Information Technology Applications II

Course

This course will focus on skill development in data science using spreadsheet, database, and integration of applications utilizing advanced features. Students taking both Information Technology Applications I and II may be eligible for dual credit at a participating postsecondary institution. Skills, standards, and coursework align with industry certifications.

Course Code: 270502

Endorsements to teach:

Basic Business and BMIT Endorsement

Programs of Study to which this Course applies:

Business Technology and Data Science

CIS.HS.4a.8

	Organize, aggregate, and manipulate data using advanced spreadsheet features.
CIS.HS.4a.8.a	Create worksheet structures using formulas and advanced features. (e.g., logical statements, vLookup, financial, statistical functions).
CIS.HS.4a.8.b	Interpret data through statistical analysis (e.g., sorting, filtering, forecasting, and pivot tables).
CIS.HS.4a.8.c	Import, export, and share worksheet data.
CIS.HS.4a.8.d	Customize formatting methods, including conditional formatting and other advanced formatting methods.

CIS.HS.4a.9

	Synthesize relational database concepts to design, manage, evaluate, and organize information.
CIS.HS.4a.8.a	Design tables specifying properties for data entry and relationships.
CIS.HS.4a.9.b	Construct multi-table queries to retrieve, organize, and aggregate data to draw conclusions.
CIS.HS.4a.9.c	Design forms and sub-forms for efficient and effective data entry or retrieval.
CIS.HS.4a.9.d	Design reports and sub-reports for visually appealing display of meaningful data.
CIS.HS.4a.9.e	Analyze relational data using Structure Query Language (SQL).

CIS.HS.4a.10

	Understanding the importance of ethical data collection and applicable conclusions.
CIS.HS.4a.10.a	Analyze the privacy practices of data collection and use.
CIS.HS.4a.10.b	Analyze the security practices of data collection and use.

CIS.HS.4a.11

	Critical thinking skills will be used to integrate information technology tools to access, manage, and create new information.
CIS.HS.4a.11.a	Gather, evaluate, use, and disseminate information from multiple technology sources.
CIS.HS.4a.11.b	Use data to create purposeful digitally designed products (e.g., brochure, presentation, website, portfolio).

CIS.HS.4a.12

	Examine resources to develop understanding of data science in careers.
CIS.HS.4a.12.a	Identify the benefits of industry certification and higher education programs.
CIS.HS.4a.12.b	Identify the necessary skills to succeed in fields using data science.

Written by:

Katie Luebbe, Tom Dickey, Teresa Feick, Tennille Allison, Jocelyn Crabtree

Resources:

Overall

How To Become A Data Scientist In 2017
https://www.forbes.com/sites/drewhansen/2016/10/21/become-data-scientist/#57043d8b87d3
https://www.amstat.org/asa/files/pdfs/EDU-DataScienceGuidelines.pdf