

## Computer Program Curriculum

The computer program is aimed at providing courses of computer basics, programming languages and standards for development of web sites and browser based applications on PC and mobile devices, databases and Linux servers, as well as other related knowledge. The following courses are available for prospective students. The latest versions of all courses will be taught:

**Computer basics, HTML, CSS, Javascript, PHP/Frameworks, Python, Regular Expression, SQL, MySQL/Maria DB...**

**Optional: Node JS, Linux, Git**

All courses are taught by well experienced IT professional in a flexible way that allows students at different levels to select courses they prefer. After graduation from our computer program, the students will be armed with basic knowledge of computer sciences and skills as a web developer even a full stack developer, which is employment promising. In addition, students will learn a lot of terms of computer science. This program also prepares students for education of computer science at college and university levels.

本计算机课程包括计算机基础知识、网站和基于浏览器的应用程序开发所需的语言及标准、数据库和 Linux 服务器以及其它相关知识，如：HTML, CSS, Javascript, PHP 及 Framework, SQL, Mysql, Linux, Git....等。所有课程由具有多年实战经验的 IT 专业人士用中英文双语授课，因人而异灵活施教，教授所有语言、标准的最新版本，**并且将教授大量的计算机专业的术语**。学完课程就能具备基本的计算科学知识，并能成为网站开发工程师或全栈开发工程师，还能提高你的相关专业英文水平，就业前景无限，也能让学生为大学的计算机课程学习打好基础。

**1. Computer basics:** Binary, Algorithm, IP, HTTP, TCP...

**2. HTML 5:**

Introduction, Editors, Basic, Elements, Attributes, Headings, Paragraphs, Styles, Formatting, Quotations, Comments, Colors, CSS, Links, Images, Tables, Lists, Blocks, Classes, Id, Iframes, JavaScript, File Paths, Head, Layout, Responsive, Computer code, Entities, Symbols, Charset, URL Encode, XHTML

**3. CSS 3.0:**

Introduction, Syntax, How To, Colors, Backgrounds, Borders, Margins, Padding, Height/Width, Box Model, Outline, Text, Fonts, Icons, Links, Lists, Tables, Display, Max-width, Position, Overflow, Float, Inline-block, Align, Combinators, Pseudo-class, Pseudo-element, Opacity, Navigation Bar, Dropdowns, Image Gallery, Image Sprites, Attr Selectors, Forms, Counters, Website Layout, Units, Specificity

**CSS Advanced:**

Rounded Corners, Border Images, Backgrounds, Colors, Gradients, Shadows, Text Effects, Web Fonts, 2D Transforms, 3D Transforms, Transitions, Animations, Tooltips, Style Images, object-fit, Buttons, Pagination, Multiple Columns, User Interface, Variables, Box Sizing, Flexbox, Media Queries, MQ Examples

**CSS Responsive:**

Intro, Viewport, Grid View, Media Queries, Images, Videos, Frameworks, Templates

**CSS Grid:**

Intro, Container, Item

**CSS References:**

Reference, Selectors, Functions, Reference Aural, Web Safe Fonts, Animatable, Units, PX-EM Converter, Colors, Color Values, Default Values, Browser Support

#### **4. Javascript**

##### **JS Introduction:**

Where To, Output, Statements, Syntax, Comments, Variables, Operators, Arithmetic, Assignment, Data Types, Functions, Objects, Events, Strings, String Methods, Numbers, Number Methods, Arrays, Array Methods, Array Sort, Array Iteration, Dates, Date Formats, Date Get Methods, Date Set Methods, Math, Random, Booleans, Comparisons, Conditions, Switch, Loop For, Loop While, Break, Type Conversion, Bitwise, RegExp, Errors, Scope, Hoisting, Strict Mode, this Keyword, Let, Const, Arrow Function, Classes, Debugging, Style Guide, Best Practices, Mistakes, Performance, Reserved Words, Versions, Version ES5, Version ES6, JSON

