Advanced Technology Program Documentation

Release (rough)

Chelsea School

February 27, 2015

CONTENTS

Contents:

CHAPTER

ONE

PROGRAM INTRODUCTION

1.1 Courses

Chelsea School's Advanced Technology Program offers students three curriculum tracks:

- Computing
- Video Production
- Computer Graphics

1.1.1 Computing Courses

- **Information Systems Management 1-4** This program is generally available to 9th-12th graders. 8th graders who have demonstrated proficiency navigating the World Wide Web and the "Desktop" graphical user interface may be invited to enroll.
- **Web Design and Developent 1-3, Internship (9th-12th)** This course sequence covers markup languages, creating web pages in plain text, designing pages in "what you see is what you get" editors, graphic design for the web, web accessibility and usability standards, content management systems, and the design of web applications; in addition to HTML and CSS, students work with a server-side scripting language (e.g. PHP, Python, perl, Ruby) as well as client side scripting with JavaScript or jQuery.
- **Network Fundamentals** This course serves upperclassmen who have completed three years of Information Systems Management and intend to for CompTIA's Network+ and Security+ exams.

1.1.2 Digital Video Production Courses

- Video Production 1 and 2
- ?

Todo

Ask instructor to verify course information and complete short blurbs.

1.1.3 Computer Graphics Courses

- Computer Graphics 1 and 2

Todo

Ask instructor to verify course information and complete short blurbs.

1.2 Program Philosophy

1.2.1 Foundational Assumption

Todo

foundational v fundamental

It is not enough to equip students to access, consume, and utilize digital tools.

1.2.2 Mission

Empower students to **participate in the production** of an intentionally-designed, digital world through

- systematic and computational thinking
- authentic learning and assessment in the complimentary fields of literacy; digital design, manipulation, and publication; computer science and software engineering; and information technology.

The advanced technology program is committed to graduating a promising new generation of experienced innovators and contributors to their communities and cultures.

1.2.3 Rationale

This program encourages innovation, collaboration, and resourcefulness as it develops and required precision, logical thinking, and creative thinking.

Students apply underlying principals to understand real, contemporary systems for digital design, production, and problem solving in order to create purposeful, valuable, usable artifacts for *users or consumers with something at stake*.

Our advanced technology program is as academically rigorous as it is creative – the consequences of our underlying principles, opportunities for authentic learning, and the value it instills in participants for innovation and invention.

1.2.4 Program Values

Grounded in Chelsea School's mission, vision, and values, this program is also guided by the following values:

- Equalable access, rights, and opportunity
- Constructivist and constructionist pedagogy
- Literacy across the curriculum – writing as well as reading
- Citizenship and civic commitment
- Truly authentic learning and assessment
- Differentiated instruction

- Collaboration and cooperation
- Connected learning [1]

Todo

check again on contructionist and constructivist

1.2.5 Critical Considerations

We share an unshakeable commitment to address the following issues as matters of urgency:

- Underrepresentation of marginalized groups in general – and women in particular – in science, technology, engineering, and mathematics fields
- Inequitable access to resources
- Promoting literacy in reluctant readers and readers with language-based learning differences

[1] See Ito

CHAPTER

TWO

INDICES AND TABLES

- *genindex*
- *modindex*
- *search*