Articulation Meeting

Vancouver Island University - Nanaimo BC June 5 & 6/2017

Doug Corrin - Chair

Attendees-

- Andrea Irwin CNC
- Bill Beese VIU
- Michel Vallee VIU
- Carol Andrews Selkirk
- Anna Tikina BCCAT
- Roy Rea UNBC
- Tom Willms NVIT
- Rick Chester BCIT
- Conrad Malilay –ABCFP
- Steve Finn BCIT
- Andre Enrich VIU
- Stacey Auld BCIT
- Alex Drummond UofA
- Jim Wilkinson VIU
- Kevin Lyons UBC

Meeting called to order 0835

Approval of minutes Move Vallee, 2nd Finn

Comments/Changes

- Discussion on VIU moving "non-core" courses out of program
- Non-core courses are offered to students outside of the program

APPROVED

Approval of Agenda

APPROVED

ABCFP Report (Maililay)

4 main items

- 1. Road map to registration
- 2. 2017 certification standards for RPF
- 3. Approval process
- 4. Career learning strategy

1. Road Map

Phase out of legacy registration policy. After Nov 30, required to transition to new process 16 learning modules vs. exam and workshop but do require 3 online exams. Clarification is needed re grads from accredited programs vs. non- accredited

2. Revised Standards

Revised standards have been reorganized and renumbered. An 8th standard has been added and one of 5 "areas of concentration" must be chosen

3. Credential Assessment process

Streamlined for >50% of non-accredited or allied applicants

- A portfolio is required. This is rigourous and is an automated self assessment.
- Increased pool of assessors
 - o RPF national program
 - o ABCFP for technologists
 - o Concurs with national assessment

4. Career learning strategy

- Objectives and partnerships
- Implemented at early stages

CIF (Drummond)

- Working to bring value to membership
- "rolling" review of all Sections
 - o to assist and ensure a move to best practices
 - o compliance with national/provincial legislations
- process to define roles of executive, board, sections, members
- empower Board
- AGM in Ottawa in September
 - o 2-5 day tour of Ottawa Valley North Bay to Ottawa
 - o Room for 7-8 students on a cost sharing arrangement
 - Would need to get to North Bay and approximately \$500 for accommodation and bus
 - Quiz Bowl on Tues evening in Ottawa
- Working on a document along the lines of "How to organize and run a Silver Ring Ceremony"
 - o Section needs to be involved
 - Relate to Code of Conduct/Ethics
 - o Description of value proposition

BCCAT (Tikina)

- New System Liaison Person (SLP)
 - Google docs for orientation etc.
 - o Usually at the Dean or similar level
- BC curriculum comparison guide

- New assessment procedures in BC issues for admission
- Transfer Innovation Funding still exists
 - o Relates to learning objectives and articulation issues and initiatives
- Questions about review of 1st year leaning objectives across colleges with the idea that transfer is facilitated and/or assessment for professional eligibility is facilitated
 - o Maintenance and update of information is always a concern
- Courses to courses vs. block transfer as a means of assessment
 - o Institutions (at an institutional level) are responsible for making sure transfer information on websites is up-to-date
- BC Transfer Guide is used heavily by advisor
 - o Documents available:
 - Dual admissions
 - Experiential learning
 - What is academic credit
 - Dual credit

Accreditation (Lyons)

- CTAB and TAC for colleges; CFAB for Universities
- What is the better process CTAB vs. CFAB
- Why do accreditation process with CTAB (or TAC) if ABCFP already doing accreditation outside of CTAB
- Challenge with CTAB process as far as the process Norm Shaw developed changes from initial drafts to implementation
- What is the value of CTAB? What are consequences if we walk away from CTAB? Does ABCFP own the Shaw process?
- Can CFAB play a role? Can we influence CFAB and encourage them to take on College accreditation in Forestry?
- "Tech" students/programs tend to have issues with
 - o Calculus (and other Math)
 - o English
 - o Chemistry
 - Biology
 - At what level are decisions around requirements around calculus made?
- CTAB isn't working- thus investigate
- ABCFP or CFAB are avenues. Can work with CFPFA to push with ABCFP or CFAB
- 1. ABCFP route
- 2. CFAB route

ACTION - message from Colleges to ABCFP – given CTAB is problematic, would ABCFP take on the role of Accreditation for Colleges?

ACTION- Doug Corrin to work with all For Tech colleges to develop a letter that will be addressed to ABCFP with all signing.

- Steve Earl (VIU) has been contracted to BCCAT to examine all field schools
 - Look at ways to enhance coordination and cooperation between institutions with offerings with field schools.
 - Met with 11 Articulation Committees as well as web and literature reviews
 - 1. Can't do things anywhere else that field schools
 - 2. More effective learning than classroom
 - 3. Better retention (2, 3, 5 years out from graduation)
 - Field schools tend to be concentrated and NOT semester long courses
 - Deans and faculty members recognize that these field schools are effective and should be made more available
 - o Increasing coordination and cooperation should allow greater opportunity and ideally allow increase in field school enrollment numbers.
 - o Allow different perspectives from other schools both students and staff
 - o How? -
 - Through articulation a field school at one place is recognized at others
 - 1. Multi-party agreements to recognize field schools
 - 2. Encourage students to look at other filed school sat different institutions
 - 3. Field School information made more public
 - 4. Discipline specific a website listing all field schools
 - 5. Pre-approved template
 - ON 15 universities cooperate and have created a set of standards for an Ecosystem Field School
 30 of these field schools are offered annually and meet the standard.
 - OUPFB ON University Program Field Biologist
 - articulation
 - faculty to faculty cooperation
 - encourage students
 - database of information (not discipline specific)
 - common templates

Tablet use in teaching (VIU)

- User for field navigation, data collection, classroom use and reference
- VIU uses iPad with waterproof case (Lifecase)
- Cost is ~\$900 which is approximately the same as textbooks annually
- VIU- must be Apple
 - o Recommended case
 - Need SIM card for GPS use- data plan not required
- Used iPads because West Coast industry was using iPads
- Other schools using Windows based tablets (Samsung)
- Classroom uses
 - Field form annotation on screen EPSON link, Bluetooth, AppleTV etc.

- o Can annotate on an image, map, pdf file
- Can use "Air Drop" and can release projector to any tablet and can "toss" files tablet to tablet
- Can work problems live on screen
- Bluetooth sharing in the field or classroom
- Can do real-time test/quiz/evaluations (Socratic learning) very good with maps
- Can onboard a reference library
- Can "trade" data etc. amongst all students
- Use Avenza for PDF maps
- Selkirk is implementing a tablet program but has concerns with a \$900 charge per student.

ARCA program – Carol Andrews

- Applied research
- "warehouse" and share data collection

Currency of curriculum

- Teaching status quo but not issues regarding upcoming or ongoing/evolving issues and how we integrate
 into curriculum
 - o Climate change
 - Sustainability
 - o Timber supply (& sustainability),
 - Markets
 - Trade & globalization
 - o Reconciliation and Indigenization
- What are ways to discuss these things?
- Students are likely not wanting to be industrial foresters something newer, different

ACTION – letter to ABCFP CEO inviting discussion on this item.

