














## Application Programming and Web Development (9246)

### Associate of Applied Business Degree

This program prepares students for in-demand entry-level software and web development careers. The primary languages studied are HTML, Java, JavaScript, Python and PHP programming. Additional topics covered include SQL programming, database design, ethics in IT, and foundational security issues. Students will learn how to develop application software for businesses and design mobile applications. Also, students will learn web design techniques in order to create interesting and functional web sites. Finally, business and general soft skills will be developed through business management courses which will be essential when working as part of a team and/or interacting with end users and clients. In addition to employment opportunities, students have the option to continue their education beyond the two-year associate degree program by enrolling in bachelor's degree programs. The U.S. Bureau of Labor Statistics forecasts a 25% increase in jobs between 2021 and 2031. Lakeland's program is designed to get you the skills and knowledge for a job in the exciting fields of programming and web development.


**NOTE:** Students planning to transfer to a four-year college are encouraged to take ENGL 1120 English Composition II in addition to the following requirements.

Course	Title	Credit Hours
<b>First Semester</b>		
BUSM 1300	Introduction to Business	3
ENGL 1110 or ENGL 1111	English Composition I (A) <sup>1</sup> or English Composition I (B)	3
FYEX 1000	First Year Experience	1
ITCS 1010	Programming Logic 	3
ITIS 1005 or ITIS 1007	Computer Essentials or Principles of Information Technology and Computer Science	3
ITIS 1102	Internet: Services, Tools, and Web Page Design 	3
<b>Credit Hours</b>		<b>16</b>
<b>Second Semester</b>		
BUSM 2400	Business Communication	3
GRDS 1800	Introduction to User Experience Design 	3
ITCS 1105	Web Programming I 	3
ITCS 1820	Java Programming I 	3
ITDB 1401	SQL Programming and Database Design 	3
MATH 1600	Survey of College Mathematics	3
<b>Credit Hours</b>		<b>18</b>
<b>Third Semester</b>		
BUSM 2000	Principles of Management	3
ITCS 2120	JavaScript Programming I 	3
ITCS 2820	Java/Android Programming II 	3
ITIS 1008	Ethics in Information Technology 	1
Select course(s) from the Arts and Humanities Electives List		3
Select course(s) from the Natural Science Electives list		3
<b>Credit Hours</b>		<b>16</b>
<b>Fourth Semester</b>		
BUSM 1700	Principles of E-Business	3
ITCS 1870	Python Programming I 	3
ITCS 2155	PHP Programming 	3
ITIS 1030	Security Awareness 	1
ITIS 2890	Information Technology and Computer Science Capstone 	2



Select course(s) from the Social &amp; Behavioral Sciences Electives list

3

**Credit Hours****15****Total Credit Hours****65**

- <sup>1</sup> English course selection is based on placement test results (ENGL 1111 English Composition I (B) is 4 credits, only 3 credits apply to the degree).
- <sup>2</sup> Students planning to transfer to a four-year college should take a sequence of math as advised by their counselor.
-  This course is designated as a technical course in the program. Students must earn a "C" grade or higher in the course to fulfill the college's graduation requirements policy.

**Electives**

Course	Title	Credit Hours
<b>Technical Electives</b>		
ITCS 1870	Python Programming I 	3
ITCS 2848	.NET Programming 	3
<b>Natural Sciences</b>		
CHEM 1050	Chemistry in the Everyday World	3
PSCI 1300	Earth Science	3
PSCI 1400	Introduction to Meteorology	3
Any other Natural Sciences laboratory course included in the Ohio Transfer 36		
<b>Arts and Humanities</b>		
ARTS 1120	Art Appreciation	3
ARTS 2220	Survey of Art I	3
ARTS 2230	Survey of Art II	3
ENGL 2250	Survey of American Literature I	3
ENGL 2260	Survey of American Literature II	3
ENGL 2280	Survey of British Literature I	3
ENGL 2290	Survey of British Literature II	3
HUMX 1100	Introduction to Humanities	3
MUSC 1200	Music Appreciation	3
MUSC 1215	World Music	3
MUSC 1800	Popular Music: Rock, Jazz, Country, and Hip-Hop	3
MUSC 2200	Music History and Literature I	3
MUSC 2250	Music History and Literature II	3
PHIL 1500	Introduction to Philosophy	3
PHIL 2000	Comparative Religion	3
PHOT 1000	History of Photography	3
<b>Social and Behavioral Sciences</b>		
ANTH 1160	Introduction to Cultural Anthropology	3
ECON 1150	Basic Economics	3
ECON 2500	Principles of Macroeconomics	3
ECON 2600	Principles of Microeconomics	3
GEOG 1500	Introduction to Geography	3
GEOG 1600	World Regional Geography	3
HIST 1150	Western Civilization I: Antiquity Through the Reformation	3
HIST 1250	Western Civilization II: Age of Revolution Through the Present	3
HIST 2150	U.S. History: Colonization Through Reconstruction	3
HIST 2250	U.S. History: Reconstruction to the Present	3
POLS 1300	U.S. National Government	3
POLS 2500	Modern Political Ideologies	3
PSYC 1500	Introduction to Psychology	3
SOCY 1150	Principles of Sociology	3