Engineering Articulation Meeting

Date: Thursday, May 3, 2012
Time: 9:30 a.m.
Location: University of the Fraser Valley,
Room A225, Abbotsford, BC

Present:	Name	Institute	Email:
1	Ross Gibbs, P.Eng.	Camosun	gibbs@Camosun.bc.ca
2	Margaret Dulat	Capilano	mdulat@capilanou.ca
3	Barbara Rudecki	College of New Caledonia	rudecki@cnc.bc.ca
4	Jim Bailey	College of the Rockies	bailey@cotr.bc.ca
5	Kuros Gadareh	Douglas	gadarehk@douglascollege.ca
6	Jana Kolac	Kwantlen	jana.kolac@kwantlen.ca
7	Tom McMath	Kwantlen	Tom.McMath@kwantlen.ca
8	Todd Stuckless	Langara	johntodd@langara.bc.ca
9	Dennis Lightfoot	North Island	dennis.lightfoot@nic.bc.ca
10	Richard Christie	Okanagan College	rchristie@okanagan.bc.ca
11	Per Joensen	Selkirk	pjoensen@selkirk.ca
12	Glenn Chapman	SFU	glennc@cs.sfu.ca
13	Stephen Price	SFU	stephen_price@sfu.ca
14	Normand Fortier	TRU	nfortier@tru.ca
15	Arnold Sikkema	TWU	Arnold.Sikkema@twu.ca
16	Herbert Tsang	TWU	herbert@herberttsang.org
17	Bruce Dunwoody	UBC	bruce.dunwoody@ubc.ca
18	Myra Hughes (note taker)	UFV	myra.hughes@ufv.ca
19	Ora Steyn (opening remarks)	UFV	ora.steyn@ufv.ca
20	Peter Mulhern	UFV	peter.mulhern@ufv.ca
21	LillAnne Jackson	UVIC	lillanne@csc.viu.ca
22	Gregory G. Arkos	VIU	gregory.arkos@viu.ca
23	Mike Winseman	BCCAT	mwinsemann@bccat.ca
24	Ray Filipiak	APEGBC	rfilipiak@apeg.bc.ca
Regrets:	Chris Niwinski	BCIT	Chris_Niwinski@bcit.ca

M I N U T E S

1. Introductions and Welcome

Opening remarks and welcome were given by Ora Steyn, UFV Dean of Science.

2. Approval of the Agenda

The agenda was approved with one addition:

- Support of Secondary Transfer – CEAB

3. Minutes of the Last Meeting – May 5, 2011

The minutes from last year's meeting are available on the website:
http://www.bccat.ca/pubs/Engineering%20AC%20Minutes%202011.pdf
Motion: To accept the minutes as presented. **Lightfoot-Christie – CARRIED.**

4. Business Arising from the Minutes

Plans were made last year to prepare a letter to send to the various institutions in support of the engineering transfer courses and programs and for it to be signed by the degree-granting institutions. This letter was not drafted. At the request of the committee, Peter Mulhern drafted such a letter after the meeting.

(note added; at 2013 meeting it was agreed to add draft letters to the 2013 minutes, after revision. -JTS)

5. New Chairperson / SLP

A unanimous decision was made to elect Todd Stuckless, Langara College, as Chair.
(Email: johntodd@langara.bc.ca)

IMPORTANT ADDITION AFTER THE MEETING: At a previous meeting the committee decided to work with a co-chair system, and Peter Mulhern and Barbera Rudecki were put in these positions. At this May 2012 meeting I, Peter Mulhern, was trying to step down, and it completely slipped my mind that we were using the co-chair system. This was entirely an error on my part due to an incomplete memory. This entire "new chairperson" section should have been an election to replace one of the two co-chairs. I propose that the first order of business in the May 2013 meeting be to formally correct the above decision and acknowledge Barbera Rudecki's role in the committee.

The System Liaison Person is Bruce Dunwoody, UBC (Email: bruce.dunwoody@ubc.ca)

6. Date and Place of Next Meetings

May 2013 – College of the Rockies, contact: Jim Bailey (bailey@cotr.bc.ca)
May 2014 – North Island College – Tentative; contact: Dennis Lightfoot (dennis.lightfoot@nic.bc.ca)

7. APEG Report – Ray Filipiak

Ray reported on the following topics:

1) Academic requirements for Registration and Licensing as a P.Eng. in BC
2) Accredited engineering programs in BC institutions (UBC, SFU, UVIC, BCIT)
3) For applicants with degrees from unaccredited programs, their degree course will be vetted by the APEGBC Board of Examiners against a discipline specific syllabus
4) Applicants can receive up to one year of experience credit for each of a M.Sc. and Ph.D. degree (total required is 4 years of experience)
5) Engineers Canada accreditation visits for 2012 will be UBCO and SFU

Q Is there a provision to a P Eng. status, for example when someone is teaching Engineering?
A. There is an alternative available for university professors.
Action: Peter Mulhern will follow up on this.

For more information, contact register@apeg.bc.ca or call **1-888-430-8035**
Website: http://www.apeg.bc.ca/reg/engineering.html

8. Reports:

BCCAT – Mike Winseman -

Enabling the BC Transfer System

BCCAT is moving ahead with plans to enable all institutions to perform sending and receiving functions within the BC Transfer System. Recommendations to implement these changes were approved by Council in March and the first phase will be operational in Sept 2012. BCCAT will provide the system with the information required to manage any changes in processing at the institutional level. More information can be found at: bccat.ca/enabling.

Transfer Innovation Projects

Flexible Pre-Majors

- Current status: Psychology—sign-off complete, Sociology/Anthropology—in signing, Economics—planning implementation, Computing Education—in implementation phase; Biology—starting analysis phase, History—analysis phase.
- *FPM Working Group Final Report* approved by Council and on BCCAT website at: bccat.ca/pubs/FPMFinalReport.pdf

Other Transfer Innovation Projects

1. ABT/OA (Medical Office Assistant Transfer Grid)
   A Descriptive Pathways transfer grid for the Medical Office Assistant program, both on-line and on-site, at BC public institutions completed.
2. Early Childhood Education (Transfer Matrix Incorporating Privates)
   Review and expansion of the ECE course transfer matrix to include private institutions that are accredited, registered and approved by the BC Early Childhood Educator Registry in progress.

