

LANDSCAPE TECHNOLOGY

PROGRAM REVIEW

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LANDSCAPE TECHNOLOGY INTRODUCTION:

The Landscape Technology Department has been an active and growing department at Portland Community College for over 30 years. Currently, the program offers over 35 separate classes with an Associate of Applied Science Degree in Landscape Technology and four certificate programs; One Year Landscape Services Technician, Two Year Landscape Management, Two Year Landscape Construction, and Two Year Landscape Design. These degrees and certificates were initiated from program review in 1999-2000. A significant portion of this assessment is the impact that they have had on enrollments and completions.

1) **To improve the quality of teaching and learning by asking faculty, staff, and administrators to reflect upon and examine teaching methodologies, learning outcomes, and curriculum.**

1a) Evaluate the curriculum using national and or professional discipline/program guidelines where available.

The Landscape Technology Department has developed its courses so that they exceed the requirements of national/state industry guidelines. The strength of the program has been in the practical application of concepts and skills required to succeed in industry. The certificate and degree programs in design, construction and maintenance exceed the standards established by the Associated Landscape Contractors of America and by the Association of Professional Landscape Designers. The program would have been certified by ALCA except for lack of budget dollars. The Oregon Landscape Contractors board accepts our two year certificates and degree as qualification to sit for the Landscape Contractor's licensing exam. The Landscape Technology Advisory Committee has reviewed course offerings on a regular basis to help insure industry standards are met. (see Appendix A – International, National, and State Professional Certification Requirements, and Oregon State Licensing Requirements)

1b) Review and revise where necessary learning outcomes for the discipline/program and/or for any sequence of courses within the discipline/program.

As part of this assessment, the program outcomes and the course outcome guides for all classes, thirty-six guides were reviewed for applicable content, clarity, and how they fit into each certificate and the degree. This review helped to find areas of redundancy in the program and areas where content needed to be updated to current standards. The four two year certificates were introduced in the 1999-2000 year to better serve the needs of students who had prior college education and degrees, and were only interested in specific areas of the field. The result has been very encouraging with the number of completers in the program increasing some 300%. The assessment also

uncovered areas of weakness that allowed the program to make needed budget cuts through the reduction of sections taught.

The Two Year – Certificate in Plant Propagation had only 3 certificate completers in the time period of the assessment and in reviewing the CCOG's it was decided by the SACC that the body of the courses offered was not sufficient to merit the certificate level. The basic skills of plant propagation were determined to be a critical part of a broad basic Landscape education. Based on that, a single plant propagation class was returned to the one-year certificate and degree offerings as a required first year course.

In the Landscape Management certificate, the Turfgrass Identification and Turfgrass Cultural Practices courses were found to have too much redundancy and were consolidated into one.

In the design certificate, three changes were made. The SACC determined that the Site Grading class would be eliminated. Recent changes in the Landscape Architects' law and common office practices of landscape designers made it illegal and unpractical for students to learn how to draw and develop grading plans. In installing landscapes, contractors and their employees need to be able to read grading plans and have the skills to lay them out in the field. These skills were folded into the Site Survey and Analysis course. The Landscape Technology staff and Advisory committee felt that it was a critical skill for designers to be able to estimate costs of proposed designs and the Landscape Estimating and Bidding course was added to the design certificate.

The results of the advisory committee and assessment review also indicated that most students who enter the field from the program enter at, or quickly move to, supervisory and/or management positions. To better serve this need, a requirement of a Management and Supervisory Development class in supervisory skills was added to the certificate in Landscape Construction and to the Associate of Applied Science Degree. (see Appendix B – Learning outcomes for the Landscape Technology Department, Certificates and Degrees)

- 1c) Give evidence that the discipline/program learning outcomes are being met by students.

Our evidence that program outcomes are met by students comes from the student survey, student success in industry and acceptance of student's training/education by licensing and professional organizations and agencies.

From the student survey, over 78% of students felt that they met their personal goal in the Landscape Department and of 78% of students employed and actively working, 69% indicated that their job was related to their education.

In the regional landscape industry, PCC Landscape students have highly successful businesses in Landscape Contracting, Design and Maintenance. In landscape contracting, several PCC students are serving leadership roles with the Oregon Landscape Contractors Association and on the Oregon Landscape Contractors Board. Students graduating from the Landscape Design Certificate program form the core of the Association of Northwest Landscape Designers and have played a prominent role in the development of the Associated Professional Landscape Designers and its new Oregon Chapter.

Students success in the landscape industry, and the Landscape Technology Program content, have led to the acceptance of our curriculum as preparation for licensing as Oregon Landscape Contractors, licensing for pesticide certification with the State of Oregon Agricultural board, certification for the Certified Landscape Technician program in irrigation, construction and maintenance through the Associated Landscape Contractors of America and certification by the Associated Professional Landscape Designers. The curriculum in the Landscape Design Certificate can also be used in articulation with the University of Idaho's Landscape Architecture program. (see Appendix C – Portland Community College – Landscape Technology Survey of Graduates and Former Students)

1d) Describe how the courses in this discipline/program address the College Core Outcomes.

Communication

Graduates of Portland Community College should be able to communicate effectively by determining the purpose of communication; analyzing audience and context to use appropriate language and modality; and by responding to feedback to achieve clarity, coherence, and effectiveness.

Students are asked through a variety of courses to write reports with supporting references for a subject pertaining to the course. They also prepare reports as if presenting information to a client either in written or verbal form. They are asked to do presentations in front of classes for practice, again as if presenting to a client or a board their ideas and proposals. They prepare notebooks that they can use in design for the purpose of presenting information and photo's to the client.

Community and Environmental Responsibility

Graduates of Portland Community College should be able to apply scientific, cultural, and political perspectives in understanding the natural and social world and in addressing the consequences of human activity both globally and locally by demonstrating an understanding of social change and social action.

Landscape Technology is by its very nature connected in a profound way to the environment. Therefore, in most of our classes students are nudged in their thinking to consider their impact on the earth, sustainability of their practices, and their responsibility as future leaders in their industry to educate the public as they interact with them.

Critical Thinking and Problem Solving

Graduates of Portland Community College should be able to think critically and creatively solve problems by understanding and using various methods of reasoning and evaluating information.

In all our classes we strive to present students with real world problems that challenge the student to not only master the necessary skills involved in Landscape Technology, but lead them to make broader and creative connections. Our classes not only test their skills but ask them to apply that information toward projects so that they can deepen their understanding and come to “know” their subject and “see” new possibilities.

Cultural Awareness

Graduates of Portland Community College should be able to demonstrate an understanding of the varieties of human cultures, perspectives, and forms of expressions as well as their own culture's complexities.

We have many different cultures exemplified in our student population. Most of our classes involve group projects to build team effort and break down barriers that might exist in a standard classroom.

Professional Competence

Graduates of Portland Community College should demonstrate mastery in a discipline or profession at a level appropriate to program and transfer requirements through the application of concepts, skills, processes, and technology in the performance of authentic tasks that enhance community involvement and employability.

Our motto at the Landscape Technology Department is to “learn by doing”. We continue to evaluate our classes as to their strengths in competencies on skills, and the suitability of our students to the skills needed by the industry. Our advisory committee keeps us in touch with those requirements.

Self-Reflection

Graduates of Portland Community College should be self-appraising in applying the knowledge and skills they have learned, examining and evaluating personal beliefs, and comparing them with the beliefs of others.

Through classes such as Landscape Business Operations and Estimating and Bidding, students discuss business ethics. As they approach graduation, students through the guidance of department advisors, assess their personal strengths and interests as they approach impending employment.

2) To maintain instructional quality consistent with standards of excellence within the discipline/program.

2a) Assess the success of the discipline/program in contributing to the College mission.

The Landscape program contributes directly to the college mission by training students at multiple levels from one class professional upgrades to a full two-year Associate Degree with general education, as well as professional technical courses. The core of the landscape curriculum is critical thinking applied to real world physical tasks. As a service industry, landscaping requires good communication skills including oral, graphic and written. As witnessed in the outcomes for the CCOG's, in the landscape curriculum students are exposed to, and have to apply and master, mathematical, mechanical and verbal skills. Environmental issues are dealt with in multiple levels in design, construction and maintenance of landscapes. Student success in the industry is a good marker of student's professional competence upon leaving the program.

2b) Report any changes the SACC has made to instructor qualifications and the reasons for the changes.

Instructor qualifications for the Landscape Technology Program include a sound education in combination with good work experience in the field, and if possible, in the classroom. Most importantly, instructors need good background in the actual competencies and practical everyday landscape tasks required and used in the industry. With part time instructors, qualifications are focused on the set of skills for the class being taught with emphasis on job experience and the ability to teach the subject area. (see Appendix E - Full Time and Part Time Faculty Requirements, 2004)

- 2c) Describe how the students in this discipline/program are using the library or other outside the classroom information resources.

Students in the Landscape program make use of resources outside the classroom in several ways. In Basic Horticulture and Landscape Design Process they are required to do research papers. They use the Internet to develop plant notebooks, seek soils information, to get class information, and to gather information to support design concepts. Speakers are brought in to lecture on landscape business (several of whom are past students), new technologies, equipment use and techniques. Field trips to industry sites, businesses, arboretums, botanical gardens and nurseries are frequently utilized. Students are involved with industry seminars and service learning for the community, such as landscape design for the Washington County Fairgrounds; the St. Helens Marina; the Oregon Association of Nurserymen's Far West Show and Yard Garden and Patio Show; irrigation installation for Lenox School; and tree plantings in neighborhoods with Friends of Trees.

3) To respond to the changing needs of students and the community.

- 3a) List the professional development activities of the faculty over the last three years and describe any instructional or curricular changes made as a result of those activities.

The professional development of the Landscape Faculty is ongoing and quite varied. It includes certification with the Associated Professional Landscape Designers, multiple levels of pesticide licensing certification with the Agriculture Department of the State of Oregon, contractor licensing with the Oregon Landscape Contractors Board, certification with the International Society of Arboriculture. Staff has been involved and responsible for the development of Certified Landscape Technician testing in Oregon and has served for seven years as the state chair for the CLT committee. They have served on the committee that reviews and writes the state licensing exam for the Oregon Landscape Contractors' Board for ten years and one staff member wrote Landscape Standards for the Oregon Landscape Contractors Association to establish statewide minimum standards

for landscaping. The landscape staff has served as speakers for many industry events and attends industry wide seminars and trade shows on a regular basis.

At the education level, staff has participated in PCC training sessions for Internet and computer usage in the classroom, banner training and OSHA/PCC safety training. The professional development activities of the staff have led directly to many of the skills and competencies that are developed to teach the core outcomes of the courses and program.

- 3b) Describe any significant shift in student demographics within your discipline and how that has impacted instruction.

The Landscape program has a very diverse student population. With an average age over thirty-four years, many of the students have prior college education and degrees upon entry into the program and are often seeking a career change. These students usually are not interested in another degree, but instead are looking for the concentrated curriculum in one of the concentrated two-year certificates.

Currently the program has a gender balance of about 60% female and 40% male. This is primarily due to a current strong interest in the landscape design aspect of the industry.

Within the student body there is a mixed minority population of about 7-10%. This includes students of Middle Eastern, Indian, Asian, and Hispanic descent. In the industry, the biggest change has been at the entry level with large numbers of Hispanic workers filling job positions. Getting these students to the classroom has proved difficult because of cultural barriers, lack of support from the administrative level, and because of the use of undocumented workers by the industry which causes problems with registration. Many of the Hispanic population in the industry need developmental education both in their language and in English and employers are not willing to allow for the time needed to bring them to college level to insure success in the classroom.

3c) Give examples of how feedback from students, business and industry, community groups, or institutions our students transfer to, was used to make curriculum or instructional changes.

The green industry is very busy from spring until fall. At the suggestion of industry we moved the estimation and bidding class from spring to winter quarter. This winter quarter we offered three experimental courses aimed at industry.

Feed back from students and student evaluations have always been a way of garnering student input and the instructor making changes in their course, whether small or large.

3d) What strategies are used within the discipline/program to increase enrollment, improve student retention and student success.

Increased enrollment (student recruitment) has been a 3 fold approach for our department. 1) Quarterly course announcements press releases are sent to 3 trade organizations (ANLD – Assn of NW Landscape Designers; APLD – Assn of Professional Designers; OAN – Oregon Association of Nurseries) for publishing in their periodicals. 2) We exhibit at three trade shows a year (Yard, Garden and Patio Show in the winter; Farwest Show in the summer; Landscape Expo in the fall). 3) We are working with PAVTEC to develop articulation agreements with high schools. This fall we developed a dual credit articulation agreement with the Forest Grove H.S. agriculture program.

We have improved student retention by developing graduation checklists for each degree and certificate to help students plan out their path to graduation.

3e) Report any changes made in the last three years to increase student access and diversity.

The majority of Landscape students are working part or full time while attending classes. The Landscape Department has made every attempt to adjust the course and program offerings to working students. All of the first year classes have been changed to one day per week and are offered both mornings and nights. All of the second year

classes are offered at night with the exception of two or three that require daylight to perform the tasks for the class. These are also held one day per week to facilitate part time students.

- 3f) Identify any operational issues faced by the SACC that impact student learning in your area, (e.g., facilities, availability of part time faculty and other needed resources).

Like most industries, the Landscape field is constantly being changed through new technologies especially in the area of equipment. The biggest operational difficulty lies in the lack of budget to have the newest technologies in adequate numbers to allow hands on training of 20-30 students per class. Also lack of time and/or monies to provide instructors with the training and instructional technology to upgrade classroom performance are a factor. The Landscape Technology program has had a history of “making do”.

4) To develop recommendations for improvement in the program/discipline.

- 4a) Assess the strengths and areas in need of improvement in the program/discipline.

Strengths of our program:

- 1) Longevity: We have been focused on landscape education (and nothing else) since 1970. That longevity and its specific focus has developed us a reputation in the area. We have had students come to us from throughout the Pacific Northwest (the furthest commuting student came from Medford, OR).
- 2) An emphasis on hands-on education: Most of our courses are project based or competency based. Students learn by lab as well as in the classroom. The ability to do is an important factor to both students and industry.

- 3) Our Associates Degree and our Two-Year Certificates (a recent coup this fall) enable students to sit for the Oregon Landscape Contractors Exam.
- 4) Our facilities: Both a strength and a weakness (as addressed below); our greenhouse, classroom shop and pole barn have made it possible to do more in applying hands-on application of classroom work.
- 5) Strong enrollments: At slightly over 35 FTE the program is the strongest it's been enrollment wise in years.

Areas in need of improvement in the program:

- 1) Labor: With retirements two years ago, a full-time position was "frozen". Coupled with a strong enrollment, the workload that falls on the full-time faculty left (advising, recruitment, facilities management, and SAC) has increased substantially. With only so many hours in a 10 hour day, not everything receives the care and attention due it, and most often the short shrifted area is the instructor's own class preparation.
- 2) New Course Offerings: To enhance a program's reputation to industry and the community at large, it's important to be able to offer new courses focusing on what's new and innovative in the industry. It makes the program a leader and brings alumni coming back. To date, we have been able to offer new courses on an experimental, margin basis. In light of future budget cuts, we may not even be able to have recourse to this.
- 3) Equipment Budget: Except for some Carl Perkins money last year (\$1,000) to buy surveying equipment, we have not seen any equipment budget for several years. Four years ago we purchased a tractor with money from our Landscape Foundation funds. In the next five years we anticipate some large capital expenditures needed for the maintenance of existing equipment and facilities.

To be precise, that would be the re-glazing of our greenhouse (at a cost of \$20,000 - \$25,000) and the final and complete deterioration of the hand-me-down Ford Ranger pickup we use on a daily basis. Our supply budget of about \$7,000/year will not be able to cope with these when they arise.

