



Proposal for a Bachelor of Applied Science in
Transportation and Logistics Management

Submitted to the
State Board for Community and Technical Colleges
by
Lake Washington Institute of Technology

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Cover Sheet (Form C)

COVER SHEET NEW DEGREE PROGRAM PROPOSAL

Program Information

Program Name: Transportation and Logistics Management
Institution Name: Lake Washington Institute of Technology
Degree: Bachelor of Applied Science in Transportation and Logistics Management
Level: Bachelor
Type: Applied Science
CIP Code: 52.0203

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Introduction

Lake Washington Institute of Technology (LWIT) has designed the Bachelor of Applied Science in Transportation and Logistics Management (BASTLM) degree to provide students with an interdisciplinary foundation in transportation and supply chain/logistics management to prepare for careers in purchasing, retail services, industrial distribution, logistics, transportation, and operations management.

Students will learn about management of transportation fleets; automotive sales and service; warehousing and distribution; supply chain management; and performance, production, and inventory measurement techniques. Courses emphasize current and applied problems, and the use of computers in management and problem solving.

The BASTLM provides the opportunity for graduates to focus in one of two areas:

Transportation Management



The transportation management focus prepares graduates to work as individual proprietors, managers, or supervisors in companies involved with:

- fleet maintenance
- vehicle procurement or upgrades
- vehicle and equipment sales
- ancillary industries such as component manufacturing

Logistics Management



The logistics management focus prepares graduates to work as individual proprietors, managers, or supervisors in companies involved with:

- warehousing
- freight forwarding
- third party logistics (3PL)
- intermodal terminals
- manufacturing
- brokering
- stevedoring

The BASTLM will leverage a student's existing business or transportation coursework and experience by adding upper division courses that specifically prepare the student to work in the management arena of those fields. The BASTLM degree can be built upon a number of associates' degrees, including (but not

limited to) Automotive Repair; Auto Collision Repair; Diesel and Heavy Equipment Technology; Motorcycle, Marine, and Power Equipment Service Technology; as well as business programs.

The following document addresses each of the eight SBCTC criteria in the following sections:

1. Curriculum
2. Faculty and Staff
3. Admissions Process
4. Student Services Plan
5. College Commitment and Financial Plan
6. Program-Specific Accreditation
7. Pathway Options
8. External Expert Evaluations

1. Curriculum

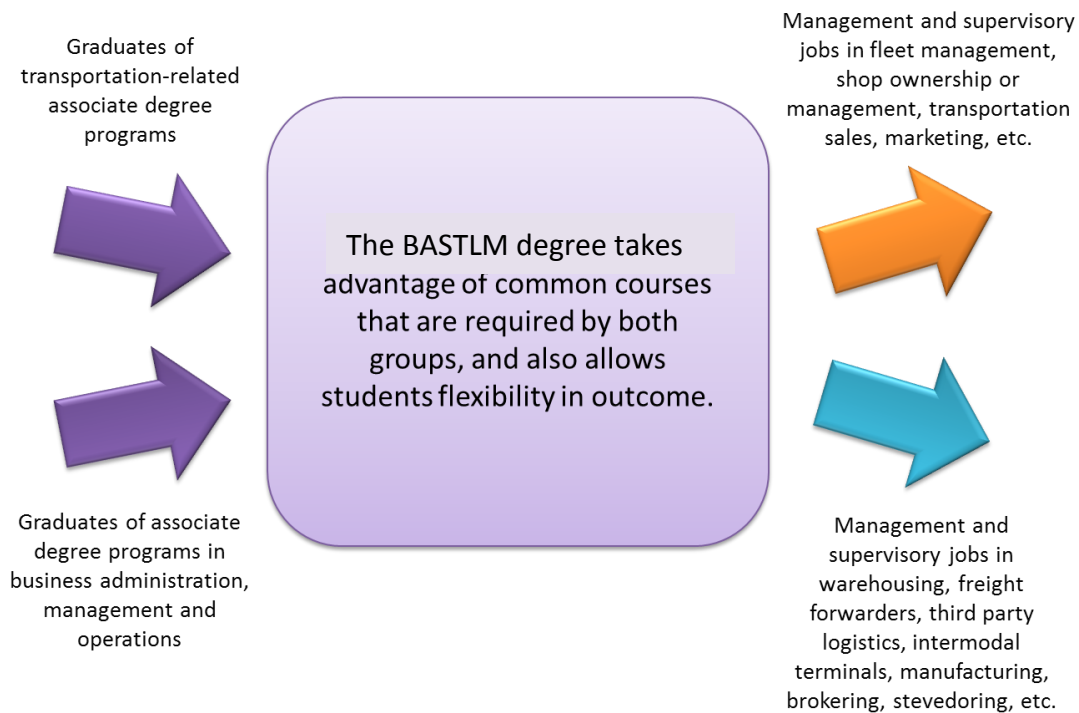
CRITERIA	STANDARD
1. Curriculum demonstrates baccalaureate level rigor.	Describe curriculum including: (1) program learning outcomes; (2) program evaluation criteria and process; (3) course preparation needed by students transferring with a technical associate degree; (4) general education components; and (5) course work needed at junior and senior levels in the BAS.

The BASTLM curriculum has been developed by LWIT faculty under the guidance of the Program Advisory Committee (Appendix E).

Program Learning Outcomes

The aim of the BASTLM program is to take students from transportation and business feeder programs, and prepare them for jobs in fleet operations and management or logistics and supply chain management.

Figure 1 - Feeder Programs and Target Jobs

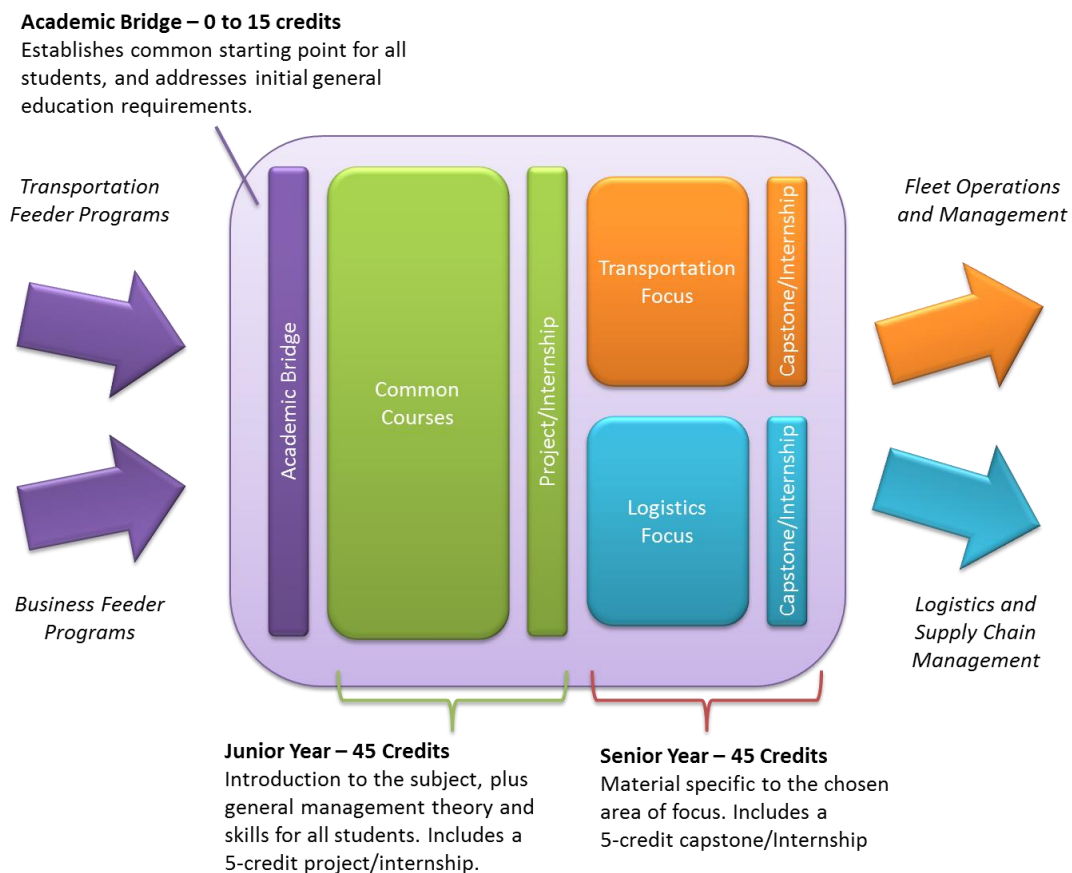


Graduates of the BASTLM program will:

- be prepared for a range of management positions in the transportation and logistics management industries
- master the tools, techniques, and technologies associated with the management of goods movement, inventory maintenance, fleet management, commercial vehicle procurement and disposal, and/or production management
- understand and apply the business processes, economic factors, and personnel considerations to operate or manage a business, or team/section within a commercial entity
- demonstrate critical thinking, teamwork, communication, intercultural appreciation, and technical and information literacy skills

Curriculum Structure

Figure 2 - Structure of the BASTLM Curriculum



The BASTLM curriculum consists of three parts:

- 1) An Academic Bridge designed to facilitate entry of students from diverse academic backgrounds into the program by addressing some of the General Education requirements that might not have been covered during students' associate degrees.
- 2) The junior year consists of an introduction to the subject, and courses that develop fundamental management skills.
- 3) The senior year, during which students choose between a Transportation Focus which prepares them for jobs in Fleet Management and Operations, or a Logistics Focus which is appropriate for a student looking for a job in Logistics and Supply Chain Management.