Transfer and Articulation Projects 2011/12

- 2011 JAM: Was held at River Rock Casino Resort, Friday November 4, 2011. This year's JAM will be November 2, 2012.
- Qualitative Research on Block Transfer Students**:** Focus groups of transfer students in Business programs at Selkirk and Okanagan Colleges will be conducted over the coming year.
- Preliminary Review of Associate Degrees: This project will start a provincial review of the purpose, current usage, and requirements for Associate Degrees in light of the changes in institutional designations, the growth of degree options, and the general decline in their use.
- Examination of Trades and Vocational Transfer Credit to Academic Programs: This project examines current BC, national, and international practice, and identifies considerations in creating or administrating such transfer arrangements. A research paper was prepared by Dr. Fiona McQuarrie and is currently being circulated for feedback.
- Case-by-Case Articulation Research: This research will examine the processes used for case-by-case articulations by institutions including the way these transfer credit assessments are conducted, collected, and stored. Eight universities are participating.
- Student Services for Transfer Students: BCCAT is examining services that could be provided to transfer students including such activities as transfer days, student service units, and counselling. The project examines practices in BC, Canada, and the US and a report is being prepared by Mike Winsemann.
- Block Transfer, Advanced Placement, and International Baccalaureate Transfer Guides: The Transfer Credit Evaluation System (TCES) now allows for the creation and maintenance of Block Transfer agreements and AP and IB equivalencies electronically and users of the BC Transfer Guide can review Block, AP, and IB guides by institution and program.
- Articulation Committee Resources: A major review and update of BCCAT information for articulation and transfer personnel will start later this year and will include a revision of the *How to Articulate Handbook*.

Student Transitions Projects 2011/12

- Report on International Students in the Post-Secondary System.
  Key Finding: There are approximately 28,000 international students in public post-secondary institutions with 12,000 new students each year.
- Applicant Research (Nursing)

Key Finding: Applicant research has enormous potential to answer important research questions at the system and institutional level although data consistency issues remain a stumbling block.

BCCAT Research Projects 2011/12

- 2011 Admissions and Transfer Experiences of Students Continuing their Studies in BC.
  bccat.ca/pubs/bcstats11.pdf (full study), bccat.ca/pubs/rr_mar12.pdf (newsletter)
  This study profiles the admission and transfer experiences of about 5,500 students who continued their studies in BC's public post-secondary system after having participated in either an Arts and Science or an Applied program in a college, teaching-intensive university, or institute and includes comparisons with findings from the 2002, 2005 and 2008 surveys.
  Key Findings: Of those continuing their studies and transferring to another institution (not including the research intensive universities), 86% received all the transfer credits they expected and 79% were satisfied with their transfer experience. A survey will explore those students not satisfied in more detail.
- Degree Partnership Database
- Central Repository for Institutional and Program English Proficiency Requirements
- Survey of all Movers in the Public Post-Secondary System
- Pan Canadian Consortium on Admissions and Transfer (PCCAT): National Survey of Transfer and Mobility.
- Adding Transfer Data to the Central Data Warehouse (CDW)

Education Planner Website

BCCAT is currently re-designing the Education Planner website to introduce a number of features aimed at increasing engagement with users. New features include a simplified search mechanism, an Explore feature that will allow users to search for programs based on keywords, and a canvass that will allow users to save and share their education plans.

BCCAT Marketing

BCCAT has seen a 35% increase in its overall user traffic for both the BC Transfer Guide and Education Planner websites. BCCAT's websites combine for over 150,000 unique visitors per month. BCCAT is launching a revising transit ad campaign in the spring and is available to give presentations and workshops upon request. Recent publications include:
Engage - Fall/Winter 2011 bccat.ca/pubs/engagefall11.pdf
BCCAT: Then and Now bccat.ca/pubs/thenandnow.pdf

New Articulation Coordinator

Ms. Christi Garneau began work at BCCAT on January 4, 2012. She is the main contact for questions related to articulation committees, SLPs, and JAM. She can be reached at cgarneau@bccat.ca or 604 412-7791.

New Special Projects Coordinator

Dr. Fiona McQuarrie began at BCCAT in September 2011, replacing Jennifer Orum who retired in June 2011. She is the main contact for Transfer Innovation projects. She can be reached at fmcquarrie@bccat.ca or 604-412-7679.

New Associate Director, Research and Admissions

Dr. Robert Adamoski, previously Dean of Social Sciences at Kwantlen Polytechnic University, will replace Dr. Devron Gaber who is retiring as Associate Director, Research and Admissions as of May 1, 2012. He can be reached at radamoski@bccat.ca or 604-412-7790.

For more information, contact John FitzGibbon, Associate Director, at jfitzgibbon@bccat.ca or 604-412-7682.

9. Institutional Reports – see Appendix

9.1 Vancouver Island University – Greg Arkos
9.2 University of Victoria – LillAnne Jackson
9.3 University of the Fraser Valley – Peter Mulhern
9.4 University of British Columbia – Bruce Dunwoody
9.5 Trinity Western University – Arnold Sikkema
9.6 Thompson Rivers University – Normand Fortier
9.7 Simon Fraser University – Glenn Chapman
9.8 Selkirk – Per Joensen and Elroy Switlishoff
9.9 Okanagan College – Richard Christie
9.10 North Island College – Dennis Lightfoot
9.11 Langara College - Todd Stuckless
9.12 Kwantlen Polytechnic University - Tom McMath
9.13 Douglas College - Kuros Gadareh
9.14 Camosun College– Ross Gibbs and Joyce vandeVegte
9.15 Capilano University – Margaret Dulat
9.16 College of New Caledonia – Barbara Rudecki
9.17 College of the Rockies – Jim Bailey

Note: BCIT is willing to discuss transfers with any institution. Feel free to contact Chris_Niwinski@bcit.ca

10. Round Table Discussion

Collaborative Offering of Courses

Jim Bailey (COTR) reported that 20 institutes have signed a Memo of Agreement (this includes both public and private institutions) This memo has been agreed to at the Dean's level, and includes Math, Science and Engineering at BC Colleges offering degrees.

For more information on the discussion paper see:
Ministry of Advanced Ed. – Discussion paper – April 4, 2012
http://www.aved.gov.bc.ca/education_quality_assurance/docs/pse_framework.pdf

Ministry of Advanced Education Website regarding quality assurance:
http://www.aved.gov.bc.ca/education_quality_assurance/welcome.htm

Discussion / and some comments include:

- Peter Mulhern noted this sounds similar to what UFV is working on with AECL.
- Jim Bailey has drafted a response to this document.
- Dennis Lightfoot, NIC commented they have students at different campuses.
    - Students need to be reminded about the difference between copying and working as a team.
    - Instructors at different campuses are still available to meet with students.
- Tom McMath, Kwantlen, suggested that students work in pairs, assign the groups, pair up people from different campuses.
- OK College (R. Christie) offers courses in Vernon and Salmon Arm
  There is a lab and the instructor goes to each campus.
- Bruce Dunwoody asked what courses could we do collaboratively?
  Statics and Dynamics? We need ways to make courses more accessible
  Action Item: To create 2-3 paragraphs on the topic. A sub-committee is required. (Strategic Action Group)
  Action Item: After Peter's report is read and distributed, a committee of volunteers will be formed.

