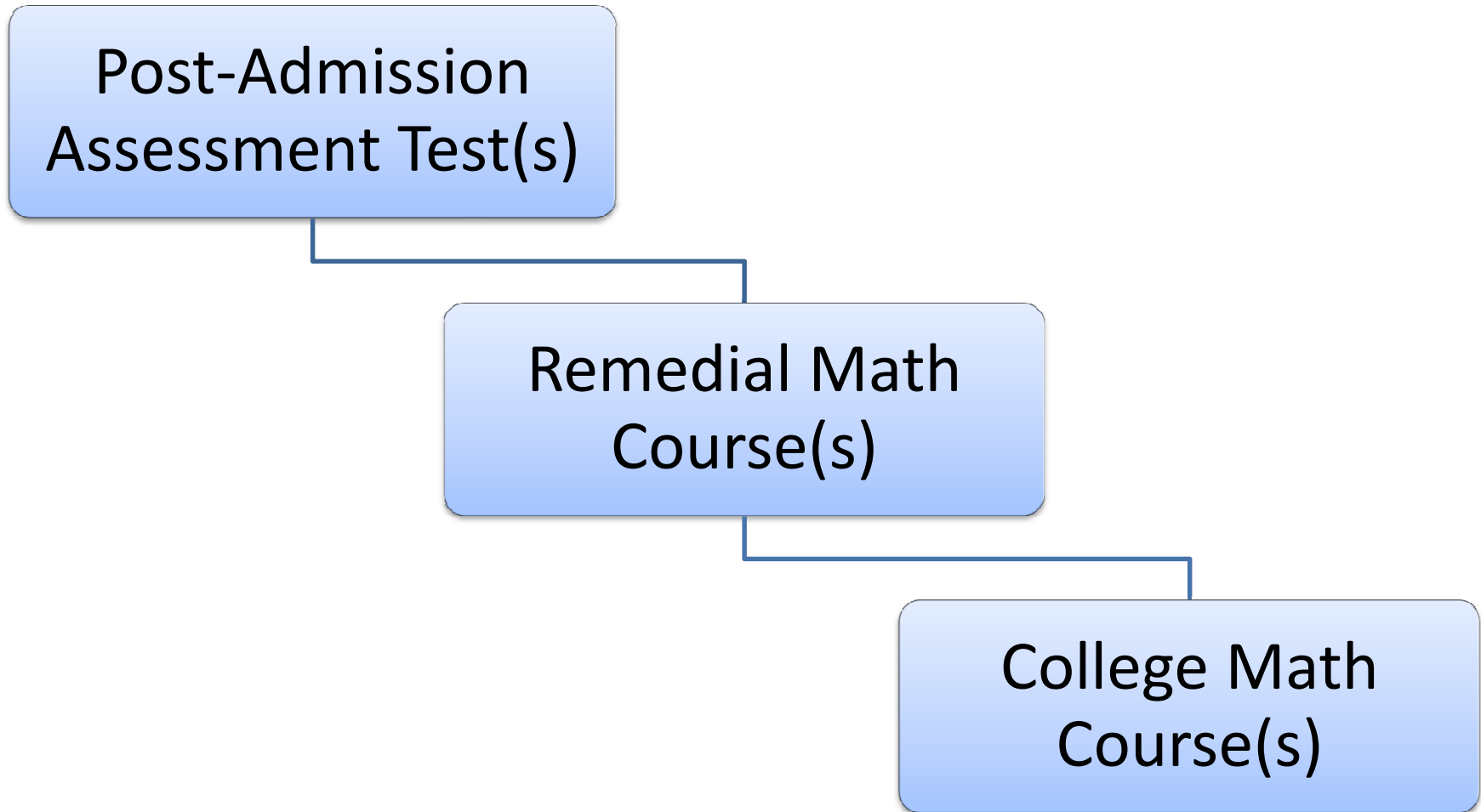
GBC Mathematics Project 2009

- 53 programs tested their students for Math, and of the 53 programs, 28 tested their students using COPA (56.8% of the students)
- 43.4 % of the (2790) students were placed in a remedial math course
- Note the range: 28.3% in Accounting to 73.9% in Human Resources needed remedial math
- 71-78% pass the remedial course (in 53 prog)

Remedial Courses

- Most programs do not follow the US model of Basic Math, Algebra and Geometry sequence
- Each program has its own remedial course(s) for its students, lasting 1-2 semester(s)
- Each program/department has its own remedial course(s) to address only the units students should know
- Students who pass enter College level math

