APPLICATION GUIDELINES APPENDIX A
2008 I-BEST

College:	Walla Walla Community College		
Contact Person:	Marleen Ramsey		
Phone:	509.527.4265	**Email:**	marleen.ramsey@wwcc.edu
Brief Program Summary(including program length and number of college-level credits):	This IBEST project supports students through a one-year certificate program in Watershed Ecology. The one-year certificate is 3 quarters in length with a total of 45 credits of Watershed Ecology. Students in the IBEST Watershed Ecology program will gain the technical skills needed in planning, developing, managing, and evaluating projects designed to protect and regulate natural habitats and natural resources. Coursework will also support the skills necessary to analyze soil, plant, and water relationships as well as understand water relationships to environment, economic, and sociological impacts to communities. This IBEST project provides a support system for students needing basic skills to make successful completion of a one-year certificate in Watershed Ecology. This IBEST project also helps prepare students for entry-level positions as biological technicians and/or environmental technicians. At the present 45 of the 101 credits within the AAAS in Watershed Ecology are eligible for IBEST support. This pathway allows for several start-stop and reentry points giving participants increased levels of employment at each stop out point. Students attending full-time can complete the certificate in one year and the AAAS degree in two years.		
Professional-Technical Program (P-T) Title:	Watershed Ecology		
CIP Code:	03.0101		
EPC Code:	165		
I-BEST Instruction Start Date:	Fall Quarter 2010		

Number of students expected to be served	**25**
Minimum Entry Criteria including ABE & ESL Levels	CASAS ABE Level 4 Reading CASAS ESL Level 5 Reading CASAS Level 3 Math
Professional/Technical Entrance Requirements for the next level (GED, Asset/Compass scores, etc.)	GED or High School Diploma or placement into English 097

Job Title(s) for I-BEST program completers	Level One: High School or GED, Technician I, entry level Level Two: One-year Certificate, Technician II, Crew leader responsibilities Level Three: AAAS, Technician III, Supervisory responsibilities, coordination with agencies and public
Median salary for I-BEST program completers	Technician I starting salary begins at $12.10 and ends at $13.55 Technician II starting salary begins at $13.55 and ends at $15.05 Technician II starting salary begins at $15.05 and ends $16.68

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Signature of Workforce Administrator Signature of Adult Basic Education Administrator

FOR SBCTC USE ONLY: **Approved ☒** **Denied ☐** **Date Approved 11/16/09**

Please complete column 2 with responses to criteria in column 1.

Criteria	College's response to essential elements.	Reviewers' Comments
1. Program has an identified educational pathway(s) linked to a career pathway.	***Essential elements to meet criteria.*** Proposal provides evidence that the program is part of an educational pathway, linked to a career pathway, which begins with adult basic education ABE/ESL and continues to a one-year certificate and beyond. Proposal clearly articulates how each level of attainment in the educational pathway prepares students to readily engage in the next level. Proposal includes a pathway diagram (see attached example).	
	College's response. This IBEST project is part of an educational pathway towards an AAAS in Watershed Ecology. The project provides for start-stop points in order to allow participants the opportunity to get specific skills and work experience at each level before progressing forward. In order to ensure student success, participants begin with the one-year Watershed Ecology certificate requirement, allowing them to complete their GED simultaneously if they do not hold a high school diploma or equivalent. At this point participants can work in an entry level position of Technician I to gain greater experience or they may choose to continue with the next level, a two-year degree in Watershed Ecology. All coursework required to earn a GED as well as the one-year certificate in Watershed Ecology has the support of IBEST. In an effort to maximize student success, all academic support which include WRITE 100, OCSUP 102, Oral Communications in the Workplace, OCSUP 106 and OCSUP 108, Applied Mathematics I and II classes required for the one-year certificate are offered using the IBEST teaching model. These courses have statewide CTC approval and transferability and make up a significant portion of the first year of the Watershed Ecology program culminating in a one-year	