11. Support of Secondary Transfer – CEAB (added agenda item)

There was continued discussion on how the financial restrictions on many institutions have resulted in the cutting back or closing of courses and programs. The degree-granting institutions agreed on the need for the transferring institutions to be able to offer their courses and provide the flow of students needed in the province.

12. Information Items

12.1 Retirement

Tom McMath, Kwantlen is retiring. This was his last meeting. Thanks for his dedication and service.

12.2 Thank you

Thanks to the host institution – University of the Fraser Valley
Peter Mulhern - Physics Instructor, Ora Steyn - Dean of Science, Myra Hughes – Dept. Assistant

Meeting adjourned at 3:50 p.m.

9.1 Vancouver Island University – Greg Arkos
9.2 University of Victoria – LillAnne Jackson
9.3 University of the Fraser Valley – Peter Mulhern
9.4 UBC –Bruce Dunwoody
9.5 Trinity Western –Arnold Sikkema
9.6 Thompson Rivers University – Normand Fortier
9.7 Simon Fraser University – Glenn Chapman
9.8 Selkirk – Per Joensen (and Elroy Switlishoff)
9.9 Okanagan College – Richard Christie
9.10 North Island College – Dennis Lightfoot
9.11 Langara College - Todd Stuckless
9.12 Kwantlen Polytechnic University - Tom McMath
9.13 Douglas College - Kuros Gadareh
9.14 Camosun College– Ross Gibbs
9.15 Capilano University – Margaret Dulat
9.16 College of New Caledonia – Barbara Rudecki
9.17 College of the Rockies – Jim Bailey

9.1 Vancouver Island University - G. Arkos

1. Student numbers in our 1st year engineering transfer: 24 UVic, 19 UBC. It is believed that about half of these will be able to successfully transfer this year.

2. Student numbers were stable in our 1st year calculus based physics courses (P121/P122) (this year: 64/53; last year 67/55).

3. Following cancellation of second year engineering transfer program a few years ago, the second year physics was formally suspended due to budget, low demand.

4. Green Building and Technology diploma was cancelled; possibly "reworked".

9.2 University of Victoria – L. Jackson

Current programs:

<table>
<tr><td colspan="3">Bachelor of Engineering</td><td>Bachelor of Software Engineering</td></tr>
<tr><td>Computer Engineering</td><td>Electrical Engineering</td><td>Mechanical Engineering</td><td>Software Engineering</td></tr>
<tr><td colspan="2">Possible Specializations:
• Biomedical Engineering
• Computer Music
• Communications
• Digital and Embedded Systems
• Digital Signal Processing
• Electrical Energy Systems
• Electromagnetics and Photonics</td><td>Possible Specializations:
• Advanced Manufacture
• Advanced Materials
• Computer Aided Engineering
• Energy Systems
• Fluids and Aerodynamics
• Mechatronics</td><td>Possible Specializations:
• Biomedical
• Communication and Networks
• Computational Intelligence
• Embedded Systems
• Graphics and Gaming
• High Performance Computing
• Human Computer</td></tr>
</table>

• Electronics • Mechatronics • Networks, Security, and Privacy		Interaction • Mechatronics • Programming Languages and Architecture • Security and Privacy • Theory of Computation

New programs under review:

Biomedical Engineering	**Civil Engineering**
• A stand alone program • 2nd year begins in Fall 2012	• 2nd year begins Fall 2013

Engineering program information: www.engr.uvic.ca (Use the 'Programs' link)

Engineering First year

Bachelor of Engineering (Biomedical, Computer, Civil, Electrical, Mechanical):

Fall term (September – December):

CSC 111 Fundamentals of Programming with Engineering Applications
ENGR 020 Introduction to Professional Practice
ENGR 110 Design and Communication I
MATH 100 Calculus I
MATH 110 Matrix Algebra for Engineers
PHYS 122 Mechanics for Engineers

Spring Term (January – April):

CHEM 150 Engineering Chemistry
ENGR 120 Design and Communication II
ENGR 141 Engineering Fundamentals I
MATH 101 Calculus II
PHYS 125 Fundamentals of Physics

Bachelor of Software Engineering (Software only):

Fall term (September – December):

CSC 111 Fundamentals of Programming with Engineering Applications
ENGR 020 Introduction to Professional Practice
ENGR 110 Design and Communication I
MATH 100 Calculus I
MATH 110 Matrix Algebra for Engineers
PHYS 122 Mechanics for Engineers

Spring term (January – April):

CSC 115 Fundamentals of Programming II
ENGR 120 Design and Communication II
ENGR 141 Engineering Fundamentals I

MATH 101 Calculus II
PHYS 125 Fundamentals of Physics

ENGR 110 can be replaced by:

- ENGL 135 Academic Reading and Writing, ***and***
  ENGR 112 Design I

ENGR 120 can be replaced by:

- ENGR 240 Technical Writing, ***or*** ENGL 225 Technical Communications, ***and***
- ENGR 121 Design II

New students no longer require the Language Proficiency Index (LPI) test.

Transfer Programs

Transfers to 3rd year:

- Camosun's Bridge from Engineering Technology programs
- (On hold since April 2010) Vancouver Island University's (VIU)

If your school uses instructors who are (PEng or EngL) Engineers and you teach courses that closely match our 2nd year, please discuss transfers to 3rd year.

Transfers to 2nd year:

Recently Reviewed:

North Island College (NIC): • Seamless transfer agreement for all 1st year, direct entry into 2nd year • All courses in BC Transfer Guide articulated separately • Dual admission agreement between NIC and UVIC
Vancouver Island University (VIU) • Recently agreed on changes • Will have all courses in BC Transfer Guide articulated separately
Capilano University • Recently agreed on changes
Thompson Rivers University • Recently agreed on changes

Other current 2nd year Seamless Transfer Agreements: (Review is ***in progress***)

College of New Caledonia
Kwantlen Polytechnic University
University of the Fraser Valley

Future New 2nd year Seamless Transfer Agreements:

College of the Rockies
Camosun College (University Transfer)

9.3 University of the Fraser Valley – P. Mulhern

UFV is pleased to announce that there is no major news.