GBC DM Model



GBC General Arts and Science (GAS) as an Example

- A 14-week Foundational Math course (Math 1074)
- In 2009, about 75% of the students who were placed in remedial math passed and moved on to regular college math

GAS Remedial Math

MATH 1074

- 1. The Real Number system**
- 2. Fractions and Mixed Numbers**
- 3. Fundamentals of Algebra**
- 4. Linear Equations**
- 5. Geometry (to Volume)**
- 6. Conversions of Units**
- 7. Percent, Ratio, Proportions**
- 8. Exponents and Radicals**
- 9. Graphing Linear Equations, and Right-Angled Trigonometry**

Time Frame (42 hours/14 weeks)

- 1. 3 hrs/1 wk**
- 2. 6 hrs/2 wks**
- 3. 3 hrs/1 wk**
- 4. 6 hrs/2 wks**
- 5. 6 hrs/2 wks**
- 6. 3 hrs/1 wk**
- 7. 6 hrs/2 wks**
- 8. 4.5 hrs/1.5 wks**
- 9. 4.5 hrs/ 1.5 wks**

Alternate Remedial Path: GBC School of Work and College Preparation Programs

Programs offered:

- ***Academic Upgrading*** (Math, English, Sciences, Computers)
- Literacy and Basic Skills for Deaf and Hard-of-Hearing Adults
- College Vocational
- Pre-Health Science
- Pre-Community Services
- Pre-Business
- Pre-Hospitality Services
- Assistant Cook Extended Training (ACET)
- Redirection Through Education (For You)
- Redirection Through Education (Work Entry)
- Construction Craft Worker Extended Training (CCWET)
- Second Career (for those who have lost their job)

GBC Academic Upgrading (AU)

- Available to those who have not received their high school diploma (19+) or have not met the college requirements for acceptance
- AU courses are not regular college courses
- AU is funded by provincial (state) government, and is free to anyone who wants it (textbooks included)