RESOLUTION - moved Carol (Selkirk), 2nd Michel (VIU)

BC Advanced Education Report – Linda Kaivanto

- Most initiatives on hold given uncertainty re BC government
- Concern around countervail and US process and Canadian response
- Are students getting job? Yes, as far as group understands
- As to reeducation in AAC have not seen impact as yet and woodlands, at this juncture appear to be OK.
- Linda is retiring this is her last Articulation meeting Congratulations from the whole group
- Forest Technologist Entry Level Program

SCHOOL REPORTS

- See attached:
 - o BCIT

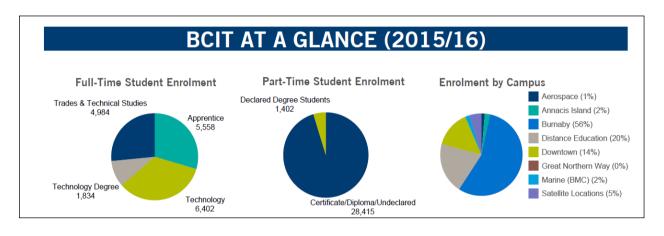
- o <u>CNC</u>
- o <u>NVIT</u>
- o <u>Selkirk</u>
- o <u>TRU</u>
- o <u>UBC</u>
- o <u>UNBC</u>
- o <u>UofA</u>
- o <u>VIU</u>

BCIT

Annual Report to the Forestry and Sustainable Resources Management Articulation Committee

1. Introductory Overview

1.1. Institutional Snapshot



Graduates					
	2011-12	2012-13	2013-14	2014-15	2015-16
Master of Applied Science				3	2
Master of Engineering		5	5	9	7
Bachelor of Business Admin	176	167	149	162	177
Bachelor of Engineering	36	57	49	74	57
Bachelor of Interior Design				7	10
Bachelor of Science: Nursing	146	174	203	191	190
Bachelor of Science				33	67
Bachelor of Technology	335	386	381	298	355
Advanced Diploma	39	38	43	52	49
Diploma	2,197	2,292	2,365	2,287	2,432
Certificate	2,629	2,678	2,803	2,695	2,673
Associate Certificate	703	652	648	743	779
Total BCIT Graduates	6,261	6,449	6,646	6,554	6,79

1.2. Program offerings overview

The Forest and Natural Areas Management (FNAM) program is housed within the School of Construction and the Environment (SOCE). We are one program within the Renewable Resources Department. This department consists of the following programs:

• Ecological Restoration (Master of Science) (joint with SFU)

- Ecological Restoration (Bachelor of Science)
- Fish, Wildlife and Recreation (Diploma)
- Forest and Natural Areas Management (Diploma)
- Renewable Resources part-time studies courses

2. Enrollment/Graduation Summary Table for 2016/17 Academic Year

Technical Programs 2016/17

Institution:			
		Acade	emic Year
Program Name:		2016/17	2017/18 proj.
RFT registerable	Capacity 1 st year	34	34
	Capacity 2 nd year	34	34
	Applicants (as of this report date)	88	90 Full and
			closed as of
			March 15th
	1 st year enrollments		
	full time	34	34
	part time	0	0
	2nd year enrollments		
	full time	26	30
	part time	0	1
	Graduates	26	30

Degree Programs and Transfer Programs 2016/17

Program Name	Prof. Registration (RPF, RPBio, PEng)	Technical transfer (# intake)	Graduated/Transferred

3. Program Activities

- 3.1. Program Highlights
 - 3.1.1. This past term was the first run through of our term 4 of the FNAM program. As part of this term, students pick a stream (option) along with taking some common core courses. 60% of the students chose the Silviculture / Protection stream and 40% chose the Engineering / Measurements stream.
 - 3.1.2.This year saw the continuation of the 2-day challenge, led by faculty members Helene Marcoux and Laurie Stott. http://commons.bcit.ca/2daychallenge/the-2017-2-day-challenge/. The theme of the 2017 Challenge is "Development at the Urban-Wildland Interface" and will encompass elements of designing communities at the edge of wild-forested-landscapes in the Lower Mainland. Such challenges include building infrastructure around watercourses, storm water management, reducing wildfire risk, mitigating tree-related hazards, incorporating recreational trails and building on steep slopes.
 - 3.1.3. Student Projects Listing from this past term

Topics on Invasive Species and Establishing Plant Communities in Urban Natural Areas

Native revegetation strategies on glyphosate treated sites previously infested with knotweed in the Lower Mainland

Assisting forest development using mycorrhizal inoculants at Everett Crowley Park, Vancouver, BC

Hazelnut (Corylus sp.) fertilization trial at the Bothwell Park Urban Food Forest, Surrey BC

Developing plum (Prunus sp.) stands at the Bothwell Park Urban Food Forest, Surrey BC

Walnut, buartnut and heartnut (Junglans sp.) trees in Bothwell Park: Development of a fruit & nut producing forest in Surrey, BC

Topics on Silviculture and Forest Management

Wood Lake time-of-planting fertilization trials

Mixed species trials: diversifying conifers stands with paper birch (Betula papyrifera) and bigleaf maple (Acer macrophyllum) in Maple Ridge, BC

Alternative fire management strategies for WL0007

Western white pine (Pinus monticola) growth trial at WL0007

Growth and yield permanent sampling in managed stands at WL0007

Comparing the effectiveness of deer repellant western red cedar stocktypes at Woodlot 0007

- 3.2. Significant Curricular Changes N/A
- 3.3. Faculty Changes
 - 3.3.1.Recent hires Stacey Auld, permanent AI and Julia Alards-Tomalin, temp. AI
 - 3.3.2.Norm Caldicott, our silviculture instructor has expressed a desire to go down to a 50% appointment still in the works.
- 3.4. New Initiatives Efforts to do more part time studies courses are underway. Stay tuned

4. Accreditation

- 4.1. We have just graduated its first class that has gone through the FNAM program. We hope to apply for accreditation early in 2018, though either CTAB (probably) or TAC. The program has received recognition via the ABCFP.
- 5. International Education/Exchanges
 - 5.1. As in past years, the FNAM program has 5 dedicated seats for international students
- 6. Students
 - 6.1. Recruiting
 - 6.1.1.Other than the institute BigInfo sessions, we have not done any recruiting sessions for a few years, as the demand for the program exceeds our capacity. With the program full for September 2017, applicants are asking questions about the September 2018 intake now.

6.2. Student Placement

- 6.2.1.As in past years, recruitment has been vicious. The major companies are asking to come in earlier and earlier to promote and recruit. Students are now "complaining" that this is happening too early, particularly for first year students, as they have not necessarily been exposed to all facets of the industry.
- 6.2.2. Student placement in the traditional forestry areas is very strong.

CNC

Annual Report to the Forestry and Sustainable Resources Management Articulation Committee

1. Introductory Overview

1.1. Institutional Snapshot

CNC continues to offer one natural resources program through the Prince George Campus. That program has been renamed this spring to Natural Resources and Forest Technology (NRFT). It is a two-year technology diploma program that carries national accreditation as a forest resource technology. The program is recognized by both of the Association of BC Forest Professionals and the College of Applied Biology.

