Arboriculture & Community Forestry

Instructor:  Mark Reiland            Spring/Summer/Fall 2016
            119 Holdsworth Hall
            Amherst, MA  01003
            (413)545–6626            FAX (413)545-4358
            mreiland@eco.umass.edu

Note:  NRC 198Y Co-op forms are on the Stockbridge website

Course:  NRC 198Y Arboriculture & Community Forestry Co-op Internship
        4 credits (64697)

Course Description:
Co-op internship is required of all Arboriculture & Community Forest Management students. Five (5) months, April 1 to September 1, this internship must be with an arboriculture, park or community forestry enterprise.

Grading & Course Requirements:
1. Daily Diary -75 points
2. Company/Park/Agency report – 100 points
3. Tree Identification Collection – 100 points
4. Power-point Project -25 points

All of the report will be due by Friday September 9, 2016 at 10am.

There will be a 25% reduction in grade for each school day that a report is late.

2016 Internship Calendar

Jan. 19   Introduction and review of assignment
          Arboriculture Internship Agreement – Returned to Dr. Ryan before first day
          of work. You cannot start working until the Agreement Form and insurance
          information has been turned in, you will be withdrawn from the course unless
          the form is turned in on time

March 21  Co-op start-up date

April  
          Fall Pre-registration information will be sent to your student E-mail.
          If you do not received your Pre-reg information call the Stockbridge office at
          (413)545-2222, if you do not register at this time the Stockbridge School cannot
          guarantee that you will be able to get into all of your required classes for the fall
          semester or have a place to live.

April 30  30 Day evaluation report
          (-5 points if not sent in, by May 15 )

September 1 Employer’s final evaluation
          (-10 points if not sent in, by Sept 15 )

September 6 Stockbridge / UMASS start date

September 9 Report due date – 10am
This internship can be described as a cooperative work experience and is required of all first year
students. You are responsible for finding your own job and your advisor must approve this job. While
your advisor will assist you in locating a suitable position, it is your responsibility to prepare a resume and successfully interview for the position. Positions should be secured that will enable the student to gain as much practical experience as possible in arboriculture, park or community forestry. Although the wage rate will vary depending on your experience, you should earn a reasonable salary.

**Academic Honesty:**
Academic dishonesty is a violation of the spirit and regulations of the University, and will not be tolerated. Any student in this class found to be in violation of University honesty regulations will automatically receive, at a minimum a **failing grade (F) for this course**. Examples of academic dishonesty include plagiarism, cheating, fabrication and the reuse of computer generated reports.

**Internship requirements:**
All students are required to complete the five-month training period without unnecessary absences. In addition to the time requirement, the following 4 part graded report is required to successfully complete your co-op internship.

1) **The Daily Diary (75 points)**
   a) **Daily Entry:**
      i) What were the tasks and jobs required of you each day?
      ii) How many people were on the work crew with you?
      iii) What kind of equipment and materials were utilized each day?
      iv) Give your estimate of the person hours to do the job & the actual hours it took to complete the work.
      v) Note starting date, last day of work, and any vacation days taken
   b) **Weekly Entry:**
      i) List the new skills that you were exposed to & a self-evaluation of your level of competency
      ii) Weekly skill assessments should demonstrate your growth as an arborist over the course of the internship

2) **The Company/Park/Agency Report (100 points)**
   You are to research and write a comprehensive report about the company/park/agency (CPA) that you worked for during your Forestry 198 Internship, all phases of the CPA should be included in the report. This report shall be submitted as if you are a professional consultant.

   All three parts will be incorporated into an 8.5 x 11 report (size 12 font), bound in an attractive folder, you will be graded on content, completeness and presentation, at a minimum have:
   A. An attractive cover page with CPA name, your name, course number & due date
   B. Table of contents & page numbers
   C. Introduction -- what are you doing
   D. History and CPA location description
a. How has the CPA changed and developed over the years, detail all aspects of the firms work and operations, what does the CPA do?

E. Flow chart of CPA officers and employees

F. Facilities, include all CPA buildings, office space, use photos and describe each fully

G. Equipment, make a list (photos) of all equipment, trucks, chippers etc. and small tools

H. Occupational Safety – You should pay attention to safety on the job, do not ever engage in an activity that you consider unsafe! What is the CPA safety program and how is it in actual practice? Can safety be improved, how?

I. Figures in text: Numbered, stand alone quality maps, graphs, drawings and photos

J. Opinion: this portion of your report should discuss your opinion of the CPA, what is good about the organization and what can be improved. Example; improvement of safety training, work environment etc. Your opinion should be detailed and contain only an honest constructive review.