UFV is currently looking for a new Dean of Science. We have recently hired John English as the new Dean of Trades - he is the person behind the Engineering degrees to BCIT.

Two items anticipated last year did not occur. A large influx of International students did not appear as promised. However, to aid future International students, I have recorded my entire drafting course and I intend to produce a questionnaire for students who listen to certain lectures. The intent is to use this as a self-assessment tool to allow students to know if they have the technical English skills needed to succeed in the course. I hope this will reduce the high failure rate among my International students.

The other event that did not occur was an expansion of the number of Engineering course offerings. Our numbers did not merit the expansion.

We offered two sections of the drafting course for the last three years, and this is now part of our regular offerings. This allows 60 students to take the Drafting course.

Course Specifics

Our Engr 151 Drafting continued to use Intellicad software, but we are in the process of re-assessing this. The free Draftsight for students is an inducement to change. We have changed to Giesecke's "Technical Drawing with Engineering Graphics" for the text.
Our Engr 113 Statics and Dynamics continues to use Hibbeler.

Enrollment Specifics

We continue to be restricted to 24 students in our one year program. Last year we had only 64 complete applications, and this year we have 87. Normally I do extensive follow-up with all applicants, but for various reasons I was unable to do that last year. The number of students that came to UFV in September dropped - perhaps because of the lower personal contact.

Our Introduction to Engineering course in the Fall term remains open to all students interested in Engineering, and also has all the students interested in applying to UBC through General Science. We only had about fifty students this year - a return to the numbers of two years earlier. A total of 51 students took the Engineering Drafting course - down from about 60 - and many of those is the Winter term course are probably weaker than needed for UBC/UVic admission. The Statics and Dynamics course continues to pass about 30+ students per year.

I did not poll all the students on their plans. Individual conversations lead me to suspect a similar breakdown in transfer interests. However, multiple students are telling me about problem in dealing with UBC Admissions this year.

9.4 University of British Columbia – B. Dunwoody

The biggest change in engineering at UBC has been the change of Dean. The Dean was Dr. Tyseer Abulnasr, who is no longer here. Currently we have Dr. Eric Hall as acting Dean while we are actively searching for the next Dean. That process should finish by the end of 2012 or early 2013, with the new Dean probably starting during the summer of 2013. As well, Deborah Robinson has been hired into the new position of Assistant Dean. She, not I, is responsible for admission to the undergraduate engineering program at UBC.
The biggest change to the admission process for UBC, including engineering, is the move to admit all students under a broader base of criteria than just marks. To that end, all applicants are required to respond to a few questions about themselves as part of the application process.

This expanded process does not apply to students who have taken the entire engineering transfer program within one winter session and have achieved an average of at least 2.5/4.0. Those students will still be admitted under the guarantee. Unfortunately, we have had to be hard-nosed over the past few years over who qualifies for the guarantee as the average for transfer in has been raised to 3.2 for those applicants who do not fall under the guarantee. We have raised the transfer average to keep the total number of students entering second year to a manageable number. The total number of students entering second year from first-year engineering is dropping, so the admission average for students not covered by the guarantee should be easing.

There are no major changes coming to any of our programs.

The Canadian Engineering Accreditation Board (CEAB) seems to be imposing more stringent requirements for accreditation each year, including a requirement that all courses having engineering science or engineering design content must be taught in-house. The more stringent requirements may make sense in Ontario, but do not consider the transfer system we have in place in BC.

9.5 Trinity Western University – A. Sikkema

We continue promote three options for our pre-engineering and engineering transfer programs:

- Take a pre-engineering year of some science courses (calculus, physics, chemistry) plus English and humanities electives and apply into another university's engineering program.
- Prepare for admission into UBC's second year by spending one year at TWU. This program adds linear algebra, computer programming, physical chemistry, statics & dynamics (at UFV or Langara), and engineering graphics at Kwantlen.
- Prepare for admission into UBC's second year by spending two years at TWU. This adds multivariable calculus, differential equations, mechanics, economics (macro & micro), statistics, technology & society, some or all of which will help reduce the student's workload once arriving at UBC, and allows opportunity for more liberal arts courses.

Our information is posted at www.twu.ca/academics/science/engineering.
Over the course of the year, we had about 21 students express an interest in engineering transfer. (This number the same as last year.) By the end of the year:

- A few plan to go to UBC in 2012 after two (or more) years at TWU.
- Several plan to stay at TWU for another year before transferring.
- Several had changed their plans: physics, English, math, education, etc.
- A few performed exceptionally poorly in all math and science courses.

We are considering offering two engineering specific courses — introduction to engineering and engineering graphics — starting in January 2013.

We are actively networking with TWU supporters in the engineering profession who may be interested in partnering with us in the development of a select set of full engineering programs.
Martin Fandrich, Ph.D., P.Eng., taught our mechanics courses this past semester as a sessional instructor.
Herbert Tsang, Ph.D., P.Eng., our new computing science professor, will be helping me with engineering coordination and hopefully taking over entirely soon.

9.6 Thompson Rivers University – N. Fortier

2011/2012 Engineering Program Summary

- Program capacity: 40
- Number of students admitted: 38
- From High School: 20
- Science transfers or other forms of post-secondary education: 16
- International: 2

- GPA >2.50 after fall semester: 29
- Intend to transfer to UBC: ~23
- Intend to transfer to UVic: ~5
- Intend to transfer to other engineering programs ~1

Observation: Strong interest observed in Mining engineering

2011/2012 Program Projections

- Number of applicants so far: 85
- Admitted so far: 35

Highlights

- Students attended 9 presentations given by P.Eng. of various disciplines.
- Popsicle Bridge Building contest was held during Engineering Week. About 80 bridges were tested.

Program structure (No change this past year)
Fall Semester Winter Semester
APSC 1200 CHEM 1520
COMP 1520 EPHY 1700
DRAF 1520 EPHY 1990
ENGL 1100 EPHY 1250
EPHY 1150 MATH 1230
MATH 1130 1 Elective
MATH 1300

9.7 Simon Fraser University – G. Chapman

SFU Engineering is splitting into SFU Engineering Science (ENSC Burnaby Campus) and Mechatronics Systems Engineering (MSE Surrey Campus) effective April 2013.
SFU Eng. Science currently will include the options:

- Electronics Eng
- Computer Eng.
- Systems Eng
- Biomedical Eng
- Eng. Physics

SFU Surrey currently is only Mechatronics
Eng. Science is currently engaged in a curriculum revision as part of new CEAB requirements. The main target of this is to enhance student performance in the first two years.