The College has been developing its research initiatives through the College wide research Office of Applied Research and Innovation headed up by Hardy Griesbauer. This initiative is intimately connected to the NRFT program and is providing opportunities to expose students and faculty to applied research projects and employment opportunities. Nine students were hired in that department this year, six from the NRFT program.

1.2. Program offerings overview

The Natural Resources and Forest Technology program is built on a core of forest based courses with a focus on harvesting/engineering, forest measurements, forest protection, silviculture and GIS. The program is intended to provide graduates with the skills required for work in various forest land-based natural resources sectors primarily for the forest sector but also with potential to support natural resource aspects of oil and gas exploration and mine exploration/development/operations.

Student employment is excellent with virtually 100 % placement in natural resources and mostly forest sector jobs. There are jobs still open if we had more students.

2. Enrollment

The student intake for NRFT continues to be capped at 22 students in each year. As a result of returning part time students, we will be challenged again this fall term by having more than 22 students returning to second year. Intake into first year continues to be strong with a waitlist of over 50 applicants. Applications are typically cut off by the registrar's office in April. This year we were full before Christmas break.

Current enrollment/Graduation Summary Table 1 with projections to next year.

Table 1. CNC Technical Programs Applications and Enrollment.

Institution: CNC			
		Acade	emic Year
Program Name: NRFT		2016/17	2017/18 proj.
RFT requirements	Capacity 1 st year	22	22
	Capacity 2 nd year	22	22
	Applicants	73	75
	1 st year enrollments		
	full time	22	22
	part time	0	1
	2 nd year enrollments		
	full time	22	22
	part time	2	2
	Graduates	22	24

The application trend for the NRFT program continues to be strong with many students left on a wait list. At this point it is not clear if those on the wait list reapply or try a different institution. There is some consideration being given to a selection process. At this time a section of first year is also being considered for a fall 2018 intake. The risk of trade disputes and reduced AAC are factors in this decision.

3. Program Activities

3.1. Program Highlights

Research activities are providing exciting developments at CNC. Faculty are directly involved with or leading projects with the community. This is building interesting connections with the natural resource sector and providing new opportunities for curriculum enhancement, real world research projects for students, student and graduate employment opportunities, and a higher profile for the NRFT program in the community.

This year the ABCFP annual conference provided an opportunity to engage keen high school students in the actual conference program rather than have them just observe the "gown ups". COFI was an important partner in organizing the schools and the ABCFP organizing committee generously accommodated the students into their program. This approach went over well and given an opportunity we would do this again.

3.2. Significant Curricular Changes

The heavily revised forest technology program launched in 2009 has graduated seven classes since its launch. We have gone through several accreditation reviews, have been able to survey students and graduates, consult with our advisory committee and observe outcomes for graduates. Based on this information we were able to move ahead with a few minor program changes that included a name change and some minor changes to the curriculum.

The new name for the program is now Natural Resources and Forest Technology. Although we strongly feel that graduates of our program have skills that are widely useful to the broader natural resources sector, the reality is most of our graduates find the most opportunities for work in the forest sector.

The curriculum was also addressed in the first year. We found that the outdoor recreation course wasn't aligning with job placements so it was dropped to allow our silvics course to be moved from 1st term (fall) into the 2nd term (winter). This reduced some workload for new students in their first term and allowed for more time for math which continues to be a barrier for some students. We feel this will reduce some of the shock of starting such an intense program and hopefully will increase retention and improve the student's experience.

3.3. Faculty Changes

This past year the program was delivered by 6 full time faculty and 1 full time laboratory tech support position. Not all faculty are teaching full time in the NRFT program as they have release for research projects. Also, several courses including English, Math and Aboriginal Studies were delivered as service courses by other departments.

The NRFT program at CNC is continuing to undergo transformation of staff paralleling what is occurring in the forest sector. As reported last year, Richard Reich joined the faculty, bringing forest health expertise to the program. Also as of last summer, David Stearns, our longest serving faculty member, retired. A search for a replacement instructor was completed with the January hiring of Greg Rose. Greg comes to us with a wealth of current forestry consulting experience, a strong capability with statistics, technology applications and supervisory experience.

These changes in staff followed the hiring of two other new full time faculty in 2014. All new faculty positions are a combination of instructor/research positions. However, the program priority remains provision of quality technical instruction for students in the program.

4. New Initiatives

4.1. Research

Students and faculty worked on a number of research projects through the school year starting with data collection in the fall, analysis and report preparation through the winter term. The preparation of the report is done in concert with the English department through two course ENGL 229 and ENGL 252.

Students worked in groups to collect data but reports focused on different aspects of data sets. A faculty member worked with each student as an advisor on their projects. A sample of projects undertaken follows:

- Review of the effects of soil compaction mitigation treatments on tree growth.
- Use of bioengineering restoration techniques to facilitate natural successional processes to
 restore a functioning riparian zone by planting live willow and cottonwood staking of the river
 banks, live gravel bar staking, and installation of large woody debris features.
- Evaluation of the effect of adjacent vegetation on the efficacy of funnel traps to capture spruce beetles.
- The effect of weather variables, elevation, slope and aspect on the spread of comandra and stalactiform blister rusts.
- Silviculture projects including efficacy of aspen girdling treatments by season, the efficacy of
 naturally occurring fungus to control cut aspen resprouting, the impact of glyphosate on nontarget blueberry plants and an updated evaluation on an industry established western larch
 migration trial.

4.2. Tablets and technology

Implementation of student use of tablets following in the footsteps of VIU's initiative has been stalled due to funding allocation. Faculty have however been working with tablets (iPads specifically) gaining familiarity and determining utility. We will reinvigorate the adoption of tablets for students again this fall with both some funding and programming support. We don't see going 100% to tablets at this time but expect field work to become increasingly dominated by this tool. As usual it will be important to consider the pedagogical aspects of adopting this new tool.

We are also acquiring a 3-D photo viewing system for the program in recognition of the move by the sector to digital imagery and remote sensing. This year faculty will be gaining some experience with this viewing tool and will be working to introduce students to new ways of acquiring, presenting and interpreting data. We expect this will affect the content of several courses and better align our graduates with tools commonly used by industry.

5. Accreditation

The program underwent a full accreditation paper review process with CTAB last year. The program was accredited for a further 2 years to April 2018 based on a finding, an area of concern and a few items for improvement. The communication from CTAB was clear on the issues they wanted addressed and most have already been implemented as if the spring of 2017 i.e. the desired name change to drop the reference to environmental technology.

6. International Education/Exchanges

The Forest Science course (FOR 251) was delivered again this year with a trip to Ecuador. Four students from our program were able to participate. The experience continues to be excellent and ties in with a number of ecological studies and land policy studies in the NRFT program.

7. Students

7.1. Recruiting

The NRFT program continues to be very involved with the Council of Forest Industries (COFI) under the banner of their forest education program. Not only have there been opportunities to recruit new students but it has been a conduit for connecting with the forest sector and local communities. In addition, we present to the local Rotary service club's "Adventures in Forestry" program as part of our recruiting efforts. Enrollment in our program is currently high but looming issues of a softwood lumber trade, a significant reduction in AAC, and mill closures that will follow are all risk to continued enrollment.

