

Meridian Technical Charter High School

Pathway Area Curriculum Outline, Equipment, Software/Tools

Microcontrollers & Electronics

2016-2017-Microcontrollers & Electronics

- No emphasis on pre-engineering (instead all pathways possibly lead to engineering)
- Tools, hardware, crimping, splicing, cabling, wiring, breadboarding
- Schematics, block diagrams, component/board level repair/replacement, datasheets
- Soldering, desoldering, fluxes, solder types, thru-hole, surface mount
- CAD - SolidWorks, parts, assemblies, drawings, not drafting emphasis (minimal emphasis, introduction to software, mountainboard project, some FEA analysis, large assemblies with hardware/toolbox usage)
- [Projects using Arduino, interfacing and programming emphasized](#) **OR**
- [DC theory and lab, NIDA 130E trainers \(Juniors\)](#)
- DC, AC & Analog theory and lab, NIDA 130E trainers, test bench equipment, component level troubleshooting (Seniors)

Media and Web Design and Development

2016-2017-Media and Web Design and Development

1. Pathway will evolve from Media Design to Media and Web Design and Development
2. Traditional design principles - color theory, elements of design, demographics, etc.
3. CSS3/HTML5/Javascript to develop dynamic user interfaces for web (UX)
 - a. Design for computers, tablets, smartphones
4. Media design including print and business identity
5. Videography and photography for the web
6. Adobe Photoshop, Illustrator, Indesign, Premiere, Dreamweaver, Muse - CC
7. Wordpress, Wix, and other WYSIWYG web design platforms.
8. Fundamentals of PHP and MySQL

Computer Science & Web Development

2016-2017-Computer Science & Web Development

1. PHP/MySQL - Server Side and Database Development (Junior)
 - a. Focussed on Procedural Programming / Introduced OOP (Junior)
2. HTML5/CSS3/JavaScript/jQuery (Junior)
3. SQL Database Design and Programming (MySQL and Oracle - Junior)
4. C# Web Applications and Advanced Scripting (Advanced Juniors)
5. Using API's (Basic and Advanced - Junior/Senior)
6. Java (BSU Computer Science 121) - (Senior)
7. Software Projects using SCRUM Development- (Senior)
8. WordPress and other CMS systems.(Junior/Senior)
9. Basic/Advanced concepts of UX Design and accessibility. (Junior/Advanced)
10. Photoshop, Illustrator, Dreamweaver Adobe Training - Adobe CC (Junior/Senior)

Webmaster Area (Senior year will begin 2016-2017)

1. PHP/MySQL - Server Side and Database Development (Junior)
 - a. Focussed on Procedural Programming / Introduced OOP (Junior)
2. HTML5/CSS3/JavaScript/jQuery (Junior)
3. SQL Database Design and Programming (MySQL and Oracle - Junior)
4. C# Web Applications and Advanced Scripting (Advanced Juniors)
5. Using API's (Basic and Advanced - Junior)
6. Intro to Networking and Servers - (Senior)
7. Software Projects using SCRUM Development- (Senior)
8. WordPress and other CMS systems.(Junior/Senior)
9. Basic/Advanced concepts of UX Design and accessibility. (Junior/Advanced)
10. Photoshop, Illustrator, Dreamweaver Adobe Training - Adobe CC (Junior)

Networking / Information Systems Technology

2016-2017-Information Systems Technology

1. A+ curriculum and certification - Comptia- A+ 901 and 902 (Junior)
2. Network+ curriculum and certification - network design, and help desk (Junior)
3. Desktop support - Windows 7, Windows 8, Windows 10 - Microsoft desktop support (Junior)
4. Introduction to servers - Server 2008 and Server 2012, Virtualization and servers (Junior)
5. Help Desk and Customer Service concepts in all 4 sections (Junior)
6. Security Pro - securing desktops, servers and personal devices (Senior)
7. Independent study - Linux, Cisco, or advanced Microsoft servers (Senior)