



8733

INTRODUCTION TO LANDSCAPE
MAINTENANCE AND
CONSTRUCTION (11B)

30S/30E/30M

A Horticulture Course

8733: INTRODUCTION TO LANDSCAPE MAINTENANCE AND CONSTRUCTION (11B) 30S/30E/30M

Course Description

This course is intended for students continuing in the specialization phase of the horticulture program. The curriculum focuses on an introduction to the maintenance and construction of landscape structures and sites. Students participate in the construction of landscape structures and sites.

Goal 1: Describe and apply appropriate **safety** and **health** practices as they relate to horticulture.

GLO 1.1: Create and maintain a **safe work** environment in horticulture.

- SLO 11B.1.1.1: Describe workplace safety and health procedures (e.g., S.A.F.E., right to refuse). (A3.1)
- SLO 11B.1.1.2: Identify and report hazards (e.g., electrical safety, ergonomics, material handling, chemicals) related to processes, materials, tools, and equipment used in horticulture and landscaping. (A3.7) (D1.2)
- SLO 11B.1.1.3: Outline the safety principles for working on and around electrical equipment. (A3.8) (TSA 18)
- SLO 11B.1.1.4: Follow the directions of the teacher/supervisor in regard to safe work practices.
- SLO 11B.1.1.5: Follow safe practices and procedures for facilities, processes, materials, tools, and equipment used in horticulture and landscaping (e.g., keep work area clean and organized). (A3.3)
- SLO 11B.1.1.6: Describe and use appropriate personal protective equipment (PPE) (e.g., gloves, safety glasses or goggles, hearing protection, respirator mask) and identify PPE and procedures related to PPE. (A3.2) (TSA 16)
- SLO 11B.1.1.7: Locate the first aid and eyewash stations.
- SLO 11B.1.1.8: Identify the process for reporting injuries.
- SLO 11B.1.1.9: Identify ergonomically correct procedures to avoid injury (e.g., stress, strain, lifting).
- SLO 11B.1.1.10: Identify and outline workplace fire safety principles. (A3.10) (TSA 19)
- SLO 11B.1.1.11: Identify emergency evacuation and response procedures.

- SLO 11B.1.1.12: Identify potential hazards with regard to personal apparel and grooming.
- SLO 11B.1.1.13: Demonstrate awareness of the principles of the Workplace Hazardous Materials Information Systems (WHMIS) as they apply to the horticulture industry and identify safety requirements as they apply to WHMIS. (A3.11) (TSA 13)
- SLO 11B.1.1.14: Describe the purpose of Material Safety Data Sheets (MSDS).
- SLO 11B.1.1.15: Demonstrate knowledge of the need and purpose of safe handling and application of chemical controls according to the label. (A3.4, A3.14)
- SLO 11B.1.1.16: Identify the hazards associated with working in a confined space and the preparation required to work safely in a confined space. (A3.9) (TSA 20)
- SLO 11B.1.1.17: Identify the hazards and precautions related to working with and around horticulture and landscaping equipment, including ladders and scaffolding. (A3.5, A3.6)
- SLO 11B.1.1.18: Identify the need for a safety checklist in the landscaping and horticulture industries (e.g., chainsaw, power lawnmower, garden tractor).
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GLO 1.2: Demonstrate knowledge of the **Trade Safety Awareness Manual** (<www.gov.mb.ca/tce/apprent/apprentice/trade_safety/>).

No applicable SLOs.

Goal 2: Demonstrate the safe and appropriate **maintenance, management, and operation of equipment, tools, consumables, and materials.** (GHCP B3)

GLO 2.1: Demonstrate the safe and appropriate **maintenance and management of equipment, tools, consumables, and materials.**

- SLO 11B.2.1.1: Demonstrate the safe and appropriate maintenance and management of equipment, tools, consumables, and materials used in landscape maintenance and construction.
- SLO11B.2.1.2: Troubleshoot minor problems with equipment.
- SLO11B.2.1.3: Describe the procedures used to inspect, maintain, sharpen, clean, and store hand and power tools. (A4.4, A4.6)
- SLO 11B.2.1.4: Describe the procedures used to inspect, clean, maintain, and store measuring tools and equipment. (A4.8)

SLO 11B.2.1.5: Use and maintain hand, power, and measuring tools applicable to the workplace. (A4.9)

GLO 2.2: Demonstrate the safe operation of horticultural tools and equipment.

SLO 11B.2.2.1: Demonstrate the safe operation of horticultural tools and equipment used in landscape maintenance and construction.

SLO 11B.2.2.2: Identify types of engines and describe their characteristics, applications, and operations. (A5.7)

SLO 11B.2.2.3: Demonstrate the ability to perform the necessary checks prior to use.

Goal 3: Demonstrate an understanding of the fundamentals of horticulture.

GLO 3.1: Demonstrate a basic understanding of plant anatomy, morphology, and physiology.

No applicable SLOs.

GLO 3.2: Identify and select plants.

No applicable SLOs.

GLO 3.3: Demonstrate an understanding of plant care. (GHCP B2)

No applicable SLOs.

Goal 4: Demonstrate an understanding of soils and growing media.

GLO 4.1: Demonstrate an understanding of soils and growing media.

No applicable SLOs.

GLO 4.2: Demonstrate knowledge of the effects of soils and growing media on plants. (GHCP A7)

SLO 11B.4.2.1: Discuss the purpose and characteristics of soil amendments.

