The Illinois School for the Deaf
Information Technology Program of Study
June 24, 2014

Introduction

Career Pathways in Information Technology at the secondary level at the Illinois School for the Deaf (ISD) provide preparation for a variety of occupations and assist students with developing skills as family and community members. The targeted occupations require product knowledge and skills and technology expertise that takes into consideration specialized technology and assistive devices for individuals with hearing loss in addition to excellent human relation skills. The Information Technology program covers a wide array of career and program options, including: web development and design.

ISD's programs in Information Technology prepare students for employment in entry level occupations and further career preparation at the postsecondary level. Some students may choose to enter a career right out of high school whereas others may decide to further their education before entering a career. The Information Technology program prepares students for lifelong learning. The tasks, skills and standards identified by business and industry as necessary for success in these occupations are used as the basis for the instructional program development. To assist students in achieving success in their chosen careers, the ISD Information Technology program emphasizes the development of skills and knowledge that are transferable to a variety of settings. Additionally, students acquire the competencies and strategies necessary to improve the quality of life in their homes, communities and workplaces and to prepare them to become self-supporting citizens.

The following job outlook for occupations in Information Technology was summarized from information provided by the Occupational Outlook Handbook. This information was updated in 2012. Jobs in web developing are projected to increase by 20% from 2012-2022 which is faster than average for all occupations. Due to the increased use of the Internet in today's society, web developers are in high demand to design websites for multi-media devices such as tablets, smart phones, & laptops.

ISD developed its Information Technology program from statewide labor market information (LMI). Occupations with related skills have been grouped together to develop instructional programs which provide students with a wide range of opportunities for entry-level employment, career advancement and further education. As new occupations emerge and employment needs are demonstrated, additional programs will be developed. The ISD Information Technology program consists of the following area:

- Web Page & Interactive Media Development

The Information Technology program prepares students for assuming the multiple roles of being a wage earner and community member. The program focuses on time management, work ethic, and how to adapt to the ever changing fields of Information Technology.

ISD follows a planned sequence of courses in its Information Technology program. The content and learning experiences are defined in subject-specific course descriptions. ISD offers two semesters for each course rather than the one semester recommended because generally students who are deaf or hard of hearing face academic challenges and require additional time to learn the skills necessary for these courses. These skills must be formally taught. Because of the intense nature of the teaching, more time is required to cover the course content.

Components of ISD's Secondary
Information Technology Program

ISD's program includes the following components in its instructional programs.

1. Qualified, Licensed Professional Educator—ISD educator is fully qualified and licensed as a secondary Career Technical Education educator and possesses non-teaching work experience. Currently, the educator possesses a teaching license in the area of Business and Industrial Technology.
2. Student Services--ISD employs appropriate support services and these services are available to all students in the Information Technology program. Students at ISD have Individualized Education Plans (IEPs); individualized career plans; and individual advisement by the educator and counselor on a regular basis.
3. Sequentially Structured, Aligned Programs--The instruction in the Information Technology program is based on worker competencies and includes the skills, knowledge and attitudes required for successful employment in the occupations served by the program. Programs include practical, logical, sequentially structured courses and are aligned with the Common Core Standards.
4. Active Career and Technical Education Student Organizations – ISD is investigating the possibility of establishing a vocational organization for students in the Information Technology Program of Study.
5. Facilities and Equipment—the facilities and equipment used in teaching the Information Technology program is appropriate for the students enrolled in the program. It is adequately designed, installed and maintained to ensure safe operation and use. There is appropriate instructional and storage space. Students participate in hands-on experiences in classroom and lab areas. Students also have the opportunity for job shadowing experiences and student work experiences.
6. Active CTE Advisory Council—ISD has a CTE Advisory Council that held its most recent meeting on May 2, 2014. The ISD CTE Advisory Council will meet in both Fall 2014 and Spring 2015. The most recent meeting was held as a whole group and break outs sessions were held based on career pathways, which provided direction and support for development and evaluation of instructional programs. Membership of the committee is comprised of employers/employees, students, educators, instructors, DRS staff, post-secondary staff, ISBE staff, SIU Workforce Development staff, and DRS staff.

