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Company/Organization Name: IBEC
Resource/Product Name: Digital Competencies & Entrepreneurial Skills
ISTE Standards: ISTE Standards for Students (Foundational)

RESOURCE DESCRIPTION:

1) What are IBEC Digital Competencies & Entrepreneurial Skills?

The IBEC Digital Competencies & Entrepreneurial Skills courses are designed to provide a pathway for different certifications of skills within a variety of Microsoft Office programs, Python 3.9, Digital Marketing, and Business Management courses. Each of these courses have self-guided lessons with eBooks, video tutorials and a partial/final exam. Within the lessons portion of the course, the IBEC platform guides the user to explore, click within the different programs and demonstrate their knowledge during the partial and final assessments.

2) How are IBEC Digital Competencies & Entrepreneurial Skills Implemented?

The IBEC Digital Competencies & Entrepreneurial Skills courses are: Data Analysis Fundamentals, Word processor, Project planning, Spreadsheets, Programming Fundamentals, Fundamentals of Computing and Online Applications, Business Management I, II & III, Digital marketing, Presentations and International Certification in Pedagogy & Digital Competencies.

Each course is broken down by different objectives, skills and goals. Within each course, a student has the option to explore self-guided lessons with access to eBooks, video tutorials, view infographics and take partial/final exams. The video tutorials ask that the user click where appropriate in order to complete different step by step tasks. This demonstrates immediate understanding of where one needs to click in order to complete the given task(s). There are also informational videos in some of the courses with overviews of pertinent information. For example, within the digital marketing course, a student has access to different videos related to marketing. At the end of each lesson, students are provided with an assessment. Assessment question types range from multiple choice to task-based. There is also a final exam component for each course. With an individual student log-in, one can access and organize different resources from each of the courses, interact with their instructor through the "chat" feature and a leaderboard provides information regarding one's advancement in each of the listed courses.

3) Scope of Review

ISTE Reviewers reviewed information & materials found in each of the courses available within **IBEC Digital Competencies & Entrepreneurial Skills** against the *ISTE Standards for Students: Foundational*.

ISTE Reviewers reviewed each of the ebooks, video tutorials, videos, infographics and assessments located within the courses: Data Analysis Fundamentals, Word processor, Project planning, Spreadsheets, Programming Fundamentals, Fundamentals of Computing and Online Applications, Business Management I, II & III, Digital marketing, Presentations and International Certification in Pedagogy & Digital Competencies.

Through the analysis of these different online courses, evidence was located in *Foundational alignment* of the ISTE Standards for Students for the following standards & strands:

Empowered Learner: 1c , 1d
Digital Citizen: 2d
Knowledge Constructor: 3a, 3c
Innovative Designer: 4b
Computational Thinker: 5a, 5b, 5c
Creative Communicator: 6a, 6d

4) Review Findings

Complete the Table using evidence gathered from matrices

ISTE Standard	Foundational/Readiness Finding Statement
1. Empowered Learner. Students leverage technology to take an active role in choosing, achieving and demonstrating competency in their learning goals, informed by the learning sciences.	
1.a. Articulate and set personal learning goals, develop strategies leveraging technology to achieve them and reflect on the learning process itself to improve learning outcomes.	
1.b. Build networks and customize their learning environments in ways that support the learning process.	
1.c. Use technology to seek feedback that informs and improves their practice and to demonstrate their learning in a variety of ways.	Students can track their own progress on each lesson and with each of the online exams. Within each learning module, and using tools embedded in partial tests, students can get feedback that informs their performance through the different lessons before completing the Final Exam.