##### **JS Forms:**

JS Forms, Forms API

##### **JS Objects:**

Definitions, Properties, Methods, Accessors, Constructors, Prototypes, ECMAScript

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##### **JS Functions:**

Definitions, Parameters, Invocation, Call, Apply, Closures

##### **JS HTML DOM:**

Intro, Methods, Document, Elements, HTML, CSS, Animations, Events, Event Listener,

Navigation, Nodes, Collections, Node Lists

### **JS Browser BOM:**

Window, Screen, Location, History, Navigator, Popup Alert, Timing, Cookies

### **JS AJAX:**

Intro, XMLHttpRequest, Request, Response, XML File, PHP, ASP, Database, Applications,

Examples

### **JS JSON:**

Intro, Syntax, vs XML, Data Types, Parse, Stringify, Objects, Arrays, PHP, HTML,

JSONP

### **JS vs jQuery:**

Selectors, HTML, CSS, DOM,

### **JS References:**

JavaScript Objects

HTML DOM Objects

## **5. PHP**

### **PHP Intro:**

Install, Syntax, Variables, Echo / Print, Data Types, Strings, Constants, Operators,

If...Else...Elseif, Switch, While Loops, For Loops, Functions, Arrays, Sorting Arrays,

Superglobals

### **PHP Forms:**

Handling, Validation, Required, URL/E-mail, Complete

### **PHP Advanced:**

Arrays Multi, Date and Time, Include, File Handling, File Open/Read, File

Create/Write, File Upload, Cookies, Sessions, Filters, Filters Advanced, Error

Handling, Exception

### **MySQL Database:**

Database, Connect, Create DB, Create Table, Insert Data, Get Last ID, Insert Multiple,

Prepared, Select Data, Delete Data, Update Data, Limit Data

### **PHP XML:**

XML Parsers, SimpleXML Parser, SimpleXML - Get, XML Expat, XML DOM

### **PHP AJAX:**

Intro, PHP, Database, XML, Live Search, RSS Reader, Poll

### **PHP Reference:**

Overview, Array, Calendar, Date, Directory, Error, Filesystem, Filter, FTP, HTTP, Libxml,

Mail, Math, Misc, SimpleXML, String, XML, Zip, Timezones

### **PHP Framework:**

LavaraL, ThinkPHP, CodeIgniter, Zend Framework, Yaf, Phalcon

## **6. SQL**

### **SQL Intro:**

Syntax, Select, Select Distinct, Where, And, Or, Not, Order By, Insert Into, Null Values,

Update, Delete, Select Top, Min and Max, Count, Avg, Sum, Like, Wildcards, In,

Between, Aliases, Joins, Inner Join, Left Join, Right Join, Full Join, Self Join, Union,

Group By, Having, Exists, Any, All, Select Into, Insert Into Select, Case, Null Functions,

Stored Procedures, Comments

### **SQL Database:**

Create DB, Drop DB, Backup DB, Create Table, Drop Table, Alter Table, Constraints, Not Null, Unique, Primary Key, Foreign Key, Check, Default, Index, Auto Increment, Dates, Views, Injection, Hosting

### **SQL References:**

SQL Keywords, MySQL Functions, SQL Server Functions, MS Access Functions, SQL Operators, SQL Data Types, SQL Quick Ref

### **7. Mysql/MariaDB**

Field properties, Mysql Engines, Mysql Charset, Mysql Import/Export

### **8. Regular Expression**

Perl style regular expression

### **9. Python**

Introduction, Get Started, Syntax, Comments, Variables, Data Types, Numbers, Casting, Strings, Booleans, Operators, Lists, Tuples, Sets, Dictionaries, If...Else, While Loops, For Loops, Functions, Lambda, Arrays, Classes/Objects, Inheritance, Iterators, Scope, Modules, Dates, JSON, RegEx, PIP, Try...Except, User Input, String Formatting

### **File Handling:**

File Handling, Read Files, Write/Create Files, Delete Files

### **Python MySQL:**

Get Started, Create Database, Create Table, Insert, Select, Where, Order By, Delete, Drop Table, Update, Limit, Join