Information Technology Course Structure

<u>Orientation-level course</u> introduces students to all aspects of keyboarding and formatting and serve as a background for all ISD Information Technology classes offered. Students may proficiency out of this requirement by completing a skills assessment of typing at least 20 words per minute with 80% accuracy. A two-semester comprehensive course, Keyboarding & Formatting, is generally offered to 10th grade students and older without fundamental keyboarding skills and knowledge of computer applications. This orientation course exposes students to a variety of procedures, the knowledge, and basic skills necessary to enable students to make meaningful decisions regarding further Information Technology occupational studies.

<u>Preparation-level courses</u> provide students with experiences that support the acquisition of occupational standards and skills required for developing independent skills and employment. The 11th, 12th, and Transition grade preparation-level courses provide students with the opportunity to develop marketable job skills as well as preparation for further postsecondary training. All Information Technology programs include logical, practical, sequential learning experiences for the essential technical skills and are designed to achieve that goal. The goal of ISD is to collaborate with postsecondary programs in order to complete the full scope of instruction.

ISD provides classes that utilize work-sites that give real life experience in Information Technology areas. The structure and content of the courses follows child labor laws and state rules and regulations. Examples of Information Technology work sites are: web design studios, graphic designer, software companies, or major web page design companies.

Information Technology

This program offers a sequence of planned educational classroom and laboratory experiences including career exploration, record keeping, content knowledge, practical work experiences provided by ISD staff and stakeholders.

Emphasis is placed on developing competencies in the following areas:

- Work place/employability skills
- Record keeping
- Content knowledge

ISD Information Technology Program of Study Sequence

Orientation Courses

ISBE Course Number	Course Title	Credits Per Semester	Semester Length	Grade Levels
12005A001	Keyboarding & Formatting	0.5	2	9,10, 11, 12, TLP

Preparation Courses

ISBE Course Number	Course Title	Credits Per Semester	Semester Length	Grade Levels
10201A001	Web Page & Interactive Media Development I	0.5	2	10,11,12, TLP
10201A002	Web Page & Interactive Media Development II	0.5	2	11,12, TLP

Student Work Experience

ISBE Course Number	Course Title	Credits Per Semester	Semester Length	Grade Levels
22206A000	Life Skills	0.5	2	11
22208A000	**Consumer Family Living	0.5	2	12
22210A000	**Consumer Economics/Personal Finance	0.5	2	12
22152A000	Transition Employability Skills	0.5	2	TLP
22998A000	Student Work Experience	0.5	2	12, TLP

** Students will be enrolled in either Consumer Family Living or Consumer Economics/Personal Finance during their 12th grade year.

Course Descriptions for the listed classes are in Appendix A.

Curricular Outlines for the listed classes are in Appendix B.

APPENDIX A – COURSE DESCRIPTIONS

Course Title: Keyboarding and Formatting—(ISBE # 12005A001)

Course Description: Keyboarding and Formatting is a course designed to develop basic skills in touch keyboarding techniques for entering alphabetic, numeric, and symbol information found on computers and terminals. Students may proficiency out of this requirement by completing a skills assessment of typing at least 20 words per minute with 80% accuracy. Students will learn to edit and format text and paragraphs, change fonts, cut and paste text, create and use tab keys, create labels, and work with multiple windows. Students will format documents such as letters, envelopes, memorandums, reports, and tables for personal, educational, and business uses. During the second half of the course, major emphasis is placed on formatting documents, improving proofreading skills, and increasing speed and accuracy.

Course Title: Web Page & Interactive Media Development I - (ISBE # 10201A001)

Course Description: Web Page and Interactive Media Development I is a skill-level course designed to prepare students to plan, design, create and maintain web pages and sites. Students will learn the fundamentals of web page design using HTML, HTML editors, and graphic editors. Students will work in a project-based environment to create a working website. Students will learn to create pages, add hyperlinks, make tables and frames, create forms, integrate images, and set styles. Students will use image-editing programs to manipulate scanned images, computer graphics, and original artwork. Instruction will include creating graphical headers, interactive menus and buttons, and visually appealing backgrounds. Students will use hardware and software to capture, edit, create, and compress video clips.

Course Title: Web Page & Interactive Media Development II (ISBE #10201A002)

Course Description: Web Page and Interactive Media Development II is a skill-level course for students who have completed Web Page and Interactive Media Development I. Instruction will include using multimedia authoring applications and programming tools to create a web site that combines text, hyperlinks, images, and video. Instruction will include using hardware and software to capture, edit, create video clips as well as create animated text, graphics, and images. Other topics will include using tables to align images with text, creating newspaper-style columns, and inserting side menus and call-outs. Students will learn how to use templates and interactive elements to enhance web pages. Students are encouraged to develop a portfolio project that demonstrates their expertise in areas such as multimedia authoring, web development, video editing, and applications to create interactive web pages.