1.d. Understand the fundamental concepts of technology operations, demonstrate the ability to choose, use and troubleshoot current technologies and are able to transfer their knowledge to explore emerging technologies.	Within each of the courses, students are provided with knowledge related to a variety of programs with the goal of obtaining a certification. Students participate in simulated learning experiences through each of the video tutorials. For example, in the Data Analysis course, there are guides & tutorials in learning how to analyze data, visualize data and use Power BI (*Power BI is a cloud-based analysis service that provides rapid insight and is used to extract and visualize data*). Another example is located within the Programming Fundamentals course where students are guided in how to code with video tutorials which walk students step by step through understanding how basic programming functions in Python.
2. Digital Citizen. Students recognize the rights, responsibilities and opportunities of living, learning and working in an interconnected digital world, and they act and model in ways that are safe, legal and ethical.	
2.a. Cultivate and manage their digital identity and reputation and are aware of the permanence of their actions in the digital world.	
2.b. Engage in positive, safe, legal and ethical behavior when using technology, including social interactions online or when using networked devices.	
2.c. Demonstrate an understanding of and respect for the rights and obligations of using and sharing intellectual property.	
2.d. Manage their personal data to maintain digital privacy and security and are aware of data-collection technology used to track their navigation online.	Students are provided with guidelines in how to manage their personal data and maintain digital privacy. In the course, Fundamentals of Computing and Online Applications, students gain knowledge on how to configure their web browser settings to manage and protect personal data, including setting up options for emerging pop-up windows, managing cookies, and deleting browsing history.
3. Knowledge Constructor. Students critically curate a variety of resources using digital tools to construct knowledge, produce creative artifacts and make meaningful learning experiences for themselves and others.	
3.a. Plan and employ effective research strategies to locate information and other resources for their intellectual or creative pursuits.	Each of the learning modules provides access to an array of programs to increase one's knowledge & skills in the usage of MS Office applications, programming, marketing, project planning and business management. As an example, through lessons in the Project Planning course, students learn and apply in various practical exercises how to effectively use Microsoft Project to create, manage and evaluate a plan for a specific project. Students learn how to employ effective strategies to locate data and information needed in the process. Another example can be located in the course Fundamentals of Computing and Online Applications, students learn how to use

	search engines to filter, refine and conduct an effective information search.
3.b. Evaluate the accuracy, perspective, credibility and relevance of information, media, data or other resources.	
3.c. Curate information from digital resources using a variety of tools and methods to create collections of artifacts that demonstrate meaningful connections or conclusions.	Students have the ability to organize their learning resources within their own student account. Each of the resources available such as the video tutorials can be organized and used to practice foundational information learned. As an example, within the Presentations course, students learn how to create a presentation, add tables, word art, shapes, photos, graphics, animation as some examples. Within the Data Analysis course, students gain knowledge related to analyzing data, visualizing through graphs and how to use the platform Power BI. And, in the Spreadsheet course, students learn how to find essential data information within a sheet and find unique values within a data set.
3.d. Build knowledge by actively exploring real-world issues and problems, developing ideas and theories and pursuing answers and solutions.	
4. Innovative Designer. Students use a variety of technologies within a design process to identify and solve problems by creating new, useful or imaginative solutions.	
4.a. Know and use a deliberate design process for generating ideas, testing theories, creating innovative artifacts or solving authentic problems.	
4.b. Select and use digital tools to plan and manage a design process that considers design constraints and calculated risks.	With the Business Management and Project Planning courses, students are introduced to the design process, how to plan according to different risk factors and develop solutions. Specifically in the Business and Management I course, one is introduced to the steps to launch and start a business, including the outside business risks that may arise in this process. As an added example, video resources with the Project Planning course present students with information about limitations and constraints for the project scope. Students gain an understanding of how to use certain tools to collect, manage, analyze and visualize data within the planning process.
4.c. Develop, test and refine prototypes as part of a cyclical design process.	
4.d. Exhibit a tolerance for ambiguity, perseverance and the capacity to work with open-ended problems.	
5. Computational Thinker. Students develop and employ strategies for understanding and solving problems in ways that leverage the power of technological methods to develop and test solutions.	