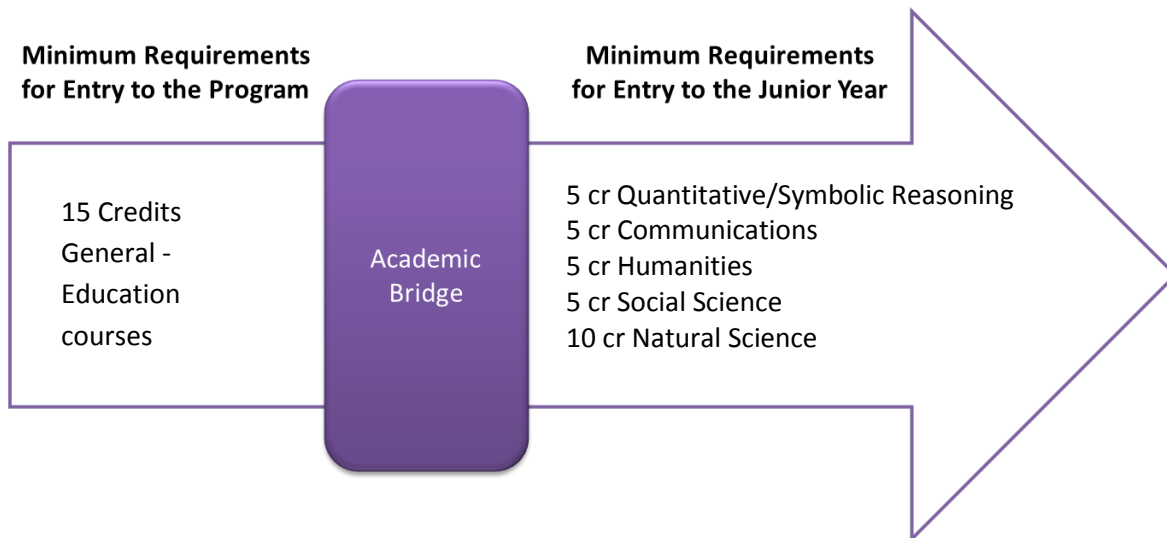
The total credit load for the curriculum is 90 to 105 credits depending on how many courses are required in the Academic Bridge and is broken down as follows:

Table 1 – Credit Breakdown

		<i>Credits</i>
Academic Bridge	General education courses as required	0 – 15
Junior Year	Common Courses	40
	Project/Internship	5
Senior Year	Focus Courses	40
	Capstone/Internship	5
TOTAL		90 – 105

Academic Bridge

Figure 3 - General Education Credits Before and After the Academic Bridge



In keeping with the SBCTC system aims for applied baccalaureate degrees, the BASTLM program has been designed to accept students with a broad range of educational backgrounds and to facilitate students “re-joining” the educational system after time in the workforce. In particular, it is designed to meet the education aims of those who have studied transportation-related subjects and who now require the more advanced material in a baccalaureate degree to advance their careers.

An “Academic Bridge” is therefore included in the program which will allow students who are deficient in particular areas to address these deficiencies before entering the main body of the degree. This is particularly important for students from transportation programs who might have gained considerable knowledge of applied math, but who might not have taken the academic courses required to meet the formal quantitative/symbolic reasoning requirements for an applied baccalaureate. The Academic Bridge is designed to allow these students to take an appropriate math class to address this.

The Academic Bridge also allows students to take the Natural Science classes, or any other general-education classes, that are required for an applied baccalaureate degree if they have not already taken these courses.

The Academic Bridge will therefore involve between 0 and 15 credits of coursework depending on the general education component of the student’s associate’s degree. Table 2 shows the **minimum** general education requirements for admission to the program (discussed in more detail in Section 3) and for entry to the junior year.

Table 2 - General Education Requirements and the Academic Bridge

	Minimum 15 credits Gen Ed required to enter the BASTLM program from:	Courses to be taken during the Academic Bridge period if <u>needed</u>.	Minimum required at entry to the Junior Year
Communications	5 credits – ENGL& 101 or equivalent	(as necessary)	5 credits
Quantitative/Symbolic Reasoning	5 credits Intermediate Algebra or higher (minimum 2.0 GPA); or equivalent COMPASS math scores (within the past 2 years)	(as necessary) 5 credits of any college-level math class with Intermediate Algebra as a prerequisite	5 credits
Humanities	5 credits	(as necessary)	5 credits
Social Sciences	5 credits	(as necessary)	5 credits
Natural Sciences	5-10 credits	(as necessary) 10 credits, including at least 1 lab class – ENV& 101 and CHEM& 121 recommended	10 credits

Any courses required during the Academic Bridge will be drawn from LWIT’s list of Academic Core courses. In particular, any of the following math classes taught at LWIT would meet the Quantitative/Symbolic Reasoning requirements for a student entering the BASTLM program with the minimum requirements (Intermediate Algebra):

- MATH 111 College Algebra with Applications
- MATH 145 Finite Mathematics for Business
- MATH 147 Digital Mathematics
- MATH& 107 Math in Society
- MATH& 141 Pre-Calculus I
- MATH& 146 Statistics

Courses in the Academic Bridge will be taught by the College’s Academic Core faculty (see Appendix C for more information).

Junior Year – Common Courses

During the junior year, students will take 45 credits of common courses culminating in an end-of-year project or internship. Course descriptions are included in Appendix A.

Table 3 - Courses in the Junior Year

Course Title			Credits
TLM	301	Topics in Transportation and Logistics Management	5
BUS&	201	Business Law	5
ECON	310	Business Economics	5
MATH	246	Business Statistics	5
PSYC	324	Psychology of Organizations	5
TLM	304	Global Trade and Freight Operations	5
ENGL&	235	Technical Writing	5
PHIL	305	Professional Ethics	5
TLM	398/399	First Year Project/Internship	5

Courses taken during the junior year also address the remaining general education requirements for the Applied Baccalaureate degree as shown in Table 4.

Table 4 – General Education Requirements Satisfied by Junior Year Courses

	Minimum Credits at Entry to the Junior Year	Courses to be taken during the Junior Year	Minimum Credits at End of the Junior Year	Minimum Requirements for an Applied Baccalaureate Degree
Communications	5	ENGL& 235 Technical Writing	10	10
Quantitative/ Symbolic Reasoning	5	MATH 246 Business Statistics	10	5
Humanities	5	PHIL 305 Professional Ethics	10	10
Social Sciences	5	BUS& 201 Business Law ECON 310 Business Economics PSYC 324 Psychology of Organizations	20	10
Natural Sciences	10	(none required)	10	10
TOTAL	30		60	45

Senior Year – Focus Courses

During the senior year, students will have the choice of two areas of focus – one emphasizing transportation management, and the other emphasizing logistics management. Each area of focus is 45 credits and culminates in an end-of-course capstone project.

Transportation Focus

The Transportation Management focus is designed to extend the introductory courses taken during the junior year so that graduates will be well-prepared for management and supervisory jobs in fleet management, shop ownership or management, transportation sales, and marketing.

Table 5 - Courses in the Senior Year - Transportation Focus

	Course Title	Credits
TLM 303	International Transportation and Border Security	5
TLM 305	Legal Concepts for Transportation and Logistics Management	5
TLM 306	Quality Management for the Firm	5
TLM 307	Enterprise Resource Planning and Management	5
TLM 404	Warranty Administration and Customer Relations	5
TLM 421	Vehicle Maintenance Management	5
TLM 422	Vehicle Fleet Risk and Asset Management	5
TLM 444	Capstone Project in Transportation Management	5
BUSA 301	Managerial Accounting	5

Logistics Focus

The Logistics Management focus is designed to extend the introductory courses in the junior year so that graduates will be well-prepared for management and supervisory jobs in warehousing, freight forwarders, third party logistics (3PL), intermodal terminals, manufacturing, brokering, and stevedoring.

Table 6 - Courses in the Senior Year – Logistics Focus

	Course Title	Credits
TLM 302	Airport and Seaport Operations	5
TLM 303	International Transportation and Border Security	5
TLM 305	Legal Concepts for Transportation and Logistics Management	5
TLM 306	Quality Management for the Firm	5
TLM 307	Enterprise Resource Planning and Management	5
TLM 414	Warehousing and Distribution Center Management	5
TLM 415	Supply Chain Management and Technologies	5
TLM 445	Capstone Project in Logistics Management	5
BUSA 301	Managerial Accounting	5

Course descriptions are included in Appendix A.