Course Title: Student Work Experience (ISBE # 22998A000)

Course Description: Workplace Experience courses provide students with work experience in a field related to their interests. Goals are typically set cooperatively by the student, teacher, and employer (although students are not necessarily paid). These courses may include classroom activities as well, involving further study of the field or discussion regarding experiences that students encounter in the workplace.

Appendix B – Course Outline

Keyboarding and Formatting

Topic	Length of Unit (Time) in weeks	CCSS Standards
Keyboarding On-Line	18 weeks	CCSS.ELA-Literacy.RI.11-12.7 CCSS.ELA-Literacy.RST.11-12.3 CCSS.ELA-Literacy.WHST.11-12.2 CCSS.Math.Content.HSN-Q.A.1
MS Word – edit, format, text paragraphs, change fonts, cut and paste, save, format documents	9 week	CCSS.ELA-Literacy.RI.11-12.7 CCSS.ELA-Literacy.RST.11-12.3 CCSS.ELA-Literacy.WHST.11-12.2 CCSS.Math.Content.HSN-Q.A.1
MS PowerPoint – Digital camera, basic Photoshop and Bridge, fundamentals of PowerPoint – add slides, insert pictures, create backgrounds, transitions, add animations	9 weeks	CCSS.ELA-Literacy.RI.11-12.7 CCSS.ELA-Literacy.RST.11-12.3 CCSS.ELA-Literacy.WHST.11-12.2 CCSS.Math.Content.HSN-Q.A.1

Web Page & Interactive Media Development I

Topic	Length of Unit (Time) in weeks	CCSS Standards
Fundamentals of HTML code	3 weeks	CCSS.ELA-Literacy.RI.11-12.7 CCSS.ELA-Literacy.RST.11-12.3 CCSS.ELA-Literacy.WHST.11-12.2 CCSS.Math.Content.HSN-Q.A.1
Digital Camera – how to take quality pictures	1 week	CCSS.ELA-Literacy.RI.11-12.7 CCSS.ELA-Literacy.RST.11-12.3 CCSS.ELA-Literacy.WHST.11-12.2 CCSS.Math.Content.HSN-Q.A.1
Introduction to Photoshop, Bridge, Flash, Fireworks, Dreamweaver	6 weeks	CCSS.ELA-Literacy.RI.11-12.7 CCSS.ELA-Literacy.RST.11-12.3 CCSS.ELA-Literacy.WHST.11-12.2 CCSS.Math.Content.HSN-Q.A.1
Create school web pages using Dreamweaver, Photoshop, Bridge, Flash,	30 weeks	CCSS.ELA-Literacy.RI.11-12.7 CCSS.ELA-Literacy.RST.11-12.3 CCSS.ELA-Literacy.WHST.11-12.2 CCSS.Math.Content.HSN-Q.A.1

Fireworks		

Web Page & Interactive Media Development II

Topic	Length of Unit (Time) in weeks	CCSS Standards
Fundamentals of HTML code	3 weeks	CCSS.ELA-Literacy.RI.11-12.7 CCSS.ELA-Literacy.RST.11-12.3 CCSS.ELA-Literacy.WHST.11-12.2 CCSS.Math.Content.HSN-Q.A.1
Digital Camera – how to take quality pictures	1 week	CCSS.ELA-Literacy.RI.11-12.7 CCSS.ELA-Literacy.RST.11-12.3 CCSS.ELA-Literacy.WHST.11-12.2 CCSS.Math.Content.HSN-Q.A.1
Introduction to Photoshop, Bridge, Flash, Fireworks, Dreamweaver	6 weeks	CCSS.ELA-Literacy.RI.11-12.7 CCSS.ELA-Literacy.RST.11-12.3 CCSS.ELA-Literacy.WHST.11-12.2 CCSS.Math.Content.HSN-Q.A.1
Create school web pages using Dreamweaver, Photoshop, Bridge, Flash, Fireworks, sound and video	30 weeks	CCSS.ELA-Literacy.RI.11-12.7 CCSS.ELA-Literacy.RST.11-12.3 CCSS.ELA-Literacy.WHST.11-12.2 CCSS.Math.Content.HSN-Q.A.1