K. Lastly, your report shall be comprehensive and review all phases of your internship

L. Summary and recommendations,

M. Literature cited & acknowledgments

N. Resume of student, with photo

O. No plastic sleeves for typed areas of report

P. Typed diary in separate section

Q. Report & diary should be bound together in one document, Report first.

3) Tree and Shrub Herbarium or Photo Album (100 points)

During your internship you will collect and mount 100 tree and shrub specimens. The purpose of this assignment is to reinforce your training in ENVDES 335 and to prepare you for your arboricultural certification exam. The herbarium or photo album will be incorporated into an 8.5 x 11 report, bound in an attractive folder, you will be graded on content, completeness and presentation, at a minimum have:

   i) Title page & table of contents

   ii) 100 properly mounted trees and shrubs, maximum of 20 shrubs

   iii) Each plant will have a label with the following information

      (1) Common name

      (2) Latin name

      (3) Where collected

      (4) Date collected

      (5) Page number, that corresponds to table of contents

      (6) Place label on bottom right hand corner of page
When you are collecting plants, collect as many plant parts in as many stages of development as you can – buds, leaves, flowers etc. If a plant has a unique characteristic that distinguishes it from other species be sure to include the feature with your collected specimen. Remember you will want to use this when studying for your certification exam.

**Pressed Specimen Herbarium:**
Start by selecting the best specimens. Pick a sunny day and collect only dry leaves. Avoid leaves with any damage because these imperfections will be accentuated when the leaves are dry. Try to find at least two or three leaves from each species so that you will have a good representation. Within a half hour of collecting, place each leaf between two layers of paper towel or blotting paper (you can find this at an art-supply store). If you wait much longer, the leaves begin to dry out and lose color. The trick to keeping the colors sharp is to remove the moisture as quickly as possible. Gently put the leaf (with its paper) between the pages of a large book. A big phone book works well, but I prefer a large “coffee table” book, the pages are thicker and therefore more likely to withstand moisture. And when it comes to adding weight for pressing, a big hard-back book is less likely to shift and damage the leaf. Keep at least ten pages between leaves, and don’t put in too many use a second book if you have a lot of leaves. Stack at least five more books (at least five pounds of pressure) on top, and let them sit for ten days or more. Keep the books in a dry room (no humidifiers). For the best results, change the blotting paper after the first few days of pressing.

If you have just a few leaves and want quicker results, try ironing them dry. Set your iron on medium (no steam) and place the leaves between single layers of absorbent paper or paper towels. Press for at least ten minutes, turn the leaves over, change the paper, and press the second side for about five minutes. To prevent scorching, keep the iron moving constantly.

*(Yankee- 9/99)*

**Photo Album Herbarium:**
The same rules for specimen selection apply to the photo herbarium. Pictures need to be clear, have sufficient light so that identifying characteristics can be easily seen, and have a concept of scale (a small ruler or coin). You or a co-worker must be present in at least 20 of the photo pages. The photo pages need to have a consistent format, with identically sized photos and locations on each photo page. I strongly recommend making a template to use for each specimen collected. The next page demonstrates an example of using photo for this project, you must have at least 3 photos for each plant.
Sugar maple *Acer saccharum*

**Leaf:** Opposite, simple and palmately veined, 3 to 6 inches long, 5 delicately rounded lobes, entire margin; green above, paler below.

**Flower:** Light yellow-green, small, clustered, hanging from a long, slender (1 to 3 inch) stem, appearing with or slightly before the leaves in early spring.

**Fruit:** Two-winged horseshoe-shaped samaras about 1 inch long, appearing in clusters, brown when mature in the fall.

**Twig:** Brown, slender and shiny with lighter lenticels; terminal buds brown, very sharp pointed, with tight scales.

**Bark:** Variable, but generally brown, on older trees it becomes darker, develops furrows, with long, thick irregular curling outward, firm ridges.

**Form:** Medium to tall tree (to 100 feet) with very dense elliptical crown.
IV. Arboriculture / Community Forestry Power Point Project (25 points)

As part of your internship you are required to produce a 5-minute Power Point presentation, followed by 5 minutes Q&A, that will outline & introduce the company or agency that you worked for. In addition you will photo document 2 jobs/projects that you worked on over the course of your summer internship. The photos should include several images from these three categories:

1) before
2) during
3) completed project.

The images from each of these categories should show the overall site and specific details. All pictures will be incorporated into a Power Point Presentation. The Power Point Presentation you create should be burned to a CD/DVD (save both as a .ppt and a .pptx file) and submitted with your report packet to Dr. Ryan.

You will present this Power Point presentation to your classmates and the Stockbridge Arbor freshman class one evening during the Fall semester.

Images should fill the screen. Each image slide should be preceded by a slide that includes the following information:

Job name
A description of what the image shows
What part you had in the work shown
Each job should be labeled and each picture should be clearly described.