As well as actively recruiting, CNC is continuing to participate in the provincial conversation on labour market requirements for forest professionals. This is an important issue as government works to tie labour demand to institutional priorities for programming. Conversations with Lisa Perrault (ABCFP council) and John Betts (Western Silviculture Contractors Association/Consulting foresters of BC) show that there continues to be problems with provincial data in regard to the demand for forest professionals. There is a good handle on the supply of graduates from accredited forestry schools based on reports of this articulation group, however there is not a clear indication of the demand. Labour market studies tend to reflect the larger needs of mills and logging operations or silviculture labour rather than forest professionals. Consequently, the assessment of need is unclear in spite of anecdotal evidence that there is a significant shortfall in the supply of forestry graduates.

7.2. Student Placement

Student employment has had another stellar year. Employment is all but guaranteed for students and graduates in the current market. Most students are employed in the forest sector as accessing nonforestry opportunities continues to be challenging. Competition for non-forestry jobs is high, with a large number of very qualified applicants applying for those few positions. Graduates and students seeking employment in the forest sector are being hired with little competition. Both BCTS and FLNRO are attracting students to positions especially in more remote locations.

We continue to work with the Wildfire Services Branch and have had success in placing students with them. We continue to have a number of fire fighters attending our program as a route to obtaining an RFT credential. This helps with their goal of enhancing their opportunities for full time employment with the Wildfire Services Branch.

Nicola Valley Institute of Technology Environmental Resources Technology (ENRT) Program Forestry and Sustainable Resource Management Articulation Committee Meeting (June 5 and 6th, 2017) Program Overview

The ENRT program continues to offer an Environmental Resources Technology **Certificate** following student's successful completion of Year 1 (54 credits) of the Program, and an Environmental Resources Technology

Diploma following successful completion of Year 2 (56 credits) of the program. The structure of the diploma program is designed to meet the core skills required of Forest Technologists, but has been integrated to include essential skills in biological sciences, policy and planning, Aboriginal experience, and Indigenous Knowledge. The faculty of the ENRT program work hard to provide quality education from perspectives that are relevant to First Nations people.

Environmental Resources Technology Certificate and Diploma Programs Certificate Completion Plan Year Credits

1 Fall		
STSC 101	Strategies for Success1	3
ENRT 110	Introduction to Natural	3
	Resources	
ENRT 141	Aboriginal People and	5
	the Land	
ENRT 150	Silvics and Dendrology	5
ENRT 155	Soil Science	5
ENRT 160	Field Surveys I	5
Math 140	Technical Mathematics	3
Total Credits	26	

Year 1 Spring		
COMM 140	Technical Writing	3
COMP 140	Geographic Information	5
	Systems	
ENRT 145	Fire Ecology	5
ENRT 165	Field Surveys II	5
ENRT 170	Principles of Ecology	5
SCIE 140	Ethnoscience	5
Total Credits	28	54

Diploma Competition	Plan Year Credits	
2 Fall		
COMM 145	Public Relations and	3
	Communications	
ENRT 250	Silviculture	5
ENRT 255	Timber Development I	5
ENRT 260	Forest Surveys	5
ENRT 270	Fisheries Ecology	5
ENRT 271	Grasslands Ecology	5
Total Credits	28	

Enrolment

Enrolment in the ENRT program has been increasing and is expected to be at capacity for the 2017/2018 academic year. Retention

Diplomas and Certificates Awarded in 2017

between Year One and Year Two of the program is also expected to be much better, with between 15 to 20 students likely returning to complete their diplomas.

Enrolment

This Yea	ar		La	ast Year			Five	Years Ag	0	
Year 1	Year 2	Total	Year 1	Year 2	Total	Year 1	Year 2	Total	Certifi	Diplo
									cates	mas
45	9	54	28	9	37	17	8	25	16	5

Program Activities

The 2016/2017 academic year was very successful. Students were able to participate in some excellent field labs and there we no major health and safety incidents. NVIT continues to deliver the ENRT Program in a way that is grounded in Indigenous Knowledge and Aboriginal culture. Elders are often invited to spend time in the classrooms and to come on field trips. NVIT also delivered several ENRT courses in communities this year, including; Skeetchestn First Nation near Savona, BC and Penticton Band. Several proposals have also been submitted for 2017/2018 to deliver first year courses to communities in northwestern BC.

Program Highlights

Some ENRT highlights from this year include the following;

- 2 Silvics and Dendrology field trip to Hope, BC and Manning Park;
- Snow measurement field trip to Falls Lake;
- 2 Silviculture field trip to the Kalamalka Research Station and PRT's nursery in Vernon;
- 2 Principles of Ecology field trip to the Cheakamus Center in Squamish, wetlands tour of the Lower Mainland, and tour of UBC's Malcolm Knapp Research Forest with Cheryl Power (accompanied by Alison Krahn [UBC]);
- 2 NVIT tour with the ABCFP's CEO, Christine Gelowitz;
- ② Guest speakers from the ABCFP (Brian Robinson, Casey Macaulay and Gordon Prest);
- 2 Submission of NVIT's Sustainability Plan, as part of the Environmental Planning course; and
- ② Announcement of NVIT's new *Center for Excellence in Sustainability*. This nine million dollar project/building includes a built-in greenhouse laboratory, two green energy technology training labs, a training kitchen for a Culinary Arts program, and sports facilities.

Current Program Faculty and Staff

Dr. John Chenoweth – Program Dean
Darrell Eustache – Fulltime Instructor
Tom Willms. – Department Head/Fulltime Instructor
Chris Lepsoe – Part-time Instructor
Kent Watson – Part-time Instructor
Shawn Larson – Sessional Instructor
Tracy Thomas – Sessional Instructor
Don Parno – Sessional Instructor
Ed Nedokus – Sessional Instructor

Accreditation

NVIT has been working towards, and has now submitted an application for accreditation of the Program with the Canadian Technology Accreditation Board (CTAB). The required site visit is currently being planned for November, 2017. The Program was accredited with CTAB until 2010, but the accreditation was allowed to expire. Both the

ENRT Program Advisory Committee and NVIT's Board of Governors have requested that the Program pursue external accreditation again.

It is also exciting to note that NVIT has recently signed block transfer agreements with UNBC for their B.Sc. in Natural Resource Management (**Forest Ecology and Management** and **Wildlife and Fisheries** majors).

Students

NVIT's communications team was involved with numerous recruiting events and activities throughout the year. These events did not recruit specifically for individual programs, but for the whole institution. Examples from 2016/2017 include the following:

- ☑ *Experience NVIT* Grade 11 students were hosted by NVIT for two days, with one night spent in NVIT's student housing on campus. Students participated in numerous information sessions and fun events, including a tour of the ENRT classrooms and labs;
- ☑ **NVIT Parents Night** Prospective Grade 12 students and their parents were invited to NVIT for dinner and an information session;
- ☑ **Strengthening Connections** Post-Secondary Education awareness initiative that was delivered in Aboriginal communities throughout the province;
- Public school information sessions; and
- Community information sessions, as requested.