	certificate in Watershed Ecology. **<u>Watershed Ecology One Year Certificate includes</u>:** Academic Instruction 16 credits Watershed Ecology, 27 credits Related support courses, <u>2 credits</u> Certificate Total: 45 credits Of the 101 credits needed to earn the AAAS degree in Watershed Ecology, 45 credits are provided in the IBEST learning model. Regardless of whether a student chooses the one-year Watershed Ecology certificate or Associate in Applied Arts and Science degree, they will receive support to maximize success in their core coursework. At all levels along the pathway, IBEST students are given priority admission to enroll in coursework leading to completion of certificate or degree.	
• **Proposal demonstrates at the completion of the program, completers will have the opportunity to fill job openings and/or are provided with preferential status for next program level.**	***Essential elements to meet criteria.*** Proposal (1) provides labor market data that shows evidence of available jobs for I-BEST program completers at a minimum of $13 per hour ($15/hr for King County) (with the exception of Early Childhood Education); <u>and/or</u> (2) provides a description of how preferential status will be given to I-BEST program completers for entry into the next program level of an educational pathway that ends in available jobs with earnings of $13 per hour ($15 for King County).	
	College's response. The Watershed Ecology program has been analyzed by the Economic Modeling Specialists, Inc. (EMSI) to show the preliminary economic impact. There will be an increase of 82 jobs in our region by 2018 with the median hourly earnings equaling $16.76. The specific occupations increasing are Biological technicians and Environmental science and protection technicians. Potential career mobility for Watershed Ecology	

	graduates with a one-year certificate include the Confederated Tribes of the Umatilla Indian Reservation (CTUIR), and local conservation districts, state and federal agencies. For example, individuals earning a GED will qualify to work for the CTUIR Department of Natural Resources (DNR) Technician I earning between $12.10 – 13.55/hour; graduates with a one-year certificate qualify as Technician II's earning between $13.55 – 15.05/hour; and AAAS completers are qualified as Technician III's earning between $15.05 – 16.88/hour. These positions are similar to several careers identified using Washington labor market Workforce Explorer. Career titles are listed below as well as specific state hourly average wage and 2017 employment projects: - Biological technicians ($18.710/hr, 193 new jobs). - Environment science and protection technicians ($21/71/hr, 49 new jobs). - Forest and conservation technicians ($17.47/hour, 91 new jobs). Alternative job titles for the identified careers include, but are not limited to: - Biological Aide - Environmental Compliance Technician - Field Sampling Technician - Forest and Conservation Technician - Grazing Aide - Ground Water Technician - Laboratory Associate	

• **Proposal shows evidence that program graduates will fill high demand jobs and that there is a skills gap between the number of positions and program graduates.**	***Essential elements to meet criteria.*** Proposal provides evidence of local and regional labor market demand for program graduates who will fill high demand jobs. Labor market data may include a variety of resources such as transitional labor market data, industry data, trade association data, and other transactional data. Labor market demand must demonstrate a gap between the number of program graduates/completers in the region versus the number of job openings locally and regionally (list the number of available positions locally and the number of programs graduates locally).	
	College's response. The need for trained environmental technicians is on the rise at the national, state, and local level. The growing concern regarding sustainability has generated studies and reports by the Economic Modeling Specialists, Inc., (EMS) revealing that over the next ten years the national demand for skilled technicians with backgrounds in high demand jobs such as biological and environmental science and protection technicians will increase dramatically. Within the State of Washington jobs will increase by approximately 2,300, including 82 new jobs within the local region according to the EMS. The curriculum and course material required in the Watershed Ecology certificate and degree programs is designed to meet workforce needs and provide skills for maintaining employment for large local employers such as the Confederated Tribes of the Umatilla Indian Reservation (CTUIR) who have an increasing demand for skilled technicians to serve growing needs for natural resource conservation. The one-year Watershed Ecology certificate exposes students to technical courses that will provide them with cutting-edge skills within the environmental conservation profession. The communication courses within the curriculum will provide experiences in working with individuals	Reviewer note: The Watershed Ecology program was new this fall, so there is no data available at this time for the number of local graduates. The program will run two cohorts; one traditional cohort and one I-BEST cohort. There are 22 students enrolled in the traditional program currently.