Delivery Modes

The BASTLM program will be delivered in hybrid mode using a combination of face-to-face interactions such as:

- in-class discussions
- group work
- live lectures

with web-based tools such as online courses, assignments, and discussion boards.

We believe that this blended approach best suits the needs of our students who often have restricted ability to travel due to work or other obligations. It also reflects the increasing use of web-based communications tools in today's business environment while still recognizing the need for students to develop the interpersonal skills still needed to deal with coworkers, clients, and others in the workplace.

Program Evaluation Criteria and Process

LWIT Program Review Process

LWIT has an established, and comprehensive, Program Review Process detailed in Appendix B.

To ensure student success, the BASTLM program will be reviewed annually for the first five years, and then at least every 5 years thereafter.

Program Advisory Committee

A panel of industry professionals will form the BASTLM Program Advisory Committee and will continuously monitor the curriculum to ensure that it provides the current skills and knowledge needed by industry.

BASTLM program staff will also monitor sector-specific economic trends and labor market analyses to ensure that there are internship and employment opportunities for BASTLM students and graduates and report their findings to the Program Advisory Committee.

Graduate and Employer Surveys

Prior to the graduation of the first cohort of students, a survey will be developed to gauge employer satisfaction with program graduates to see where curriculum can be improved.

Program staff will track wages upon hiring and career advancement, as well as job retention at six months and one year, through a custom survey sent to program graduates.

2. Faculty and Staff

CRITERIA	STANDARD
2. Qualified faculty.	<p>Provide a profile, including education credentials, of anticipated faculty (full-time, part-time, regular, continuing) that will support the program for each year (junior and senior). Include faculty needed to cover the technical course work, general education courses and electives. In addition, provide the total faculty FTE allocated to the program.</p> <p>Faculty and administrators responsible for technical courses must meet certification requirements for professional and technical administrators and instructors in the Washington Administrative Code.</p>

Projected Student, Faculty and Staff Numbers

The number of teaching faculty needed for the BASTLM program is based on the number of students to be enrolled in the program. It is assumed that 25-30 students will be admitted to the program each year starting in Fall 2014, and that we will target a student/faculty ratio of 20:1 (FTE).

One full-time faculty member supported by .5 FTE of Student Services resources will be committed to the program 6 months before the scheduled start date (i.e. starting in Spring 2014) in order to recruit students into the program and set up the instructional resources.

Administrative and library support will be committed to the program in Summer of AY 14/15.

Table 7 – Projected FTE Student, Faculty and Staff Numbers

	AY 13/14 Spring	AY 14/15 Full Year	AY 15/16 Full Year	AY 16/17 Full Year	AY 17/18 Full Year	AY 18/19 Full Year
Projected Admissions		20	20	20	20	20
Projected Enrollment		20	40	40	40	40
Student/Faculty Ratio		20:1	20:1	20:1	20:1	20:1
Full-time Faculty	.33	1.0	2.0	2.0	2.0	2.0
Part-time Faculty		.8	1.67	1.67	1.67	1.67
Administrative Support		.25	.25	.25	.25	.25
Student Services	.5	.5	.5	.5	.5	.5
Librarian		.25	.25	.25	.25	.25

Faculty

LWIT intends to hire a faculty member to act as the primary instructor and Program Director 6 months before the scheduled program start date because it is considered critical to the success of the program that there is a consistent link between the program and other groups – both internal and external.

Faculty in the BASTLM program will be required to teach both face-to-face and online using LWIT's Canvas Learning Management System. Online teaching will involve a mix of synchronous and asynchronous instruction – the exact proportions varying from course-to-course.

All full- and part-time faculty members hired to teach technical courses will meet the certification requirements for professional and technical administrators and instructors in the Washington Administrative Code.

Program Director/Full-Time Faculty

Full-time faculty – including the Program Director – will have a minimum of a Master's degree (Doctorate preferred) in a relevant field with at least five years of teaching and/or business experience in transportation management, logistics management, or international trade.

Part-Time and Adjunct Faculty

Where part-time faculty are needed to teach core courses within the program (i.e. those carrying the TLM designation), they will be expected to have an advanced degree in business or a related field, as well as real-world experience directly applicable to the course(s) being taught. Strong preference will be given to those who have prior college teaching experience at the four-year level.

For courses that are common to other programs at LWIT, and those that fall within LWIT's Academic Core, the program will take advantage of the highly-qualified faculty already teaching in these subject areas. These courses include:

- BUS& 201 Business Law
- BUSA 301 Managerial Accounting
- ENGL& 235 Technical Writing
- ECON 310 Business Economics
- MATH 246 Business Statistics
- PHIL 305 Professional Ethics
- PSYC 324 Psychology of Organizations

Credentials held by faculty currently teaching within the Academic Core area are shown in Appendix C.

Library and Learning Resources

The LWIT Library–Learning Commons combines traditional library services, academic support services, a computer lab, and technology services in two locations. The library staff is comprised of the associate dean, two librarians, two library technicians, and a media services technician. The librarians assist LWIT students and faculty with individual research as well as teaching specific information literacy classes concerning plagiarism, citations, use of Web2.0 tools, research, and web evaluation. More information about the LWIT Library–Learning Commons is contained in Appendix D.

In order to support the research needs of BASTLM students, we are providing for 0.25 FTE of librarian support throughout the program together with additional funding to allow the library to add specialized data resources and subscriptions.

Student Services

The need to provide advising support to BASTLM students – particularly through the admission process – is recognized by the plan to provide additional resources within LWIT’s Student Services department throughout the program.

Additional services in job search and career connections will be developed for the College’s growing baccalaureate graduate population enabling students to engage at a career level with employers seeking graduates with new and enhanced career skills.

Staff Support

Dedicated administrative support for the program will be provided starting in Summer 2014.

3. Admissions Process

CRITERIA	STANDARD
3. Selective admissions process, if used for the program, consistent with an open door institution.	Describe the selection and admission process. Explain efforts that will be used to assure that the program serves as diverse a population as possible.

Responsibility for student services rests with LWIT's Student Services Division, including admissions, intake, testing, counseling, advising, and intervention. Recruitment is a shared responsibility between Student Services and Instruction with both units having support staff and faculty involved in recruiting prospective students to the program. The recruiting effort involves faculty and staff work with industry, advisory committees, and feeder programs.

Students who apply for the program will be evaluated using the admission requirements shown below.

The admission process for the BASTLM program closely follows the pattern previously established for the LWIT Bachelor of Technology in Applied Design (BTAD) program which has been successfully operated since 2009. Admission criteria reflect an approach that includes the student's academic record, personal characteristics, and potential to work in the industry.

General

LWIT currently uses selective admissions processes for several programs of study. Our processes meet standards for both community/technical colleges and baccalaureate institutions established by the American Association of Collegiate Registrars and Admissions Officers (AACRAO). The admissions staff members also have extensive experience in community/technical colleges, regional baccalaureates, upper-division, and Masters' level institutions.

Admissions procedures that serve all selective admission programs include:

1. Admissions office as the central locus of application
2. Comprehensive paper application with detailed, step-by-step instructions
3. Regular day, evening and online information sessions
4. In-house transfer credit evaluations conducted at the time of application so students know their exact status regarding admissions
5. Use of spreadsheets for easy candidate selection by faculty
6. Clearly communicated timelines for admissions

Information Sessions

Information sessions will be presented on a regular basis, both day and evening, to provide prospective students with an overview of the BASTLM program and to explain the admission process. An online

option will also be available through the Admissions office for prospective students who are unable to attend an in-person session.

Program Admission Requirements

1. An earned associate degree or equivalent from a regionally accredited institution in an appropriate area of concentration (e.g. transportation or business).
2. Intermediate Algebra or higher with a minimum 2.0 GPA or equivalent COMPASS math score within the past 2 years
3. Minimum cumulative GPA across all college coursework of 2.0. The 2.0 GPA mirrors the AAS and AAS-T degree requirements at CTC's. It also recognizes that associate degree-level students may not have performed at their maximum abilities and could benefit from another pathway to succeed in an academic program. Admissions selectivity is provided in the weighted criteria shown in Table 8, where students will have a higher admission score with a higher cumulative GPA.
4. Completion of at least 15 credits of college-level general education courses. Students who have not completed this requirement will be required to submit a written plan for its completion.
5. A current resume.
6. One to two page admission essay describing the candidate's interest in the degree, how completion of this degree meets his or her personal, education and employment goals, and any other information that may support entry to the program.
7. Two letters of recommendation attesting to the student's ability to succeed at the baccalaureate level (include with packet in a sealed envelope), preferably one from an instructor and one from an employer (such as a supervisor).
8. \$50 non-refundable application fee.