ENRT graduates continue to have high job placement. Almost all first year students had relevant summer employment secured prior to the end of the spring semester, and diploma graduates were typically moving to fulltime positions with their previous employers. NVIT receives regular requests from employers looking for qualified Aboriginal technologists.

Closure

This report was intended to provide a general update regarding NVIT's ENRT program. If you have any questions, please feel free to contact me directly at (250) 378-3328 or by email at twillms@nvit.bc.ca . Feedback regarding our program is always appreciated!

Sincerely,

Tom Willms



Selkirk

Annual Report to the Forestry and Sustainable Resources Management Articulation Committee

7. Introductory Overview

7.1. Institutional Snapshot

The latest FTE projections predicting about 2300 domestic FTEs and 550 international FTEs. Over the past 4 years our international student enrolments have **quadrupled**. While the English Language Program, Business and Hospitality programs still attract the highest number of international learners, we have international students in over two dozen different programs including the School of Environment and Geomatics (mostly in RFW and IEP).

Facilities

The \$18.9M renovation of our (Nelson) Silver King trades facilities is continuing. The projected completion date is spring 2018. Next in line for major renovations is the Castlegar Campus.

Senior Leadership

Two of the three Vice Presidents will be retiring in the next year. The College is starting a search process.

Within the Education Division there are 3 new Deans. **Tiffany Snauwaert is Dean for the School of Business, School of Environment and Geomatics, and Community Education and Workplace Training.**

7.2. Program offerings overview

The School of Environment and Geomatics (SEG) is home to three nationally accredited programs: Forestry Technology, Recreation Fish & Wildlife Technology, and Integrated Environmental Planning Technology. The School also delivers an Advanced Diploma (ADGIS) and a Bachelor Degree (BGIS) in Geographic Information Systems.

SEG strives to provide the most comprehensive and flexible mix of environmental science training in Canada. Students complete a common first year curriculum that leads to all three technical diploma specializations in second year. From there, students have a choice of pursuing advanced training in GIS. Students may also peruse a variety of degrees through other institutions that grant up to two years of credit for our technical diplomas, or recognize our four year BGIS.

Additionally, SEG is home to the Selkirk Geospatial Research Centre (SGRC). The SGRC is a leading-edge research centre specializing in geospatial technologies aimed at solving critical issues pertaining to environmental and socio-economic problems.

The GIS programs and the SGRC as well as the Columbia Basin Rural Development Institute (RDI) are now housed in the Applied Research & Innovation Centre, the former Professional Aviation Building at the West Kootenay Regional Airport. The new campus facility is located just minutes from the main Castlegar Campus.

8. Enrollment/Graduation Summary Table for 2016/17 Academic Year

Technical Programs 2016/17

Institution: Selkirl	k College		
		Acade	emic Year
Program Name:		2016/17	2017/18 proj.
RFT registerable	Capacity 1 st year	30	33
	Capacity 2 nd year	30	33
	Applicants (as of this report date)	<u></u>	
	1 st year enrollments		
	full time	27	33
	part time	1	
	2nd year enrollments		
	full time	23	26
	part time	0	
	Graduates	23	26

- 9. Program Activities
 - 9.1. Program Highlights: Forestry completes a "Program Outcome Mapping exercise
 - 9.2. Significant Curricular Changes: none
 - 9.3. Faculty Changes: New Dean; Tiffany Snauwaert
 - 9.4. New Initiatives:
 - 2017 Advisory Meeting focused on technology. The Forestry Program will continue to incorporate digital technology in lab activities in all Forestry Courses.
 - All SEG Faculty participated in Indigenous training in February.
 - A new Fall Field School for Forestry students entering 2nd year, will take place at the Nature Conservancy of Canada's *Darkwoods* property near Creston.
- 10. Accreditation: CTAB has accredited the Forestry Program for 3 Years (next submission: 2019). We have started talking to TAC as an alternative.
- 11. International Education/Exchanges:None
- 12. Students
 - 12.1. Recruiting: Program has a waiting list.
 - 12.2. Student Placement: All graduates have found jobs to suit their needs. More students looking at non-industry options.













TRU

Forestry & Sustainable Resource Management Articulation Committee Meeting, Vancouver Island University, Nanaimo, BC. June 5 & 6, 2017

Department of Natural Resource Sciences & M.Sc. Report by Dr. John Karakatsoulis & Dr. Tom Pypker

Department of Natural Resource Sciences

(http://www.tru.ca/science/programs/nrs.html)

General Overview

The main degree offered by the department is the Bachelor of Natural Resource Science (BNRS), which can be taken with Co-Op and Honours options. Below is a list of our courses as they appear in each year and semester of the program. Descriptions of each course can be found on our website, or you can contact Program Advisor John Karakatsoulis (jkarakatsoulis@tru.ca) if you require full course outlines.

Students graduating with the BNRS degree meet the educational requirements to become a Natural Resource Professional from the Association of BC Forest Professionals, a Registered Professional Biologist from the College of Applied Biology, and a Professional Agrologist, from the Association of BC

Professional Agrologists. In addition, BNRS grads can apply to become a professional forester (via the non-accredited route) with the addition of extra courses.

The department also offers a two-year forestry transfer program, and is an active participant in the Masters of Science in Environmental Sciences program (described later in this report).

The department is very active in research, with faculty holding NSERC and other peer-reviewed grants, supervising graduate students at TRU and other universities and publishing peer-reviewed journal articles. We have a strong commitment to undergraduate student research, supervising student research projects and hiring many students during the year to work as research assistants on various projects.

Changes and updates

Total enrolment in BNRS courses have increased over the past 2 years, reaching their highest level of the past 15 years in the 2016-17 academic year (Fig. 1). The increase results from greater numbers of first and second year students in the program. The numbers represent students in the NRS program, as well as students in biology and geography taking NRS courses as electives. The number of domestic students applying to the program as of May 28, 2017 was 63. This year we will graduate 40 students (Fig. 2), similar to last year, and slightly more than our program profile of 32. New courses currently offered in the program include 1) Introduction to Climate Change Science, and 2) Ecosystem Reclamation. We are in the process of implementing a few new initiatives including a post baccalaureate diploma in sustainable resource management.

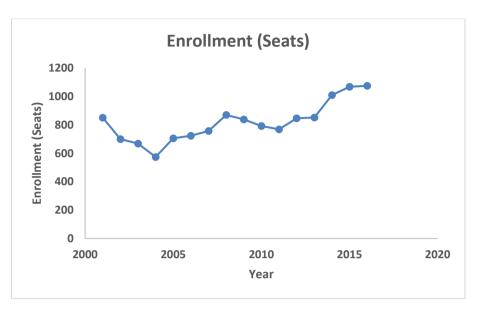


Figure 1. The total number of students enrolled in NRS classes from 2001 through 2016/17. This number includes both NRS program students and students in other programs.

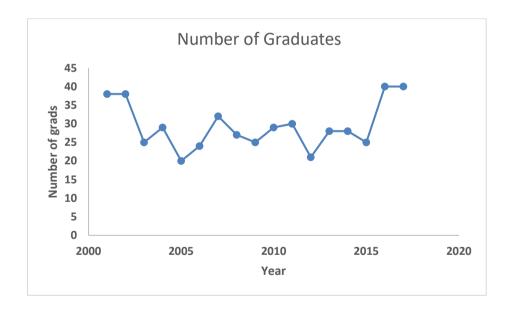


Figure 2. The total number of students graduating from the NRS program from 2001 through 2016.