SLO 11B.4.2.2: Analyze the effects of water and nutrient uptake by roots in an outdoor environment.

SLO 11B.4.2.3: Analyze atmospheric conditions that influence water availability in an outdoor environment, and respond accordingly.

Goal 5: Understand pest management.

GLO 5.1: Understand the principles of integrated pest management.

- SLO 11B.5.1.1: Identify common pests in an outdoor environment.
- SLO 11B.5.1.2: Identify damage caused by pests in an outdoor environment.
- SLO 11B.5.1.3: Practise integrated pest management in an outdoor environment.
- SLO 11B.5.1.4: Differentiate between abiotic and biotic damage to plants in an outdoor environment.

Goal 6: Demonstrate an understanding of the principles of plant installation and propagation.

GLO 6.1: Demonstrate an understanding of the principles of plant installation and propagation.

- SLO 11B.6.1.1: Install plant material. (GHCP B1)
- SLO 11B.6.1.2: Apply different methods of plant propagation appropriate to an outdoor environment.

Goal 7: Demonstrate an understanding of the principles of crop production and management.

GLO 7.1: Demonstrate an understanding of crop production.

No applicable SLOs.

GLO 7.2: Demonstrate an understanding of crop management.

No applicable SLOs.

Goal 8: Demonstrate an understanding of the construction techniques relevant to the horticulture industry.

GLO 8.1: Identify and demonstrate different construction techniques.

- SLO 11B.8.1.1: Describe types of landscape plans and documentation. (C1.1)
 - SLO 11B.8.1.2: Interpret the information and design principles on landscape plans. (C1.2)
 - SLO 11B.8.1.3: Interpret information in specifications. (C1.3)
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Goal 9: Understand **career opportunities** in horticulture and related environmental fields. (GHCP D1)

GLO 9.1: Describe **education and career opportunities, and professional organizations** in horticulture and related environmental fields.

SLO 11B.9.1.1: Describe special opportunities and challenges regarding Landscape Horticulturist Training. (A1.3)

Goal 10: Describe and demonstrate the transferable, **cross-curricular** knowledge and skills as they pertain to horticulture.

GLO 10.1: Read, interpret, and communicate information relevant to horticulture.

SLO 11B.10.1.1: Use terminology relevant to horticulture.

SLO 11B.10.1.2: Read, understand, and produce written information in different types of workplace documents (e.g., work instructions, emails and memos, health and safety manuals, policies, and reports). (A10.3)

GLO 10.2: Apply **mathematics** knowledge and skills relevant to horticulture.

SLO 11B.10.2.1: Express values of quantity measurement in both imperial and metric units. (B1.5)

GLO 10.3: Apply **other subject areas** (art, physical education/health education) knowledge and skills relevant to horticulture.

No applicable SLOs.

Goal 11: Demonstrate an awareness of **sustainability** as it pertains to horticulture.

GLO 11.1: Describe the impact of **sustainability** on the health and well-being of horticulture workers and their clients, as well as the role of horticulture in society.

SLO 11B.11.1.1: Describe the dynamic interrelationship between human health and well-being, and horticulture.

GLO 11.2: Describe the horticulture industry's **sustainability practices and environmental impacts**.

SLO 11B.11.2.1: Describe the dynamic interrelationship between the environment and the economy.

GLO 11.3: Describe **sustainable business practices** within the horticulture industry.

SLO 11B.11.3.1: Discuss practices which promote long-term business success.

Goal 12: Demonstrate an awareness of the **ethical and legal standards** as they pertain to horticulture.

GLO 12.1: Apply the **ethical and legal standards** as they pertain to horticulture.

SLO 11B.12.1.1: Describe the ethical and legal expectations related to the landscaping industry.

Goal 13: Demonstrate **employability skills** related to horticulture. (GHCP D1) (GHCP D4)

GLO 13.1: Demonstrate **fundamental employability skills**.

SLO 11B.13.1.1: Arrive on time and be prepared for work.

SLO 11B.13.1.2: Meet deadlines.

SLO 11B.13.1.3: Use time effectively.

SLO 11B.13.1.4: Follow written and oral directions.

SLO 11B.13.1.5: Ask questions for clarification.

SLO 11B.13.1.6: Initiate work independently.

SLO 11B.13.1.7: Work effectively without supervision.

SLO 11B.13.1.8: Complete tasks without supervision.

SLO 11B.13.1.9: Fulfill commitments to self and others.

SLO 11B.13.1.10: Perform tasks to a high standard.

SLO 11B.13.10.11: Cooperate with others.

SLO 11B.13.10.12: Act respectfully towards oneself and others.

SLO 11B.13.10.13: Participate in group activities.

SLO 11B.13.10.14: Dress appropriately for the workplace.

SLO 11B.13.10.15: Demonstrate appropriate site etiquette. (GHCP D3)

SLO 11B.13.10.16: Maintain a clean and organized work area. (A3.3)

Goal 14: Demonstrate an understanding of the **evolution and technological progression of, and the emerging trends in** horticulture.

GLO 14.1: Demonstrate an understanding of the **evolution and technological progression of, and the emerging trends in** horticulture.

SLO 11B.14.1.1: Describe the evolution and technological progression of, and the emerging trends in the landscaping industry.
