**LANDSCAPE and LAWN MANAGEMENT PROGRAM**

**MSU Landscape & Lawn Management Certificate**

**MSU Contact:** Marcus Duck, Program Coordinator – (517) 355-5191 ext. 1351; duckmarc@msu.edu  
**GRCC Contact:** Rosario-Montes Sutton, Counselor – (616) 234-3900; RMSutton@grcc.edu

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## GRAND RAPIDS COMMUNITY COLLEGE COURSES  
(24 credits maximum for the MSU Certificate)

<table>
<thead>
<tr>
<th>Required - One of the following:</th>
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<tbody>
<tr>
<td>BA 101 Business and Technical English I</td>
<td>BI 153 Plant Biology</td>
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<tr>
<td>EN 100 College Writing</td>
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<td>EN 101 English Composition I</td>
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**Required:**

- BA 103 Introduction to Business 4

**Required - Two courses from the following:**

- BA 156 Accounting Fundamentals* 3
- OR
- BA 256 Principles of Accounting 1* 4
- BA 172 Sales 3
- BA 174 Advertising 3
- BA 183 Supervision 3
- BA 270 Marketing 3
- BA 283 Business Management 3

*NOTE: If taking an Accounting course, you may choose only one to satisfy the business credit requirements.

## MICHIGAN STATE UNIVERSITY COURSES  
(24 credits minimum for the MSU Certificate)

<table>
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<th>Required:</th>
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<tbody>
<tr>
<td>CSS 210 Fundamentals of Soil Science 3</td>
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<tr>
<td>CSS 202 World of Turf 2</td>
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<tr>
<td>CSS 202L World of Turf Lab 1</td>
</tr>
<tr>
<td>ENT 111 Basics of Applied Entomology 2</td>
</tr>
<tr>
<td>HRT 211 Landscape Plants I 3</td>
</tr>
<tr>
<td>HRT 212 Landscape Plants II 3</td>
</tr>
<tr>
<td>HRT 213 Landscape Maintenance 2</td>
</tr>
<tr>
<td>HRT 214 Landscape and Turfgrass Business Operations 2</td>
</tr>
<tr>
<td>PLP 104 Applied Plant Pathology for Ornamentals &amp; Turf 3</td>
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**Required Internship:**

- AT 293 Placement Training/Internship 3

**Elective courses:**

- AT 291 Turf & Ornamental Production App & Weed Bio 1
- HRT 111 Landscape Design 3
- HRT 218 Landscape Irrigation 3
- HRT 475 Study Abroad 4-6

*NOTE: If taking an Accounting course, you may choose only one to satisfy the business credit requirements.

*NOTE: CO 151 AND CO 153 if previously taken

**Required – One of the following:**

- BA 145 Computer Applications in Business 4
- CO 101 Intro to Computer Applications 2
- CO 155 Word 2
- CO 156 Excel 2

**Required - One of the following:**

- MA 105 Basic Geometry 4
- MA 107 Intermediate Algebra 4
- TE 103 Intermediate Technical Math 4
- TE 104 Advanced Technical Mathematics 3

*NOTE: MA 3, 95, 96, 97, or 98 may be a prerequisite for the above courses based on student’s math background

Other MSU HRT and CSS courses not listed here may also be offered and accepted as electives in the program. Course offerings are subject to change. Consult with the program coordinator.

**Total credits needed to obtain the MSU certificate:** 48
LANDSCAPE AND LAWN MANAGEMENT PROGRAM – MSU COURSES
(24 Credits Minimum from MSU)

Required Courses:

AT 293  Placement Training/Internship  3 credits
A supervised work experience in business & industry appropriate to the individual student's education and training. Contact program coordinator for more information on requirements and enrollment procedures for this course.

CSS 210  Fundamentals of Soil Science (Fall of Even years)  3 credits
Management of soils based on physical and chemical properties and biological activity. Effect of soil properties on plant growth. Selection and use of various soil management techniques and fertilizers.

CSS 202  World of Turf (Spring of Odd years)  2 credits
Role of turf in society and the environment. Principles underlying establishment and maintenance of turf on athletic fields, parks, home lawns, and golf courses. Aesthetic, safety, and economic aspects of turfgrass management practices.

CSS 202L  World of Turf Lab (Spring of Odd years)  1 credit

ENT 111  Basics of Applied Entomology (Fall of Even Years)  2 credits
Basic insect biology, principles of integrated pest management, and the major pests of woody ornamentals, herbaceous perennials, turfgrass, and commercial greenhouses.

HRT 211  Landscape Plants I (Fall of Even years)  3 credits
Identification, adaption and evaluation of trees, deciduous shrub, narrow-leaved evergreens, woody vines and herbaceous perennials. Emphasis on management and functional uses in landscape.

HRT 212  Landscape Plants II (Fall of Odd years)  3 credits
Identification, adaptation and evaluation of flowering trees, deciduous shrubs, broad-leaved evergreens, woody vines, ground covers, bulbs and corms. Emphasis on management and functional uses in the landscape.

HRT 213  Landscape Maintenance (Spring of Odd years)  2 credits
Principles and practices involved in ornamental plant management. Plant growth and development related to pruning, fertilization, weed control, transplanting; specifications.

HRT 214  Landscape and Turfgrass Business Operations (Spring of Even years)  2 credits
Organizing, marketing, and directing a business enterprise within the turf and landscape industry. Project estimating, bidding, and accounting. Practical hands-on learning using real-life examples and case studies.

PLP 104  Applied Plant Pathology for Ornamentals & Turf (Fall of Odd Years)  3 credits
Provide an understanding of the nature and management of diseases of ornamental plants and turfgrass. To develop student’s investigating and diagnostic skills for disease identification.

Elective Courses:

AT 291  Turf & Ornamental Production App & Weed Bio (Spring of odd years)  1 credit
Pesticides and products; labels and regulations; products in the environment/stewardship; equipment components and calibration; integrated vegetation management; turf, ornamental and right-of-way weed communities; plant competition; weed biology and ecology; seed banks. Spring of odd years in GR.

HRT 111  Landscape Design (Spring of Even years)  3 credits
Landscape design techniques, plant selection, plant/site interaction, relationship between design and planning, construction materials and design specifications.

HRT 218  Landscape Irrigation (Spring of Even years)  3 credits
Principles and practices in the design, installation and maintenance of irrigation systems for turfgrass and landscape plants. Design hydraulics, equipment selection, pump stations, water features, water quality and conservation

HRT 475  Study Abroad  4 to 6 credits
Various programs offered through the College of Agriculture and Natural Resources. Contact the MSU program coordinator for more information on options, requirements, and enrollment procedures.