Thompson Rivers University

Course Requirements for the Bachelor of Natural Resource Science Degree 2017-2018

First Year - Ser	mester 1 Fall	<u>First Year - Semester 2 Winter</u>			
BIOL 1110	Principles of Biology 1	BIOL 1210	Principles of Biology 2		
ENGL 1100	Intro to University Writing	NRSC 2100	Forest Ecology and Silvics 1		
MATH 1150 or	1140 Calculus 1	CMNS 2300	Writing for Science & Tech.		
NRSC 1110	Science & Mgmt. of Nat.Res.	NRSC 1220	Dendrology 2		
NRSC 1120	Dendrology 1	**ENGL 1110	Intro to Prose Fiction		
		**Or elective			
15 Credits		15 Credits			
		NRSC 1500 Intro	to Climate Change Science		

Second Year - Semester 3 Fall

Second Year - Semester 4 Winter

BIOL 3000	Biometrics	CHEM 1510	Fundamentals of Chemistry
CHEM 1500	Chemical Bonding & Organic	NRSC 2110	Forest Mensuration
NRSC 2000	Introduction to Soils	ECON 1900	Microeconomics
NRSC 2200	Forest Ecology and Silvics 2	NRSC 3000	Diversity & Ecology of Vertebrates
ANTH 2140 or 3	270 or 3280 or 4040	NRSC 3170	Ichthyology
16 Credits		15 Credits	

Third Year - Semester 5 Fall

Third Year - Semester 6 Winter

NRSC 3200	Silviculture	NRSC 2230	Geographic Information Systems
NRSC 3260	Limnology	BIOL 3030	Population Biology
NRSC 4020	Entomology	***ECON 3730	Forest Economics or ECON 3410 or 3740
NRSC 4030	Pathology	NRSC 3110	Grassland Ecology
NRSC 4130	Fire Ecology & Management	Elective	

15 Credits 15 Credits

Fourth Year - Semester 7 Fall

Fourth Year - Semester 8 Winter

NRSC 4100	Fisheries Management	NRSC 4050	Wildlife Management 2
NRSC 4140	N.R. Policy & Planning	NRSC 4110	Watershed Management
NRSC 3210	Range Management	NRSC 4210	Conflict Resolution in N.R.
NRSC 4040	Wildlife Management 1	NRSC 4230	Graduating Essay
***ECON 3710 or ECON 3740 or Elective		Elective	
15 Credits		15 Credits	

Minimum credits required to graduate: 120

*Recommended Electives

NRSC 1500	Introduction to Climate Change Science
NRSC 4240	Research Design
NRSC 4250	Tropical Field Studies
NRSC 4300	Ecosystem Reclamation

^{**}Students receiving a grade of B or better in ENGL 1100 can replace ENGL 1110 with an elective.

***Note: Students will <u>take one of ECON 3710</u> (Economics of the Environment), 3730 (Forestry Economics), 3740 (Economics of Climate Change) or 3410 (Land Use Economics)

<u>Faculty</u>

Broad, Peggy, B.Sc.F. (Dendrology, Forest Ecology and Grassland Ecology labs)

Gardner, Wendy, B.Sc., M.Sc., Ph.D. (Range Ecology, Range Management, Fire Ecology, Ecosystem Reclamation)

Fraser, Lauchlan, B.Sc., M.Sc., Ph.D. (Community & Ecosystem Ecology; jointly appointed between Departments of Natural Resource Science and Biological Science)

Heise, Brian, B.Sc., M.Sc., Ph.D. (Limnology, Ichthyology, Fisheries Management, Ecosystem Reclamation)

Karakatsoulis, John, (Chair & Program Advisor), B.Sc., Ph.D. (Forest Ecology, Silvics, Silviculture, Conflict Resolution). John will be on sabbatical from July 1 – Dec. 31, 2017. Tom Pypker will be the interim Dept. Chair and Jacque Sorensen will be the interim Program Advisor during this period.

Larsen, Karl, B.Sc., M.Sc., Ph.D. (Wildlife Ecology, Wildlife Management, Graduate courses, Belize field school)

Pypker, Tom, B.Sc., M.Sc., Ph.D. (Watershed Management, Climate change, Soils)

Sorensen, Jacque, B.N.R.S., M.Sc. (Fisheries/aquatics & Dendrology labs; NRSC intro course)

Watson, Sheri, B.Sc., M.Sc. (Wildlife Ecology/Wildlife Management, labs)

BC Regional Innovation Chair

Church, John, B.Sc., M.Sc., Ph.D. (Food Systems)

Program Assistant

Cornell, Nadine

Part Time Faculty (on-going)

Andrea Barnett, BA, MA (MPP) (Public Policy)

Master of Science degree

The Master of Science Program in Environmental Science has graduated between 3-11 students each year since 2010 (Fig. 3). There are currently 39 students in the program. Students from a wide range of undergraduate programs are admitted into the program, including natural resources, biology, forestry, geography, business, economics, mathematics and computing science. Admission into the program is dependent on the student having a strong undergraduate track record, and the availability of a faculty member to supervise and/or fund the thesis research. Students take a small number of courses (normally < 5) and focus primarily on their thesis research. Thesis research projects range from pure field studies to detailed data analysis and studies on the human dimension of the environment. A large proportion of students in the program conduct their research with the support of outside agencies, including government offices, non-government organizations, and industrial partners.

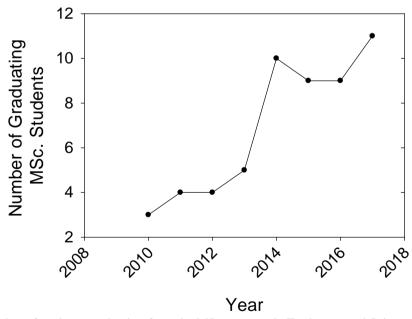
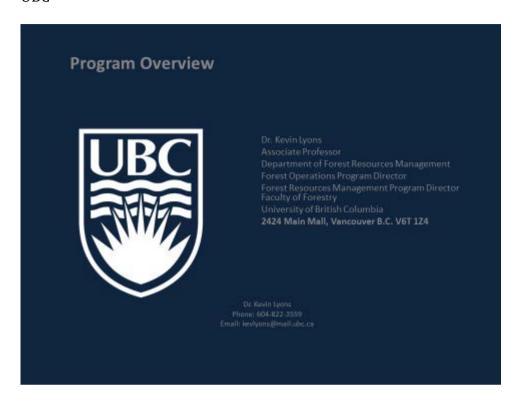
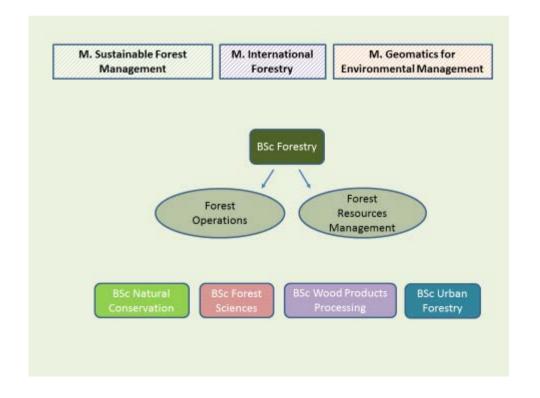
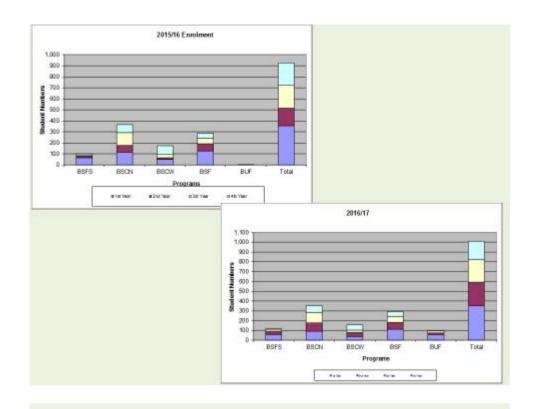