5.a. Formulate problem definitions suited for technology-assisted methods such as data analysis, abstract models and algorithmic thinking in exploring and finding solutions.	The Programming Fundamentals course provides students with the fundamentals about how to think and solve problems in coding. Students learn how to test, debug, and implement code effectively. The course highlights how a student can divide problems into smaller tasks and write algorithms. It also provides students an introduction to the pillars of computational thinking: decomposition, abstraction, pattern recognition, algorithm.
5.b. Collect data or identify relevant data sets, use digital tools to analyze them, and represent data in various ways to facilitate problem-solving and decision-making.	In various courses such as Business Management, Data Analysis, Programming Fundamentals, and Project Planning, students are introduced to data collection, how to use different tools to analyze data and assist with problem-solving. Step by step directions are provided in the Data Analysis course in how to represent data in different ways through organizational tools such as graphs, charts, etc. Another example can be located within the Business Management courses as students learn how to analyze and break down transactions of a business in an Excel spreadsheet to generate financial statements, including the full accounting cycle.
5.c. Break problems into component parts, extract key information, and develop descriptive models to understand complex systems or facilitate problem-solving.	In various courses such as Business Management, Data Analysis, Programming Fundamentals, and Project Planning, students are introduced to how to break down problems, identify key information and problem solve. Within the Project Planning course, students learn how to decompose a planning project and work it most efficiently through real-world examples described in the E-books. And, lessons in the Project Planning course also introduce students to the Gantt Chart, a visual project management tool assisting in the planning and scheduling of projects of all sizes. Students have the opportunity to practice the creation of a Gantt Chart using Microsoft Project 2019.
5.d. Understand how automation works and use algorithmic thinking to develop a sequence of steps to create and test automated solutions.	
6. Creative Communicator. Students communicate clearly and express themselves creatively for a variety of purposes using the platforms, tools, styles, formats and digital media appropriate to their goals.	
6.a. Choose the appropriate platforms and tools for meeting the desired objectives of their creation or communication.	In both the Digital Marketing and Project Planning courses, students are introduced to different creative communication tools such as website design, infographics, and presentation software. In the Digital marketing course, students learn about how to create a brand, strategies behind promoting one's brand, designing a website by using a web hosting platform such as Wordpress, and differences between SEO/SEM. Throughout the Project Planning course, students learn how to develop a communication plan and identify the best method to communicate with their intended audience.

6.b. Create original works or responsibly repurpose or remix digital resources into new creations.	
6.c. Communicate complex ideas clearly and effectively by creating or using a variety of digital objects such as visualizations, models or simulations.	
6.d. Publish or present content that customizes the message and medium for their intended audiences.	In many courses, students are provided with information on how to publish content and customize their message to an audience. One can explore Microsoft Office: PowerPoint and review thirteen lessons about creating, delivering and sharing a presentation. In the Data Analysis course, students learn how to present data through graphs. And in the Fundamentals of Computing and Online Applications course, students are presented with information on how to customize email messages depending on the audience.
7. Global Collaborator. Students use digital tools to broaden their perspectives and enrich their learning by collaborating with others and working effectively in teams locally and globally.	
7.a. Use digital tools to connect with learners from a variety of backgrounds and cultures, engaging with them in ways that broaden mutual understanding and learning.	
7.b. Use collaborative technologies to work with others, including peers, experts or community members, to examine issues and problems from multiple viewpoints.	
7.c. Contribute constructively to project teams, assuming various roles and responsibilities to work effectively toward a common goal.	
7.d. Explore local and global issues and use collaborative technologies to work with others to investigate solutions.	

5) Conclusion

There are a variety of courses available within **IBEC Digital Competencies & Entrepreneurial Skills** platform such as Data Analysis Fundamentals, Word processor, Project planning, Spreadsheets, Programming Fundamentals, Fundamentals of Computing and Online Applications, Business Management I, II & III, Digital marketing, Presentations and International

Certification in Pedagogy & Digital Competencies. In each course, students are introduced to different goals and lessons to develop their knowledge in these different programs, business models and certification paths. Students have the advantage of being able to self-pace and customize their learning pathway within the "Agenda" and "Resource" areas. Video tutorials guide students where to appropriately click in order to perform certain actions within the platform and each lesson is accompanied by an assessment. Certain lessons also provide informational videos and infographics. There is a final assessment for each course with the intention of gaining IBEC certification. Students can also keep track of their individual progress through the "leaderboard".

Evidence was located in *Foundational alignment* of the ISTE Standards for Students for the following standards & strands: **Empowered Learner:** 1c , 1d, **Digital Citizen:** 2d, **Knowledge Constructor:** 3a, 3c, **Innovative Designer**: 4b, **Computational Thinker:** 5a, 5b, 5c and **Creative Communicator:** 6a, 6d. The different online courses provide students with foundational knowledge in each of the Microsoft Office programs, digital marketing, data analysis and business management skills. Students can learn all about these programs at their own pace, set different goals and ultimately earn an IBEC certification.