- 4) Our facilities: Our land lab and building facilities are adequate, but often the labor to maintain them is not. We have one full-time technician and a casual labor budget to hire two, 599 hour/year employees. One to maintain our greenhouse and one for the grounds. Sometimes we're lucky and have a cooperative education student that works a semester for us. With what we have we can just maintain what we have, but there's little left for improvement and expansions such as rebuilding the campus arboretum and replacing plant materials lost in construction.

- 5) Updated Technology: Our main classroom in Bldg. 4 lacks a data port and Infocus projector.

- 6) Professional development: As stated earlier, work loads permit little time and energy to pursue professional development by the existing full-time faculty. Time to attend seminars (even local ones) are only possible if it doesn't interfere with one's own class schedule as there are not enough faculty to cover a missed class. This severely limits participation by faculty.

- 4b) Given the above analysis and other findings of the SACC in this review process, prepare a set of recommendations that cover areas such as curriculum and professional development, recruitment and retention of students, obtaining needed resources, and being responsive to community needs.

Recommendations:

- 1) Unthaw the frozen position. If there is a ratio of FTE to full-time faculty in a department, I think it would be evident that we have a wider ratio than other professional /technical programs.
 - 2) The addition of casual labor dollars to support an additional 599 hour/year employee.
 - 3) Technical assistance in the area of public relations/ recruitment. We would like to develop a promotional CD and brochures for degrees and certificates offered.
 - 4) Guidance on what future avenues will exist to offer new innovative courses.
 - 5) An LCD projector, screen and 3-D visual presenter in Bldg.4.
 - 6) A five year budget plan on replacing major equipment and facilities maintenance.
- 5) To ensure that curriculum keeps pace with changing industry demands and continues to successfully prepare students to enter into a career field.**
- 5a) Evaluate the impact the advisory committee has on curriculum and instructional methods.

The Landscape Technology advisory committee has representatives from all phases of the industry including small contractors, large contractors, nursery, related

sales, design, and maintenance both public and private. The committee includes past students as well. All program progress, changes and curriculum materials are shared with the advisory committee for their response. One area of improvement would be to include the advice of the advisory committee in establishing qualifications and interview questions for new faculty.

- 5b) Review the job placement statistics of students in your program over the last three years, including salary information where available.

Recent statistics are not available for this analysis, but information from the student survey was gleaned for general tendencies in the landscaping field. Government and public institutions had the best record for pay in landscaping and provided partial to full benefits (medical, dental, paid leave and retirement). Within landscaping businesses, whether a job in maintenance, construction, design/estimating, arbor care, nursery, etc., those jobs in management positions garnered better wages or salaries overall. Those in management also received greater overall benefits. Therefore larger companies requiring management level positions are the best for securing a higher level of pay and benefits. Perhaps the bleakest statistics are in the area of self employment, particularly in design, with maintenance companies being a step above. Throughout the surveys, those that were self employed in those fields had no benefits set aside and did the poorest in income. Owners of landscape construction companies seem to fare better.

- 5c) Analyze the program learning outcomes, competencies, and skills as compared to the business and industry needs today and in the immediate future.

Recently the Oregon Landscape Contractors Board has accepted AAS degree and any of our Two-Year Certificates to sit for the landscape contractor's exam. In addition, our program has been setup to follow the guidelines of ALCA (see Appendix F – ALCA Landscape Contracting Model Curriculum) for curriculum development.

- 5d) Forecast future employment opportunities for students in your program.

Like all businesses, the landscape industry has had a downturn over the last few years. The employment picture has held fairly steady in the field because it is a service industry and because of a strong housing market. With students competing more for supervisory and management level jobs, additional education and degrees and certificates have become more important. Licensing exams in pesticides and landscape contracting have become more comprehensive and difficult, requiring more education as well. Enrollment numbers for the program have remained strong, and with the restructuring of classes and certificates have increased in Fall of 2003. The landscape field is one of the areas where students can look to form their own businesses and to advance if employed by a landscape firm.

- 5e) Analyze any barriers to degree or certificate completion that your students face and describe the main reasons students leave your program before program completion.

From the student survey three main areas need improvement to continue to provide successful students. First the program needs the newest equipment in adequate numbers for classes. Second, students see a need for improving advising at the campus level. Many indicated that the campus wide counselors had no concept of the professional technical programs and their workings. Third, students indicated a need for improving the job placement portion of the campus. The job placement service as structured is too cumbersome for both industry and students to take advantage of it.

LANDSCAPE TECHNOLOGY

PROGRAM REVIEW

Appendix A

International, National, and State Professional Certification Requirements, & Oregon State Licensing Requirements

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Oregon Landscape Contractors Association

Certified Landscape Technician (CLT)

For more details contact:
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150 Elden Street, #270 • Herndon, VA 20170
800.395.2522
information@alca.org

**Be Recognized.
Be Certified.
Be a CLT.**

Information About Certified Landscape Technician (CLT)

What is Certification?

Certification is a national hands-on testing program administered by the Oregon Landscape Contractors Association that seeks to recognize proficiency in the landscape workforce, upgrade the status of the landscape professional, and provide the public with a means of identifying qualified landscape professionals.

The Oregon Landscape Contractors Association has joined forces with the Associated Landscape Contractors of America (ALCA) to offer three Core Tests in Installation, Maintenance, and Irrigation, in addition to Advanced Specialties in Carpentry, Concrete, and Irrigation Management.

To become a Certified Landscape Technician, an applicant must pass the Common Elements plus a Core Test.

Passing the Installation test demonstrates that an individual has the skills to review a landscape blueprint and implement the design in the field.

Passing the Irrigation test demonstrates that a person has the skills to install and maintain an irrigation system and understands the fundamentals of water management.

Passing the Maintenance test shows that a person has the skills to maintain a landscape project in a professional manner.

Developed and organized by the California Landscape Contractors Association's Certification Committee, the exam was first administered in 1983. In 1994, ALCA purchased rights to the exam and began to offer it to state associations for their members. Since 1993, 174 Oregon Landscapers have been certified.

What Are The Benefits of Certification?

- Promotes professionalism within the landscape industry.
- Provides local, state and national recognition.
- Enhances landscape companies.
- Validates landscape skills.
- Creates opportunities for career advancement in the industry.

What is the Recognition for Certification?

- Your company is registered as an employer of Certified Landscape Technicians.
- Individuals who pass each test will become Certified Landscape Technicians. (The distinction between installation, maintenance and irrigation will be made on all official documents.)
- Individuals passing a Certification Test will receive a numbered certificate and identification card.
- Employers are encouraged to advertise that they have Certified employees on their staff.

Who is Eligible for Testing?

Anyone is eligible to take the exam, but it is recommended that applicants have a combination of one of the following:

- Two years of experience in the landscape industry.
- One year of experience in the landscape industry plus the successful completion of a two-year or four-year curriculum in the landscape field.
- One half of a year of experience in the landscape industry plus the successful completion of a two-year or four-year curriculum in the landscape field plus the completion of an approved internship program.

CLT Testing

Testing is available in 4 sections, the Common Elements section, plus 3 specialty sections: Installation, Irrigation and Maintenance. To become a CLT, applicants must pass the Common Elements section of the exam, plus one of the specialty sections. Whichever specialty section is passed denotes the applicant's CLT designation (example: CLT-Irrigation means an applicant has successfully passed the Common Elements and Irrigation sections of the exam). The full exam, the Common Elements section plus a specialty section, is 6-8 hours total testing time. Field and written testing is conducted at OLCA's permanent test site at Portland Community College's Rock Creek Campus.

Common Elements

The Common Elements are required skills common to all core tests. Applicants must demonstrate their abilities in the following areas:

- 1.02 First Aid & Safety - written
- 1.03 Plan Reading - written
- 1.04 Plant Sensitivity & Use - written
- 1.05 Plant Identification
- 1.06 Sod Installation
- 1.07 Work Orders & Reports
- 1.08 Program Controller
- 1.09 Irrigation Identification
- 1.10 Lateral Repair & Head Adjustment
- 1.11 Truck & Trailer
- 1.12 Tree Planting & Staking/Guying*
- 1.14 Chainsaw*

Installation Core

- 2.01 Plant Layout
- 2.02 Grading and Drainage
- 2.03 Instrument
- 2.04 Paver Installation
- 2.05 Rototiller
- 2.06 Tractor Operation

Maintenance Core

- 3.01 General Comprehension - written
- 3.02 Pruning
- 3.03 21" Mower
- 3.04 36" Mower
- 3.05 Aerator
- 3.06 Edger & Trimmer
- 3.07 Riding Mower
- 3.08 Pesticides
- 3.09 Fertilizer
- 3.10 Power Blower

Irrigation Core

- 4.01 General Comprehension - written
- 4.02 Irrigation Plan Reading - written
- 4.03 Lateral Installation
- 4.04 Mainline Installation
- 4.05 Valve Repair
- 4.06 Valve Wiring
- 4.07 Pipe Installation Equipment

Advanced Specialities

Advanced Specialty Endorsements are advanced exams which are offered to Certified Landscape Technicians upon successful completion of the Common and any Core Element. Each advanced specialty test is 4 hours total testing time. ALCA currently offers the following Advanced Specialities:

- Carpentry
- Concrete
- Irrigation Management

Test Procedures

Testing begins with a written test for each core. Applicants then begin a series of timed tasks supervised by one or more judges. Most tasks require applicants to install or maintain sample landscape projects. At the end of each timed session, the applicants rotate to another work station. This process continues until the end of the testing. Applicants must pass every task in order to become Certified Landscape Technicians. Those who do not pass may retake the unsuccessful portions during the next test date.

Retakes

If you are a retake applicant and are unsure of which section(s) you have remaining to pass, call the OLCA office at 503.253.9091 or 800.505.8105 - we will be happy to assist you.

Preparing for the tests

To allow sufficient time for study, persons should apply for the examination well in advance of the test date.

Study Guides

The CLT Committee strongly recommends reviewing the appropriate study guides to prepare for the test.

Study Guides for the sections in which you register are included with your registration fee. There are Study Guides for each section - Installation, Irrigation and Maintenance.

Study Guides are also available in Spanish. This is a great way to prepare for the CLT test if English is your second language.

Employers take note: The Study Guides are a great tool for every day use in your business! You can now purchase them in both English and Spanish to use as an employee guide.

Spanish Interpreters

Interpreters will be at the test site to assist those individuals whose primary language is Spanish.

Study Groups

You might be asking yourself “How do I prepare for CLT?” An important component is to form STUDY GROUPS. Ask around in your area and see who else is interested in taking the test, set-up times and review the material with each other! You will be surprised at how much you and other members of your STUDY GROUPS will be able to share, and then when you take the test you will be prepared. (Another great benefit, when you take the test you will already know someone there.) And, afterwards you will have someone to celebrate your hard work and success!

Scholarships

OLCA has a limited amount of scholarship funding for employees of member companies. The Scholarship Committee will be offering scholarships for CLT testing. Listed below are the details:

- Amount of scholarship - \$125.
- This must be the first time you have taken the CLT test.
- Available on a first come, first served basis.
- Limit of two (2) per company.
- Must be a full time employee and have 1 year of employment.

If you need additional information, please contact the OLCA office at 503.253.9091 or 800.505.8105.

To Register

(Remember - the sooner you register, the earlier you receive your test outline and Study Guide!)

Please complete the registration form (coming soon) to sign up for the 2004 Certified Landscape Technician Testing. Upon receipt of the registration form and payment, new applicants will receive a test outline and Study Guide.

Do you have questions? Please contact the OLCA office at 503.253.9091 or 800.505.8105. All applicants will receive a confirmation packet outlining the details of the test day (i.e., what to wear/bring, testing hours, etc.)

THE APLD CERTIFICATION PROCESS

Certification : APLD™ certification program provides professional recognition to landscape designers, based on established standards of excellence. This process encourages self-assessment by offering guidelines for achievement. Certification is available for Associate APLD™ members in good standing, who have been practicing landscape design for a minimum of two years.

Our certification process is to evaluate the candidates submitted work. It is not an educational curriculum.

To encourage our certified members to continue their education, we require recertification every three years, with 30 contact hours of continuing education credit (CEU).

The certification committee has developed a review process for landscape designers to become certified. Ours is the only national (international) certification program for landscape designers. Currently, 20% of our members are certified. The evaluation process includes review of submitted plans and other data as well as keeping track of and assigning CEU's (continuing education units) which are required for maintaining certification. Committee members are divided regionally. All submissions are kept confidential.

The APLD™ Certification Review Panel convenes four times each year to review applications for Certified Professional Membership. The current review schedule is January, March, August and November. Applications are due by the first of the month.

The certification process defines our standard of practice.

APLD EXPECTATIONS FOR CERTIFICATION

Candidates will be expected to respond to knowledge of these design elements in the presentation of the designs they submit for certification. Each submission is judged on its own merits, and is not compared to the work of others. Because they stand alone, no one is with your projects to explain them to the review panel; send as much documentation as you feel is necessary for the panel to fully appreciate your efforts and expertise.

EDUCATION:

While work experience makes us aware of design difficulties, design education is the foundation of good design. The panels have found that there is a very strong correlation between design education and submission success.

1. Two years in the field doing landscape design work (This is required).
2. Minimum of 12 credit hours in courses about Landscape Design (i.e., Introduction to Landscape Design, Design Problems, Design Process, Plant Composition).

DESIGN:

1. Exhibits an understanding of art principles (unity, balance, focal points, interconnection and rhythm, scale, repetition and variety) and how line, form, color and texture can be manipulated to create a unified design.
2. Exhibits an understanding of space in relation to the aesthetic and functional principles of design.
3. Uses appropriate vehicular and pedestrian circulation patterns.
4. Shows an awareness of general maintenance accessibility and requirements in relation to client's available time. This should be explained in the design intent statement.
5. Meets client's functional and aesthetic needs, as explained in the design intent statement.
6. Shows site sensitivity and is ecologically responsible.
7. Where appropriate, include the following: survey and site analysis (graphically, including topography), concept plan and planting plan, construction drawings, and notes and specifications provided to the contractor or client for installation.

8. Where appropriate, include a contractor's bid for the project submitted. (This will be confidential within the review panel and can be returned to designer with photos in the SAS envelope provided by the candidate.)

GRAPHICS:

1. Indicates growth year represented by plant symbols on the submission design intent statement (e.g, 5year, 2/3 maturity, full size).
2. Exhibits knowledge of line hierarchy and weight.
3. Provides clear, understandable, consistent professional graphic conventions, including proper lettering & labeling of all hard and soft materials, title block, borders, scale, a graphic scale (so that designs are readable even if reduced) and north arrow.
4. Candidate renders all design work and graphics and states if they are computer-generated.

PLANT COMPOSITION AND KNOWLEDGE:

1. Exhibits awareness of the appropriate scale and growth rate of the plants used.
2. Exhibits awareness of the functional suitability of the plants used considering the climate, environmental and site limitations.
3. Exhibits awareness of design principles and plant associations.
4. Uses proper scientific nomenclature and common names where they exist.
5. Provides a complete plant list (botanical name, common name, quantity, size to be installed, and comments).

APLD™ Requirements for Certification

Eligibility

Applicants for Certified Membership in APLD™ must be current Associate Members and have a minimum of two years of professional landscape design experience.

Submission Requirements

1. Complete application form.
2. An entire landscape design plan with material and plant specifications. This plan may be for a residence, business or commercial establishment, industrial or governmental project, or other suitable project that demonstrates the applicant's professional capabilities. These capabilities should include use of creativity; suitable circulation patterns; a mixture of perennials, shrubs, and trees; and hardscape. They may include water features and landscape lighting.
 - a. Copy of original planting plan to scale, along with an additional site and concept plan, where appropriate. Construction drawings or concept sketches suggested, depending on state law.
 - b. Design intent statement that includes how the design meets the client's functional and aesthetic needs (design concept); zoning, governmental, and budget restrictions; existing site conditions and problems; off-site conditions affecting design; hardiness zones; and arrangements for installation.
 - c. Complete plant list (botanical name, common name, quantity, size to be installed, and comments).
 - d. Bid for installation, if appropriate.
 - e. Educational records and relevant professional experience. Include copies of transcripts and/or supporting documents and certificates showing course length and credit hours.
 - f. Before and after photos of project with no more than two photos per page.