Examples of what to take pictures of:
Before Job
Try to show the character of the tree/property/specifically the areas where work is to take place.
During job
equipment used
plant materials being planted/pruned/removed.
Completed project
show the completed project.

This report, diary, drawings, and power point is to be done on your time not during work hours.

NRC 198Y Co-op Grading Sheet                 Name _____________________________
1. **Daily Diary – 75 points**

   Start Date __________________________

   Daily job outline
   Crew makeup, Equipment used, Materials used 20 points ___________
   Estimated hours / actual hours 20 points ___________
   New skills acquired 10 points ___________

   Completeness
   Neatness, Overall quality 25 points ___________

   End Date __________________________

   Total ______

2. **Company Report – 100 points**

   Company overview
   History 20 points ___________
   Organization
   Facilities
   Equipment 20 points ___________
   Type of work 20 points ___________
   Safety 10 points ___________

   Your opinion & skills learned 20 points ___________

   Presentation
   Completeness 30 points ___________
   Overall quality
   Resume ___________

   Total ______

3. **Tree collection – 100 points**

   100 Specimens
   Properly labeled 50 points ___________
   Condition of specimens ___________

   Presentation
   Completeness
   Overall quality 50 points ___________

   Total ______

4. **Power-point Project – 25 points**

   Power point quality
   Class presentation

   30 Day reports on time ? (-5)

   Final employer report on time ? (-10)

   Total ______

   Total points ______

   Semester grade ______

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**STOCKBRIDGE SCHOOL**
The internship program at the Stockbridge School is an integral part of our students’ academic career. The program provides the student with industry-related work experience, which will supplement his/her classroom studies. To the employer we thank you for being part of our student’s academic career by integrating the student into the many facets of your business. Both the student and employer should review the following information.

**INSTRUCTIONS:**

- Student & employer should meet weekly; establish a clear understanding of the work assignments, expectations, and concerns.
- Student & employer need to sign the Internship Agreement; the student will submit the form to the program coordinator before starting the first day of work. The insurance form must be attached.
- Complete & return the 30-Day Evaluation of Student & Employer forms & send to the program coordinator by April 30\(^{th}\).
- Complete & return the Final Evaluation of Student to the program coordinator by September 15\(^{th}\).

The student is required to complete a report to receive a grade for his/her internship. The Arboriculture Report requirements and student / employer pages are posted at:

[https://stockbridge.cns.umass.edu/Internship-Information](https://stockbridge.cns.umass.edu/Internship-Information)

The student is responsible for completing the work on his/her own time, not company time.

If you have any questions, please do not hesitate to contact Mark Reiland
Holdsworth Hall
UMass Amherst
Amherst, MA 01003
413-545-6626 or mreiland@eco.umass.edu
INTERNSHIP REQUIREMENTS

- Pre-register for internship during registration for spring semester courses beginning in November. Students should access their SPIRE account for their enrollment appointment date and time.

- Work full time (40 hours/week) for the duration of the internship. One credit equals four weeks/160 hours. Students can expect a reduction in credits when the required weeks are not completed as outlined by major.
  - Students in Arboriculture are required to complete five months/22 weeks for four credits.

- Submit all required forms by the designated deadlines otherwise there will be reduction to your final grade. Submit the Internship Agreement before starting the first day of work and the 30-Day Evaluation of Employer and student by April 30th.

- It is the student’s responsibility to see that the employer submits the Final Evaluation of Student form by September 15th.

- Complete and submit the internship report as outlined in the Arboriculture Report Instructions by September 9th at 10:00am to Mark Reiland. There will be a full grade reduction to the final grade for each day the report is received after the deadline.

- Earn a grade of “C” (2.0) or better, and complete the required credits specified by your major for graduation.

- Meet the work quality standards of the employer and the minimum standards as outlined in the Final Evaluation of the Student form.

- Students who change positions, for whatever reason, must notify their program coordinator in writing.

- Students should coordinate any vacation plans with their employer.
ARBORICULTURE INTERNSHIP AGREEMENT

Student name____________________________________   Phone (___)___________________

Student summer address _________________________________________________________
Street   City/Town  State          Zip Code

Company name ________________________________________________________________

Company address _______________________________________________________________
Street   City/Town  State          Zip Code

Employer Name _____________________________________ Phone (___)_________________
Employer Workman’s Compensation #__________      Please attach verification of Workman’s
Comp. Insurance

Period of employment, from:______________________ to: ___________________________

Daily work hours: ____________________________a.m. to _________________________p.m.

Days per week that student will work: _______________________________________________

Remuneration that the employer will pay student $ _________________ per hour

What is the overtime agreement for work beyond 40 hours per week? ______________________

Educational objectives and activities in which the student will participate:
________________________________________________________________________________________
________________________________________________________________________________
_____________________________________________________________________________________

Two weeks notice must be given to all parties before this agreement is terminated.
We, the undersigned, agree to conform to this agreement.