Selection Criteria

Applicants will be selected based on the criteria listed above. GPA is the most heavily-weighted criteria followed by resume, admission essay and recommendation letters.

Prior to reviewing applicants the admissions selection team (program faculty, dean, admissions coordinator, and advising representative) will design comprehensive rubrics for evaluating the resume, admission essay and references. Evaluation rubrics will ensure a consistent and rigorous method is applied to each prospective student equally.

Evaluation rubrics:

1. Candidate resumes will be evaluated for the range of educational and work experiences, clarity and expression.
2. Assessment of entrance essays will be based on candidates' statements of personal and career goals and the educational value to be gained in the baccalaureate program.
3. Letters of recommendation will be evaluated based the writers statements about the candidates' potential to benefit from baccalaureate study and the enhancement of his/her career goals.

Currently the college uses a weighted method for selection criteria for all selective programs, and anticipates the BASTLM program will follow a pattern similar to that shown in Table 8. The final decision on admission to the BASTLM program will be made by the admissions selection team.

Table 8 – Weighted Criteria for Selective Program Admission

Application Requirements	Max. Pts	Notes
Cumulative College-Level Associate Degree GPA	40	Multiply cumulative GPA by 10 to determine total points
Resume	20	Based on evaluation rubric
Entrance Essay	20	Based on evaluation rubric
Letters of Recommendation	20	10 points for each recommendation, based on evaluation rubric
TOTAL	100	

Encouraging Diversity

LWIT values and celebrates student diversity in a number of ways including support for an active Diversity Committee, using Intercultural Appreciation as one of the college's five global outcomes,

- Critical Thinking
- Intercultural Appreciation
- Information and Technical Literacy
- Teamwork
- Communication

and focusing on diversity work within its Strategic Plan.

LWIT consistently enrolls greater percentages of students of color than reflected in the surrounding school districts. Excluding students who choose not to report race, LWIT's fall 2012 enrollment was 34% students of color compared to the surrounding school district average of 29%. Additionally, over 7% of enrolled students report having a disability and the average age of students is 32. This strong enrollment from diverse students in existing programs at LWIT will benefit the recruiting opportunities for a new Baccalaureate program.

When recruiting, the college consistently reaches out to historically disadvantaged populations by participating in Veteran's job and resource fairs, WorkSource resource fairs, LGBTQ education events, and students of color career conferences. Outreach for a new applied baccalaureate degree would occur at all of these events.

Because the BASTLM program will use selective admission, LWIT will carefully monitor diversity in student enrollment in the program to determine the extent to which it represents the local community and to determine if action needs to be taken to change the recruitment processes.

4. Student Services Plan

CRITERIA	STANDARD
4. Appropriate student services plan.	Describe services that will be needed by the students admitted to the degree program and the college plan for providing those services. Include a description of financial aid services and academic advising for students admitted into the program.

The following advising and retention-related services at LWIT are available to BASTLM applicants and regularly-enrolled students.

Assessment

Provides COMPASS placement testing, all College Level Examination Program (CLEP) exams, industry certification exams, accommodated testing for students with disabilities, and Washington Online (WAOL) proctoring.

Advising

Advising is available for all new and continuing students. See Section 2 for more about advising specific to the BASTLM program.

Counseling

Counseling is available to support all students with short-term issues that might impact retention and academic success. One-on-one, crisis-response, and group counseling services are all available and used as appropriate to support student needs. Counseling has established relationships with community mental health and service-providing agencies that are utilized for both referrals and on-campus assistance with programming around mental health issues.

Disability Support Services

Disability Support Services (DSS) offers academic adjustments to all students with documented disabilities. The role of these adjustments is to provide equal access in the classroom. Academic adjustments are specific to the student, his or her disability, and the class requirements. Students registered with this office are also eligible to join TRiO (see below).

Employment Resource Center

The Employment Resource Center (ERC) provides a comprehensive suite of services focused on individuals' career and professional development at all academic and career levels. The office provides career exploration, career and personality assessments, and labor market information and research. Through individual work and a workshop series, the office assists students in clarifying their career

aspirations, developing job readiness skills, and learning job search and job success skills such as resume and cover letter writing, and interviewing techniques.

On-campus recruiting is coordinated through the ERC. The ERC also offers an online e-career center that allows employers to post job notices and students to search and apply for jobs or post their resumes online.

Intervention Services – General Student Population

Students experiencing difficulties making adequate academic progress are assisted through several intervention programs under the direction of the Assistant Director for Student Development and Advising. For the general student population, faculty can initiate assistance to students having difficulties with attendance, assignment completions, exams, and class preparation using the FAST (Faculty Advising Support Tools) system. This includes faculty informing Student Development and Advising of the difficulties followed by interventions by staff via email, phone and/or in-person meetings.

For first generation, low income and/or disabled students, the TRiO program offers similar services with the same follow up “intrusive interventions” designed to assist student progression towards their educational goals (see below).

TRiO Student Support Services

TRiO Student Support Services is a federally-funded project established at LWIT for the purpose of assisting students to achieve their post-secondary ambitions.

The Student Support Services project is focused on increasing the retention and graduation rates of students with disabilities as well as low-income and first generation students. This is accomplished by providing supportive services such as academic action plans, individualized and group tutoring, and academic counseling supported by workshops in study skills, motivation, financial aid, stress reduction, test anxiety life skills, and campus resources as well as mentoring and monitoring of student progress.

The TRiO program also runs the Learning Lab, where any LWIT student can ask questions about any course, discover and utilize learning resources, and receive assistance in understanding important course concepts. The Learning Lab also helps LWIT students develop stronger study skills (e.g., test taking, textbook reading, time management, organization, stress management).

In addition, the program offers specialized services such as career guidance, resume and cover letter writing, and interview sessions; and cultural events to promote personal and educational development.

Financial Aid

Since 2008 the financial aid office has successfully processed grant, loan, and scholarship awards for students in the BTAD program. All services provided by financial aid, including FAFSA orientations, veterans services, in person assistance, and scholarship referrals will be made available to students in the BASTLM program.

Student Programs

LWIT offers all students a variety of ways to get involved in campus life. BASTLM students will enjoy the same access to these services as all other students, including: participation in existing clubs, opportunities to form new student clubs, participation in associate student government, and the ability to enjoy frequent educational programming.

5. College Commitment and Financial Plan

CRITERIA	STANDARD
5. Commitment to build and sustain a high quality program.	<p>Provide a financial plan for the first five years of program operation. This plan should include (1) types of funds to be used to support the program; (2) projected program expenses; (3) appropriate facilities to be used; (4) equipment, technology, and instructional resources needed for the program.</p> <p>Document the college's ability to sustain the program over time.</p>

Financial Plan

The financial plan assumes the following:

- a. 25-30 students will be admitted each year, producing an initial enrollment of 20 FTE and then 40 FTE in following years.
- b. The BASTLM budget is based on state support with the option to convert to self-support depending on overall College FTE generation.
- c. LWIT will support the initial two years of program funding from college reserves as shown in Table 9 under "College Support."
- d. Funding is allocated to instruction, student services, instructional administration, and library services at levels generally used by LWIT for all its programs. The distribution also uses the College experience in funding its existing baccalaureate program in Applied Design.
- e. Faculty and staff fringe benefits are calculated at an average of 36% (35% for full-time faculty, 29% for part-time faculty, 40% for staff), the current LWIT rates.
- f. Six months prior to the program start, a program director/faculty will be hired with recruiting, marketing and program development responsibilities. The director will be assisted by a .5 FTE student services representative to provide additional recruitment and admissions services.
- g. Staff Support (0.25 FTE) and library (0.25 FTE) staff for the program will be provided starting in Summer 2014. It is anticipated that these positions will also serve other baccalaureate programs with a commensurate increase in work hours.

Tuition and fees have been assumed to be \$2,164 per student per quarter as shown below:

Applied Baccalaureate Tuition Fees at the 15 Credit Level	2,504
CTC Building Fee and CTC S&A Fee	(261)
<hr/>	
Paid to College	2,243
To Financial Aid @ 3.5%	(79)
<hr/>	
Net per Quarter per FTE	2,164

All numbers are based on the FY2012-13 Resident rates adjusted for inflation (see below).

- a. \$2,500 per annualized FTE will be allocated to the BASTLM program from the existing State allocation.
- b. 2% per year inflation has been assumed for all operating costs (including faculty and staff salaries), and for all sources of funding.

Table 9 shows the financial plan for Spring 2014 and the first 5 years of the BASTLM program operations.

