The Turfgrass Science and Management (TSM) major prepares graduates for the Bachelor of Science in Turfgrass Science (TURF) program or direct entry into the work place. The primary objective of this major is to train current/future turfgrass facility managers in communicative and mathematical skills, and initiate student mastery of technical aspects unique to management of turfgrass systems.

Graduates of this program are qualified to support golf course, landscape, and athletic field maintenance operations; production of sod commodities; equipment sales and service; and technical research programs. Graduates may also apply their credits to pursue completion of Baccalaureate programs such as Environmental Resource Management, Recreation, Parks, and Tourism Management, and Turfgrass Science (TURF). Students who plan to continue in the TURF degree program should meet with their advisors regarding entrance to major and other requirements.

What is Turfgrass Science and Management?
The Turfgrass Science and Management major provides an integrated program of study that includes basic and applied plant sciences, business management courses, and an internship to prepare students for careers as decision makers in golf course, sports field, and landscape construction and management.

You Might Like this Program If...
- You enjoy working outdoors
- You want to be part of the sports industry
- You want to use your technical expertise to solve problems related to plants and the environment
- You have a sense of accomplishment seeing your work appreciated by others

Entrance to Major
Students must have a minimum 2.0 GPA to change to this Associate degree after admission to the University.

Degree Requirements

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>For the Associate in Science degree in Turfgrass Science and Management, a minimum of 61 credits is required:</td>
<td></td>
</tr>
<tr>
<td></td>
<td>General Education</td>
<td>21</td>
</tr>
<tr>
<td></td>
<td>Electives</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Requirements for the Major</td>
<td>52</td>
</tr>
</tbody>
</table>

General Education
Connecting career and curiosity, the General Education curriculum provides the opportunity for students to acquire transferable skills necessary to be successful in the future and to thrive while living in interconnected contexts. General Education aids students in developing intellectual curiosity, a strengthened ability to think, and a deeper sense of aesthetic appreciation. These are requirements for all baccalaureate students and are often partially incorporated into the requirements of a program. For additional information, see the General Education Requirements (http://bulletins.psu.edu/undergraduate/general-education/associate-degree-general-education-program) section of the Bulletin and consult your academic adviser.

Foundations (grade of C or better is required.)
- Quantification (GQ): 3 credits
- Writing and Speaking (GWS): 3 credits

Knowledge Domains
- Arts (GA): 3 credits
- Humanities (GH): 3 credits
- Social and Behavioral Sciences(GS): 3 credits
- Natural Sciences (GN): 3 credits

Foundations or Knowledge Domains
- A General Education course selected from GWS, GQ, GN, GA, GH, or GS, and may include Integrative Studies (Inter-domain or Linked) courses: 6 credits

The keystone symbol appears next to the title of any course that is designated as a General Education course. Program requirements may also satisfy General Education requirements and vary for each program.

15 of these 21 credits are included in the Requirements for the Major.

University Degree Requirements
Cultures Requirement
3 credits of United States (US) or International (IL) cultures coursework are required and may satisfy other requirements

Writing Across the Curriculum
3 credits required from the college of graduation and likely prescribed as part of major requirements.

Total Minimum Credits
A minimum of 60 degree credits must be earned for a associates degree. The requirements for some programs may exceed 60 credits. Students should consult with their college or department adviser for information on specific credit requirements.

Quality of Work
Candidates must complete the degree requirements for their major and earn at least a 2.00 grade-point average for all courses completed within their degree program.

Limitations on Source and Time for Credit Acquisition
Credit used toward degree programs may need to be earned from a particular source or within time constraints (see Senate Policy 83-80 (http://senate.psu.edu/policies-and-rules-for-undergraduate-students/82-00-and-83-00-degree-requirements/#83-80)). For more information, check the Suggested Academic Plan for your intended program.

Requirements for the Major
This includes 15 credits of General Education courses: 6 credits of GN courses; 3 credits of GQ courses; 3 credits of GWS courses; 3 credits of GH courses.
To graduate, a student enrolled in the major must earn a grade of C or better in each course designated by the major as a C-required course, as specified by Senate Policy 82-44 (http://senate.psu.edu/policies-and-rules-for-undergraduate-students/82-00-and-83-00-degree-requirements/#82-44).