Employer signature _______________________________________ Date ___________

Student signature _________________________________________ Date ___________

Return before starting the first day of work to:
Mark Reiland
119 Holdsworth Hall
UMass Amherst
Amherst, MA 01003
413-545-6626  Fax: 413-545-4358
mreiland@eco.umass.edu
ARBORICULTURE
30-DAY EVALUATION OF EMPLOYER

Student name_____________________________________   Phone (___)___________________

Student summer address _________________________________________________________

Company name ________________________________________________________________

Company address_______________________________________________________________

Employer Name________________________________Title_____________________________

1. Did you discuss the internship program and your educational objectives with

2. a. your supervisor?_____ YES _____ NO (explain on reverse side)

   b. other?                 _____ YES _____ NO Whom?_____________

2. Are you satisfied with the conditions of your employment?    _____ YES _____  NO

   (explain on reverse side)

3. Are relations with your employer and co-workers satisfactory _____YES _____ NO

   (explain on reverse side)

4. The date you began your internship: _____________________________________

5. If provided, are room and board arrangements satisfactory?     _____ YES _____ NO

   (explain on reverse side)

6. On the reverse side, list the type of work you have performed since your internship began.

Student signature ______________________________________ Date ___________________________

Return form by April 30th to:
Mark Reiland
119 Holdsworth Hall
UMass Amherst
Amherst, MA 01003
413-545-6626 Fax: 413-545-4358
mreiland@eco.umass.edu
ARBORICULTURE
30-DAY EVALUATION OF STUDENT

Student name____________________________________________   Phone (___)__________________

Student summer address _________________________________________________________________

Street   City/Town  State           Zip Code

Company name________________________________________________________________________

Company address _____________________________________________________________________

Street   City/Town  State            Zip Code

Employer Name _____________________________________  Title_____________________________

1. Is the student performing to your satisfaction?                        YES_____  NO _____

2. Does the student follow instructions?                                       YES _____ NO _____

3. Is the student arriving to work at the specified hour?                YES _____ NO _____

REMARKS

_____________________________________________________________________________________
_____________________________________________________________________________________
_____________________________________________________________________________________
_____________________________________________________________________________________

Employer/supervisor signature __________________________________ Date _____________________

Return form by April 30th to:
Mark Reiland
119 Holdsworth Hall
UMass Amherst
Amherst, MA 01003
413-545-6626  Fax:413-545-4358
mreiland@eco.umass.edu
ARBORICULTURE
FINAL EVALUATION OF STUDENT

We thank you for providing this Stockbridge Student with a positive learning experience, which will complement his/her classroom education. Please complete this confidential form that will be used along with his/her report to assess the student’s internship grade.

Student name _______________________________________ Phone (___)________________________

Student summer address _________________________________________________________________
Street  City/Town   State  Zip Code

Company name ________________________________________________________________________

Company address ______________________________________________________________________
Street                 City/Town  State  Zip Code

Employer name ________________________________________ Phone (____)____________________

Approximate number of absences _______                 Number of employer/student conferences ________

First day of work ____________________  Last day of work _________________

1. Is the student honest?      ____ YES     ____ NO
2. Does the student keep a good personal appearance?                      ____ YES    _____ NO
3. Is the student arriving to work on time?                                         ____ YES    _____ NO
4. Is the student completing assigned projects in a timely fashion?   ____ YES    _____ NO
5. Does the student follow instructions?                                            _____YES    _____ NO
6. Does the student get along well with other employees?                _____YES    _____ NO
7. Does the student show enthusiasm?                                               _____YES    _____ NO
8. Does the student accept constructive criticism?                            _____ YES    _____ NO
9. Do you think the student displays leadership potential?               _____ YES    _____ NO
10. Quality and thoroughness of student’s work:
   _____ Excellent   _____ Good   _____ Average   Fair_____   _____Poor

11. How would you rate the student’s technical competence?
   _____ Excellent   _____ Good   _____ Average   Fair_____   _____Poor

12. Provide examples where you feel we could improve the student’s technical rating. ________________
_____________________________________________________________________________________
_____________________________________________________________________________________
_____________________________________________________________________________________
_____________________________________________________________________________________
_____________________________________________________________________________________
_____________________________________________________________________________________
_____________________________________________________________________________________
_____________________________________________________________________________________

THIS EVALUATION IS CONFIDENTIAL

At the conclusion of the student’s internship, return form by September 1 to:

Mark Reiland
119 Holdsworth Hall
UMass Amherst
Amherst, MA 01003
413-545-6626  Fax: 413-545-4358
mreiland@eco.umass.edu