Transfer Issues
Important issues for transfers of students from other institutes is that often students are missing one or more of the critical math, physics or computing courses to meet the prereq's of our second year gate keeping courses. In particular basic circuits course, we find that students are missing of the basic math or physics courses.
In particular these courses are:
Math 151 Calculus I
Math 152 Calculus II
Math 232 Applied Linear Algebra
Physics 120 Mechanics and Modern Physics
Physics 121 Optics, Electricity and Magnetism
Physics 131 Physics Lab
See SFU's Calendar at
http://students.sfu.ca/calendar.html
for details on those courses.

In the computer engineering courses the main problem is that our courses are built around using C++, and many students basic computing involves Java or Python. An introductory course that includes C is a significant advantage for entering SFU engineering.

Added after the meeting: In response to Mike Winseman's question about student success rates across disciplines: success rates of international students was similar (slightly higher) than domestic students at SFU applied sciences and that success rates were about the same for Science and Applied Sciences programs, slightly higher for Arts programs and significantly higher for business at SFU (although the entry cohorts in Business are not comparable).

9.8 Selkirk College – P. Joensen and E. Switlishoff

INTRODUCTION

Selkirk College has been offering a two year engineering/applied science bridge program. A one-year program had been offered in the past, but both enrollment rates and success rates were very low. Selkirk College has suspended the engineering/applied science bridge program as of September 2012, as well as most second year math and science courses.

ANNUAL SUMMARY

Selkirk College's 2011-2012 enrollment in the first year of the two-year engineering/applied science bridge program was 11 students in the first semester. By the second semester, enrollment appeared to decline to 5 students, but this number was artificially low because some first year student elected to delay taking a full applied science/math course load because of Selkirk's two-year format.

Of this year's second-year class of 7 students, 2 are transferring to UBC, 4 are transferring to UVic, and one is transferring to University of Saskatchewan.

Selkirk College has not offered the 1-year engineering curriculum for 3 years, and only offered the 2-year transfer program. A trial offering of the 1-year program for the 2011-2012 academic year did not attract any interested "fresh incoming" students. Two students that were interested in the 1-year program had sufficient prior first year maths and sciences to structure a "modified" course load that enabled them to transfer into second year at UBC/UVic this year.

For the 2012-2013 academic year, Selkirk College as chosen to suspend the engineering bridge program as well as most second year (200 level) maths and sciences courses. This decision was driven entirely by budget constraints and perceived low enrollment during the 2011-2012 year.

The future of the engineering bridge program at Selkirk College is dependent on structuring a model that increases enrollment or decreases costs. The targets for both metrics are poorly defined at this time, so it is not possible to tell how many students or what lower costs would bring back the engineering bridge program at Selkirk College.

Some of the options being investigated are:

1) Streamlining and restructuring the engineering bridge program to only the minimum suite of courses necessary to satisfy second year entry requirements for UBC, UBCO, UVic and UNBC.
2) Partnering with other institutions for shared delivery opportunities for course with low enrollment
3) Canvassing other bridge programs to better understand how to increase success rates in the one-year bridge program

As with past year, there is continued good participation and visibility with the West Kootenay Branch of the APEGBC. Some students have been participating in Branch field trips, and the Branch members have been helpful in presenting seminars in their respective fields of practice.

This is the seventh year in which a formal Co-op course in Engineering is being offered after first year. However, there are limited job openings, and given the uncertainty of the engineering bridge program at Selkirk College, a "chicken vs. egg" environment has been created in the local co-op job market. Some potential employers are not reserving co-op jobs for engineering students, but rather simply advertising summer jobs for the general student population.

The Engineering Graphics course (ApSc 100) was using AutoCAD 2010. AutoCAD 2010 is overkill for the content of ApSc 100, but other programs at Selkirk College have adopted AutoCAD 2010 and the college is reluctant to support

multiple versions of the same software. AutoCAD 2010 does not appear to be as user-friendly as previous versions to new or casual users.

ISSUES

- Determine the future of the engineering bridge program at Selkirk College
- Is an "Introduction to Engineering" course required by UBC, UVic, UBCO or UNBC for transfer to second year, or can this be dropped from the curriculum?

9.9 Okanagan College – R. Christie

Okanagan College has five technology programs (Civil Engineering Technology - CIEN, Electronics Engineering Technology - ELEN, Mechanical Engineering Technology - MECH, Network Telecom Engineering Technology - NTEN, Water Engineering Technology - WET) and one computer technology program (Computer Information Systems with both a Diploma (CIS) and a Degree(BCIS)). The caps are 40 in CIEN, 24 in ELEN, 40 in MECH, 24 in NTEN, and 40 in WET. There is no specific cap in CIS/BCIS which can handle about 40+ students in first year. Enrolment is strong in CIEN with a substantial waitlist. Each of the others they are not full with ELEN, NTEN, and WET a bit weak. Applications for the Technology programs are down this year across the board except for CIS (-9.3% in CIEN, -17% in ELEN, -11% in MECH, -24% in NTEN,
-40% in WET, and +30% in CIS). Last year first-year students numbered 37 in CIEN, 19 in ELEN, 34 in MECH, 17 in NTEN, 33 in WQT, and about 37 in CIS/BCIS. Second-year numbers were 31 in CIEN, 15 in ELEN, 17 in MECH, 18 in NTEN, 13 in WET, and 17 in CIS/BCIS. We had ~8 students in third-year and ~9 students in fourth-year of the BCIS program. Based upon applications we expect CIEN to be full at ~40 again (+0%). ELEN will likely have ~16 (-17%), MECH will be at ~30 (-11%), NTEN will likely have ~13 (-24%), and WQT will be at ~20 (-40%). The CIS/BCIS can handle more than 40 students and is expected to have ~48 (+30%).

Okanagan College does not have an Engineering transfer program any longer (since 1992). Therefore, our Engineering-bound students take a modified first-year science load and as a result are very hard for us to track. I believe we had ~1 Engineering-bound student at our Penticton campus, ~1-2 at the Vernon campus, ~1 student at our Salmon Arm campus and about 5-8 at Kelowna. We offered PHYS 202 (Engineering Statics and Dynamics) for the third time last winter semester at Kelowna for the Engineering students. We had only 3students. I doubt the course will survive much more than another year or two with these low enrolments.

