

# CURRICULUM STANDARD

Effective Term  
Spring 2007  
[2007\*01]

Curriculum Program Title

**Environmental Science Technology**

Code

**A2014C**

Concentration

**Invasive Species Management**

## *Curriculum Description*

Invasive Species Management is a concentration under the curriculum title of Environmental Science Technology. This curriculum prepares individuals for employment related to invasive species management in various agencies. Emphasis is placed on prevention, regulation, detection, eradication, and long-term control.

Course work includes general education, computer applications, general biology, chemistry, environmental science, environmental biology, environmental health, industrial safety, and detailed invasive species management courses related to the concentration.

Graduates should qualify for invasive species technician positions within the public and private sectors (e.g., federal, state, and local land management agencies, private conservation organizations, and invasive species management companies).

## *Curriculum Requirements\**

*[for associate degree, diploma, and certificate programs in accordance with 23 NCAC 02E.0204 (3)]*

- I. General Education.** Degree programs must contain a minimum of 15 semester hours including at least one course from each of the following areas: humanities/fine arts, social/behavioral sciences, and natural sciences/mathematics. Degree programs must contain a minimum of 6 semester hours of communications. Diploma programs must contain a minimum of 6 semester hours of general education; 3 semester hours must be in communications. General education is optional in certificate programs.
- II. Major Hours.** AAS, diploma, and certificate programs must include courses which offer specific job knowledge and skills. Work experience, including cooperative education, practicums, and internships, may be included in associate in applied science degrees up to a maximum of 8 semester hours of credit; in diploma programs up to a maximum of 4 semester hours of credit; and in certificate programs up to a maximum of 2 semester hours of credit. *(See second page for additional information.)*
- III. Other Required Hours.** A college may include courses to meet graduation or local employer requirements in a certificate, diploma, or associate in applied science program. These curriculum courses shall be selected from the Combined Course Library and must be approved by the System Office prior to implementation. Restricted, unique, or free elective courses may not be included as other required hours.

	<b>AAS</b>	<b>Diploma</b>	<b>Certificate</b>
Minimum General Education Hours	15	6	0
Minimum Major Hours	49	30	12
Other Required Hours	0-7	0-4	0-1
<b>Total Semester Hours Credit (SHC)</b>	<b>64-76</b>	<b>36-48</b>	<b>12-18</b>

*\*Within the degree program, the institution shall include opportunities for the achievement of competence in reading, writing, oral communication, fundamental mathematical skills, and basic use of computers.*

## *Major Hours*

[ref. 23 NCAC 02E.0204 (3)]

- A. Core.** The subject/course core is comprised of subject areas and/or specific courses which are required for each curriculum program. A diploma program offered under an approved AAS program standard or a certificate which is the highest credential level awarded under an approved AAS program standard must include a minimum of 12 semester hours credit derived from the subject/course core of the AAS program.
- B. Concentration** (if applicable). A concentration of study must include a minimum of 12 semester hours credit from required subjects and/or courses. The majority of the course credit hours are unique to the concentration. The required subjects and/or courses that make up the concentration of study are in addition to the required subject/course core.
- C. Other Major Hours.** Other major hours must be selected from prefixes listed on the curriculum standard. A maximum of 9 semester hours of credit may be selected from any prefix listed, with the exception of prefixes listed in the core or concentration. Work experience, including cooperative education, practicums, and internships, may be included in associate in applied science degrees up to a maximum of 8 semester hours of credit; in diploma programs up to a maximum of 4 semester hours of credit; and in certificate programs up to a maximum of 2 semester hours of credit.