3. Two reduced plans. Plans should still be readable without a magnifying glass.
 - a. Design intent statement that includes how the design meets the client's functional, and aesthetic: needs (design concept); zoning, governmental, and budget restrictions; existing site conditions and problems; off-site conditions affecting design; hardiness zones and arrangements for installation.
 - b. Complete plant list (botanical name, common name, quantity, size to be installed, and comments).
 - c. Before and after photos of both projects with no more than two photos per page.
4. A short statement discussing your business program as specified on the score sheet.
5. Submission packages will be held for 5 years if certified, 7 years if denied. At the end of that time, we can return them to you, destroy them, or use them for educational purposes with names removed. If you choose to have the package returned, you must include an extra \$10 in your filing fee check.
6. A one time only, nonrefundable-filing fee of \$75 or \$85 (if submission return desired).

RETURN COMPLETED APPLICATION AND DESIGN SUBMITTAL MATERIALS TO:

Judy Nauseef, APLD
Chair, Certification Committee
3962 James Avenue SW, Iowa City, IA 52240
Tel: 319/337-7032

The APLD™ Certification Review Panel convenes four times each year to review applications for Certified Professional Membership. The current review schedule is January, March, August and November. Applications with review materials are due by the first of the month. The committee wishes to judge each submission fairly. We know only what you send us, so label, describe and illustrate everything that will help present your work in the most professional manner.

Certification Checklist

- | | |
|---|---|
| <ul style="list-style-type: none"> <input type="checkbox"/> Application <input type="checkbox"/> Transcripts <input type="checkbox"/> Payment <input type="checkbox"/> Entire Landscape Design Plan | <ul style="list-style-type: none"> <input type="checkbox"/> Business Program Statement <input type="checkbox"/> Two Reduced Plans <input type="checkbox"/> 3 Design Intent Statements <input type="checkbox"/> Three Complete Plant Lists <input type="checkbox"/> Before and After Photos for 3 Plans |
|---|---|

The ISA Certification Credentials: The Right Certification for the Right Job

The International Society of Arboriculture has been working hard with our members to raise the standard of professional tree care. The decision to choose the right arborist is very important. Trees are a lifelong investment and you want to protect that investment.

The decision was once a simple one. Choose an ISA Certified Arborist. Now, the ISA has been listening to our credential holders and have responded by developing a career path in arboriculture through our certification programs. Not only does this benefit the professional, it will benefit you when hiring professional tree care.

The ISA Certification credentials can be viewed as a pyramid with the largest group at the base. These credentials were developed based on the knowledge required to obtain each one.



ISA Certified Arborist - This is the largest group of credential holders. These professional arborists have a minimum of three years experience in some aspect of tree care and have passed an exam developed by an international panel of experts. The exam extensively covers every aspect of tree care and the individuals must have an acceptable level of knowledge in all areas of arboriculture.



ISA Certified Arborist/ Utility Specialist - This certification is for professional arborists who are ISA Certified Arborists in good standing and have additional experience in the specialty area of tree care around power lines. The utility specialists work for utility companies, their contractors or consultants. One of the certification objectives is to provide the public and those in government with a means to identify those professionals who have demonstrated, through a professionally developed exam and education program, that they have a thorough knowledge of line clearance vegetation management.



ISA Certified Arborist/ Municipal Specialist - This certification is also for professional arborists who are ISA Certified Arborists in good standing and have additional experience in the specialty area of urban trees. The municipal specialists work for cities and states, parks, contractors or consultants. One of the certification objectives is to provide the public and those in government with a means to identify those professionals who have demonstrated, through a professionally developed exam and education program, that they have a thorough knowledge of establishing and maintaining trees in a community.



ISA Certified Tree Worker/Climber Specialists - These credential holders have a minimum of 18 months experience professionally climbing trees in a safe and efficient manner to perform tree care. They have knowledge in the major aspects involved in tree care including, pruning, removal, cabling and safety. They must pass a knowledge exam and a skills exam conducted by trained evaluators.



ISA Board Certified Master Arborist - This credential holder must be an ISA Certified Arborist and may have one or more of the other credential listed above. They must have a minimum of 7 years experience as an ISA Certified Arborist or its equivalent. They must pass a computer based exam that intensively covers all aspects of arboriculture. These individuals have advanced levels of knowledge in all aspects of tree care. This is our smallest group of credential holders.

All of these levels must maintain their credential through continuing education. If you would like to learn more about any or all of these just click on the title.

INTERNATIONAL SOCIETY OF ARBORICULTURE

Post Office Box 3129
Champaign, IL 61826-3129
phone (217) 355-9411
fax (217) 355-9516
cert@isa-arbor.com
www.isa-arbor.com

8/03

I. THE PROGRAM

Certification is a voluntary program providing recognition of one's professional knowledge by one's peers. INTERNATIONAL SOCIETY OF ARBORICULTURE (ISA) Certified Arborist recognition is given by ISA to those who (1) meet the eligibility requirements for admission to the examination as set forth in this application, (2) successfully complete the examination, (3) maintain the necessary number of continuing education units (CEUs) to recertify after three years, and (4) pay the necessary recertification fees every three years.

The objectives of the Certification Program are

- to be an educational program that will improve technical competency of personnel in the tree care industry.
- to create incentives for these individuals to continue their professional development.
- to provide the public and those in government with a means to identify those professionals who have demonstrated, through a professionally developed exam and education program, that they have a thorough knowledge of tree care practices.

The benefits of the Certification Program include the following:

- Certification builds an individual's self-image. By studying for and passing the exam, individuals reaffirm to themselves and their peers a thorough knowledge and dedication to arboriculture.
- Certification affords the public and those in government the opportunity to make an informed selection of services based on the knowledge that is represented by the certification designation.
- The process of becoming certified and maintaining the designation provides incentives to the individual to continue his or her ongoing professional development.
- Certification is a tool to help employers both in training their personnel and selecting new employees.

II. THE CONTENT OF THE CERTIFICATION EXAMINATION

The certification examination is weighted in the following manner:

I. Tree Nutrition and Fertilization	5.5%
II. Identification & Selection	9.5%
III. Installation and Establishment	9.0%
IV. Safe Work Practices	11.5%
V. Tree Biology	13.0%
VI. Pruning	12.0%
VII. Tree, Soil & Water Relations	6.5%
VIII. Diagnosis & Treatment	11.0%
IX. Trees, People & Ecology	3.0%
X. Cabling, Bracing & Lightning Protection	4.5%
XI. Construction Preservation	7.0%
XII. Tree Risk Assessment	7.5%

Recommended Study Materials

Note: The *Arborists' Certification Study Guide*, published by ISA, should NOT be considered the sole source of information for the certification examination.

The *Arborists' Certification Study Guide* is intended to serve as a recommended program of study. Each chapter in the study guide lists additional references that should be considered for review, such as *Arboriculture: Integrated Management of Landscape Trees, Shrubs and Vines* (Harris, Clark, and Matheny); *Tree Maintenance* (Pirone); *New Tree Biology* (Shigo); the *ANSI Z133.1 Safety Standard for Tree Care Operations*; *Horticultura Arborist Edition*; and *Trees, Shrubs and Groundcovers Edition II*.

How the Examination Was Developed

The certification examination was developed by a panel of industry experts representing all aspects of arboriculture. Questions were derived from a job analysis survey filled out by arborists from around the United States and Canada. Questions are constantly analyzed by the Certification Test Committee using the latest test statistics, and new questions are always being developed. Questions that do not perform satisfactorily are removed from the question bank. New examinations are created on a regular basis.

The Format of the Examination

The certification examination consists of 200 multiple-choice questions. One-hundred ninety questions are drawn from the question bank, and ten are tree identification samples. Each question has four choices listed, only one of which is correct. The answer to each question can be derived independently of the answer to any other question.

Whenever trees are referred to on the exam, both scientific and common names are given.

You will have 3-1/2 hours to complete the examination. It is always advisable to first answer the questions that are easy for you, skipping over those questions to which you will need to return to give more thought. Working in such a manner, you should feel no time pressure because 3-1/2 hours will be more than enough time to complete the examination.

Passing Scores on the Examination

To pass the examination, you must achieve an overall score of at least 70%. You also must achieve a minimum score of 60% in each of the twelve domains. When you receive your results, please remember that the domains are weighted and the average of the twelve domains **WILL NOT** be equal to the overall score.

Attainment of Certification

If you achieve both the overall passing score and the domain passing scores, you will receive the designation of ISA Certified Arborist and will be sent a certificate, an ID card, an advertising logo sheet, a hard-hat decal, and a patch.

If you achieve an overall passing score but do **NOT** score the minimum or above on any of the testing domains, you must retake and score a passing level in those area(s) not passed. If you do **NOT** achieve an overall passing score, you must retake the entire exam. You will be allowed to retake the exam one time for free. If you do not show up for the scheduled retake exam, you will forfeit your free retake. After that, there is a charge of \$65 per retake. If you do not pass within one year from the original test date, you must repay the full exam fee.

Denial and Revocation of Certification

Certification will be denied or revoked for any of the following reasons:

- falsification of application
- violation of testing procedures
- misrepresentation
- failure to pass the examination

Denials or revocations of certification may be appealed to the Certification Board.

III. APPLYING FOR YOUR EXAMINATION

Examination Eligibility Requirement

The ISA Certification Board requires a candidate to have a minimum of three years of experience in arboriculture. Acceptable experience includes the practical use of knowledge involved in pruning, fertilization, installation and establishment, diagnosis and treatment of tree problems, cabling and bracing, climbing, or other services that directly relate to arboriculture. Examples of experience sources include but are not limited to

- tree care companies
- utility personnel
- nursery personnel
- instructors of arboriculture/horticulture
- landscape personnel
- horticultural/Extension advisors
- municipalities
- consulting arborists
- state forestry personnel
- pest control advisors/applicators

The eligibility requirement also may be satisfied with a two-year degree in arboriculture and two years of practical experience **or** a four-year degree in a related field and one year of practical experience.

By submitting your application, you authorize ISA certification staff to contact the practical experience reference named on your application to substantiate your eligibility.

The ISA Certification Program does not discriminate in determining eligibility on the basis of race, color, religion, sex, national origin, age, disability, or any other characteristic protected by law

Recertification

The ISA Certified Arborist designation is valid for three years. To maintain the certification, you must have accumulated the necessary 30 continuing education units (CEUs) by the end of that three-year period and pay the renewal fee.

Renewal dates always occur on June 30 or December 31, depending on the date you took your exam. You will be notified when it is time to renew your certification. You also will be notified two times per calendar year and informed of the number of CEUs you have accumulated to date.

If you do not achieve the necessary number of CEUs, you may retake the examination.

You will need to pay the full fees required to take the examination.

You are responsible for keeping records of all CEUs sent to ISA.

Test Dates and Application Deadlines

Certification exams are offered at ISA chapter meetings and at educational seminars. For more information on location and dates of certification exams in your area, contact either your local ISA chapter or the ISA Certification Department. Exam dates also can be found in industry publications such as ARBORIST NEWS, ARBOR AGE, and TCI MAGAZINE. The ISA Web site (<http://www.isa-arbor.com>) also contains exam dates.

Applications and proper payment must be received in the ISA office no later than 12 (twelve) working days before a scheduled exam. No exceptions. You will not be allowed to take the exam unless all payments and applications are received by the deadline date.

Special Accommodations for Candidates with Disabilities

All test sites are accessible to all examinees. However, some individuals with disabilities may need special accommodations, such as extra time or assistance with writing or reading.

Oral exams are available by request. If you need such arrangements, please contact ISA before submitting your application. You will be informed how to proceed with your application submission. Arrangements, if approved by the certification staff, will be provided at no additional charge.



Descriptions of Pesticide Licenses

Commercial Applicator

The **Commercial Pesticide Applicator License** is required of individuals who apply or supervise the application of pesticides on the land or property of others while employed by a Commercial Pesticide Operator. This license is also required of those who apply restricted-use pesticides to non-agricultural land or property that belongs to them or their employer, even if they are not employed by a Commercial Pesticide Operator. Some examples may be: *privately owned* golf courses, food processing plants, business parks or *private* schools. These individuals are subject to the same record-keeping requirements as Commercial Pesticide Operators. Commercial Pesticide Applicators may also consult on the use of restricted-use pesticides in the categories in which they are licensed. To become certified and qualify for this license, an individual must obtain a passing score of 70% or higher on the required examinations (Laws and Safety examination + appropriate *category examinations*). The Commercial Pesticide Applicator license expires on December 31st and is renewable annually during the licensee's certification period. The licensing fee depends on the number of categories held. Contact the Pesticides Division at **503-986-4635** if you have questions or need additional information.

Commercial Operator

The **Commercial Pesticide Operator License** is required of any business which applies pesticides (general-use or restricted-use) on the land or property of others. There are two requirements to obtain a Commercial Pesticide Operator license:

1. In the case of a sole ownership or a partnership, the owner (or at least one partner in the case of a partnership) must be licensed as a Commercial Pesticide Applicator in the proposed categories of operation. If the business is a corporation, the licensed applicator(s) may be officers *or* employees.
2. The applicant must provide proof of financial responsibility for pesticide applications (i.e. insurance), which must accompany the license application, along with the appropriate fee. **Form 4018**, the Proof of Financial Responsibility Insurance Certificate Form, is available from the Pesticides Division in Salem for this purpose. This form must be completed by the applicant's insurance carrier and submitted to ODA. Proper insurance must be in effect at all times during the licensing period for a Pesticide Operator license to be valid. Commercial Pesticide Operators are required to maintain records of all pesticide applications made. The Commercial Pesticide Operator license expires on December 31st and is renewable annually. The licensing fee depends on the number of categories held on the license. Contact the Pesticides Division at **503-986-4635** if you have questions or need additional information.

Consultant

A **Pesticide Consultant License** is required of individuals who provide technical advice to those who use restricted-use pesticides. Typically individuals such as county extension agents, chemical company technical and sales representatives, food processor field representatives and representatives of agricultural supply outlets may need to hold this license. To become certified and qualify, an individual must receive a score of 70% or higher on Pesticide Consultant examination. Once the applicant becomes certified, he/she may apply for the license. The Pesticide Consultant license expires on December 31st and is renewable annually for a \$40.00 fee during the licensee's certification period. Contact the Pesticides Division at **503-986-4635** if you have questions or need additional information.

Dealer

A **Pesticide Dealer License** is required of individuals or businesses who sell, offer for sale, handle, display, or distribute restricted-use pesticides to pesticide users. No examination is required to obtain this license. Pesticide dealers must prepare and maintain records of restricted-use pesticide sales. This license expires on December 31st and is renewable annually for a \$75.00 fee. Contact the Pesticides Division at **503-986-4635** if you have questions or need additional information.

Private Applicator

The **Private Pesticide Applicator License** is required of individuals who use or supervise the use of restricted-use pesticides on land in agricultural production that is owned, leased, or rented by them or their employer. This includes farm and ranch land, forest land, nurseries, Christmas trees, orchards and other properties on which agricultural crops or commodities are produced. No license is needed if only general-use pesticides are used. Private Pesticide Applicators are required to maintain records of their applications of restricted use pesticides. To become certified as a Private Pesticide Applicator, an individual must obtain a score of 70% or higher on the Private Pesticide Applicator examination. Once an individual qualifies by becoming certified, he/she is entitled to become licensed as a Private Pesticide Applicator. The licensing fee is \$25.00. Unlike other Oregon pesticide applicator licenses, the licensing period for this license is the same as the certification period. This license expires on December 31 of the year of expiration. Contact the Pesticides Division at **503-986-4635** if you have questions or need additional information.