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 11</td>
<td>Introductory Biology I</td>
<td>3</td>
</tr>
<tr>
<td>CHEM 202</td>
<td>Fundamentals of Organic Chemistry I</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 15</td>
<td>Rhetoric and Composition</td>
<td>3</td>
</tr>
<tr>
<td>MATH 21</td>
<td>College Algebra I</td>
<td>3</td>
</tr>
<tr>
<td>PHIL 103</td>
<td>Introduction to Ethics</td>
<td>3</td>
</tr>
<tr>
<td>TURF 295</td>
<td>Internship</td>
<td>3</td>
</tr>
</tbody>
</table>

**Prescribed Courses: Require a grade of C or better**

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENT 317</td>
<td>Turfgrass Insect Pest Management</td>
<td>3</td>
</tr>
<tr>
<td>SOILS 101</td>
<td>Introductory Soil Science</td>
<td>3</td>
</tr>
<tr>
<td>TURF 230</td>
<td>Turfgrass Pesticides</td>
<td>1</td>
</tr>
<tr>
<td>TURF 235</td>
<td>The Turfgrass</td>
<td>3</td>
</tr>
<tr>
<td>TURF 238</td>
<td>Turf and Ornamental Weed Control</td>
<td>3</td>
</tr>
</tbody>
</table>

**Additional Courses**

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM 101</td>
<td>Introductory Chemistry</td>
<td>3</td>
</tr>
<tr>
<td>or CHEM 110</td>
<td>Chemical Principles I</td>
<td></td>
</tr>
</tbody>
</table>

**Supporting Courses and Related Areas**

Select 9 credits from department professional agriculture list  
Select 9 credits from department professional management and economics list  

1 of the 9 credits must be from bolded sub-list

**Suggested Academic Plan**

**World Campus**

The course series listed below provides only one of the many possible ways to move through this curriculum. The University may make changes in policies, procedures, educational offerings, and requirements at any time. This plan should be used in conjunction with your degree audit (accessible in LionPATH as either an Academic Requirements or What If report). Please consult with a Penn State academic adviser on a regular basis to develop and refine an academic plan that is appropriate for you.

**First Year**

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGL 15</td>
<td>‡† Rhetoric and Composition</td>
<td>3</td>
</tr>
<tr>
<td>MATH 21</td>
<td>‡† College Algebra I</td>
<td>3</td>
</tr>
<tr>
<td>BIOL 11</td>
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<td>1</td>
</tr>
<tr>
<td>TURF 235</td>
<td>The Turfgrass</td>
<td>3</td>
</tr>
</tbody>
</table>

**Supporting Course**

3 of the 9 credits must be from Professional Agriculture

**General Education Course**

3

**Second Year**

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>TURF 238</td>
<td>‡ Turf and Ornamental Weed Control</td>
<td>3</td>
</tr>
<tr>
<td>CHEM 202</td>
<td>† PHIL 103W</td>
<td>3</td>
</tr>
</tbody>
</table>

**Supporting Course**

3 Elective

**University Park**

Dianne Petrunak  
Academic Adviser  
242 Agricultural Sciences and Industries Building  
University Park, PA 16802  
814-863-0139  
dmp6@psu.edu

**World Campus**

Penn State World Campus

Undergraduate Academic Advising  
301 Outreach Building  
University Park, PA 16802  
814-863-3283  
advising@outreach.psu.edu

READ SENATE POLICY 32-00: ADVISING POLICY (http://senate.psu.edu/policies-and-rules-for-undergraduate-students/32-00-advising-policy)

**University Requirements and General Education Notes:**

US and IL are abbreviations used to designate courses that satisfy University Requirements (United States and International Cultures).

W, M, X, and Y are the suffixes at the end of a course number used to designate courses that satisfy University Writing Across the Curriculum requirement.

GWS, GQ, GN, GA, GH, and GS are abbreviations used to identify General Education program courses. General Education includes...
Foundations (GWS and GQ) and Knowledge Domains (GN, GA, GH, and GS). Foundations courses (GWS and GQ) require a grade of ‘C’ or better.

Integrative Studies courses can be completed for the General Education program. N is the suffix at the end of a course number used to designate an Inter-Domain course and Z is the suffix at the end of a course number used to designate a Linked course.

**Career Paths**

Graduates manage golf courses and professional stadium playing surfaces. Turfgrass professionals utilize grasses in conservation areas, and suburban and urban landscapes to enhance and beautify the environment. Some alumni pursue careers in agricultural enterprises that support the turfgrass industry.

MORE INFORMATION (http://plantscience.psu.edu/research/centers/turf)

**Contact**

**University Park**

DEPARTMENT OF PLANT SCIENCE
102 Tyson Building
University Park, PA 16802
814-865-2571
mcnitt@psu.edu
http://plantscience.psu.edu/

**World Campus**

DEPARTMENT OF PLANT SCIENCE
116 Ag. Sci. & Ind. Building
University Park, PA 16802
814-863-1039
dmp6@psu.edu
https://www.worldcampus.psu.edu/degrees-and-certificates/turfgrass-science-and-management-associates/overview