Our numbers overall were up this year in Science at Okanagan College (+24%). Most of this growth was at Kelowna (+46%) and Penticton (+36%). The numbers in Vernon (-2.4%) and Salmon Arm dropped slightly (-8.7%). Kelowna represents 56% of our Science students (Vernon 19%, Penticton 17%, and Salmon Arm 8%).

Applications for next year are up slightly (+2.5%) with the largest growths in Vernon (+13.5%) and Salmon Arm (+13.6%) and a small decrease for Kelowna (-1.9%). Penticton applications remain static (0%).

The numbers in Physics at Kelowna this year were up for both streams (+4.5% calculus-based and +18% algebra-based). Our Physics numbers in Penticton were up dramatically (+145% algebra-based), up in Salmon Arm (+10% algebra-based), and down slightly overall in Vernon (+14% for calculus-based and -23% algebra-based). We expect slight growth in first-year Physics (both streams) next year with the modest growth expected at Vernon and Salmon Arm. Attrition in first-year Physics was not a major problem this year. Most of the attrition still occurs in the first semester.

This year we offered three second-year Physics courses. They were Modern Physics (OC PHYS 200) with 4 students, Thermodynamics (OC PHYS 215) with 9 students, and Statics and Dynamics (OC PHYS 202) with 3 students. I do not know how long we will be able to hang on to PHYS 200 and 202 with those enrolments. I suspect we may lose PHYS 202 next year because of faculty retirements and quite possibly PHYS 200 as well. OC PHYS 215 is more protected

now since it forms part of the Engineering Bridge from the ELEN program to UBC-O Engineering. We had two students last year in the Bridge and have had 4 qualified students this year apply so far.

We did offer our two second-year Astronomy courses for Science and Arts students this year (ASTR 220 – Astrobiology with 9 students and ASTR 230 - History of Cosmology with 19 students).

We had two retirements this year and will have another one or even two next year. That means we will be looking for one Full-Time Continuing faculty member and one half-time Term faculty member this year. For the FT Continuing faculty we would like someone with strong experimental experience preferably in electronics who would enjoy teaching both lectures and laboratories.

9.10 North Island College – D. Lightfoot

This was only the second year of our first-year seamless transfer to UVic, and our enrollment was up considerably over last year. In fact, additional lab sections had to be added to both first year chemistry and physics to accommodate the engineering students. There were approximately 30 engineering transfer students in September, which was down to about 20 by January.

Most of our students are bound for UVic, but students are also transferring to UBC, BCIT, U of Calgary, and Dalhousie University.

Feedback from the students who transferred to both UVic and UBC last fall after completing first year with us has been very positive; they have felt like they were adequately prepared, and have been successful in their second year studies (an co-op work placements).

Our first-year engineering transfer program consists of 13 courses, with two full semesters of 6 courses and an engineering design course in the May/June period. Starting next year, students will be able to take a one-semester Engineering Chemistry instead of two semesters of general UT chemistry, thereby reducing their workload by one course in the fall semester. We have had a number of students returning to school who also need to upgrade their high-school math, English, and/or science courses, and these students have been able to combine their upgrading and engineering transfer for two years of study at NIC. These mature students are generally highly motivated and provide excellent role models for the recent high-school graduates. Most students find the workload of six courses per term to be heavy, and we have a fairly high attrition rate. Some of the students who had to drop courses last year did return to complete their first year this year.

We hope to be able to offer a seamless transfer to UBC in the future. At this time, we are focusing on better course-by-course transfer. To that end, we worked with CoTR on a proposal to offer first year engineering mechanics for both Universities from either college. The first half of the course would be the material that is common to UVic and UBC, then NIC would provide the second half of the UVic course (which we already do), and CoTR would provide the second half of the UBC course. Lectures would be broadcast to the other college, and local instructors would provide local support for both courses. We are awaiting direction from the Deans of the colleges to move this proposal along.

9.11 Langara College – T. Stuckless

Langara had 45 students registered this past year in its (Arts and Science) Engineering Transfer Certificate program (ENGT). The Langara credential allows for 2 years to completion.

15 students completed a two-term eleven course engineering overload, with a GPA above 2.5. Some are students who have been in engineering programs at other schools. Another 3 students completed the program part-time, with a GPA over 3.3. Another 3 students completed the program after having repeated many or all of the Langara

courses a second time, with an upgraded GPA above 3.3. Another 3 students completed the program after having repeated many or all of the Langara courses a second time, with an upgraded GPA between 2.5 and 3.3. Six students may continue on at Langara for a second year, to complete and in some cases repeat program requirements. Another 15 students either withdrew during the program, or have finished two years with a GPA below 2.5.

At Langara, very many of the students who will be pursuing University Engineering are not actually registered in the ENGT certificate program, and so are not among those listed above. For instance our summer course in drawing, a course which is very specific to engineering, has 18 ENGT students signed up, and 17 non-ENGT students. Of particular note, 7 of the non-ENGT are international students, while there is only 1 international student who is registered in the ENGT program at all. Getting international students in the program requires on-campus entrance exams, with a high level english requirement, in the Spring preceding the academic year.

Demand for seats in arts and science remains very high at Langara, with long waitlists for most sections, and the sacrificing of any sections without. It is extremely difficult for new students to put a viable course selection together without early registration privileges.

The current engineering transfer program coordinator at Langara (Todd Stuckless) has been re-appointed to a second two-year term.

The college is investing teaching release for review and renewal of the program. Proposals are being developed for a one-term engineering chemistry course, for a matrix algebra course specific to freshman engineering, and for the insertion of a formalized zero-credit "introduction to engineering" course into the timetable. Also, a proposal for a bridging term to precede the freshman year, to allow ENGT registration of students while they still are working on english requirements, or are out-of-province, or are still upgrading old "expired" prerequisite credentials. Additionally, the computer science department is introducing more hardware-level / micro-controller content in their term one course.

9.12 Kwantlen Polytechnic University – T. McMath

Our program was completely full at both Surrey and Richmond campuses again this year. Other continuing trends were very few dropouts; a small proportion of women (<10%); and a higher than usual number of students who had studied elsewhere or been out for a year or two, which improved the maturity level of the classes.

Ongoing extreme budget restrictions continue to plague our registration process. The spillover from last year's full classes resulted in some qualified new students being unable to register in first semester courses, and the trend continued into second semester. On the positive side our admissions office is finally keeping true wait lists so we will have a much clearer picture of the demand.