Table 9 – Program Costs and Funding

	AY 13/14 Spring Only	AY 14/15 Full Year	AY 15/16 Full Year	AY 16/17 Full Year	AY 17/18 Full Year	AY 18/19 Full Year
Faculty – Full-Time	26,620	79,860	160,222	163,426	166,695	170,028
Faculty—Part-Time		27,865	28,422	28,990	29,570	30,161
Practicum/Internship Supv.		10,000	10,200	10,404	10,612	10,824
Staff Support	-	14,280	14,566	14,857	15,154	15,457
Student Services	7,875	32,130	32,773	33,428	34,097	34,779
Librarian	-	17,850	18,207	18,571	18,943	19,321
Program Development	-	20,000	10,000		-	-
FACULTY & STAFF COSTS	34,495	201,985	274,390	269,676	275,071	280,570
Goods & Services	2,500	5,000	5,100	5,202	5,306	5,520
Professional Development	-	5,000	10,000	10,200	10,404	10,612
Equipment	2,500	5,000	10,000	10,200	10,404	10,612
Marketing	10,000	20,000	20,000	10,000	10,200	10,404
Software	-	2,500	5,000	5,100	5,202	5,306
Library Materials	-	20,000	20,000	10,000	10,200	10,404
OTHER COSTS	15,000	57,500	70,100	50,702	51,706	52,858
State Support (Tuition and Fees State Allocation)	-	183,461	374,261	381,476	389,381	397,169
College Support	49,995	76,024	-	-	-	-
TOTAL FUNDING	71,417	259,485	374,261	381,746	389,381	397,169
TOTAL COSTS	49,495	259,485	344,290	320,378	326,777	333,428
TOTAL FUNDING	49,995	259,485	374,261	381,746	389,381	397,169
BALANCE	-	-	29,771	61,429	62,604	63,741

College Commitment

LWIT has committed to fund the costs associated with program launch through funding from College reserves of \$ 49,995 in 2013-14, and \$ 76,024 in 2014-15.

Facilities, Equipment and Instructional Resources

The BASTLM program is a hybrid, online and classroom program that requires no facilities beyond existing classrooms at LWIT.

The primary instructional resources that will be needed are library materials. As well as the data sources described in Appendix D, additional specialized resources will be added to support the BASTLM program including:

- Journal of Commerce
- DC Velocity
- Supply Chain Digest
- Supply Chain Management Review
- Puget Sound Business Journal
- TIACA Times
- American Shipper
- Inbound Logistics
- Pacific Maritime Magazine
- CSCMP Global Perspectives
- Journal of Business Logistics
- IANA Intermodal Insights
- Journal of Supply Chain Management (JSCM)
- Institute for Supply Chain Management (instructional resources and publications)
- APICS The Association for Operations Management (instructional resources and publications)
- Journal of Transportation Management
- Journal of Air Transport Management
- Drewry Supply Chain Advisors (resources and publications)
- The National Industrial Transportation League (resources and publications)
- Transportation Research Board (resources and publications)
- Harvard Business Review (case studies)
- Economist Intelligence Unit
- International Journal of Automotive Technology and Management
- Commercial Carrier Journal
- NAFA Fleet Management Association (resources and publications)

6. Program-Specific Accreditation

CRITERIA	STANDARD
6. Program specific accreditation.	Indicate whether the institution will seek specialized program accreditation. If so, describe plans for accreditation and identify appropriate accrediting body.

LWIT received accreditation from the Northwest Commission on Colleges and Universities (NWCCU) as a four-year degree granting institution in February, 2012.

Upon receiving SBCTC approval, the BASTLM program will receive NWCCU review via its substantive change process.

Program-specific accreditation is not required for BLTM graduates to be employed in the transportation and logistics industry.

7. Pathway Options

CRITERIA	STANDARD
7. Pathway options beyond baccalaureate degree.	Describe opportunities and articulation agreements for the place-bound BAS graduates to continue their education onto a graduate (Master's) degree program.

Conversations were held with advisors across the nation. The institutions listed below confirmed that there are a number of potential post-baccalaureate pathways for BASTLM graduates:

- Northeastern University's on-line MBA in Supply Chain Management will consider BASTLM recipients with a minimum GPA of 3.0 and 5 years cumulative work experience.
- Colorado Technical University confirms that the BASTLM will qualify students to enroll in two of their specialized on-line MBA programs, namely Operations and Supply Management and Logistics Management.
- University of San Diego's Supply Chain Management Institute will consider BASTLM recipients who have gained at least two years of relevant work experience for their Master of Supply Chain Management degree.
- City University of Seattle uses individualized admissions for their students. Their Master of Business or Master of Management programs would be most relevant, and initial discussions indicate that BASTLM students would be eligible to enroll in these programs.
- An advisor for the Western Governors University (WGU) Washington Business program has indicated that BASTLM graduates could be accepted into WGU MBA program once they pass the standard qualifying interview and submit a resume and transcripts.

LWIT is also seeking to work with relevant industry associations, such as:

- Council of Supply Chain Management Professionals (CSCMP) - <http://cscmp.org/>
- Association for Operations Management (APICS) - <http://www.apics.org/>
- Institute for Supply Management (ISM) - <http://www.ism.ws/>
- NAFA Fleet Management Association - <http://www.nafa.org/>
- The International Air Cargo Association (TIACA) - <http://www.tiaca.org/>

on industry-specific certifications with which students can augment their degree and further their careers if they so choose.

8. External Expert Evaluations

CRITERIA	STANDARD
8. External expert evaluation of program.	The institution will select two external experts to review the program. In a separate document, provide copies of external evaluators' reports or letters. Summarize the institution's responses and subsequent modifications to the proposal based upon evaluator's recommendations. Attach a short bio of the evaluators.

Two external reviewers were selected based on their credentials relevant to the degree LWIT plans to offer, as well as their management of highly successful programs in the field of transportation and logistics management. The external experts chosen were:

- **Dr. Darren Prokop**
 Professor of Logistics
 Director of the Master of Science in Global Supply Chain Management program
 College of Business and Public Policy; University of Alaska – Anchorage
<http://www.linkedin.com/pub/darren-prokop/52/640/1a6>
- **Dr. Andrew Goetz**
 Professor and Chair of the Department of Geography
 Faculty Associate in the Intermodal Transportation Institute
 University of Denver
<http://www.linkedin.com/pub/andrew-goetz/5/130/b54>

Their comments, together with our responses, are summarized below, and their biographies and full comments are included in a separate document.

Comments from Dr. Prokop

- Since the Bachelor of Technology in Applied Design is abbreviated BTAD then, logically, the Bachelor of Technology in Transportation and Logistics Management would be BTTLM not BASTLM?

This is correct. Upon review, we are changing the abbreviation to BASTLM (Bachelor of Applied Science in Transportation and Logistics Management).

- As to admissions, it is noted that an essay is required. I would suggest a formal curriculum vita be submitted as well—since it is already recommended that a letter of reference come from a previous employer.

This is an excellent suggestion, and the admissions requirements have been amended to require the submission and evaluation of a formal resume in addition to the essay.

- The weights in the admissions rubric (table 8) appear to be reasonable. However, will this scale be made available to the applicant or will it remain internal? I would suggest the incoming student be made aware of the weights which will be applied.

The weights in the table will be made available to applicants. However, per normal LWIT practice, the scoring rubric used to derive individual scores will not.

- I suggest that the internship course (TLM 398) also have two distinct course numbers in the way the capstone courses do (i.e., TLM 444 and 445).

Agreed. This change will be made before the program launches.

- Also, it is not clear in the course description whether or not the internship course requires work with a specific company and, if so, for how many hours under supervision.

Specific companies have not been identified at this time, but the members of advisory committee will be approached nearer to the program launch date to identify opportunities and the scope of the internship projects.

- In table 2 I noticed an explicit GPA for the quantitative/symbolic reasoning requirement. While only a GPA of 2.0 is required I would suggest a specific GPA be required in all components of the academic bridge. Of course, if LWIT already has a GPA policy for entry into junior/upper-division courses then this matter may already be taken care of.

We will amend the entry requirements to reflect a minimum GPA of 2.0 for all required classes including those in the Academic Bridge.

- While the junior year appears to be fully-packed (as noted in table 3) I would suggest a course in cost accounting and microeconomics be included for those associate degree graduates who have never taken such courses. The tool kits developed in those courses are quite valuable in analyzing shipper and carrier performance.

This is a very good recommendation, and we will add such a course before the launch of the program.

- I note the importance of the international transportation course (TLM 303) but wonder why TLM 304 emphasizes both domestic and international trade. I would suggest the latter course

focus exclusively on international issues facing shippers (e.g., tariffs, quotas, foreign trade zone operations). Indeed, transportation is often a non-tariff barrier to trade (e.g., cabotage (Jones Act) regulations; bilateral air agreements; etc.).

This is well-noted, and we will change the focus of course TLM 304 to concentrate on cultural and political issues in global trade.

- I suggest noting more explicitly how the web-based tools (i.e., LWIT's Canvas Learning Management System) will be used as part of the hybrid teaching envisioned in the degree. Will the web-based activity be synchronous with the instructor or simply asynchronous?

It is anticipated that there will be a mix of synchronous and asynchronous instruction – the exact proportions varying from course-to-course.