	possessing different ecological values and cultural identities. This will prepare students for entry level employment and provide skills improvements for individuals already in the workforce. In Walla Walla County, Forest and Conservation technicians are in demand, while across the region and state, Biological technicians and Environmental science and protection technicians are in demand.	
4. Proposal describes integrated professional-technical and adult basic education learning outcomes.	***Essential elements to meet criteria.*** Proposal provides (1) targeted integrated learning outcomes that include WA Adult Learning Standards and relevant professional-technical skills standards; and (2) requirements for employment at the conclusion of the I-BEST; and (3) the next level of training specifying academic entry levels, tests and/or certifications, other skills or experience.	
	College's response. The IBEST Watershed Ecology project will provide targeted integrated learning outcomes based upon the Washington Adult Learning Standards and relevant professional-technical skills standards. Upon completion of the Watershed Ecology one-year certificate students should be able to demonstrate proficiency in the following standards in order to progress toward the AAAS degree in Watershed Ecology or work effectively within an environmental and conservation work fields. 1) ***Read with understanding to perform competently as a Watershed Ecology professional***: • Recognize specialized and abbreviated words related to Watershed Ecology. • Demonstrate confidence and familiarity with specialized content knowledge and vocabulary within authentic Watershed Ecology materials. • Ability to locate important information in environmental conservation specific text using a variety of strategies.	

	• Monitor and enhance environmental compliance work (i.e. problem solving, geographic and geological changes, protection of ground water, etc.). • Demonstrate recall, sequencing, categorization, paraphrasing, and graphs and charts to organize ecological and environmental information and materials. • Demonstrate confidence in applying prior knowledge to assisting in understanding environmental and conservation information, documents, and procedures. 2) ***Convey ideas in writing to perform competently as a Watershed Ecology professional***: • Determine the purpose and audience for communicating in writing in order to perform required duties as an environmental and conservation professional. • Use pre-writing and writing strategies to identify and organize ideas to support a single focus (i.e. technical reports associated with field sampling work, government documents, etc.) • Appropriate use of familiar and specialized environmental and conservation vocabulary. • Demonstrate ability to make simple and complex revisions in writing with these revisions based upon review and feedback from others. 3) ***Speak so others can understand in order to perform competently as a Watershed Ecology professional:*** • Appropriate use and recall of vocabulary and grammar in order to communicate effectively with biologists and other technicians within a work setting. • Demonstrated ability to elaborate Watershed Ecology concepts with	

	detail and examples, as well as select, organize, and relay information related to the environmental and conservation profession. • Application of a variety of verbal and non-verbal language skills to monitor and enhance communication effectiveness with staff and personnel within Watershed Ecology work setting. 4) ***Listen actively in order to perform competently as a Watershed Ecology professional***: • Adapt response to diverse speakers and contexts when language is not specifically for English language learners in order to understand and respond appropriately to extensive discussion regarding environmental and conservation subjects. • Effectively use a variety of strategies to discern gaps in understanding as well as give feedback regarding procedures and processes necessary to maintain the safety and well-being within an environmental and conservation work environment. • Apply linguistic, socio-cultural and other knowledge to understand literal as well as implied intent of the speaker and to respond appropriately. ***5) Use math to solve problems in order to communicate competently as an Watershed Ecology professional:*** • Use mathematical procedures appropriately to record data relating to environmental and conservation. This includes providing accurate information on reports, plans, and charts. • Ability to communicate solutions to problems with visual representations on tables, charts, or graph, or elementary statistics. • Define, select, and organize common mathematical data. • Ability to measure with appropriate tools, orally describe patterns,	