Figure 3. The total number of students graduating from the MSc program in Environmental Science from 2010 through 2017.







Degrees Conferred

Program Name	Prof. Registration (RPF, MPtio, PEng)	in Program	Graduated/Transferred
UBC BSF	RPF (RPBio, PEng)	292	42
UBC BSCN	RPBio (RPF)	352	63
UBC BSFS	RPBio (RPF)	116	5
UBC BSCW	(PEng)	155	38
UBC BUF		96	0
UBC Total UG		1011	148
UBC MSFM	RPF	20	20
		19	0
UBC MGEM		35	0
UBC Total Prof Masters		74	20

Why Accreditation?

For

- Comprehensive programs
- · Nationally recognized
- · Simplify professional registration
- Meet set standards

Against

- Expensive to maintain and deliver
- Constrain intake of transfer students (tech and international)
- · Constrain program flexibility
- · Not supported by ABCFP

Challenges for technology student transfers

First year science and English requirements

- English
- Calculus
- Biology

Example Language from Justification for CFAB Standard 1: Tree and Stand Dynamics

A broad and deep understanding of tree and stand dynamics is essential for a sound forestry education. Students acquire some fundamental biological concepts in their first year through BIOL 111 and 121. This is followed up with the key constituent forestry foundational courses (FRST 200, 201, 210, and 211) in second year.

UNBC – BSc Nat Resources Management Degree structure

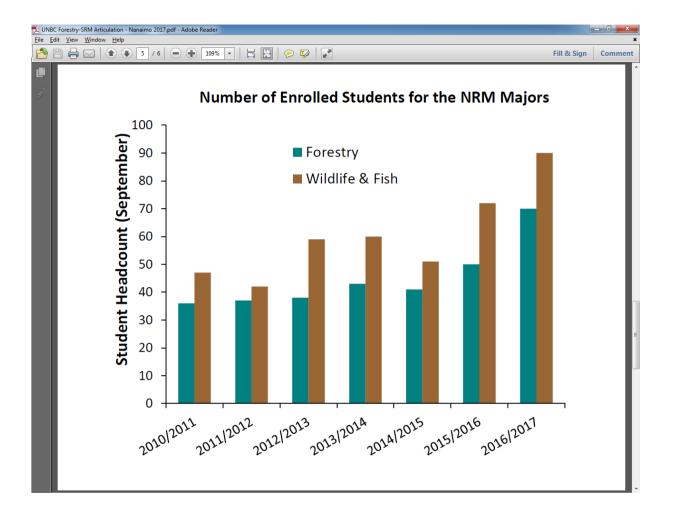
- 1. Wildlife and Fisheries (RPBio, NRP)
- 2. Forest Ecology and Management (RPF)
- 3.Outdoor Recreation and Conservation (NRP in discussions) Faculty
- Replaced Chair in Mixed Wood Ecology (Oct. 2014) Ché Elkin, ETH Zürich
- Replaced Chair, Growth and Yield (Nov. 2015) Dr. Oscar Venter, U. Queensland
- Fish Ecology & Management position (May 2017) Eduardo Martins, Waterloo
- Retirement of Dr. Staffan Lindgren (December 2015) now in Nanaimo! *Program Review and Accreditation*
- Completed 2nd CFAB review 6-year accreditation (from September 2015)
- Areas of improvement: economics, fire/disturbance ecology, decision support; focus on succession planning of faculty
- UNBC in the midst of an extensive process to develop an Academic Plan given stagnant enrollment, implications for programming...but enrollments up from previous year

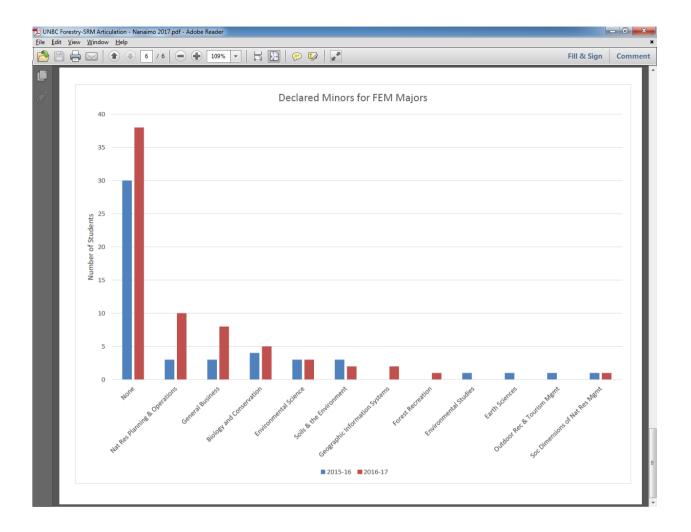
Facilities

- Aleza Lake Research Forest completed construction of Field Education Centre
- John Prince Research Forest's Cinnabar Research Station just added wind and solar energy for an off-grid power supply

Student Exchange, International Education and Engagement

- 4 students from Wildlife and Fisheries major attended the Wildlife Society National Conference (Winnipeg)
- 2016: 2 forestry students to International Forestry Students' Association symposium in Austria; 5 students to Canadian American Regional Meeting of the IFSA in Quebec; 2017: 7 students to CARM meeting in Seattle; 3 students to the CIF Demo Event and AGM in Vancouver; 2 students will go to IFSA meeting in S. Africa in July 2017
- travel supported by student fundraising and ESM program Enrollment
- Increased in enrollment in Forest Ecology and Management and Wildlife and Fisheries





University of Alberta

Annual Report to the Forestry and Sustainable Resources Management Articulation Committee

- 1. Introductory Overview
- 1.1. Institutional Snapshot

Faculty of Agricultural, Life and Environmental Sciences offers 11 programs, Related to this meeting there are 3 degree programs BSc. (Forestry); BSc. (Forest Business Management) and BSc. (Environmental and Conservation Sciences) (ENCS) with 5 majors – Conservation Biology and Land Reclamation (managed by Dept. of Renewable Resources); Environmental Economics and Policy and Human Dimensions of Environmental Management (managed by the Dept. of Rural Economics and Environmental Sociology) and Wildlife and Range (managed by Dept.. of Agricultural, Food and Nutritional Sciences). The 2 Forestry programs have approximately 90 students weighted to the 2 younger years (i.e. increasing enrollment) 1st-28; 2nd – 27; 3rd – 19; 4th -18. The ENCS programs managed by Renewable Resources – Con Bio – 160 students (approx. equal numbers in each year); Land Rec – 95- students with more students in the 2 senior years (i.e. decreasing enrollment). All data are 2016-17.