- In the financial report (table 9) I noticed a structural drop in the cost of teaching faculty and in the cost of tuition/fees in AY 15/16 and afterward. Is there a reason for this?

The slight peak in the projected costs resulted from a planned start in Winter 2014 which would have required teaching during Summer 2014 hence the increased costs during the first year. We have now revised the anticipated launch date to Fall 2014, and the peak has been eliminated.

Comments from Dr. Goetz

- It would be good to know what type of transportation feeder programs exist, as well as the type of curriculum found in these feeder programs. Likewise, it would also be useful to know more about the business feeder programs. Are the feeder programs available at LWIT or are they all external? Has there been a marketing study completed to know more about the competencies, needs, and aspirations of students in these feeder programs?

The potential feeder programs for this degree were documented in the Statement of Need (Form B) which was submitted to, and approved by, the State Board. Programs available at LWIT include (but are not limited to) Auto Collision Repair; Auto Repair; Motorcycle, Marine and Power Equipment; Diesel & Heavy Equipment; and Business Administration Support. Similar programs have been identified at Edmonds, Everett, Green River, Highline, North Seattle, Shoreline, Seattle Central and South Seattle Community Colleges; Renton Technical College; and Bellevue College.

A marketing survey of students at LWIT was carried out in 2012, and was documented in the Statement of Need submitted to the State Board. It is believed that the results of that survey are representative of similar programs at the other local institutions.

- If a high school graduate was interested in the BASTLM program, what would be the suggested path for that prospective student to follow?

Since the BASTLM degree is an Applied Baccalaureate degree, it requires students to complete an appropriate AAS degree before they can enroll in the program. We would therefore recommend that they identify whether their primary area of interest is in transportation management or logistics management, and then advise them to enroll in a transportation or business-related AAS degree accordingly. We would also recommend that they consider choosing general education courses during their AAS degree to minimize any additional work they might have to do during the Academic Bridge – in particular, choosing appropriate math and communications classes.

- I would expect a more general management course to be required, in addition to the more-specialized Topics in Transportation and Logistics Management. A general management course should be at least as important as Business Law, New Business Ventures, and Business Marketing.

Since we are heavily constrained by the number of credits available, we believe that core management concepts would best be taught within other courses such as Psychology of Organizations, Work Center Management, Business Law, Business Marketing, Quality Management, and Professional Ethics, plus a new course in business economics and/or finance (see next comment).

- I would also suggest that a course on Business Economics and/or Finance be included in the common courses. Such a course would also most likely fulfill a general education requirement, and would be quite useful for transportation and logistics managers to have.

As noted above in Dr. Prokop's comments, this is an excellent suggestion and we plan to introduce such a course into the curriculum before the program is launched.

- I would like to see a more detailed course description for Topics in Transportation and Logistics Management. Such a course should include an overview of the global transportation industry, including discussion of each of the major modes of transportation. Likewise, this course should provide an overview of the logistics industry. For students seeking employment for transportation carriers or for company shippers, it is important that they understand the basics of the transportation industry and how firms make decisions about moving commodities. Logistics and supply chain managers need to know how transportation works, and transportation managers need to know how logistics and supply chains work. This will be a very important course for both the transportation management and logistics management students.

This is, indeed, a critical course for ensuring that students see the entire picture, and we plan to

cover all of the points that you mention. We will expand on the course description before the program is launched.

- The course description for Domestic/International Trade and Freight Operations could be improved by adding basic concepts of international economics and trade, including discussion of exchange rates, balance of payments, inflation, labor, tariffs, and flows of goods and capital.

These topics will be included - either within the scope of this course or within the Business Economics and/or Finance course to be added (see above) – and the course description(s) will be amended accordingly.

- I would like to know more about plans for the 1st Year Project/Internship since this seems to be a very important part of the applied nature of this program. What types of projects/internships do you expect students to conduct? What firms, agencies, and organizations would be suitable candidates for projects and internships. A strong internship program would also help to address the Pathway Options criterion for this program.

Specific companies have not been identified at this time, but the members of advisory committee will be approached nearer to the program launch date to identify opportunities and the scope of the internship projects.

- Given the inclusion of Legal Concepts for Transportation and Logistics Management ... I wonder whether it is also necessary to include Business Law in the junior year common courses.

We believe that the basic Business Law course is a critical prerequisite on which to build the more advanced, and transportation/logistics-specific topics covered in 'Legal Concepts for Transportation and Logistics Management'. We cannot assume that all students entering the program have covered basic legal concepts in their AAS studies.

- I am not sure why a course on Warranty Administration is needed. ... [T]his course includes more material on state laws and regulations, which I am not sure is necessary in addition to: a) Business Law, and b) Legal Concepts for Transportation and Logistics Management. Couldn't these state laws and regulations be covered in one of these courses (preferably the latter, while dropping the former entirely)? ... Do you expect that most students will be involved in the automotive wholesale and retail business? Will these be managers at automobile dealerships, automobile repair shops, or automotive fleet managers for companies? It's not clear for whom this course would be taught.

The anticipated audience for the Transportation Focus is, indeed, students who will be involved in industries involving sales, service, and management of vehicles (including, but not limited to, automobiles and tracks). Therefore, understanding the intricacies of warranties and their

application/interpretation is a valid skill for these people. This can also be applied to retrofits, spare parts, sales of used/reconditioned vehicles and components of maritime vessels and their machinery, and other industrial equipment, such as loaders, lifts, etc.

- I am also not clear about the purpose of Vehicle Maintenance Management or Vehicle Fleet Risk and Asset Management. It seems that these courses are geared to managing and maintaining fleets of vehicles. Would these be automobiles or trucks, or both? What about workers in the maritime, rail, airline, and other industries? How would these courses be relevant for them? It seems to me that if you see a target student market in vehicle maintenance and fleet management, these two courses could still be combined into one course. I also question the rigor of these courses—they don't sound like college-level courses to me.

We certainly see the primary student market for this option in vehicle maintenance and fleet management since that is a logical career path for students who have transportation-related AAS degrees. The courses themselves are patterned on courses taught in established degrees at similar North American colleges, and would apply to the management of all types of vehicles – not just automobiles and trucks. However, as we develop the detailed syllabi and lesson plans, and have the program advisory committee review the content, we will consider whether they can be combined into a single course. We will also ensure that we cover the mix of theoretical and conceptual framework, and application case studies appropriate to an applied baccalaureate degree.

- The Work Center Management course looks fine, but is also applicable and should probably be available for students in the Logistics Focus area as well. The Capstone Project in Transportation Management course looks fine, but the examples provided are again mostly automobile-oriented.

We will allow the students the flexibility to take the courses that they feel are most relevant to their career goals. Likewise, the Capstone Project can be adapted to the industry sector most relevant to the individual student. This will be noted when we revise the course description.

- In a university global transportation management program, I would expect to see more courses focused on topics such as the transportation industry (study of major modes and infrastructure), transportation and public policy, transportation safety and environmental/sustainability impacts of transportation. These courses might not fit into the type of transportation management program you are considering here, but some of these courses/topics should be relevant for this program.

We intend to provide an overview of most, if not all, of these topics in the initial 'Topics in Transportation and Logistics Management' course, and then expand on them as required in subsequent courses. In doing so, we will be very careful to bear in mind the delicate balance

between the detailed knowledge required for students to find immediate employment in their chosen field, and the broader understanding that will benefit them as their careers progress.

- The five specialized courses in this focus area look fine. The course on Airport and Seaport Operations should probably also be available for students in the Transportation Focus area, or at least covering key topics in a more general transportation industry course. The other courses are all well-suited for a Logistics and Supply Chain program.

We will allow the students the flexibility to take the courses that they feel are most relevant to their career goals. Likewise, the Capstone Project can be adapted to the industry sector most relevant to the individual student.

- It may be something worth looking into for this degree program, if AST&L has an appropriate level of certification.

Very good suggestion. We are aware of several organizations offering certification programs related to this area, and plan to engage those groups as well.

- While not listed as a specific standard for the Pathway Option criterion, I would nevertheless emphasize the importance of internships and practical employment experiences as a pathway option for this degree program. This may already be part of standard operating procedures for new program consideration at LWIT, but it should be emphasized a bit more in this program proposal. Having an opportunity to work for a transportation carrier or a company shipper would be a great experience for a student in this program, and could lead to potential employment opportunities.

We strongly believe in the value of internships and will be approaching businesses – starting with members of the advisory committee – to identify internship opportunities once the program launches.

Appendix A – Course Descriptions

The following course descriptions do not include courses from LWIT's standard catalog that might be taken during the Academic Bridge in order to meet general education requirements. All courses listed here are 5 credits.

BUS& 201 Business Law

This is an introductory course which covers the basic study of the structure and function of the American legal system as it relates to business transactions. Emphasis is placed on U.S. contract law, the Uniform Commercial Code, and negotiable instruments.