	and activities appropriate in an environmental and conservation work setting.	
5. Proposal describes integrated assessment development and/or use.	***Essential elements to meet criteria.*** Proposal describes specific tools that have been integrated to assess student learning in both basic education and professional-technical competencies. Proposal describes the development and use of the tools by both instructors. ***College's response.*** All IBEST students must qualify for the federally supported levels of basic skills education. All ESL Basic Skills students will take a CASAS appraisal, listening form 80 and reading form 80. ABE students will be appraised using the ECS reading form 130 and Math Form 130. ABE students scoring a level 4 reading, ESL student scoring a level 5 reading, and ABE and ESL students scoring a level 3 math are eligible for admittance to the program. All students will be pre-tested prior to beginning the program or within the first 12 hours of instruction and scores entered in WABERS+. All basic skills students will be post-tested at the end of 45+ hours or the end of the quarter using the appropriate CASAS tests as determined by scores from pretest or previous posttests. CASAS TOPSpro reports will be used by instructors to identify students' strengths as well as areas targeted for improvement. IBEST instructors which include basic skills and professional-technical instructors will be contracted and paid for joint planning and program development time under the guidance of the Director of Transitional Studies. The joint planning and program development time is needed to support both team and individual curriculum development prior to the onset of the class as well as throughout the duration of the IBEST program. Joint weekly planning time will be scheduled by the instructors for these purposes. Budgetary and material support as well as management of the IBEST program will be directly provided and supported by the Director of	

	Transitional Studies and the Vice President of Workforce Education at WWCC. Outcome assessments in professional technical programs use a variety of approaches that serve both basic skills and professional technical purposes. These include the development of portfolios, examinations, written and oral assignments, research projects, as well as self and employer-based evaluations and observations. Grades will be submitted by the professional-technical faculty in the Instructor Briefcase at the end of each term of study. The planning, advising, and registration process will be a shared responsibility between the basic skills and professional-technical faculty with support from the Director of Transitional Studies and Watershed Ecology Program advisor.	
6. Proposal describes integrated teaching strategies.	***Essential elements to meet criteria.*** Proposal specifically describes the team teaching model that includes joint course planning and at least an instructional overlap of 50% of the class time.	
	College's response. Initially all IBEST Watershed Ecology courses will be overlapped at the 100% delivery rate. Subsequently, a minimum of 50% overlap of class time will be provided. Basic skills and professional-technical instructors will be contracted and paid to co-develop, co-plan, and co-instruct course curriculum and lessons. WWCC is committed to providing professional development and IBEST training opportunities to participating faculty in order to strengthen their understanding and skills regarding the IBEST method of instruction.	
7. Proposal describes strategies for student success.	***Essential elements to meet criteria.*** Proposal describes specific strategies that are effective with traditionally underserved and academically challenged populations. Strategies must address innovative efforts for (1) recruitment/screening, (2) retention, and (3) program completion. Student support strategies (include college resources and systems navigation, financial aid assistance, career/educational planning, and barrier	

	identification and mitigation).	
	College's response. Every effort is made to ensure that classes are offered at a convenient time for working students. This effort generally means that the achievement of certificates may take longer than one year and degrees longer than two years. However, making this time accommodation allows greater opportunity for greater participation and persistence. An ongoing academic and financial advising process is essential to the success of students in this program. Advising process and support specific to IBEST Watershed Ecology pathway will be developed so that students and faculty have access to timely and accurate decisions regarding coursework, scheduling and financial aid. The Watershed Ecology Program advisor and Transitional Studies Director will recruit students from the basic skills classes as well as from community organizations who identify employees needing environmental and conservation education training. The Watershed Ecology Program advisor and the Director of Transitional Studies will work with the different funding sources identified at the college to assist students with their tuition costs. This includes the Opportunity Grant, WorkFirst, Worker Retraining, as well as other community organizations such as the Migrant Labor Council, Confederated Tribes of the Umatilla Indian Reservation, Blue Mountain Action Council as well as seek outside funding sources such as those from the National Science Foundation. Students will be assisted in their program planning by basic skills and professional-technical faculty at the end of each quarter of study. The goal is to make sure that students in this program are given priority registration	