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	AAS	Diploma	Certificate																																												
<b>Minimum Major Hours Required</b>	<b>49 SHC</b>	<b>30 SHC</b>	<b>12 SHC</b>																																												
<p><b>A. CORE</b>  <i>Courses required for the diploma are designated with *</i></p> <p><b>Required Courses:</b></p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 5%;">*</td> <td style="width: 15%;">BIO 111</td> <td style="width: 60%;">General Biology I</td> <td style="width: 20%; text-align: right;">4 SHC</td> </tr> <tr> <td>*</td> <td>CHM 131</td> <td>Introduction to Chemistry</td> <td style="text-align: right;">3 SHC</td> </tr> <tr> <td>*</td> <td>CHM 131A</td> <td>Introduction to Chemistry Lab</td> <td style="text-align: right;">1 SHC</td> </tr> <tr> <td>*</td> <td>ENV 218</td> <td>Environmental Health</td> <td style="text-align: right;">3 SHC</td> </tr> </table> <p><b>Required Subject Areas:</b></p> <p><b>*Science. Select one sequence.</b></p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 5%;"></td> <td style="width: 15%;">BIO 140</td> <td style="width: 60%;">Environmental Biology</td> <td style="width: 20%; text-align: right;">3 SHC</td> </tr> <tr> <td></td> <td>BIO 140A</td> <td>Environmental Biology Lab</td> <td style="text-align: right;">1 SHC</td> </tr> <tr> <td></td> <td colspan="2" style="text-align: center;"><i>or</i></td> <td></td> </tr> <tr> <td></td> <td>ENV 110</td> <td>Environmental Science</td> <td style="text-align: right;">3 SHC</td> </tr> </table> <p><b>*Safety. Select one.</b></p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 5%;"></td> <td style="width: 15%;">ISC 112</td> <td style="width: 60%;">Industrial Safety</td> <td style="width: 20%; text-align: right;">2 SHC</td> </tr> <tr> <td></td> <td>ISC 121</td> <td>Envir Health &amp; Safety</td> <td style="text-align: right;">3 SHC</td> </tr> <tr> <td></td> <td>EHS 114</td> <td>OSHA Regulations</td> <td style="text-align: right;">4 SHC</td> </tr> </table>	*	BIO 111	General Biology I	4 SHC	*	CHM 131	Introduction to Chemistry	3 SHC	*	CHM 131A	Introduction to Chemistry Lab	1 SHC	*	ENV 218	Environmental Health	3 SHC		BIO 140	Environmental Biology	3 SHC		BIO 140A	Environmental Biology Lab	1 SHC		<i>or</i>				ENV 110	Environmental Science	3 SHC		ISC 112	Industrial Safety	2 SHC		ISC 121	Envir Health & Safety	3 SHC		EHS 114	OSHA Regulations	4 SHC	<b>16-19 SHC</b>	<b>16-19 SHC</b>	
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<p><b>B. CONCENTRATION</b>  <i>Courses unique to the concentration are designated with **</i></p> <p><b>Required Courses:</b></p> <table border="0"> <tr> <td>GIS</td> <td>110</td> <td>Survey of GIS/GPS</td> <td>1 SHC</td> </tr> <tr> <td>IVS</td> <td>110</td> <td>Intro to Invasive Species</td> <td>3 SHC</td> </tr> <tr> <td>**</td> <td>IVS</td> <td>210</td> <td>Inv Species Mgmt Strat</td> <td>3 SHC</td> </tr> <tr> <td>**</td> <td>IVS</td> <td>211</td> <td>Inv Species Mgmt Programs</td> <td>3 SHC</td> </tr> <tr> <td>**</td> <td>IVS</td> <td>260</td> <td>State License Exam Prep</td> <td>1 SHC</td> </tr> </table> <p><b>Required Subject Area:</b>  <b>Invasive Species. Select one set</b></p> <table border="0"> <tr> <td>**</td> <td>IVS</td> <td>220</td> <td>Inv Plant Survey Methods</td> <td>4 SHC</td> </tr> <tr> <td>**</td> <td>IVS</td> <td>221</td> <td>Inv Plant Control Methods</td> <td>3 SHC</td> </tr> <tr> <td></td> <td></td> <td><i>or</i></td> <td></td> <td></td> </tr> <tr> <td>**</td> <td>IVS</td> <td>230</td> <td>Aq Nuisance Survey Meth</td> <td>4 SHC</td> </tr> <tr> <td>**</td> <td>IVS</td> <td>231</td> <td>Aq Nuisance Control Meth</td> <td>3 SHC</td> </tr> <tr> <td></td> <td></td> <td><i>or</i></td> <td></td> <td></td> </tr> <tr> <td>**</td> <td>IVS</td> <td>240</td> <td>Insect/Dis Survey Methods</td> <td>4 SHC</td> </tr> <tr> <td>**</td> <td>IVS</td> <td>241</td> <td>Insect/Dis Control Methods</td> <td>3 SHC</td> </tr> <tr> <td></td> <td></td> <td><i>or</i></td> <td></td> <td></td> </tr> <tr> <td>**</td> <td>IVS</td> <td>250</td> <td>Inj Wildlife Survey Meth</td> <td>4 SHC</td> </tr> <tr> <td>**</td> <td>IVS</td> <td>251</td> <td>Inj Wildlife Control Meth</td> <td>3 SHC</td> </tr> </table>	GIS	110	Survey of GIS/GPS	1 SHC	IVS	110	Intro to Invasive Species	3 SHC	**	IVS	210	Inv Species Mgmt Strat	3 SHC	**	IVS	211	Inv Species Mgmt Programs	3 SHC	**	IVS	260	State License Exam Prep	1 SHC	**	IVS	220	Inv Plant Survey Methods	4 SHC	**	IVS	221	Inv Plant Control Methods	3 SHC			<i>or</i>			**	IVS	230	Aq Nuisance Survey Meth	4 SHC	**	IVS	231	Aq Nuisance Control Meth	3 SHC			<i>or</i>			**	IVS	240	Insect/Dis Survey Methods	4 SHC	**	IVS	241	Insect/Dis Control Methods	3 SHC			<i>or</i>			**	IVS	250	Inj Wildlife Survey Meth	4 SHC	**	IVS	251	Inj Wildlife Control Meth	3 SHC	<p><b>18 SHC</b></p>	<p><b>18 SHC</b></p>	
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<p><b>C. OTHER MAJOR HOURS</b>  <i>To be selected from the following prefixes:</i></p> <p>BIO, BUS, CHM, CIS, CIV, COE, CSC, CTS, EHS, ENV, FOR, GIS, ISC, IVS, MSC, PHS, and WAT</p> <p><i>Foreign language courses (including ASL) that are not designated as approved other major hours may be included in all programs up to a maximum of 3 semester hours of credit.</i></p>																																																																																	