BUSA 301 Managerial Accounting

This course introduces principles of managerial accounting which emphasize the use of accounting information for internal purposes such as planning and controlling operations, improved decision making, budgetary control, and performance management. The course integrates accounting with ideas from microeconomics, data analysis, decision analysis, finance, and operations management.

ECON 310 Business Economics

Applied microeconomics analysis, although some applied macroeconomic analysis of relevance to the business firm may also be treated. Emphasizes the development of economic tools and concepts that can be used in the firm's management decision-making process. Builds upon the standard economic analysis of the firm that integrates a company's revenue, cost, output, and pricing decisions. Marginal and incremental reasoning is stressed as an important decision-making principle.

ENGL& 235 Technical Writing

Students will learn to design, format, and produce documents common in business and industry. Emphasis will be placed on efficiently developing accurate, clear, concise, and visually accessible technical communication. Research techniques for technical writing will be introduced.

MATH 246 Business Statistics

The course is designed to teach managers to apply statistical methods in a business context in order to address business related questions and help make evidence-based decisions as well as how to interpret analyses performed by others. Topics include data description, data presentation, statistical analysis, statistical interpretation, and statistical inference.

PHIL 305 Professional Ethics

This course examines ethical questions that can arise for individuals working in business, health care, and other professions. Students will be equipped to identify the values that inform various professions and to skillfully resolve conflicts that arise between core value concepts.

PSYC 324 Psychology of Organizations

This course prepares the student to exercise effective leadership by learning positive psychology, negotiation and labor relations, strength-based management of individuals and teams, motivation/morale, and conflict resolution.

TLM 301 Topics in Transportation and Logistics Management

Course explores the organization and operations of the commercial transportation and logistics industries and their impacts on modern businesses in the context of the global trading economy. Includes the study of modes of transportation and its infrastructure, the operation of logistics and supply chains, public policy, transportation safety, and the environmental and sustainability impacts of transportation.

TLM 302 Airport and Seaport Operations

This course provides an overview of the structure, organization, and operation of modern airport and seaports, including current issues and challenges. It examines the critical interface with private sector intermediaries and government regulatory agencies that facilitate and affect operations.

TLM 303 International Transportation and Border Security

This course will provide an in-depth view of modern border and transportation security, including the protection of seaports, airports, ships, aircraft, trains, trucks, pipelines, etc. Course includes discussions with officials from security organizations such as TSA, Coast Guard, US Customs and Border Protection, and FBI. The course will cover specific facets of transportation security, including physical and procedural controls, and regulations of the Department of Homeland Security, the Transportation Security Administration, the Federal Aviation Administration, the U.S. Coast Guard, and others. It will also discuss current threats, counterterrorism measures, new technologies, and the importance of both passenger and cargo security to the global economy.

TLM 304 Global Trade and Freight Operations

This course focuses on critical issues in today's global commercial environment, one with heightened expectations on all sides: customers want reliable service and reasonable prices; employees and regulators want greater safety and security; citizens want access to services and responsible care of the environment without tax increases; shareholders want at least market returns on their investments; and governments want vibrant, healthy economies. Course includes discussions with environmental groups, freight operations executives and regulatory agency officials.

TLM 305 Legal Concepts for Transportation and Logistics Management

This course outlines the legal issues and concepts germane to the Transportation and Logistics field, including contracts, liability, torts, insurance requirements, jurisdiction, environmental and security regulatory compliance, mediation, and legal remedies.

TLM 306 Quality Management for the Firm

This course is designed to equip students with the managerial concepts and quantitative tools used in effective and efficient management of quality in manufacturing and service organizations. The focus of this course is on problem solving, including problem definition, evaluation of alternatives, implementation and control of total quality standards. Students will examine concepts including customer satisfaction, quality process orientation, empowerment, team building, and continuous improvement

TLM 307 Enterprise Resource Planning and Management

This course provides managerial information regarding material requirements, capacity planning and control techniques, master production scheduling and techniques in cost analysis. Includes application of Enterprise and Materials Resource Planning (ERP/MRP) fundamentals.

TLM 398 First Year Project/Internship in Transportation Management**TLM 399 First Year Project/Internship in Logistics Management**

This course provides an opportunity for students to conduct preliminary independent individual research or internship in the fields of transportation and logistics management. It requires a written report and oral presentation of the research findings or internship outcomes. The purpose of this course is to give students a deeper understanding of the field in order to help them to formulate and refine their career goals and align the remainder of their BASTLM studies with these goals

TLM 404 Warranty Administration and Customer Relations

This course investigates the various federal and state laws and regulations impacting the operations of the automotive wholesale and retail business, and warranty policies. Course will include discussions with attorneys and vehicle manufacturer representatives.

TLM 414 Warehousing and Distribution Center Management

The course focuses on warehouse and distribution center management systems, materials management software, inventory fundamentals, order fulfillment, supply chain disruption risk mitigation, and facility siting theories and strategies.

TLM 415 Supply Chain Management and Technologies

This course acquaints students with the global supply chain, with an emphasis on supply sources, distribution, production planning, information systems, customer service, inventory management, warehouse management, supply chain relationships and challenges facing managers today. Students completing the course will be able to understand supply chain management concepts and strategies that help firms become more responsive in today's changing global markets and provide a key source of competitive advantage. They will learn strategies for outsourcing, distribution, production planning,

customer service, inventory management, warehouse management, and the use of 3PL and 4PL providers in the supply chain. Currently technologies and how firms gain competitive advantages by embracing and adapting RFID, bar coding, sorting, picking, and track and trace technologies into their supply chains will be studied. Uses examples from retail, pharmaceutical, defense, manufacturing, and logistics industries.

TLM 421 Vehicle Maintenance Management

This course teaches the maintenance principles and scheduling systems required to effectively manage owned or leased vehicle fleets, fleet maintenance personnel, and drivers.

TLM 422 Vehicle Fleet Risk and Asset Management

This course deals with planning for uncertain events as well as the life cycle of fleets. It will focus on industry best practices. The course will include discussions with risk managers, and public and private fleet managers

TLM 444 Capstone Project in Transportation Management

This course provides an opportunity for students to conduct independent research on a wide array of salient issues in transportation management, either individually or in teams. Requires a written report and oral presentation of the research findings. Examples of areas of research: federally mandated vehicle inspection and maintenance procedures; development of computer data related to computer-based and on-board diagnostic systems and computer-based technical information databases; alternative fuel systems, procurement decisions, hazardous materials handling procedures, employee relations, etc.

TLM 445 Capstone Project in Logistics Management

This course is designed to help students solve actual logistic management challenges they will encounter in the workplace. Basic decision making tools and concepts will be used for finding cost reduction and strategic opportunities. It provides an opportunity for students to conduct independent research on a wide array of salient issues in logistics management, either individually or in teams. It requires a written report and oral presentation of the research findings. The course will make heavy use of examples from industry to provide illustrations of the concepts in practice.

Appendix B – Program Review Process

LWIT conducts systematic program reviews of all its instructional programs. College Policy 6.P.47 requires that all instructional programs conduct a formal program review every five years or as directed by the Vice President for Instruction. The purpose of program review is to:

“...assess the effectiveness and viability of its instructional programs. Program review helps determine how well the College meets its mission and goals (and) helps ensure that high quality instruction, facilities, and student support are assisting students in achieving their educational goals.”

It incorporates evaluation of the following components:

- Total state and contract funded enrollments for the program
- Student FTE
- Faculty FTE
- Student/faculty ratio
- Student demographics including ethnicity, gender, age
- Course-level student success (course completion rates)
- Program-level student success rates including retention, progression and completion rates across courses
- Program facilities, technology, and equipment
- External engagement including industry partnerships, internship opportunities, and review of the Advisory Committee
- Pathways including communications about the program as well as articulation agreements
- Employment opportunities
- Student support services

Student learning will also be assessed in terms of the course outcomes, the program outcomes, and the college’s Global Outcomes.

In addition, program staff monitor sector-specific economic trends and labor market analyses to ensure that there are internship and employment opportunities for students and graduates. And each program has a Program Advisory Committee who review the curriculum and program outline to ensure that they will provide the current skills and knowledge needed by industry.

Appendix C – Program Administration and Academic Core Faculty

The Academic Core program at Lake Washington Institute of Technology helps students develop foundational skills in written and oral communication, quantitative reasoning, social science, the humanities, and natural sciences. These skills prepare students for success in technical programs and careers, cultivate critical thinking, and foster the values of life-long learning.

The Academic Core program supports student skill development in the global outcomes areas of communication, critical thinking, and intercultural appreciation, and includes courses in:

- Written Communications
- Quantitative Reasoning
- Humanities
- Social Science
- Natural Science

All faculty teaching courses in the Academic Core area have advanced degrees – many having doctorates. Some faculty profiles are shown below.