	in the appropriate classes in order to maintain progress along their identified career pathway. This includes the assurance that financial support is identified and in place in order to continue progression in the program.	
8. Proposal describes strategies to promote transition into and success within the next step of the pathway.	***Essential elements to meet criteria.*** Proposal describes specific strategies for student transition to the next program level including pathway planning, financial aid assistance and on-going academic support.	
	College's response. It should be noted that all the coursework taken toward the one-year certificate in Watershed Ecology can be credited to the two-year AAAS degree in Watershed Ecology. Ideally, this one-year certificate can be earned within one year, although progress will be affected by the work commitment of each individual participant. All academic and instructional support classes required for the Watershed Ecology certificate courses will be offered in the IBEST model and are part of the required coursework for the AAAS Watershed Ecology degree. All core Watershed Ecology courses will be offered in the IBEST model and are part of the required coursework for the Watershed Ecology one-year certificate and AAAS degree. Students in the IBEST Watershed Ecology pathway will be provided academic advising and support throughout their study. This advising support will be provided by Basic Skills staff and faculty, trained Student Development advisors, and the Watershed Ecology Program advisor. Students will be supported in completing their FAFSA applications for traditional financial eligibility, and assisted in determining their eligibility with other funding sources on campus such as WorkFirst, Worker Retraining, and Opportunity Grant. WWCC Foundation also maintains a small scholarship fund to assist Basic Skills and English as Second Language students with tuition fees. A small library of textbooks is available for students through the resource room in the Transitional Studies Department at Walla Walla Community College. WWCC maintains an	

	academic tutoring center that supports students in their efforts for success in math, science, and writing courses. If a Watershed Ecology IBEST student needs access to tutoring assistance and is not able to come in during regular tutoring center hours, individual tutoring services can be arranged.	
9. Proposal describes partner involvement in the development program.	***Essential elements to meet criteria.*** Proposal shows evidence that local and regional businesses, labor, WDC, and community based organizations are active in supporting the college's effort to begin or expand this program (please list your partners here).	
	College's response. Walla Walla Community College has a history of strong partnerships with other service agencies, advisory councils, and professional organizations, within our district area. These include the Confederated Tribes of the Umatilla Indian Reservation, Blue Mountain Action Council, Migrant Labor Council, WorkSource, and DSHS. The college's efforts to partner with all of these agencies will ultimately benefit collaboration and cooperation for water conservation and sustainability within the region as well as the local economy by providing a skilled workforce. During this significant downturn in the state economic climate there is even greater commitment to strengthening student success through access, recruitment, retention, and employment of IBEST Watershed Ecology program completers	
10. Optional: Is there any additional information that you choose to share, for instance connection to other initiatives, and support from other entities like the local workforce development council, economic development council,	***College's response.***	

cultural and/or social service organizations, etc.		

Assurances	**Check box that the college provides assurance for each of the following:**	
1.	**(X)** The college provides assurance that **local and regional labor market demand in the industry has been verified** *(a variety of resources can be used including traditional labor market data, industry data, trade association data, and other transactional data).*	
2.	**(X)** The college provides assurance that **there has been active involvement by employers and community partners in the development and in providing ongoing support for the I-BEST program.**	
3.	**(X)** The college provides assurance **I-BEST completers will have all the requisite education and skills (including required academic levels, skills and experience, and passage of tests or certifications, etc.) to move into employment and the next level of the pathway.**	
4.	**(X)** The college provides assurance that **there is no duplication in courses within the pathway.**	
5.	**(X)** The college provides assurance that **I-BEST students will have individualized education and career plans to aid in the continuation of their skill and wage progression.**	

Please complete information for EACH of the I-BEST program's courses in the formats listed below.