Public Applicator

The **Public Pesticide Applicator License** is required of employees of public agencies in two instances when they are applying pesticides in the course of their work for the agency:

1. Those who apply or supervise the application of restricted-use pesticides.
2. Those who use machine-powered equipment to apply *any* pesticide product (restricted-use or general-use).

The Public Pesticide Applicator may also consult on the use of restricted-use pesticides in the categories in which they are licensed. Public Applicators must prepare and maintain records of restricted-use pesticide applications and applications with machine-powered equipment. To qualify for this license, an individual must obtain a passing score of 70% or higher on the required examinations (Laws and Safety examination + appropriate category examination(s)). The Public Pesticide Applicator license expires on December 31st and is renewable annually during the licensee's certification period. The licensing fee depends on the number of categories held on the license. Contact the Pesticides Division at **503-986-4635** if you have questions or need additional information.

Trainee

A **Directly Supervised Commercial Pesticide Trainee License** is required of individuals who are employed by a Commercial Pesticide Operator and who apply pesticides under the direct supervision of a properly licensed Commercial Pesticide Applicator (supervising applicator). This license must also be held by individuals who apply restricted-use pesticides to non-agricultural property under the supervision of a properly licensed individual who controls the property (i.e., privately owned golf courses, industrial properties, etc.). The categories held by the trainee are limited to those held by the supervising applicator, and must correspond to the application work being conducted. To qualify for this license, the applicant must obtain a score of 70% or more on the Directly Supervised Trainee Examination. This license expires on December 31 of the year in which it is first issued and is limited to a one-time renewal the following year. The licensing fee depends on the number of categories held on the license. Contact the Pesticides Division at **503-986-4635** if you have questions or need additional information.

A **Directly Supervised Public Pesticide Trainee License** is required of individuals who are employed by a public agency and who are applying pesticides under the direct supervision of a properly licensed Public Pesticide Applicator (supervising applicator). The categories held by the Trainee are limited to those held by the supervising applicator, and must correspond to the application work being conducted. To qualify for this license, the applicant must obtain a score of 70% or more on the Directly Supervised Pesticide Trainee Examination. This license is valid for the remainder of the calendar year in which it is first issued and is limited to a one-time renewal the following year, expiring on December 31. The licensing fee depends on the number of categories held on the license. Contact the Pesticides Division at **503-986-4635** if you have questions or need additional information.

An **Immediately Supervised Commercial Pesticide Trainee License** is required of individuals employed by a Commercial Pesticide Operator who is applying pesticides under the immediate supervision of a properly licensed Commercial Pesticide Applicator (supervising applicator). This license must also be held by individuals who apply restricted-use pesticides to non-agricultural property under the immediate supervision of a properly licensed individual who controls the property (i.e., privately owned golf courses and schools, industrial properties, etc.). The categories held by the trainee are limited to those held by the supervising applicator, and must correspond to the application work being conducted. This license is renewable annually, expiring on December 31 of each year. There is no limitation on the number of times this license may be renewed. The licensing fee depends on the number of categories held on the license. Contact the Pesticides Division at **503-986-4635** if you have questions or need additional information.

An **Immediately Supervised Public Pesticide Trainee License** is required of individuals who are employed by a public agency and who are applying pesticides under the immediate supervision of a properly licensed Public Pesticide Applicator (supervising applicator). The categories held by the Trainee are limited to those held by the supervising applicator, and must correspond to the application work being conducted. This license is renewable annually, expiring on December 31 of each year. There is no limitation on the number of times this license may be renewed. The licensing fee depends on the number of categories held on the license. Contact the Pesticides Division at **503-986-4635** if you have questions or need additional information.

LANDSCAPE CONTRACTORS BOARD

GENERAL INFORMATION

What is a licensed landscape contractor?

A landscape contractor is a person who has a license (pursuant to the regulations as defined in ORS 671.520). A landscape contractor plans and installs lawns, shrubs, vines, trees and other decorative vegetation including the preparation of the property on which the vegetation is to be installed. A landscape contractor also constructs ornamental water features and drainage and irrigation systems for decorative vegetation, plans and installs fences, decks, arbors, driveways, walkways and retaining walls or any combination of activities described in this paragraph. See ORS 671.520(2) for the full legal definition.

Do I need a license to do yard/landscape maintenance?

No, landscape maintenance is not presently a state regulated trade. However, you should check with your city or county for local requirements. Landscape maintenance is work done on an already existing landscape (mowing; pruning; edging; applying bark dust; trimming; planting of annuals, perennials and bulbs; and general upkeep of an already installed project).

How do I know if I'm doing landscape maintenance or landscape contracting?

Maintenance involves the care of plants and the general upkeep of an already installed project. Landscape contracting is the installation of a project or any part of it.

Who needs to be licensed?

Any person who operates as a landscape contractor in the State of Oregon. This includes any business that advertises as a landscape business or who uses the title "landscape contractor" or "landscape contracting business".

Once I have my landscape contractor's license, are there any restrictions as to what services I may offer the consumer?

Yes. There are three types of landscape contractor's license:

- *All Phase—all phases of landscaping including irrigation and LIBDI. (Backflow)*
- *Standard—does not include irrigation or LIBDI.*
- *Irrigation & LIBDI only—irrigation and backflow only.*

What if a landscape contractor holds a license from another state?

Oregon does not have reciprocity agreements with other states. However, you should submit a copy of your out-of-state license with your application. Your out-of-state license will not automatically qualify you for a license but it may qualify you to sit for the exam.

What is the application fee for the exam?

The initial application fee of \$60 must be submitted with your license application and documentation of eligibility as well as the exam fee based on which license you are applying for. For the All Phase license the exam fee is \$75. For the Standard license the exam fee is \$55. For the Irrigation license the exam fee is \$35. Retake fees are \$15 for the first section and \$10 for each additional section per sitting. If you will be taking the exam at a DMV, there is an additional \$12 fee.

How long before I'll know if I'm eligible to sit for the exam?

Applications are reviewed within 5 working days. The length of time before you're notified of eligibility depends on the complexity of your application and how long it takes to verify all of your documentation of experience.

What should I study for the exam?

The Laws & Rules will be sent to you when you have qualified to sit for the exam. The Study Guide is available on the web at www.lcb.state.or.us

Can I get a sample exam or previous exam to study?

No, however, sample questions are included in the Study Guide material.

What if I change my mind and decide not to take the exam? Can I get my exam fee back?

There is a \$20 processing fee that is nonrefundable to cover the cost of paperwork and time involved in the application review.

How often is the exam given?

The exam is given on an individual basis by appointment only. You will be notified by mail when you are approved to take the exam.

Where is the exam given?

If the Board determines that you are eligible to take the exam, you may either schedule an appointment in the Salem office (taken on a computer), or you may schedule to take the exam at an Oregon Department of Motor Vehicles (DMV) office that we have contracted with to proctor the exam. A list is provided in the Study Guide. There is an additional \$12 fee for mailing an exam to the DMV.

What does the exam consist of?

There are seven sections to the exam: Laws and Rules, Generals A-D, Irrigation, and LIBDI. You must pass the Laws and Rules section and Generals A-D if you wish to do all forms of landscaping except irrigation (Standard license). You must pass the Laws and Rules, Irrigation, and LIBDI sections if you wish to perform irrigation and backflow work only (Irrigation and LIBDI only license). You must pass all seven sections if you wish to do all phases of landscaping (All Phase license). You must obtain a passing score of 75% on each section.

There will be different versions of the exam sections, so if you fail, you will be taking a different version of that exam section.

How many questions are on the exam?

The number of questions varies from 45 to 100 per section. The All Phase exam has a total of 425 questions.

How will I find out the results?

You will be notified by mail within 10 working days unless you take the exam at the Salem office on the computer system which gives you immediate results.

After I pass the exam, what are my fees?

The initial license fee is \$75 and the renewal fee each year is \$75. Your license will show an expiration date and your renewal form and fee must be received on or before that date each year. A late penalty fee of \$25 is charged if you renew after that expiration date.

Once I pass the exam, can I start working?

No, passing the exam allows you to become a licensed landscape contractor. However, to begin work, you must be employed by (or be an owner of) a licensed landscaping business (see business license application packet).

If I do not pass, is the fee refunded?

No.

If I fail, can I take the exam again?

You may take the exam as many times as you want. However, you must wait two weeks between each attempt.

What if I pass some of the exam sections, but not all of them?

If you passed the Laws and Rules, and all four sections in General A-D, you can be issued a Standard license. If you pass the Laws and Rules, Irrigation and LIBDI sections, you can be issued an Irrigation and LIBDI only license. If you want the All Phase license, you must take and pass all the exam sections.

Is there a fee to retake the exam?

The fee to retake the exam is \$15 for the first section and \$10 for each additional section per sitting.

Can I review the results of exam questions if I fail?

Yes. If you fail a section, information about reviewing will be given to you when you receive your exam results. If exam taken in Salem you can review immediately. Reviews can only be done in the Salem office. Once you review you must wait two weeks before retaking the exam section(s) you failed. You may only review the questions you missed.

What about LIBDI, the landscape irrigation backflow-prevention device installer's license?

It is no longer necessary for licensed landscapers to obtain a special plumbing license from the State Plumbing Board to install backflow prevention assemblies for irrigation systems and water features. Your Irrigation and LIBDI license will include tapping into potable water supply lines and installing backflow prevention assemblies for irrigation and water features only. You are required to pass the LIBDI section along with the irrigation section.

How about low-voltage electrical installations?

Licensed landscapers are authorized to install low-voltage landscape irrigation control wiring and outdoor landscape lighting without an electrical license. Low-voltage is defined as not exceeding 300 volt amperes. This limits the authorization for outdoor landscape lighting to systems with transformers of 300 watts or less. Landscapers can keep this electrical license exemption as long as:

- 1) Their license with the Board is current,*
- 2) Installations do not exceed 300 volt amperes,*
- 3) All materials and installations comply with the Electrical Specialty Code,*
- 4) Appropriate installation permits are obtained, and*
- 5) The business issues ID cards to its landscape irrigation control wiring and outdoor landscape lighting installers.*

What other licenses do I need?

Besides a landscape contractor's license, you also need a landscape business license if you plan to start your own business.

How can I qualify to take the licensing exam?

To qualify to sit for the exam your experience must be within 10 years of date of application:

1. Employed by a licensed landscape business (es) for two years (24 months).
2. Self-employed as, or worked for, a landscape maintenance business for four years (48 months).
3. Employed by a licensed landscape business (es) for one year (12 months) and worked as a landscape maintenance business for two years.
4. Self-employed or worked for a licensed landscape business (es) for one year and have one year of education in the landscape or related field (36 credit hours).
5. Worked as a landscape maintenance business for two years and have one year of education in the landscape or related field (36 credit hours).

6. Have completed the CLT program administered by OLCA or ALCA.
7. Have obtained Associates, Bachelors or Masters Degree in horticulture or related field which includes cooperative work experience.
8. Holds current certification with the International Society of Arboriculture (ISA) as a Certified Arborist.
9. Any combination listed above.

To verify your employment with a licensed landscape business, please have your employer(s) complete the Employer Verification Statement (page 9) and return it to you. This form(s) must be submitted with your exam and license application. (NOTE: out-of-state landscape maintenance and private business employers can also use this form.)

To verify an Associates, Bachelors, or Masters Degree you will need to submit a copy of your transcripts.

To verify one year of education in the landscape field, you will need to submit copies of your college transcripts showing at least 36 credit hours of classes.

To verify your CLT, you need to submit your signed certificate.

To verify experience gained in landscape maintenance* work, you will need to complete the Landscape Maintenance Project Description form (page 11). You may photocopy this form as many times as you need. These forms must be submitted with your application.

- a) To show four years of maintenance* work you will need to submit six Landscape Maintenance Project Descriptions per year for a total of 24 in a 48 month period.
- b) To show two years of maintenance* work you will need to submit six Landscape maintenance Project Descriptions per year for a total of 12 in a 24 month period.

*Landscape maintenance means work done on an already existing landscape (mowing; pruning (up to 15'); edging; applying bark dust; trimming; planting of annuals, perennials and bulbs; and general upkeep.)

It is **important** that you fill out the Landscape Maintenance Project Descriptions completely and legibly. The form must list the full name of the customer, address, city, state, and zip code or it will be returned to you for completion. You need to have the customer sign, date and insert their telephone number for our verification process.

Make copies for your records before you submit the forms to us.

LANDSCAPE TECHNOLOGY

PROGRAM REVIEW

Appendix B

Learning outcomes for the Landscape Technology Department, Certificates and Degrees

PROGRAM OUTCOMES

LANDSCAPE SERVICES TECHNICIAN - ONE YEAR CERTIFICATE	...42
LANDSCAPE TECHNOLOGY - AAS DEGREE.....	43
LANDSCAPE CONSTRUCTION - TWO YEAR CERTIFICATE43
LANDSCAPE DESIGN - TWO YEAR CERTIFICATE45
LANDSCAPE MANAGEMENT - TWO YEAR CERTIFICATE46

PROGRAM OUTCOMES

LANDSCAPE SERVICES TECHNICIAN ONE YEAR CERTIFICATE

OUTCOMES

1. Communicate graphically, orally and in written language.
2. Work individually or as part of a team.
3. Collect, analyze, synthesize and summarize data.
4. Operate and perform daily maintenance on landscape equipment.
5. Perform landscape installation and maintenance techniques leading toward optimum plant cultural conditions.
6. Perform work in a safe manner to meet state and federal requirements.
7. Work in an environmentally sensitive manner.
8. Use computation skills in solving landscape problems.
9. Obtain the knowledge required for pesticide applicator certification.

ASSESSMENT

1. Oral reports and presentations.
2. Produce graphic landscape design plans.
3. Produce written reports.
4. Compile plant notebooks.
5. Summarize data.
6. Produce research data.
7. Demonstrate operation and use of landscape equipment and tools.
8. Install landscape plants and materials.
9. Perform maintenance tasks.
10. Written exams.
11. Identification exams.

PREREQUISITES

1. Willingness to work outdoors in all types of weather.
2. Intent to pursue a landscape career.
3. Placement at or above the following asset test scores:
 - Writing skills 41
 - Reading skills 42
 - Numerical skills 42

PROGRAM OUTCOMES

LANDSCAPE TECHNOLOGY - AAS DEGREE

OUTCOMES

1. Communicate graphically, orally and in written language.
2. Work individually or as part of a team.
3. Collect, analyze, synthesize and summarize data.
4. Operate and perform daily maintenance on landscape equipment.
5. Perform landscape installation and maintenance techniques leading toward optimum plant cultural conditions.
6. Perform work in a safe manner to meet state and federal requirements.
7. Work in an environmentally sensitive manner.
8. Use computation skills in solving landscape problems.
9. Obtain the knowledge required for pesticide applicator certification.
10. Obtain the knowledge required for certifications and licensing related to the landscape industry.
11. Awareness of laws and business practices in landscaping.
12. Complete written proposals and contracts.
13. Meet assigned deadlines.
14. Develop basic knowledge to market skills and services.
15. Formulate a bid involving labor, overhead and material costs.
16. Demonstrate and document satisfactory horticulture/landscape industry related work experience.

ASSESSMENT

1. Oral reports and presentations.
2. Produce graphic landscape design plans.
3. Produce written reports.
4. Compile plant notebooks.
5. Summarize data.
6. Produce research data.
7. Demonstrate operation and use of landscape equipment and tools.
8. Install landscape plants and materials.
9. Perform maintenance tasks.
10. Written exams.
11. Identification exams.
12. Complete bid proposals.
13. Create portfolio.
14. Job performance review.
15. Meet deadlines.