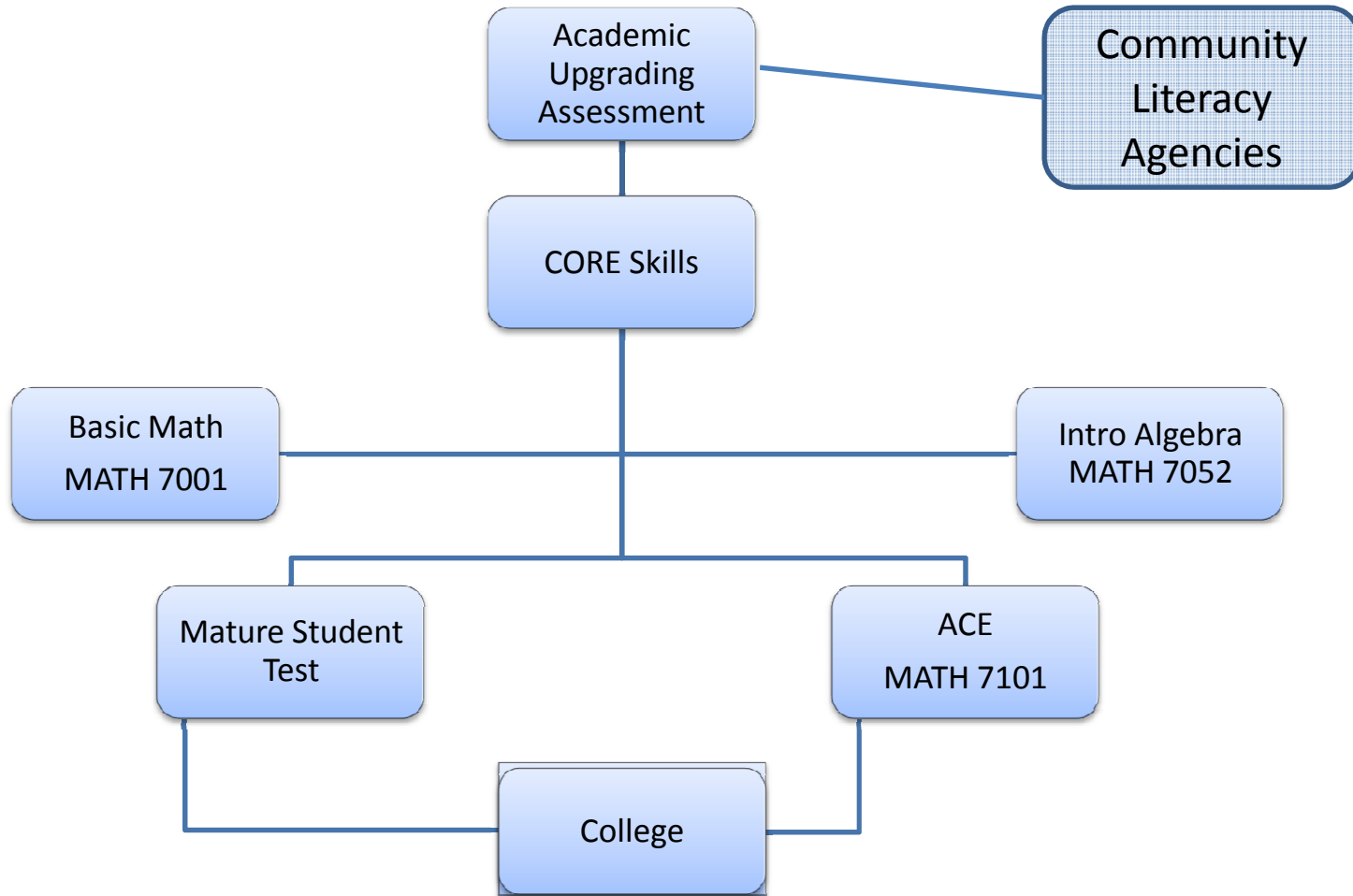
AU Process

- Potential students go through an initial assessment to determine their literacy level
- Anyone who has Literacy and Basic Skills (LBS) lower than level 4 (grade 8) is referred to Community Literacy Agencies for further upgrading
- Anyone with LBS level 4 or higher is accepted, and must take a 3-week introductory program called CORE Skills

CORE Skills

- Students are assessed further in Communications and Math to ensure they are placed properly
- They learn about their strengths and challenges, their personality type, the kind of jobs for which they are best suited, and their goal(s)
- Once completed, students are placed into a class based on their LBS level:
 1. LBS 4: Grade 8-9
 2. LBS 5: Grade 10-11
 3. ACE: Grade 12 Equivalent
- Math only class: student's LBS level does not matter

George Brown College AU Model



AU Basic Math and Pre-Algebra

MATH 7001

- **Whole Numbers**
- **Fractions**
- **Decimals**
- **Ratios and Proportions**
- **Percents,**
- **Applications for Business and Consumers**
- **Probability and Statistics**
- **Imperial and Metric Measurements**
- **Signed Numbers**

MATH 7052

- **Introduction to Algebra**
- **Geometry**
- **Pre-Algebra Review,**
- **Variable Expressions**
- **Equations**
- **Polynomials**
- **Factoring**

ACE Math and Mature Student Test

MATH 7101 (ACE)

- **Rational Expressions**
- **Linear Equations**
- **System of Linear Equations**
- **Inequalities**
- **Radical Expressions**
- **Quadratic Equations**
- **Trigonometry**

Mature Student Test

- **Anyone over 19 can take this test at any time**
- **Is subject to the Post-Admission Assessment Test once s/he is accepted into his/her program of choice**

AU Math

- Students have their own individualized learning plan that is based on their goals and needs
- They learn at their own pace towards their goal, but have to write a final test each time they complete a required chapter (some colleges have students write a final exam each time they finish one of the 3 sections)
- Professors act more as facilitators than instructors
- This year, GBC AU started a 9-week Basic Math course for those who want a traditional delivery model (lecture-based and as a cohort)

GBC Basic DM Models

There are 2 skeletal structures at GBC

1. AU programs make sure the students entering college as mature students have a clear goal and proficiency to be successful in college
2. Remedial Math (DM) courses target (in 14 weeks or 1 semester) areas students need proficiency in to be successful at regular college math

Keys to GBC (Canadian) AU Math

- Accessibility to all (even to those who have never gone to school)
- CORE Skills Assessments for proper placement and goal-setting, as well as self-policing
- Students are not set up for failure. Help is available from community literacy agencies to college AU to make sure students who are willing to do the work and learn are given access to post-secondary education, no matter how long it takes

Keys to GBC (Canadian) DM Math

- Post-Admission Math Assessment test to identify those in need
- Program-driven remedial math courses that teach only the units students need to know for the program they are pursuing
- Note: 80% of the materials for DM courses are the same for all programs; 20% of the material is customized