APSC 1299 (Intro to Microcontrollers) continues to be popular with students. It is a "real Engineering" course in that the end result is a device that has to actually work, with a portion of the mark based on performance and on both written and oral reports on how and why (or why not) it did work. (For interest, refer to student-created YouTube videos of recent performances: http://www.youtube.com/watch?v=95_4hvMst7Y
http://www.youtube.com/watch?v=jJRhq2HeDAI
http://www.youtube.com/watch?v=r1v7db8MYtI&feature=related

Some changes to first year curriculum at UVic generated some headaches for us. About ¾ of this has been resolved, but an interim solution for the remaining part involving the use of an existing Communications course as an elective was not accepted in the end. We are continuing to work on this issue.

The internal memorandum of agreement with our Drafting program by which our students can take a summer semester drafting program on top of completion of first year and receive the first level drafting certification has generated a bit of interest from our program students, but few of them have followed up on it. This sort of training could be useful for co-op placements for our students, since they don't have access to coop terms

through the destination Universities because they aren't there yet. We haven't yet moved forward with our concept of approaching our Trades areas for some short, intensive shops courses for the Engineering students, to give them some practical knowledge to enhance their academic training.

In keeping with our University status, Kwantlen is busy developing and supporting our own degree programs. This gives opportunity for growth in all areas, but leaves the status of transfer programs such as Engineering unclear, though the need for a strong and broad first year base for the entire Science area should be obvious. The Polytechnic part raises questions about Engineering programs in particular. There are a number of applied degrees at various stages of consideration. Our Physics Department's degree proposal, Applied Physics & Instrumentation, has been renamed Physics for Modern Technology (a more accurate description of its content and intent), and has just gone to Full Program Proposal stage. Stay tuned…

9.13 Douglas College - K. Gadareh

This academic year saw another good year in terms of the number of students enrolling in our engineering transfer courses. There was also a significant number of international students registering in Douglas College physics and applied science courses.

Enrollments in the Physics 1170 - Engineering Mechanics this winter was 41 with 27 students completing this course successfully. This is comparable to the number of successful students in the last year's class of 30. Students also completed a group project as part of their overall course assignment based on presentations giver by professional engineers from various industries.

Our first guest speaker discussed his current projects in the Merchant Marine, Offshore and Subsea Sonar Technology including underwater surveillance. Our second presentation was based on Sustainable Building Design focusing on recent developments such as the Vancouver Olympic Village.

In this academic year we ran two sections of our APSC 1110 - Engineering Graphics with CAD with the total enrollment of 74 students. Fifty students completed this course successfully in the fall semester. The last academic year we had 26 students enrolled in one section only and 20 completed the course successfully. The CAD part of this course is continuing to be popular among the students. In fall semester AutoCAD Lt was replaced with more cost effective software CMS IntelliCAD.

9.14 Camosun College– R. Gibbs/J. vandeVegte

Camosun College has four technology programs: Computer Systems Technology, Civil Engineering Technology, Electronics & Computer Engineering Technology – Renewable Energy, and Mechanical Engineering Technology. Pathways to university degrees are described in table. The Computer Science Bridge is currently under review due to low student interest and will be redesigned before it is offered again.

DIPLOMA PROGRAM ⇒	JULY TO DECEMBER BRIDGE (SUMMER INTAKE) ⇒	JANUARY THIRD YEAR ENGINEERING
Mechanical (or related) Technology	Mechanical Engineering Bridge	Mechanical Engineering at UVic
Electronics (or related) Technology	Electrical Engineering Bridge	Electrical Engineering at UVic
Computer (or related) Technology	Computer Engineering Bridge	Computer Engineering at UVic

DIPLOMA PROGRAM	JANUARY TO JUNE BRIDGE (WINTER INTAKE)	SEPTEMBER THIRD YEAR ENGINEERING OR COMPUTER SCIENCE
Civil (or related) Technology	Civil Engineering Bridge	Civil Engineering at UBC V and UBC O
Computer Systems (or related) Technology	Computer Science Bridge	Computer Science at UVic in September or January
Mechanical (or related) Technology	Mechanical Engineering Bridge	Mechanical Engineering at UBC V and UBC O
Mining (or related) Technology	Mining Engineering Bridge	Mining Engineering at UBC V

A large majority of Camosun technology students polled at the start of their programs express the intention to progress towards a Bridge program and a degree. In practice about one third of the technology students eventually enrol in a Bridge program. Several dozen colleges feed the Bridge programs, with the most participants coming from Camosun, SAIT, Okanagan, and BCIT.

In the summer bridge, 40 Electrical & Computer Engineering and 40 Mechanical Engineering students are accepted and about three-quarters of these progress to UBC or UVic after one intake. Students who are unsuccessful in one or more courses the first time must clear these deficiencies in a second intake. In the winter bridge, 25 Civil Engineering and 10 Mechanical Engineering students are accepted, with similar retention.

The Bridge programs to UBC and UVic have been running successfully for a couple of decades. The graduates from technology diploma plus Bridge programs are well-thought of at the universities, in particular because of their strong hands-on skills. They are in demand amongst employers.

Course listings for each Bridge program follow.

Civil & Mining Engineering Bridge to UBC

CHEM 150	Engineering Chemistry	8 hrs/week	4 credits
COMP 130	Computing for Engineers	6	3
ENGR 262	Analytical Methods	6	3
MATH 250A	Intermediate Calculus 1	5	3
MATH 251	Matrix Algebra for Engineers	6	3
ENGR 166	Geology for Engineers	6	3
ENGR 264	Engineering Mechanics	6	3
MATH 250B	Intermediate Calculus 2	5	3
MATH 252	Applied Differential Equations	5	3
MATH 254[1] or ENGL 151[2]	Probability and Statistics Academic Writing Strategies	5 3	3 3
PHYS 295	Physics (Engineering Bridge)	6	4

[1] for UBC O students

[2] for UBC V students

Electrical & Computer Engineering Bridge to UVic

Elex 236 is a new course, to be offered in the fall of 2012 for the first time.

CHEM 150	Engineering Chemistry	8 hrs/week	4 credits
COMP 166	Programming 1 for Engineers	5	3
ENGR 150	Engineering Graphics	5	3
MATH 250A	Intermediate Calculus 1	5	3
MATH 251	Matrix Algebra for Engineers	6	3
MATH 254	Probability and Statistics	5	3
COMP 139E	Data Structures & Applications	6	4
ELEX 214	Electrical Properties of Materials	3 hrs/7 wk	1
ELEX 216	Signal and Systems Analysis	4 hrs/4 wk	1
MATH 250B	Intermediate Calculus 2	5	3
MATH 252	Applied Differential Equations	5	3
MECH 210	Statics and Dynamics	5	2
ELEX 236	Discrete Structures in Eng	4	3
PHYS 210	Electricity and Magnetism	7	4

Mechanical Engineering Bridge to UBC

This new program will commence in January 2013. Engr 291/2/3 are new courses.