PREREQUISITES

1. Willingness to work outdoors in all types of weather.
2. Intent to pursue a landscape career.
3. Placement at or above the following asset test scores:
 - Writing skills 41
 - Reading skills 42
 - Numerical skills 42
4. Completion of first year sequence.

PROGRAM OUTCOMES

LANDSCAPE CONSTRUCTION - TWO YEAR CERTIFICATE

OUTCOMES

1. Communicate graphically, orally and in written language.
2. Work individually or as part of a team.
3. Collect, analyze, synthesize and summarize data.
4. Operate and perform daily maintenance on landscape equipment.
5. Perform landscape installation and maintenance techniques leading toward optimum plant cultural conditions.
6. Perform work in a safe manner to meet state and federal requirements.
7. Work in an environmentally sensitive manner.
8. Use computation skills in solving landscape problems.
9. Obtain the knowledge required for pesticide applicator certification.
10. Obtain the knowledge required for certifications and licensing related to the landscape industry.
11. Awareness of laws and business practices in landscaping.
12. Complete written proposals and contracts.
13. Meet assigned deadlines.
14. Develop basic knowledge to market skills and services.
15. Formulate a bid involving labor, overhead and material costs.
16. Demonstrate and document satisfactory horticulture/landscape industry related work experience.

ASSESSMENT

1. Oral reports and presentations.
2. Produce graphic landscape design plans.
3. Produce written reports.
4. Compile plant notebooks.
5. Summarize data.
6. Produce research data.

7. Demonstrate operation and use of landscape equipment and tools.
8. Install landscape plants and materials.
9. Perform maintenance tasks.
10. Written exams.
11. Identification exams.
12. Complete bid proposals.
13. Job performance review.
14. Meet deadlines.

PREREQUISITES

1. Willingness to work outdoors in all types of weather.
2. Intent to pursue a landscape career.
3. Placement at or above the following asset test scores:
 - Writing skills 41
 - Reading skills 42
 - Numerical skills 42
4. Completion of first year sequence.

PROGRAM OUTCOMES

LANDSCAPE DESIGN - TWO YEAR CERTIFICATE

OUTCOMES

1. Communicate graphically, orally and in written language.
2. Work individually or as part of a team.
3. Collect, analyze, synthesize and summarize data.
4. Operate and perform daily maintenance on landscape equipment.
5. Perform landscape installation and maintenance techniques leading toward optimum plant cultural conditions.
6. Perform work in a safe manner to meet state and federal requirements.
7. Work in an environmentally sensitive manner.
8. Use computation skills in solving landscape problems.
9. Obtain the knowledge required for certifications and licensing related to the landscape industry.
10. Awareness of laws and business practices in landscaping.
11. Complete written proposals and contracts.
12. Meet assigned deadlines.
13. Develop basic knowledge to market skills and services.
14. Formulate a bid involving labor, overhead and material costs.

ASSESSMENT

1. Oral reports and presentations.
2. Produce graphic landscape design plans.
3. Produce written reports.
4. Compile plant notebooks.
5. Summarize data.
6. Produce research data.
7. Demonstrate operation and use of landscape equipment and tools.
8. Install landscape plants and materials.
9. Perform maintenance tasks.
10. Written exams.
11. Identification exams.
12. Complete bid proposals.
13. Job performance review.
14. Meet deadlines.

PREREQUISITES

1. Willingness to work outdoors in all types of weather.
2. Intent to pursue a landscape career.
3. Placement at or above the following asset test scores:
 - Writing skills 41
 - Reading skills 42
 - Numerical skills 42

PROGRAM OUTCOMES

LANDSCAPE MANAGEMENT - TWO YEAR CERTIFICATE

OUTCOMES

1. Communicate orally and in written language.
2. Work individually or as part of a team.
3. Collect, analyze, synthesize and summarize data.
4. Operate and perform daily maintenance on landscape equipment.
5. Perform landscape installation and maintenance techniques leading toward optimum plant cultural techniques.
6. Perform work in a safe manner to meet state and federal requirements.
7. Work in an environmentally sensitive manner.
8. Use computation skills in solving landscape problems.
9. Obtain the knowledge required for pesticide applicator certification.
10. Obtain the knowledge required for certification and licensing related to the landscape industry.

11. Awareness of laws and business practices in landscaping.
12. Complete written proposals and contracts.
13. Meet deadlines.
14. Diagnose plant health and problems.
15. Develop pest control strategies.

ASSESSMENT

1. Oral reports and presentations.
2. Produce written reports.
3. Compile plant notebooks.
4. Summarize data.
5. Produce research data.
6. Demonstrate operation and use of landscape equipment and tools.
7. Install landscape plants and materials.
8. Perform maintenance tasks.
9. Written exams.
10. Identification exams.
11. Complete bid proposals.
12. Job performance review.
13. Meet deadlines.

PREREQUISITES

1. Willingness to work outdoors in all types of weather.
2. Intent to pursue a landscape career.
3. Placement at or above the following asset test scores:
 - Writing skills 41
 - Reading skills 42
 - Numerical skills 42

**LANDSCAPE TECHNOLOGY
PROGRAM REVIEW**

Appendix C

**Portland Community College – Landscape Technology
Survey of Graduates and Former Students**

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Landscape Technology Student Survey Results (2001 – 2002)50

September 19, 2001

Full Name
Address
City, State Zip

Dear

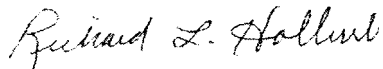
Over the next year the Landscape Technology Department is undergoing a thorough program review, and **we need your help!** The purpose of the review is to improve the program and to make sure our students are receiving the training and education needed to succeed in the industry or in whatever landscape projects they might do.

Your role in the review is a vital part of our evaluation. We are asking for input from former students who took one or more Landscape Technology classes at PCC, and our records show that you are one of those students. Whether you took one or more classes out of personal interest, or received a degree or certificate, we need to hear from you.

Please take a little time to complete the enclosed two-page survey as completely as you can. The survey does not include your name or any identifying information, so be as candid as you would like. The information collected will be used to assist us in planning the future configuration and content of the programs we teach.

Please accept my appreciation for your input. I hope all is going well for each of you.

Sincerely,



Dick Hollenbeck
Department Chair: Landscape Technology

LANDSCAPE TECHNOLOGY STUDENT SURVEY
PROGRAM ASSESSMENT 2001-2002

SURVEY: Survey sent to Landscape Technology completers and any former students who took any classes in the last five (5) years. Some part time students may have entered the program as far back as 1992-93.

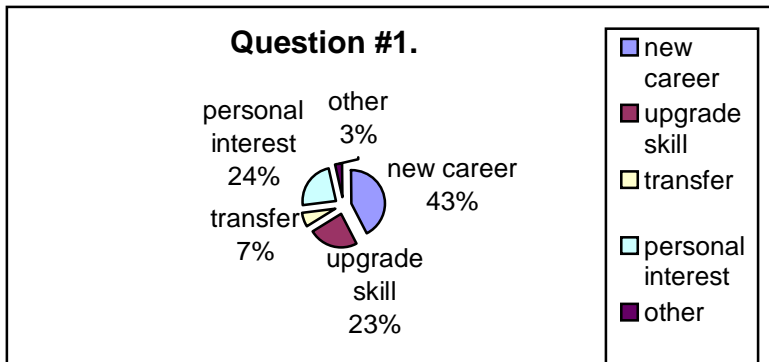
NUMBERS & RESPONSE

- Surveys sent – 882
- Surveys returned not deliverable – 124 with 20 resent
- Surveys returned – 164

RESPONSE: 164 / 778 = **21%**

1. What was your primary reason for attending PCC? 176 separate responses

- A. Prepare for a new career _____ **75 = 42.6%**
- B. Upgrade skills to keep current job or get a better one ___ **41 = 23.3%**
- C. Take classes that would transfer to a four year college ___ **12 = 6.8%**
- D. Take classes for personal interest _____ **42 = 23.9%**
- E. Other _____ **6 = 3.4%**

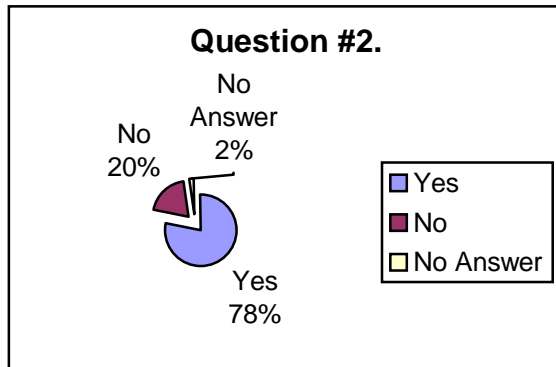


OTHER:

- All
- High School Completion
- To Take Chemical Applicator's Test
- Explore career possibilities
- Professional development
- Skill development

2. Do you feel you accomplished your goal?

- Yes – 128 = 78.1%
- No - 33 = 20.1%
- No Answer – 3 = 3.4%

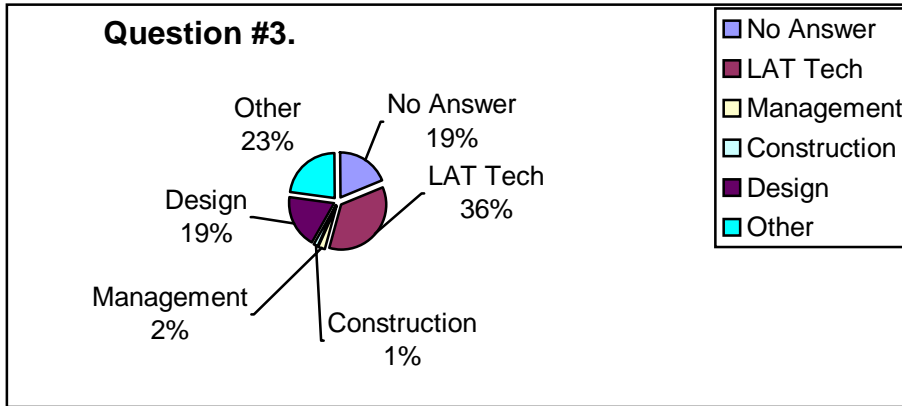


If not why?

- Lost interest - 2
- Personal or financial reasons - 9
- Not prepared enough for course level - 2
- Changed career - 2
- Did not take other classes of interest
- Classes moved too fast
- Course not interesting
- Want to take more turf classes
- Classes not challenging enough
- Not enough classes in field
- Plans stalled
- Not finished with program - 4
- Some classes not useful
- Did not use skills
- Should have taken more classes
- Classes not all given at available time - 3

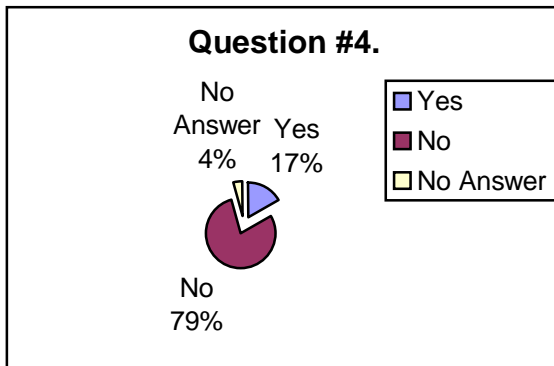
3. While attending PCC what was your major field of study? – 164 responses

- No answer – 31
- LAT Tech./General – 58
- Management – 4
- Construction – 2
- Design – 31
- Other – 38



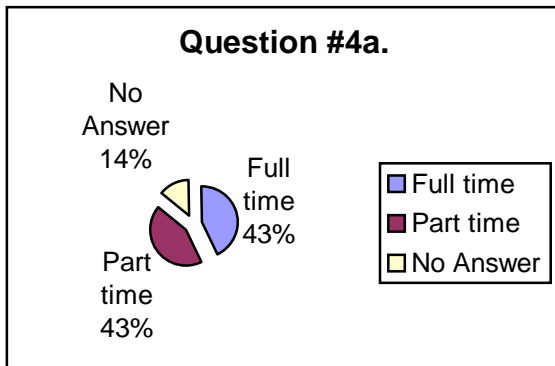
4. Since leaving/graduating from PCC, have you attended another college or trade school? - 164 responses

- Yes – 28
- No – 129
- No Answer – 7



4a. If you attended school was it Full time or Part time (12 credits or more full time)?
 - 28 yes responses

- Full time – 12
- Part time – 12
- No answer – 4

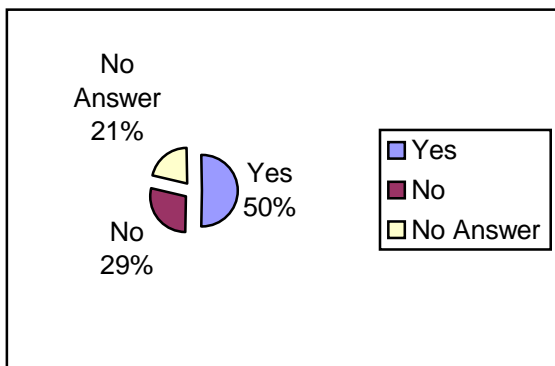


* Schools attended :

University of Oregon	University of NE Omaha
Piedmont Virginia Com. College	University of Colorado
Eastwest School of Massage	Western Oregon University
3- Portland State University	Oregon Col. of Arts & Crafts
2- Oregon State University	Eastwest Sch. of Healing Art
College of Emergency Services	Linn Benton Community Col
7- Clackamas Community College	

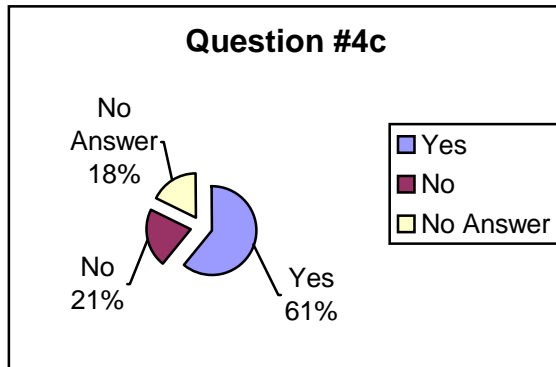
4b. Are you pursuing a degree?

- Yes – 14
- No – 8
- No Answer- 6



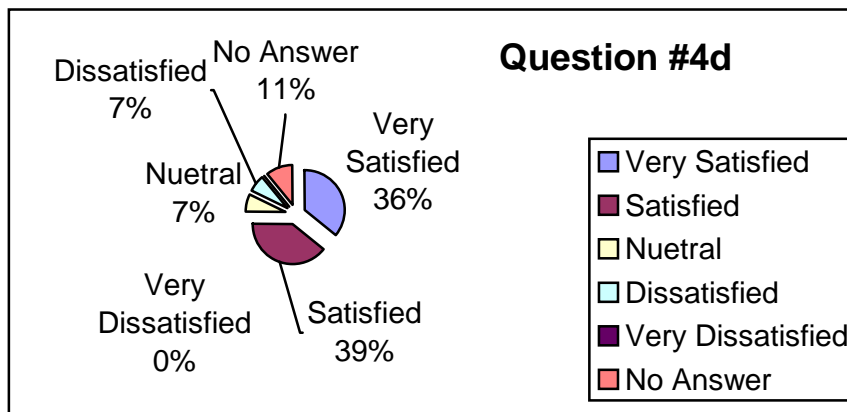
4c. Is your program related to Portland Community College Landscape Technology?