- 1.2. Program offerings overview
- 2. Enrollment/Graduation Summary Table for 2016/17 Academic Year

Technical Programs 2016/17

Institution: Univer	sity of Alberta		
		Academic Year	
Program Name:		2016/17	2017/18 proj.
RPF registerable	Capacity 1 st year	28	30(?)
	Capacity 2 nd year	27	28
	Applicants (as of this report date)		23
	1 st year enrollments		
	full time		
	part time		
	2nd year enrollments		
	full time		
	part time		
	Graduates		18

Degree Programs and Transfer Programs 2016/17

Program Name	Prof. Registration (RPF, RPBio, PEng)	Technical transfer (# intake)	Graduated/Transferred
Forestry/Forest	RPF – PAg and	~40% (decrease in	2016-17 – Forestry
Business	PBiol. also	the last 4 years)	grads = 18
Management	achievable based		
	on elective choice		
	and/or extra		
	semester		

ENCS-ConBio	PBiol. PAg or RPF also achievable based on elective choice and/or extra semester	~ 35% (stable over last 3 years)	2016-17 – Con Bio grads = 41
ENCS- Land Rec	PAg. PBiol. or RPF also achievable based on elective choice and/or extra semester. NOTE_ Professional standing as PAg dependent on particular stream of electives for full eligibility upon graduation.	~ 40% (declining)	2016-17 — Land Rec grads = 27

3. Program Activities

3.1. Program Highlights

Enrollment continues to grow at a sustainable pace in the Forestry programs. We are close to a point we will need to add labs and lecture. This has resource implications. 2016-17 was a stable year. For the Forestry program. Dr. Lieffers completed his term as Chair of the Dept. Dr Macdonald took over as of July 1, 2016 as Chair. Justine Karst and Alex Drummond both had medical leaves in the academic year but both have returned. We await Crown approval of our "Certificate programs" and continue to offer these as voluntary "Areas of Concentration" in the BSc. Forestry program. We have also hired Amanda Kelley (TRU graduate and MSc at UofA) as a lab support position for Dept large courses and as Assistant Director at our Spring Field School.

3.2. Significant Curricular Changes – No major changes. We see issues arising in enrollment capacity especially related to lab seats but also in some cases in lectures. R SOC 375 (a new required course in public engagement processes) is of particular concern but this is being addressed by the Faculty and teaching dept. 3.3. Faculty Changes

Stan Blade continues (starting 3rd year) as Dean. D. Comeau (Silviculture) will retire at end of June and Dr. Lieffers (Silviculture/Ecology) will retire in 2018-19. We are currently seeking a tenure-track faculty position in Silviculture. As of Oct 15 a new tenure-track faculty member in Conservation Biology will commence. The candidate to be announced before end of June.

3.4. New Initiatives

We continue to examine an "in-semester" field school option. The field school committee is being reconstituted to review and improve current curriculum and delivery of our current FS and to coordinate with the noted Field School Task Force

4. Accreditation.

UofA BSc. Forestry and Forest Business Management went through our accreditation review with CFAB this past year with the site visit at end of March. We recently received a very positive review with only minor issues to address. The accreditation is for a full 6 years

5. International Education/Exchanges

We have confirmed/renewed exchange agreements for SLU (SWE), Univ of Eastern Finland and Bangor University (Wales). We had 4 students on exchange last year and received 4. This year we are preparing for 7 students (SLU, Bangor and UEF) and will send 5 students (SLU, Innsbruck, Bangor) and are preparing other student for New Zealand and Germany for the winter semester

6. Students

6.1. Recruiting

The Faculty has (re-) hired Jillian Pratt as the Faculty Recruiter. The dean and the Student Services Office has set recruitment especially into the BSc. Forestry programs. Our strength lies in face-to-face discussions with potential students (and their parents). The UofA Open House and ALES Faculty Week recruitment events. With the Faulty of Science now quota-ed, we are seeing the ALES Faculty as a very reasonable option for application.

6.2. Student Placement

For summer positions for the BSc. Forestry students, we have essentially 100% placement. We see a move to hiring Conservation Biology students. These students actively seek out Forestry positions. As to permanent/career positions, we understand through informal surveys that for those seeking resource management jobs that ~85-90% of those graduates have found employment in the field.



VIU

2017 Annual Report to the Forestry and Sustainable Resources Management Articulation Committee

13. Introductory Overview

13.1. Institutional Snapshot

VIU has more than 18,000 students and offers a diverse selection of applied trades, technical diplomas and degree programs. The main campus is located in Nanaimo, with satellite campuses in Duncan, Parksville and Powell River.

13.2. Program offerings overview

- 2-year Forest Resources Technology diploma program
- 1 year bridging program to allow entry into 3rd year Forestry at UBC

14. Enrollment/Graduation Summary Table for 2016/17 Academic Year

Technical Programs 2013/4

Institution:			
		Academic Year	
Program Name:		2016/17	2017/18 proj.
RFT registerable	Capacity 1 st year	28	28
	Capacity 2 nd year	26	26
	Applicants (as of this report date)		
	1 st year enrollments		
	full time	28	28
	part time		
	2nd year enrollments		
	full time	23	27
	part time	2	1
	Graduates	23	27

Program Activities

14.1. Program Highlights

The biggest change is not to our program itself, but the loss of the private land portion of the woodlot. We still maintain the Crown portion and therefore can practice operational forestry and have a convenient place for outdoor labs.

Articulation 201

14.2. Significant Curricular Changes

No significant changes this year.

14.3. Faculty Changes

In the last few years we have not been able to hire 1.5 FTE replacements; instead we have hired temporary (sessional) instructors. As a result of our loss of the private lands of our woodlot, we have lost 1.0 FTE position. However, on the bright side, we have finally hired a permanent position, albeit it is now only a 0.5 FTE position. Our new Instructor is Andres Enrich RPF. His prime expertise is inventory and biometrics, be he also a generalist as well and will be able to teach a variety of courses.

15. Accreditation

Currently accredited with CTAB & ABCFP. Currently renewing CTAB accreditation

16. International Education/Exchanges

- The IES Hozgarganta project Last year we (VIU Forestry) were approached by the *Instituto de Educación Secundaria Hozgarganta* in Cadiz Spain to participate in an Erasmus project application to create opportunities for students from both school to travel for work-study placements.
- Developing a school to school international academic mobility agreement with the University of the Highlands and the Islands in Scotland and the University of Cumbria in the Lake District of England

17. Students

17.1. Recruiting

Enrollments are strong – we have 28 students registered with 42 on a waitlist (we stopped accepting applications at this point).

17.2. Student Placement

To our knowledge, nearly all students got either summer or full time employment in the forestry sector.

Articulation 201 38