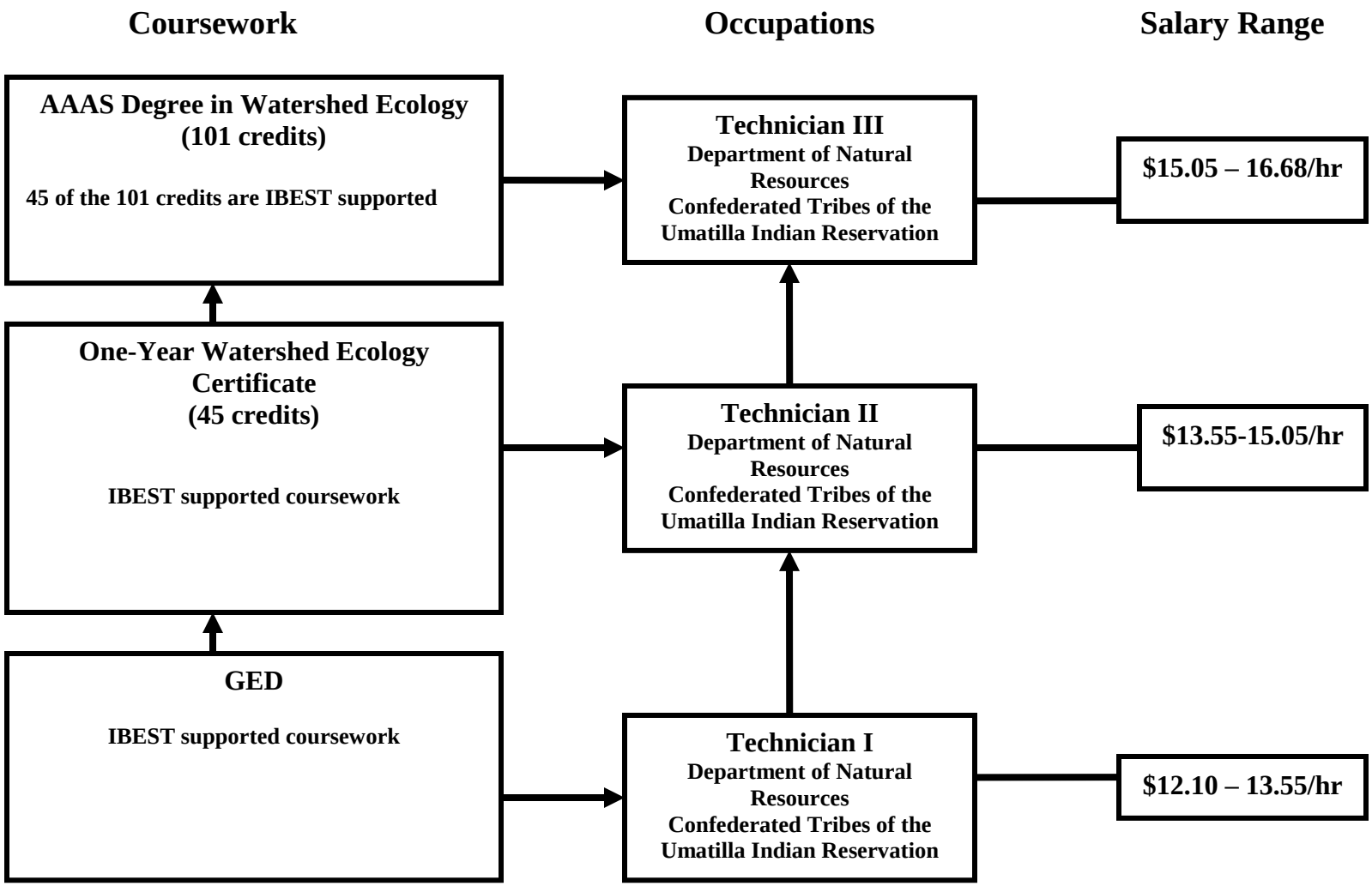
Format 1—*complete for integrated courses with at least a 50% overlap of instruction*:

P-T course name: **Plant Anatomy & Morphology**	Credits: **3 credits**	Dept. and Course Number students use to register for course: **AGPR 113**	
P-T course quarterly hours: **30 hours**	credit equivalency *(total credits x 1.75)*: **5.25**	ABE/ESL quarterly hours: **15**	Class size: **24**
P-T course name: **Elementary Surveying**	Credits: **6 credits**	Dept. and Course Number students use to register for course: **CET 160**	
P-T course quarterly hours: **60 hours**	credit equivalency *(total credits x 1.75)*: **10.25**	ABE/ESL quarterly hours: **30**	Class size: **24**
P-T course name: **Introduction to Hydrology**	Credits: **3 credits**	Dept. and Course Number students use to register for course: **CET 166**	
P-T course quarterly hours: **30 hours**	credit equivalency *(total credits x 1.75)*: **5.25**	ABE/ESL quarterly hours: **15**	Class size: **24**
P-T course name: **Workforce Leadership Development**	Credits: **2 credits**	Dept. and Course Number students use to register for course: **CLS 180**	
P-T course quarterly hours: **20 hours**	credit equivalency *(total credits x 1.75)*: **3.5**	ABE/ESL quarterly hours: **10**	Class size: **24**
P-T course name: **Introduction to Computers and Application**	Credits: **5 credits**	Dept. and Course Number students use to register for course: **CS 110**	
P-T course quarterly hours: **50 hours**	credit equivalency *(total credits x 1.75)*: **8.75**	ABE/ESL quarterly hours: **25**	Class size: **24**
P-T course name: **Engineering Graphics**	Credits: **4 credits**	Dept. and Course Number students use to register for course: **ENGR 111**	
P-T course quarterly hours: **40 hours**	credit equivalency *(total credits x 1.75)*: **7**	ABE/ESL quarterly hours: **20**	Class size: **24**

P-T course name: **Oral Communication in the Workplace**	Credits: **3 credits**	Dept. and Course Number students use to register for course: **OCSUP 102**	
P-T course quarterly hours: **30 hours**	credit equivalency *(total credits x 1.75)*: **5.25**	ABE/ESL quarterly hours: **15**	Class size: **24**
P-T course name: **Applied Mathematics I**	Credits: **5 credits**	Dept. and Course Number students use to register for course: **OCSUP 106**	
P-T course quarterly hours: **50 hours**	credit equivalency *(total credits x 1.75)*: **8.75**	ABE/ESL quarterly hours: **25**	Class size: **24**
P-T course name: **Applied Mathematics II**	Credits: **5 credits**	Dept. and Course Number students use to register for course: **OCSUP 108**	
P-T course quarterly hours: **50 hours**	credit equivalency *(total credits x 1.75)*: **8.75**	ABE/ESL quarterly hours: **25**	Class size: **24**
P-T course name: **Cultures of Water**	Credits: **3 credits**	Dept. and Course Number students use to register for course: **WMGT 135**	
P-T course quarterly hours: **30 hours**	credit equivalency *(total credits x 1.75)*: **5.25**	ABE/ESL quarterly hours: **15**	Class size: **24**
P-T course name: **Watershed Management**	Credits: **3 credits**	Dept. and Course Number students use to register for course: **WMGT 139**	
P-T course quarterly hours: **30 hours**	credit equivalency *(total credits x 1.75)*: **5.25**	ABE/ESL quarterly hours: **15**	Class size: **24**
P-T course name: **Applied Writing**	Credits: **3 credits**	Dept. and Course Number students use to register for course: **WRITE 100**	
P-T course quarterly hours: **30 hours**	credit equivalency *(total credits x 1.75)*: **5.25**	ABE/ESL quarterly hours: **15**	Class size: **24**

Format 2 —*complete for non-integrated courses that directly support the I-BEST program (not eligible for enhanced or high funded FTE*):

ABE/ESL course name: **Integrated Career Pathways**	Credits **1-4**	Dept. and Course Number students use to register for course: **OCSUP 076, 077, 078**
ABE/ESL quarterly hours: **144**	Class size: **35**	


Coursework
Occupations
Salary Range
AAAS Degree in Watershed Ecology
(101 credits)
45 of the 101 credits are IBEST supported
One-Year Watershed Ecology
Certificate
(45 credits)
IBEST supported coursework
GED
IBEST supported coursework
Technician III
Department of Natural Resources
Confederated Tribes of the Umatilla Indian Reservation
Technician II
Department of Natural Resources
Confederated Tribes of the Umatilla Indian Reservation
Technician I
Department of Natural Resources
Confederated Tribes of the Umatilla Indian Reservation
$15.05 – 16.68/hr
$13.55-15.05/hr
$12.10 – 13.55/hr