- Yes – 17
- No – 6
- No Answer – 5



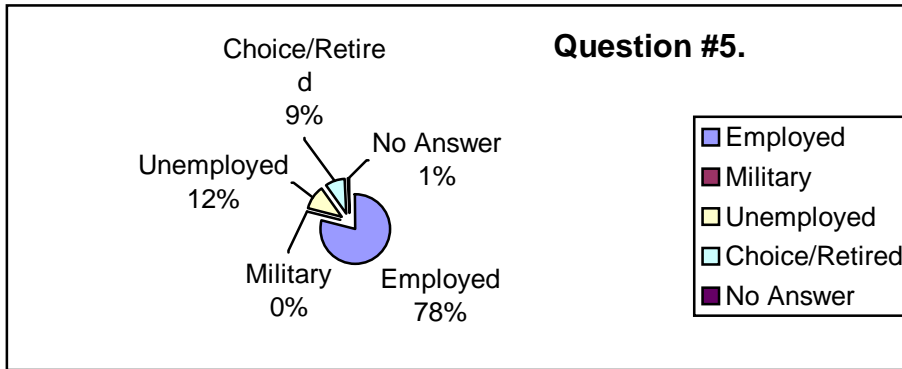
4d. What is the level of satisfaction with the preparation PCC gave you for classes at the school you are attending?

- A. Very Satisfied – 10
- B. Satisfied – 11
- C. Neutral – 3
- D. Dissatisfied – 2
- E. Very Dissatisfied – 0
- F. No Answer – 3



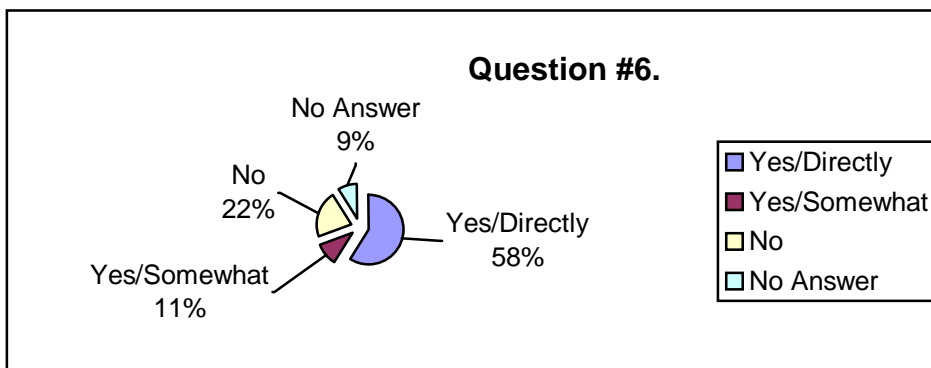
5. What is your current employment status? - 165 responses

- A. Employed - 130
- B. Full Time Military Service - 0
- C. Unemployed - 19
- D. Not in Labor Force by Choice or Retired – 15
- E. No Answer – 1



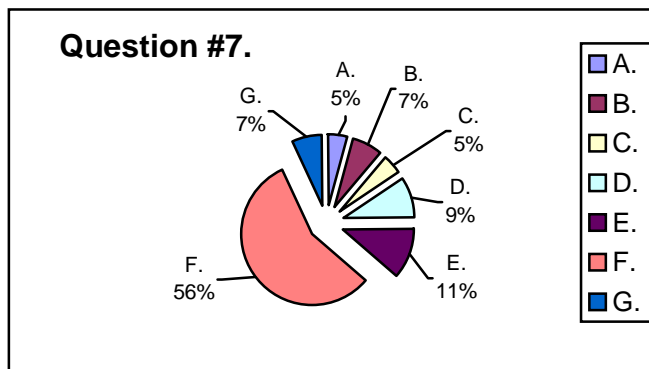
6. Is your current job related to your PCC program of study?

- Yes it is closely related – 72
- Yes it is somewhat related – 13
- No it is not related – 27
- No Answer 11



7. If your job is not related to your PCC program of study, which of the following best describes the reason for this? 44 responses

- A. Lack of jobs in program area - 2
- B. Did not feel qualified in my program area - 3
- C. Did not like the type of work - 2
- D. Found a better job in another field - 4
- E. Took an available job to continue education - 5
- F. Other - 25
- G. No Answer – 3

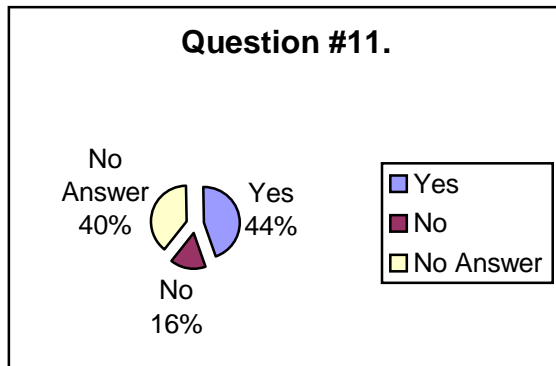


REASONS:

- Instructor not culturally sensitive
- Took a job to fill in time
- Already had career; not finished with classes
- Program for recreation/personal interest
- Continued in current field
- Was not able to transfer
- Career idea changed
- Exploring career only
- Not ready to change careers
- Did not complete program
- Pay too low
- Have a landscape business as a side business
- Became pregnant and a home mother

11. As a result of your studies at PCC, has your employment situation improved (either by obtaining new employment or enhancing your current employment)?

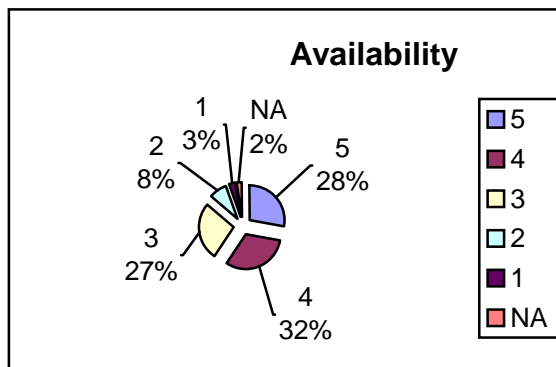
- Yes – 73
- No – 26
- No Answer – 65



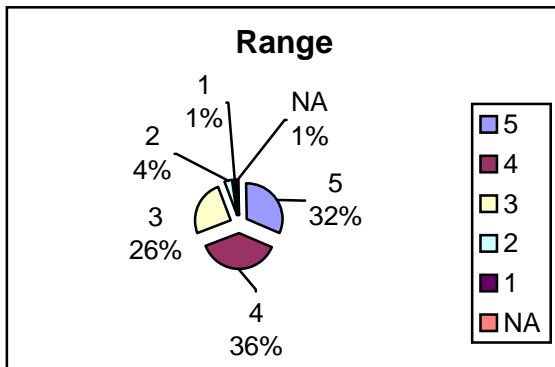
13. Please rate the quality of your PCC experience in the following areas. If you did not use the service; answer NA.

5 = excellent
4
3 = adequate
2
1 = poor
NA

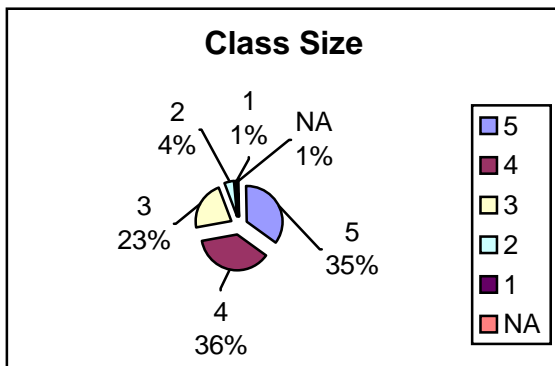
- Availability of classes when needed



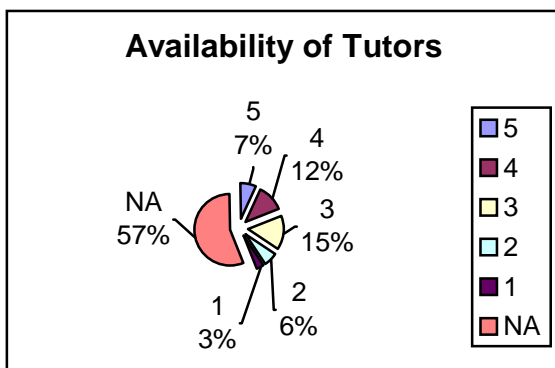
- Range of subject matter:



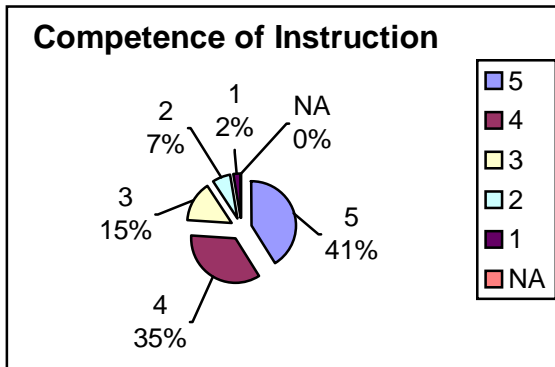
- Class size:



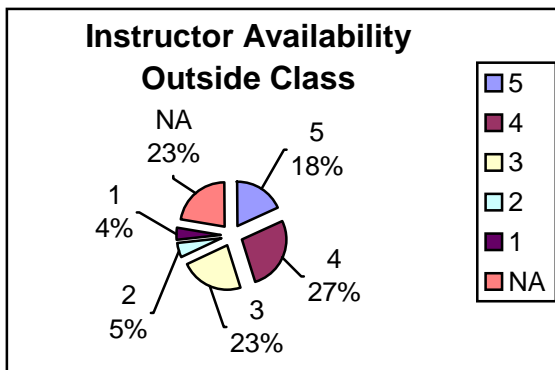
- Availability of Tutors



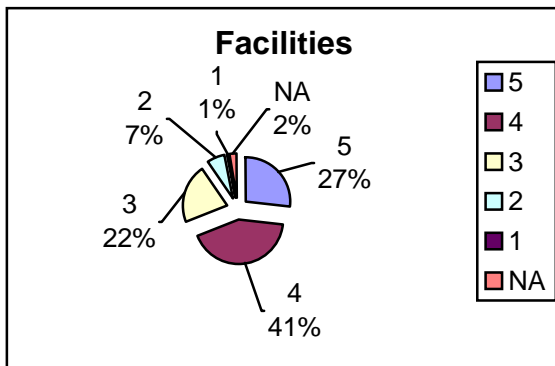
- Competence of Instruction



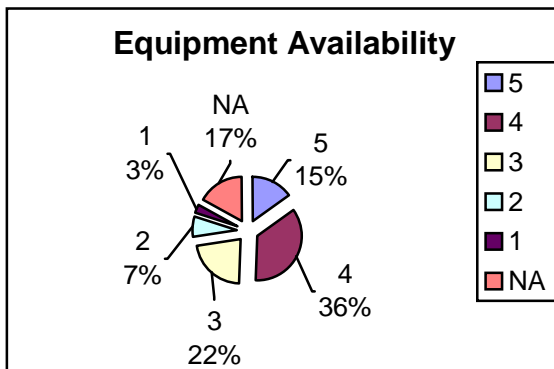
- Availability of Instructors Outside of Class



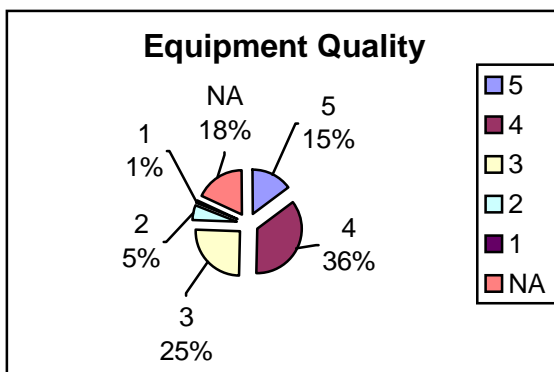
- Facilities



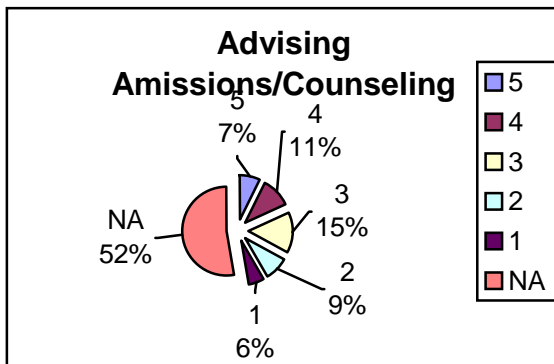
- Equipment Availability



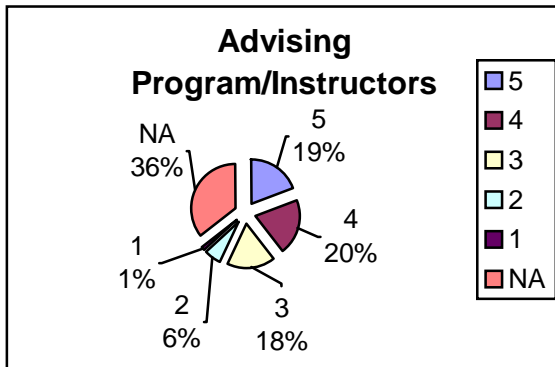
- Equipment Quality



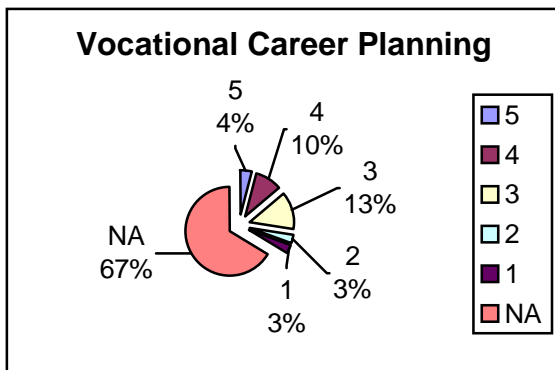
- Advising by Admissions/Counseling



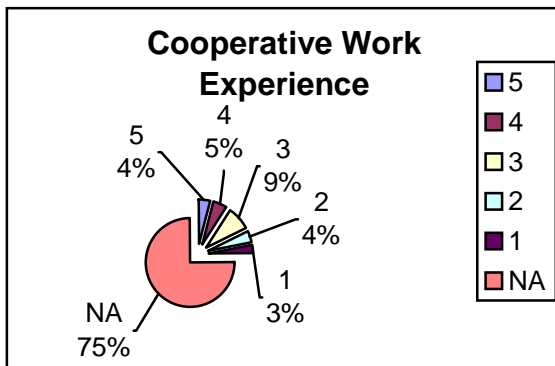
- Advising Program/instructors



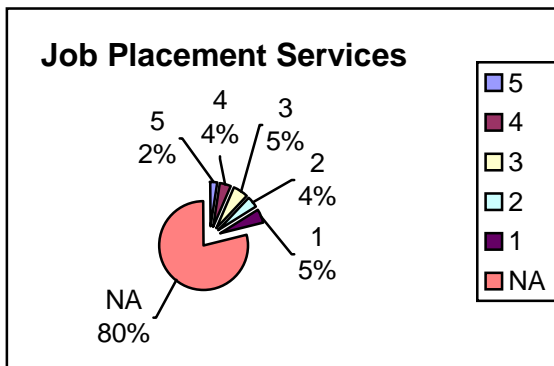
- Vocational Career Planning



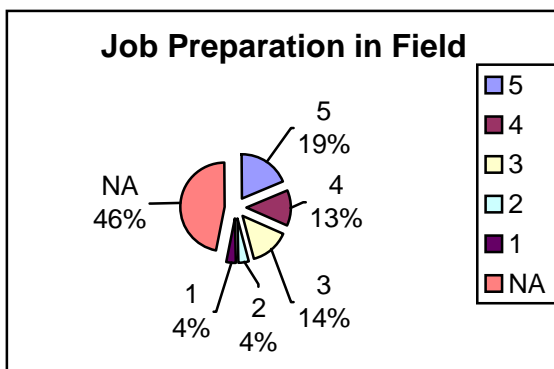
- Cooperative Work Experience Program



- Job Placement Services



- Job Preparation in Your Area of Study



13. If you marked any of the above areas as poor, please indicate below how it could be improved.

- How can I find a job in design? Who do I talk to?
- I was unhappy with the entire landscape program. It needs to be redone completely with more interesting lectures.
- Provide more class variety at Rock Creek.
- Job placement: why don't they have some place set up to show all available jobs?
- Too big of class for "studio" type class.
- I had two teachers that were only okay at best.