Program Administration

Kevin McCarthy, Vice President of Instruction

BA, University of Virginia

MA, University of Mississippi

Ph.D, University of Mississippi - American History

Sharon Buck, Dean of Instruction, Industrial Technologies

BS, California State Polytechnic University

MS, University of Washington

Ed.D, Oregon State University - Community College Leadership

Academic Core Faculty

Academic Area	Name	Degree(s)	Year Hired
	Mantooth, W.	A.A. Peninsula College B.A. University of Washington M.A. Utah State University Ph.D. George Washington University – American Literature	2005
	Lake, M.	B.A. La Sierra University M.Ed., Eastern Illinois University – English	2004
	Snider, P.	B.A. University of California – Davis M.A. University of British Columbia – English	2005
Mathematics	Bricken, W.	B.A. University of California-Los Angeles M.S. Stanford University Ph.D. Stanford University – Statistics Education (Math)	2006
	Kuestner, S.	Communications	1995
Natural Sciences	Nelson, J.	B.S. Longwood College; M.Ed. Western Washington University – Exercise Science American College of Sports Medicine Professional-Technical Certificate	2000
	Dalich, G.	B.S. Oregon State University M.S. Oregon State University Ph.D. Oregon State University – Pharmacology A.S.C.P. U.S. Army	2006
	Lasker, G.	B.S./M.S. University of Nebraska-Lincoln Ph.D. Walden University – Public Health - Epidemiology Certified Nutritionist	2006
Social Sciences	Shepherd, H.	B.A. University of Wisconsin M.Ed. Seattle University - Education	1986
	Toussaint, L.	B.A. Eastern Washington University M.A. American University Ph.D. American University - Sociology	2009
	Axinte, D.	B.S. University of Bucharest M.S. University of Bucharest – Mechanical Engineering M.S. University of Washington – Electrical Engineering	2012
Humanities	Sobottka, J.	A.A. Grays Harbor College B.F.A. Fine Arts, University of Montana M.F.A. Fine Arts, University of Minnesota – Fine Arts Certified Behavioral Assessment Expert	2008

Appendix D – Library and Learning Resources

The Library–Learning Commons at LWIT (<http://lwtechlearningcommons.com>) is designed to foster active learning for students. It combines traditional library services, academic support services, a computer lab, and technology services. The Library-Learning Commons is open Monday - Thursday 7:30 a.m. – 8:00 p.m.; Friday 7:30 a.m. – 5 p.m.; and Saturday 11:00 a.m. -5 pm. The library staff is comprised of the associate dean, two librarians, two library technicians, and a media services technician. The librarians are available for help with individual research as well as teaching specific information literacy classes concerning plagiarism, citations, use of Web2.0 tools, research, and web evaluation.

Traditional Library Services

- Provide instruction on using the library resources in the Library and through virtual instruction/videos
- Facilitate location and use of Open Educational Resources
- Conduct orientations and reference services for classes on campus
- General information and assistance with directions, resources, printing and software provided by circulation desk staff
- Collection Development for print/virtual collections
- Interlibrary Loan
- Management of course reserves for student and faculty use
- Flexible and active learning and study spaces
- Print, electronic and media resources
- Displays featuring programs and events
- Individual research help
- Printing, copying, and scanning stations

Educational Technology Support

- Online production and distribution of meetings and lectures
- A/V equipment setups for the college
- A/V equipment purchasing /consulting / troubleshooting
- Workshops on technology tools through workshops on social networking tools such as Twitter, wikis, Facebook, and blogs
- Approximately 100 public use computers with software available for student assignments
- Digital Media Studio

Summary of the Collection

- 43,000 Items (books, eBooks, DVD/Videos)
- 28,000 full-text/online eBooks
- Over 6,000 full-text/online journals

- 350 full-text print/online newspapers, broadcast transcripts, company dossiers and Roper Center polls and surveys
- Over 1.5 million images in image databases

Meeting the Far-Reaching Needs of our Community

Through our databases, the community has access to broadcast transcripts from the major television and radio networks as well as political transcripts covering Congressional committee hearings, press briefings from the State, Justice, and Defense departments, and presidential news conferences. In addition, access is available to information in the form of wire services, updated several times a day, including respected names such as the Associated Press, Business Wire and PR Newswire. Non-English language news sources are available in Spanish, French, German, Chinese, Italian and Dutch, including both newspapers and magazines.

The Library-Learning Commons meets the needs of our students studying abroad through virtual office hours, online text/chat capabilities, video tutorials, and Skype orientations or meetings.

The Digital Media Studio is a workspace for faculty, staff, and students to create learning objects using Web 2.0 and multimedia tools. The room features equipment and software programs that will meet the needs of faculty and staff creating learning resources, and assist students developing multimedia presentations.

The Library Advisory Committee (LAC), which includes library staff, faculty, and a student government representative, assesses the Library's ability to support the College mission and serve students. The LAC regularly conducts reviews and SWOT (Strengths, Weaknesses, Opportunities, and Threats) analyses to assess ongoing needs based on accreditation standards, and faculty requests. The Committee's research and analysis resulted in a Library Action Plan, a blueprint for improvements to the Library and information resources. The LAC, library personnel, and administration also concluded that the most efficient way to improve the collection and provide greater access to the collection was to increase the resources available online.

Learning Resources for Programs

Resources available to LWIT students, staff, and faculty include print and non-print resources housed within the Library, from other libraries, and on the Internet. The faculty and dean, in collaboration with the library staff, evaluate the resources annually. Learning resources identified by faculty are ordered depending on need, cost, and availability. Resources that have been identified include books, professional journals, media, etc. Students may also submit suggestions to the library staff and requests are evaluated by librarians.

The Library collection is multidisciplinary and far reaching in scope includes materials on research, psychology, ethics, and career information along with traditional resources that support every program/discipline taught at LWIT. The LWIT Library-Learning Commons subscribes to a total of 100

print journals; including titles in medicine, technology, Industry specific topics, psychology, multi-disciplinary studies, etc.

Additional research material is available online via:

- ARTstor
- Books 24x7
- Credo Reference
- EBSCOhost (Academic Search Premier)
- Education Resources Information Center (ERIC)
- Ebrary
- Facts on File Online Databases
- Health Reference Center
- LexisNexis® Academic
- Mitchell's
- Nursing and Allied Health Source
- Proquest
- Safari Online
- Science Direct

These electronic resources, in conjunction with educational/research tools and new technologies, allow 24/7 access to the Library's digital resources and are the backbone of our 21st century library.

Resources Available from Other Libraries

LWIT Library is a member of the Online Computer Library Center (OCLC). As a result, the college has borrowing privileges at over 700 libraries located the Pacific Northwest region as well as access to the collections and services of more than 10,000 libraries worldwide through interlibrary loan and OCLC World Cat. Generally there is no charge to the students. On a rare occasion, there might be a lending charge from a university library.

Resources Available Through the University of Washington

Resources are available to LWIT students, staff, and faculty through the University of Washington Libraries via two avenues:

- Access to the University of Washington's library catalog and other state libraries through their consortium online catalog.
- Use of print and non-print resources at the UW libraries on a walk-in basis. There is no fee associated with this use; however, checkout of resources is not available.

Appendix E – Program Advisory Committee

The BASTLM program advisory committee has been established to represent a broad cross-section of interest groups including business, labor, and governmental organizations; and has provided important input into the design of the curriculum during its development. The current composition of the committee is as follows:

WASHINGTON STATE CENTERS OF EXCELLENCE	
Linda Crerar	Director Center of Excellence for Homeland Security
Meg Ryan	Director Center of Excellence for Global Trade and Supply Chain Management
BUSINESS	
Brien Akers	Director - 787 Supplier Management, Production Integration and Logistics Boeing
Erich Bockelie	Owner KC Martin Transmission
William J. Hall	Maritime Economist and Management Consultant Seaport Consultants, Inc.
Doug Hehn	President Cascadia Packaging Group
Laureen Kilcrease	HR Director – Seattle Region Autozone
Liz Lasater	President Red Arrow Supply Chain Solutions
Wendy Martinez	Estimatics Team Manager State Farm Insurance
Andrew Michel	Sr. Account Manager SEA UPS Forwarding
Bob Mickey	NW Regional Manager Inter-Industry Conference on Auto Collision Repair
Rich Rebenstorf	President Importers Forwarding Company, Inc.
Robert Weiss	President Food Shippers Association of North America
Jerry Wendorf	Business Consultant Lynden Logistics, Inc.
GOVERNMENT	
Pete Bednar	Fleet Manager & Communications Manager - Civic Services Department City of Bellevue
Sam Tsoming	Deputy Team Leader - Global Information and Communication Technologies Team U.S. Department of Commerce
Mark Wen, PhD	Commercial Strategy Manager - Inland & Ag. Business Development Port of Seattle
LABOR	
Patty Warren	Business Agent/Organizer

	Teamsters Local 174, AFL-CIO
OTHER	
Erika Bowles	IT/Logistics Program Faculty Tacoma Community College
Tom McLaughlin	President Center for Advanced Manufacturing Puget Sound (CAMPS)