CHEM 150	Engineering Chemistry	8	4
COMP 130	Computing for Engineers	6	3
ELEX 250E	Linear Circuits 1	8	4
MATH 250A	Intermediate Calculus 1	5	3
MATH 251	Matrix Algebra for Engineers	6	3
ENGR 291	Solid Mechanics & Dynamics	4.5	
ENGR 292	Fluid Mechanics & Thermodynamics	4.5	
ENGR 293	Project Management	4	
MATH 250B	Intermediate Calculus 2	5	3
MATH 252	Applied Differential Equations	5	3
MATH 254[1] or ENGL 151[2]	Probability and Statistics Academic Writing Strategies	5 3	3 3
PHYS 295	Physics (Engineering Bridge)	6	4

[1] for UBC O students

[2] for UBC V students

Mechanical Engineering Bridge to UVic

CHEM 150	Engineering Chemistry	8 hrs/week	4 credits
COMP 166	Programming 1 for Engineers	5	3
ENGR 150	Engineering Graphics	5	3
MATH 250A	Intermediate Calculus 1	5	3
MATH 251	Matrix Algebra for Engineers	6	3
MATH 254	Probability and Statistics	5	3
COMP 139E	Data Structures & Applications	6	4
ELEX 250E	Linear Circuits 1	8	4
ENGR 290	Materials and Thermodynamics	4	2
MATH 250B	Intermediate Calculus 2	5	3
MATH 252	Applied Differential Equations	5	3
PHYS 210	Electricity and Magnetism	7	4

Link to website: Engineering Bridge: http://camosun.ca/learn/programs/engineer-bridge/

9.15 Capilano University – M. Dulat

Capilano University has two engineering transfer programs, both of which transfer to second year engineering at UBC and fulfill most or all of the prerequisites for second year engineering at other B.C. universities.

First-Year Engineering Transfer Program

This program is modeled after first year engineering at UBC and is geared towards strong high school graduates. Statistics for the 2011/2012 year are as follows:

- 186 applications were received (41 international)
- 63 admission offers were made (4 international)
- 33 students registered (2 international)
- 16 students completed the program in 1 year (2 international)
- 11 students have GPAs that meet UBCs transfer criteria (1 international)

This year, so far we have received 158 (29 international) applications for the 2012/2013 year.

Engineering Transition Program

This is a two-year program for mature students who have been out of school for a number of years and for high-school students who do not have the prerequisites to begin first year engineering. The cohort that are finishing this year began in the fall of 2010. Statistics for this group are as follow:

- 110 applications were received (20 international)
- 30 admission offers were made (1 international), plus an additional 18 offers (2 international) to applicants of the First-Year program
- 23 students registered (2 international)
- 6 students completed the program in 2 years (0 international)
- 5 students have GPAs that meet UBC's transfer criteria (0 international)

The cohort that began in the Fall of 2011 are finishing their first year of the program. Statistics for this group are as follows:

- 82 applications were received (13 international)
- 34 admission offers were made (3 international), plus an additional 33 offers (2 international) to applicants of the First-Year program
- 35 students registered (2 international)
- 21 students are expected to return for a second year (0 international)

This year, so far we have received 73 (14 international) applications for the 2012/2013 year.

Other News

- Our enrolment capacity remains capped at 35 for this year (hard limit of 40). Last year we filled up in mid-July.

- This year we are limiting initial offers for First-Year Engineering to students with an A in Math 12 or B in both Math 12 and Calc 12 (last year we accepted those with only a B in Math 12 if they also had at least a B in both Chem 12 and Phys 12).

- Our efforts in providing information to ESL students on the ability for them to take ESL courses concurrently with engineering courses doesn't seem to have had an effect on international applications.

9.16 College of New Caledonia – B. Rudecki

First Year Engineering Transfer Program

CNC continues to offer first year Engineering Transfer Program. This year the enrollment both in Applied Science and Physics courses was near at the same level as last year.

- APSC 100 (Introduction to Engineering) – 38 students
- APSC 120 (Engineering Drawing with AutoCAD) – 31 students
- Physics 101 (Introductory Physics I) – 33 students
- Physics 102 (Introductory Physics II) – 18 students
- Physics 105 (General Physics I) - 28 students
- Physics 106 (General Physics II) - 14 students
- Physics 204 (Mechanics I - Statics) – 16 students

Medical Radiography Program

CNC's medical radiography technology program opened its doors to 16 students in September, 2011. Students are trained in the college MRT lab, which includes three X-ray suites.

9.17 College of the Rockies – J. Bailey

At College of the Rockies we are continuing to firm up our first year Engineering offerings. The following courses are unique to our Engineering Program:

• APSC 151 Engineering Graphics, based on AUTOCAD, was again offered by Paul Knipe.

• APSC 122 Introduction to Engineering. This course was offered for the first time this year. It is 15 hours long and consists of presentations by a variety of local professional engineers. Students are evaluated on a combination of attendance and completion of short written assignments or activities with each presentation. Students can receive a grade of COM (Completed to defined standard) or NCG (No Credit Granted). We are in the process of adding a learning objective so this course will be acceptable to the University of Victoria.

• APSC 123(?) a Project and Design course is being developed; I believe that it will be based on the one at the University of Victoria.

• PHYS 170 Engineering Statics and Dynamics ran for the first time. It is based on the course with the same number at the University of British Columbia.

• PHYS 141 Engineering Statics, which is based on the course with the same number at the University of Victoria, has been developed but did not run.

• Collaborative offering of courses: Dennis Lightfoot and I were ready to offer PHYS 141/170 collaboratively in January 2012. The first half of the course, the common Statics component, was to have been offered locally, face-to-face, and then we would each have NCast (or whatever technology seemed to be most appropriate) our course to the students in the other location who wanted it. Unfortunately this did not happen.

• Collaborative offering of courses: a Memorandum of Agreement has been signed at the deans' level by approximately 20 institutions including both public and private colleges in British Columbia. In addition, there are approximately a half dozen public colleges who have agreed to collaboratively offer second year Mathematics and Science courses, perhaps starting as early as September 2012, January 2013, or September 2013.