- I feel the quality of teaching of certain courses were not worth the money paid. The material covered was below the potential for the amount of time and in others the teacher did not know the material well. In contrast, other classes were great and full
- Better access to equipment outside of class hours, especially in the evenings or when other related classes occur.
- Relationships need to be forged with industry to provided meaningful internship opportunities to students. Especially in the area of design, estimating and business operations.
- Listen to students, show and be less judgemental of students' skills, and culture differences.
- The instructors were competent but I found the method of teaching to be very boring, not challenging at all. I felt the information was spoon fed with not much room for independent thought or problem solving.
- Job listings could be kept more current.
- RE: competence of instruction: . Some instructors need to improve their methods. Add more sales and business instruction in design program.
- You all have a great program and really made a positive input on me being able to farm. Thanks for letting a farmer benefit from your Landscape classes. Your teachers have all been 1st class and helpful from a very practical basis.
- Facilities: not happy with enclosed environmentally sealed buildings.
- Availability of classes: had to attend an extra term to get summer offering.
- Lack of tutors versed in PT field.
- Availability of instructors: instructors loaded down; a couple should be added.
- Computers available to students only during class time.
- Need to keep computers upgraded.
- I received no help in getting a job after my completion (marked did not use program advising)
- Job placement opportunities: need to facilitate contacts with industry.
- Have pesticide applicator equipment training in the classroom.

- Some instructors were excellent while others were poor. Perhaps all instructors should have student evaluations for all classes.
- Could not always get classes I wanted especially in summer.
- Business class should include more on marketing, record keeping, costs, rates etc.
- Better funding
- More knowledgeable counselors
- More design classes
- The subject matter was uninteresting and the classes uninspired.
- The availability of instructor was limited
- The landscape tech. department lacked in field training and real life scenarios.
- For on-campus coop. require more than one project. Broaden the scope of skills involved.
- Was not aware of jobs available to landscape students.
- Facilities: PARKING
- If possible add more tutors experienced with programs
- More repetition of classes, several times a year for basic classes would help working students.
- Need better job placement. Improve by visiting job sites two to three times per year.
- Some of the instructors have a difficult time delivering an organized lecture. There is a lot of random, off topic, out of sequence information.
- Using an outline for specific topics would help students.
- Don't require tuition for coop. hours. Eliminate the journal. Not useful for older students with work experience.
- More classes at night. Would have to take time off work to finish degree/certificate.
- For people that work in nursery's, Saturday is a bad day.
- Equipment availability: need Skid steer training
- Equipment quality: upgrade existing equipment
- Advisors in general counseling need to be more knowledgeable about LAT

- At time my schedule was too full to do a good job.
- Post job openings in a central area.
- Some staff, , are not well respected teachers.
- New instructors.
- Design jobs not that easy to learn about.
- Night classes work well but early morning Saturday labs do not.
- Offer more classes at night.
- Would be nice to have some kind of cafeteria service at Rock Creek during summer hours and later in evenings.
- Admissions, counseling should give list of classes that count as general education.
- My counselor would not listen to me and what I wanted to do and needed.
- New drafting tables and slide show equipment, construction tools, soil testing kits. More computer use in program.
- Landscape Technology appeals to women. Women love nurturing and growing live things. But in the real world the labor intensive work is better suited for men. Aim classes at areas where women can earn a living wage but not compete with men and or people who will work for lower wages. Sales and management.
- Coop for older students who have prior field experience is a waste of time.
- More advising programs and career guidance classes.
- One instructor, , is an excellent instructor. He is very knowledgeable and is very precise about what is required.
- One instructor, , was terrible. He provides no study materials.
- Letter:
 Advisors were of no help.
 Department advising was excellent.
 Policy of not giving credit for life experience should be reviewed
 General education credits should be program specific. As is they are a waste of money.
 LAT has the best program for landscape design in the Portland Metro area.
 Plant composition should provide more information on the technical correctness of plant combinations not just the artistic.

LAT instructors offer a good mix of backgrounds and talents.
One instructor, , does not teach in a coherent, straight forward manner.
Class schedules could be improved. It would be better if students could take more than one class per day.
Credit should be given to, , the program for establishing and overseeing a well-balanced, comprehensive program.

14. In looking back, what additional education experiences or student services could PCC have provided to better assist you reach your educational or career goal?

- Expand hort classes to include greenhouse crop growing. Use student learning to provide larger quantities and better quality plants for sale and campus plantings. Instructor and staff need to pay more attention to greenhouse and its use.
- Career guidance
- More computer classes; especially cad based with up to date landscape design programs
- Require more business classes
- More focus on plant materials for small gardens and micro-climates.
- Would like to have seen established gardens.
- More financial aid.
- Better communication and transfer between PCC and PSU
- Take advantage of career counseling relative to classes.
- Need more course work on marketing and business skills.
- More design classes.
- Every class should have student evaluations.
- More hands-on class room study.
- Need small engine repair and maintenance class.
- It seemed as though program was geared to state contractors test. Teach me what I need to know on the job.
- Update Site Grading class to make it more practical. Spend more time on solving residential grading and drainage problems.

- More comprehensive program that would transfer to OSU hort programs. Need Ag. Tech.
- Career planning.
- More in the way of business courses.
- More drawing courses.
- Smaller classes; more student participation.
- Better facilities for quiet study.
- Move program closer to downtown.
- Actually seeing a design installed.
- Marketing skills.
- Designer/client relations.
- More classes in Spanish.
- Bidding and estimating was not strong enough at the time classes were taken.
- Extra electives in design classes with a broader field of instructors.
- More hands-on in site measurement.
- Not enough information on hardscaping materials and methods.
- More heavy equipment usage including grading, moving materials e.g.
- More experience and training in marketing
- More general business operations, record keeping.
- Need to seek instructor/chair replacements with good landscape design/construction backgrounds and teaching skills. Program has a strong reputation,
- Financial aid services
- More understanding and diverse faculty
- A basic business class should be required or strongly recommended.
- Wider range of classes and times at Rock Creek.
- More advising and teacher availability.

- Why can't I take a class to update my skills without being signed up in a particular discipline?
- I took a class for myself to broaden my knowledge. It suited my needs perfectly.
- Offer more summer and Saturday classes.
- The program is great. I just wish I had time to do more of the classes.
- I expect to take more classes. PCC could offer a certificate program.
- More places on campus that are quiet for studying.
- I enjoy the classes I take.
- I loved PCC and its classes. I have moved on to another school.
- More options in coop. ed.
- One class I took was excellent.
- Mentoring to follow students and suggest paths to follow, completion times etc. Better advising.
- The class was Native Plants. Taught by a horticulturalist, it did not have the scientific detail I was looking for.
- Work internships should be more available and encouraged.
- More subjects.
- My goal was to do landscape design. Design classes were good. Add more on hardscaping, drainage and business.
- I feel PCC is doing an excellent job.
- I thought it was about right. .
- More design class offerings and general perspectives on landscape design.
- Got on my case when I was slacking.
- More horticulture that would transfer to OSU.
- Image management and customer service ideals.

- Combine turf into one class offered in the winter.
- More opportunity to interact with industry professionals.
- Good job based on need.
- Agriculture courses.
- Knowing irrigation would have helped a lot in job advancement.
- It is a great program.
- Follow up on students who have just a few credits left so they know what is needed.
- More industry business contacts.
- More critiquing and guidance in design classes.
- More expanded design classes.
- Better in touch with current technologies used in landscape.
- Keep up the good work .
- I was extremely pleased with the type and quality of courses.
- More computer labs available to students.
- I loved the horticulture teachers. It was everything I needed to get started.
- I was happy with what I learned.
- More course work on starting a landscape business.
- Have not finished yet because of classes not available at night.
- I have attended PSU and OSU for graduate work, instructor I had at PCC, , is one of the most outstanding instructors I have encountered.
- Took class called water gardens. Instructor was very qualified and I was very impressed by what was expected. Would recommend class and instructor.

- Some of the classes in landscape technology were valuable springboards for Landscape Architecture Program at U of O but only counted as elective credits, not transfer credits.
- I wish PCC would honor life experience otherwise program was great.
- I felt the landscape program and instructor offices were too scattered over the entire campus.
- I had a terrific experience at PCC.

**LANDSCAPE TECHNOLOGY
PROGRAM REVIEW**

Appendix D

**Landscape Technology Course and College Core Outcomes
(2003)**

CORE OUTCOMES MAPPING

SAC Landscape Technology

<p>Mapping Level Indicators:</p> <ul style="list-style-type: none"> 0- Not Applicable 1- Limited demonstration or application of knowledge and skills. 2- Basic demonstration and application of knowledge and skills. 3- Demonstrated comprehension and is able to apply essential knowledge and skills 4- Demonstrates thorough, effective and/or sophisticated application of knowledge and skills. 	<p>Core Outcomes:</p> <ul style="list-style-type: none"> 1- Communication 2- Community and Environmental Responsibility 3- Critical Thinking and Problem Solving 4- Cultural Awareness 5- Professional Competence 6- Self-Reflection
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Course #	Course Name	CO1	CO2	CO3	CO4	CO5	CO6
CSS 200	Soils and Plant Nutrition	3	3	3	1		1
HOR 226	Plant Materials - Deciduous	4	3	4	1		2
HOR 227	Plant Materials – Evergreens	4	3	4	1		2
HOR 228	Plant Materials – Flowering	4	3	4	1		2
HOR 255	Spring Annuals and Perennials	4	3	4	1		2
HOR 272	Summer Annuals and Perennials	4	3	4	1		2
HOR 290	Intro to Landscape Design	4	4	4	3		3
LAT 104	Pesticides	2	4	4	1		3
LAT 106	Basic Horticulture	3	3	4	2		3
LAT 108	Landscape Irrigation I	3	3	4	2		2
LAT 109	Plant Propagation	2	2	4	1		2
LAT 110	Grounds Maintenance	3	3	4	2		2
LAT 111	Landscape Construction	3	3	4	3		2
LAT 214	Plant Composition	4	3	4	4		4
LAT 217	Landscape Drafting	3	3	4	2		3
LAT 219	Landscape Illustration	4	2	2	2		4
LAT 221	Landscape Design Problems	4	4	4	4		4
LAT 223	Site Survey and Analysis	2	2	4	1		2
LAT 225	Water Gardens	2	2	4	2		2
LAT 232	Landscape Irrigation II	3	2	4	0		2

CORE OUTCOMES MAPPING

SAC Landscape Technology

<p>Mapping Level Indicators:</p> <ul style="list-style-type: none"> 0- Not Applicable 1- Limited demonstration or application of knowledge and skills. 2- Basic demonstration and application of knowledge and skills. 3- Demonstrated comprehension and is able to apply essential knowledge and skills 4- Demonstrates thorough, effective and/or sophisticated application of knowledge and skills. 	<p>Core Outcomes:</p> <ul style="list-style-type: none"> 1- Communication 2- Community and Environmental Responsibility 3- Critical Thinking and Problem Solving 4- Cultural Awareness 5- Professional Competence 6- Self-Reflection
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Course #	Course Name	CO1	CO2	CO3	CO4	CO5	CO6
LAT 219	Landscape Illustration	4	2	2	2		4
LAT 221	Landscape Design Problems	4	4	4	4		4
LAT 223	Site Survey and Analysis	2	2	4	1		2
LAT 225	Water Gardens	2	2	4	2		2
LAT 232	Landscape Irrigation II	3	2	4	0		2
LAT 235	Tree Care Fall	3	4	4	2		2
LAT 236	Landscape Math	3	1	4	1		2
LAT 240	Tree Care Spring	3	4	4	2		2
LAT 241	Turf Grass Cultural Practices	2	3	3	1		2
LAT 243	Landscape Business	4	4	4	3		4
LAT 250	Plant Diseases, Insects and Weeds	2	4	4	2		2
LAT 262	Native Plant of Oregon	2	3	4	2		2
LAT 263	Bonsai-Saikei	2	2	2	4		4
LAT 264	Landscaping Estimating and Bidding	4	1	4	2		3
LAT 268	Wetlands	3	4	4	2		2
LAT 271	Computer Aided Landscape Design	4	2	4	2		2
LAT 272	Sustainable Landscaping	4	4	3	2		4
LAT 280	Landscape Co-op Work Experience	4	3	3	3		4

**LANDSCAPE TECHNOLOGY
PROGRAM REVIEW**

Appendix E

**Full Time and Part Time Faculty Requirements
(2004)**

Faculty Hiring Recommendations for LAT Courses

CSS 200 Soils and Plant Nutrition

BS in Horticulture, Agronomy, Soil Science, or related agriculture field with at least one soils course.

HOR 226, 227, 228, 225, 272 Landscape Plant Materials Courses

Relevant college level coursework in plant materials or 3 years of green industry experience.

HOR 290 Intro to Landscape Design

BS in Horticulture, Landscape Architecture, Ag Education with minor in Horticulture and one year's experience doing landscape design, or five year's experience as a landscape designer.

HOR 291 Landscape Design Process

BS in Horticulture, Landscape Architecture, Ag Education with minor in Horticulture and one year's experience doing landscape design, or five year's experience as a landscape designer.

LAT 104 Pesticides

Current or past Commercial or Private Applicators License.

LAT 106 Basic Horticulture

College level Botany coursework and 1 year of experience in the green industry.

LAT 108 Landscape Irrigation I

AAS in Horticulture, Landscape Technology, with one year's work experience in irrigation installation.

LAT 109 Plant Propagation

AAS in Horticulture, Landscape Technology, Greenhouse Management, or Floriculture with one year experience in the field of commercial propagation, or two years work experience in commercial propagation.

LAT 110 Grounds Maintenance

AAS in Horticulture, Landscape Technology, with two year's work experience in grounds maintenance.

LAT 111 Landscape Construction Practices

2 years work experience in the landscape construction field and submission of a portfolio of work examples or two years in vocational education teaching building related courses.

LAT 214 Plant Composition

AAS in Horticulture, Landscape Technology and one year's experience doing landscape design, or five year's experience as a landscape designer and submission of portfolio of work.

LAT 217 Landscape Drafting

AAS in Horticulture, Landscape Technology and one year's experience doing landscape design, or five year's experience as a landscape designer and submission of portfolio of work.

LAT 219 Landscape Illustration

AAS in Horticulture, Landscape Technology and one year's experience doing landscape design, or five year's experience as a landscape designer and submission of portfolio of work.

LAT 221 Landscape Design Problems

AAS in Horticulture, Landscape Technology and one year's experience doing landscape design, or five year's experience as a landscape designer and submission of portfolio of work.

LAT 223 Site Survey and Analysis

AAS in Horticulture, Landscape Technology, or Building Construction with at least one course in surveying or site measurement, or two years work experience in Landscape Design, Landscape Architecture or surveying.

LAT 225 Water Gardens

AAS in Horticulture, Landscape Technology and one year's experience designing, installing or maintaining water features, or three year's experience designing, installing or maintaining water features.

LAT 232 Landscape Irrigation II

AAS in Horticulture or Landscape Technology, with two years work experience in irrigation design and irrigation portfolio, or Irrigation Association Certification in Irrigation Design, or three years work experience in irrigation design and installation.

LAT 235 Tree Care Fall, LAT 240 Tree Care Spring

International Society of Arboriculture Arborist's Certification.

LAT 236 Landscape Math

College coursework in algebra and basic trigonometry and demonstrable competency in application of math in the green industry.

LAT 241 Turfgrass Cultural Practices

AAS in Horticulture, Landscape Technology, Agronomy, Turf Management, or Golf Course Management, with two year's work experience in turf management, or three years work experience in turf or golf course industry.

LAT 243 Landscape Business Operations

Five years experience as a manager or owner of a landscaping business, or Landscape Contractors Business License.

LAT 250 Plant Diseases, Insects and Weeds

AAS or BS in Horticulture, Agronomy, Plant Pathology, Entomology, Weed Science, Botany, or related agriculture field with coursework in pathology, entomology, or weed science.

LAT 262 Native Plants of Oregon

AAS in Horticulture, Landscape Technology, or BS in Botany.

LAT 263 Bonsai-Saikei

Portfolio of Bonsai projects.

LAT 264 Landscape Estimating and Bidding

AAS in Landscape Technology, Horticulture, or two years experience in estimating and bidding in the landscape industry.

LAT 268 Wetlands

Two years work experience in wetlands restoration.

LAT 271 Computer Aided Landscape Design

One year experience in CAD and one year experience in Landscape Design.

LAT 272 Sustainable Landscaping

An equivalency of one year's coursework, seminars, on sustainability issues.

LAT 280 Landscape Cooperative Work Experience

Instructors selected through college work experience office. Not administered through LAT program.

**LANDSCAPE TECHNOLOGY
PROGRAM REVIEW**

Appendix F

ALCA

**Landscape Contracting Model Curriculum
&
ALCA Accreditation Criteria
for
Two-Year Degree Program**



Landscape Contracting Accreditation Board

Accreditation Standards for

Programs in Landscape Contracting

Accrediting Organization

Associated Landscape Contractors of America's appointed board, called Landscape Contracting Accreditation Board (LCAB).

Section I General Standards

Program Mission and Planning

The program shall have a clearly defined mission supported by educational objectives appropriate to the Landscape Contracting business community. The planning process shall demonstrate progress towards the attainment of the objectives.

Indicators -

- a. Mission reflects a broad perspective of the industry
- b. Mission is stated in terms of what students should be able to do when they graduate.
- c. Mission should address ethics, critical thinking and professionalism.
- d. Program is engaged in a continuous planning process to improve instruction.
- e. Academic mission, program objectives and continuous planning relate to the larger institutional mission, strengths and character.

Governance/Administration

The program shall have the authority and resources to achieve its educational goal.

Indicators -

- a. The number of faculty is adequate to achieve the program's mission and objectives.
- b. Funding is adequate to meet program objectives and provide for faculty development and student support such as conference attendance, computing equipment and technical support.
- c. The program has adequate personnel and support staff to accomplish its mission and objectives.

Faculty

The qualifications, academic position and professional activities of faculty and instructional personnel shall promote and enhance the academic mission and objectives of the program.

Indicators -

- a. Qualifications of the faculty and instructional personnel are appropriate to their roles.
- b. Faculty is continuously engaged in activities leading to their professional growth, the advancement of the contracting industry and the effectiveness of the program.
- c. Faculty is active in local, state, or national trade or professional organizations.
- d. Faculty pursues licensing or certification as is relevant to the program.
- e. Faculty engages in continuing education.
- f. Faculty produces appropriate peer-reviewed creative, scholarly or professional work.
- g. Those teaching design courses shall be Landscape Architects or credentialed landscape design professionals.

Students

Program shall demonstrate that students are being adequately prepared to pursue a career in the landscape contracting industry.

Indicators -

- a. Student work is evaluated by criteria related to program objectives, and the information gained from such evaluation is used to enhance curriculum, instruction and other program aspects.
- b. Students are encouraged to engage in activities that relate to the contracting industry and to participate in the enrichment of the larger community. Examples include membership in state and national organizations, student club activities, community service and outreach projects.
- c. Successful job placement.
- d. Positive internship evaluations by cooperating businesses.

Alumni

Program shall provide evidence of alumni's accomplishments and their involvement in advancing the program.

Indicators -

- a. Accomplishments include positions of responsibility in and service to the industry, professional awards, licensing, certification, etc.
- b. Program uses alumni as speakers, evaluators or advisory committee members.

Industry

Program shall provide evidence of interaction with industry representatives from a variety of businesses associated with landscape contracting.

Indicators -

- a. Career fairs for internships and employment.
- b. Lectures and presentations from industry representatives.
- c. Program receives support from regional or national organizations and businesses.

Advisory Committee

A fully functioning advisory committee made up of faculty, industry and student representatives shall be in place.

Relationship to the Overall Academic Institution and the Community

Program shall promote positive relationships with the overall academic institution and the community.

Indicators -

- a. Interdepartmental cooperation.
- b. Community service projects.
- c. Lectures and seminars by non-industry professionals.
- d. Outreach efforts for recruiting and enhancing the program's image.

Facilities, Equipment and Information Systems

Faculty, students and staff shall have access to facilities, equipment, library and other information systems necessary for a positive learning environment.

Section II Curriculum Standards

4 Year Degree Program

Objectives

1. Define the academic standards for programs in landscape contracting at four-year academic institutions. These standards establish expected areas of learning deemed relevant to the landscape contracting business community.
2. Allow flexibility to accommodate a variety of emphases in four-year academic programs.

Degree - leading to a Bachelor's degree from an accredited academic institution.

Program Identification

Program title shall reflect the mission of the program. It is strongly suggested that the word "landscape" be incorporated into the title.

Areas of Competency

CREDIT NUMBERS GIVEN ARE SEMESTER HOURS. EQUIVALENT

QUARTER CREDITS ARE REQUIRED FOR SCHOOLS USING THE

QUARTER SYSTEM.

Business and Communication - minimum 18 credits

Suggested topic areas:

Composition

Business or technical writing

Public Speaking

Interpersonal Communications

Language (Spanish recommended)

Economics

Accounting

Marketing and Sales

Estimating and Bidding (both landscape construction and maintenance)

Contracts

Management Fundamentals

Small Business Startup and Management

Personnel Management

Finance

Business and Government Regulations

Horticulture and Related Sciences - minimum 15 credits

Suggested topic areas:

- Chemistry
- Soil Science and Soil Fertility
- Horticulture, Botany or Plant Science
- Woody Plant Material
- Herbaceous Plant Material
- Turf Grasses and Weeds
- Interior Plant Material
- Plant Propagation

Computing and Technology Applications - minimum 9 credits

Some, or all, credits may be satisfied within courses counted in other categories. For example, a 3 credit estimating class with one third of the course dedicated to a computer estimating software program would satisfy 3 credits in business and 1 credit in computing applications.

Suggested topic areas:

- Introduction to computers or basic computing concepts
- Business computing applications
- Computer estimating
- Computer-aided design and drafting
- Digital imaging techniques
- Other technology

Internship - minimum 3 credits; maximum 9 credits

Formalized practical work experience, preferably within an established landscape company. An internship may be called a co-op or practicum, but should include documented work experience, which is relevant to the landscape contracting business community. Typically, 12 weeks of monitored, full-time work experience counts for 3 academic credits. Practical work experience programs must have some formal mechanism in place for evaluation and monitoring by both the cooperating business and the academic institution. Refer to the ALCA Internship Guidelines found on the ALCA website, www.alca.org.

Landscape Contracting Specialty Credits

A minimum of 33 credits in any combination of A, B, C and D.

At least 6 credits are required from each of Emphasis A, B, and C.

Defined emphases

A. Landscape Design – minimum 6 credits

Suggested topic areas:

- Basic principles of design or design appreciation
- Graphic communication
- Computer aided design and drafting
- Planting design

Grading and drainage design
Interior Landscape design
Irrigation design
Advanced design issues (design sales, client relations, site inventory techniques, complex site design problems, health and safety etc.)

B. Landscape Installation and Implementation – minimum 6 credits

Suggested topic areas:

Land surveying
Landscape structures
Construction materials and methods
Installation equipment use and safety
Scheduling and project management
Plant material installation
Interior Plantscaping
Irrigation installation techniques
Safety in the landscape

C. Landscape Management – minimum 6 credits

Suggested topic areas:

Turf grass management
Arboriculture and urban plant management
Landscape management principles
Entomology
Plant pathology.
Integrated pest management
Interior plantscape management
Irrigation trouble shooting and repair
Small engine repair and maintenance
Maintenance equipment use and safety

D. Institution defined emphasis

Landscape contracting may have special expressions beyond the previous defined emphases. Category D allows and encourages academic institutions to initiate and respond to changes in the landscape contracting industry by offering courses to suit these specialized needs.

For example, a defined emphasis in, “Environmental Contracting” with possible topic areas of:

Ecology
Re-vegetation of disturbed lands
Erosion control systems
Wetland construction and restoration
Permaculture and sustainable development
Landscaping for energy and water conservation
Landscape waste management and recycling

2 Year Degree Program

Objectives

1. Define the academic standards for programs in landscape contracting at two-year academic institutions. These standards establish expected areas of learning deemed relevant to the landscape contracting business community.
2. Allow flexibility to accommodate a variety of emphases in two-year academic programs.

Degree - Associate degree from an accredited academic institution.

Program Identification

Program title shall reflect the mission of the program. It is strongly suggested that the word "landscape" be incorporated into the title.

Areas of Competency

CREDIT NUMBERS GIVEN ARE SEMESTER HOURS. EQUIVALENT

QUARTER CREDITS ARE REQUIRED FOR SCHOOLS USING THE

QUARTER SYSTEM.

Business and Communication - minimum 15 credits

Suggested topic areas:

- Composition
- Business or technical writing
- Public Speaking
- Interpersonal Communications
- Language (Spanish recommended)
- Economics
- Accounting
- Marketing and Sales
- Estimating and Bidding (both landscape construction and maintenance)
- Small Business Management
- Personnel Management
- Business and Government Regulations

Horticulture and Related Sciences - minimum 15 credits

Suggested topic areas:

- Chemistry
- Soil Science and Soil Fertility
- Horticulture, Botany or Plant Science
- Woody Plant Material
- Herbaceous Plant Material

Turf Grasses and Weeds
Interior Plant Material
Plant Propagation

Computing and Technology Applications - minimum 6 credits

Some, or all of these credits, may be satisfied within courses counted for other categories. For example, a 3 credit estimating class with one third of the course dedicated to using a computer estimating software program would satisfy 3 credits in business and 1 credit in computing applications.

Suggested topic areas:

Introduction to computers or basic computing concepts
Business computing applications
Computer estimating
Computer-aided design and drafting
Digital imaging techniques
Other technology

Internship - minimum 3 credits; maximum 9 credits

Formalized practical work experience acquired, preferably within an established landscape company. An internship may be called a co-op or practicum, but should include documented work experience, which is relevant to the landscape contracting business community. Typically, 10 - 12 weeks of monitored, full-time work experience counts for 3 academic credits. Practical work experience programs must have some formal mechanism in place for evaluation and monitoring by both the cooperating business and the academic institution. Refer to the ALCA Internship Guidelines found on the ALCA website, www.alca.org.

Landscape Contracting Specialty Credits

A minimum of 20 credits in any combination of A, B, C and D.

At least 3 credits are required from each of Emphasis A, B, and C.

Defined emphases

A. Landscape Design – minimum 3 credits

Suggested topic areas:

Basic principles of design or design appreciation
Graphic communication
Computer aided design and drafting
Planting design
Grading and drainage design
Interior landscape design
Irrigation design

Advanced design issues (design sales, client relations, site inventory techniques, complex site design problems, health and safety, etc.)

B. Landscape Installation and Implementation – minimum 3 credits

Suggested topic areas:

- Land surveying
- Landscape structures
- Construction materials and methods
- Equipment use and safety
- Scheduling and project management
- Plant material installation
- Interior plantscaping
- Irrigation installation techniques
- Safety in the landscape

C. Landscape Management – minimum 3 credits

Suggested topic areas:

- Turf grass management
- Arboriculture and urban plant management
- Landscape management principles
- Entomology
- Plant pathology.
- Integrated pest management
- Interior plantscape management
- Irrigation trouble shooting and repair
- Small engine repair and maintenance
- Maintenance equipment use and safety

D. Institution-defined emphasis

Landscape contracting may have special expressions beyond the previous defined emphases. Category D allows and encourages academic institutions to initiate and respond to changes in the landscape contracting industry by offering courses to suit these specialized needs.

For example, an academic institution may choose to have a defined emphasis titled, “Environmental Contracting” with topic areas of:

- Ecology
- Re-vegetation of disturbed lands
- Erosion control systems
- Wetland construction and restoration
- Permaculture and sustainable development
- Landscaping for energy and water conservation
- Landscape waste management and recycling

Section III Accreditation Procedures

Submit the following to LCAB:

- a. Accreditation application
- b. Catalog and course descriptions

Unless directed otherwise, documents should go to
Accreditation Coordinator
ALCA
150 Elden Street – Suite 270
Herndon VA 20170

Sixty (60) days prior to Site Visit

Submit the current application fee (contact ALCA for the amount and an invoice if needed) and Self-Study Documents to LCAB. (Number of copies dependent on the size of the site team.)

- a. College catalog containing course descriptions
- b. Organization of school with names of administration and organizational chart
- c. History of program
- d. List of program faculty with qualifications and course responsibilities
- e. Names and businesses of advisory committee members
- f. Mission statement of program
- g. Program activities and accomplishments
- h. Profile of students
- i. Course outlines relevant to the standards excluding General Education
- j. Textbook lists and teaching resources relevant to the standards excluding General Education
- k. Other patterns of evidence of general standards

LCAB will appoint a Site Team to conduct an on-site evaluation. The team is generally composed of a local landscape contractor, a non-local landscape contractor, an administrator or professor from an accredited school and the site team chair. Date to be mutually agreed on.

Site Visit Agenda

- a. Meet with president of college
- b. Meet with the college dean and department chairman
- c. Meet with key faculty
- d. Meet with students
- e. Meet with alumni and employers
- f. Meet members of advisory committee
- g. Tour campus and facilities
- h. Observe classes

- i. Review current student project samples
- j. Concluding Review and Assessment Meeting

Notification Procedure

The school administration and program coordinator will be notified of accreditation status by the LCAB within sixty days after the site visit.

LCAB Actions

LCAB can take the following actions after the initial site visit:

- a. **Initial Accreditation** - Granted on a first review when the standards are met with deficiencies. Requirements to satisfy deficiencies will be listed. Granted for three years. "Initial" status does not signify non-accreditation.
- b. **Full Accreditation** - Granted when all standards are met. Granted for seven (7) years inclusive of Initial term.
- c. **Accreditation Denied** - The result of standards not met.

Additional Accreditation Requirements

- a. Upon receiving Initial and/or Full Accreditation status, the program coordinator or other designated faculty will join ALCA as an affiliate member and the program will maintain an ALCA student chapter membership.
- b. Within first year of receiving Initial and/or Full Accreditation status, a faculty member shall attend at least one state, regional, or national ALCA workshop, seminar, symposium or annual meeting.
- c. Regardless of Accreditation status (Initial, Full or Provisional), the Annual Report will be submitted to LCAB. Form will be provided upon request.
- d. For at least 5 out of the 7 years prior to re-evaluation, the faculty shall lead a student delegation to the ALCA Student Career Days or ALCA-affiliated Student Career Days event.

Section IV Reaccreditation Procedures

At the end of the 7-year accreditation term, schools must apply to be reaccredited. The submission requirements and procedure followed is identical to the procedures outlined in **Section III** beginning on page 9.

LCAB Actions

LCAB can take the following actions after a reaccreditation visit:

- a. **Full Accreditation** - Granted when all standards are met. Granted for seven (7) years inclusive of Provisional term.
- b. **Provisional Accreditation** - Granted when a previously accredited program applies for reaccreditation and the standards are met with deficiencies. Requirements to satisfy deficiencies will be listed. Granted for three years. "Provisional" status does not signify suspension or withdrawal of accreditation.
- c. **Accreditation Denied** - The result of standards not met.

For additional information about ALCA's Accreditation program, call 1-800-395-2522