

## Tooling U-SME Technical Requirements

Listed below are the minimum system requirements for the proper viewing of Tooling U-SME classes. Our classes may function with other configurations, but these requirements ensure a quality learning experience. If you have any questions, please call us at 1.866.706.8665 or e-mail us at [support@toolingu.com](mailto:support@toolingu.com).

Client Hardware	Versions	Additional Information
	<ul style="list-style-type: none"> <li>▪ 450 MHz Intel Pentium II processor (or equivalent)</li> <li>▪ 128 MB RAM</li> <li>▪ Speakers/Headphones (recommended, but not required)</li> </ul>	The Tooling U-SME LMS & classes are a fully web-based offering and not dependent on individual computer systems.
Client Software	Versions	Additional Information
Browser	<ul style="list-style-type: none"> <li>▪ Microsoft Edge</li> <li>▪ Microsoft Internet Explorer 10.0+</li> <li>▪ Mozilla FireFox</li> <li>▪ Google Chrome</li> </ul>	Google and Mozilla release continuous updates to their Chrome and FireFox browsers. While we always recommend the latest version, we cannot always guarantee compatibility with the latest releases. We recommend testing the browser using our System Check Tool at <a href="https://www.toolingu.com/support/tech-support">https://www.toolingu.com/support/tech-support</a>
Additional Software	<ul style="list-style-type: none"> <li>▪ Adobe Reader</li> </ul>	Adobe Reader is required to view PDF files available for each class.
Client Configurations		
Network Bandwidth	A broadband internet connection is required for larger images, audio, video, and interactive components	
Screen Resolution	The minimum screen resolutions recommended is 1024 x 768 pixels	
JavaScript	Enabled	
Pop-up Windows	Allow pop-up Windows from the <a href="https://www.toolingu.com/">https://www.toolingu.com/</a> domain	

File Types	<ul style="list-style-type: none"> <li>▪ .mp3 files for lesson audio</li> <li>▪ .mp4 files for lesson video</li> <li>▪ .ogv files for lesson video</li> <li>▪ .m4v for lesson video (1.0 content for Apple devices)</li> </ul>	
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## Network Security

If you or your students are having difficulty accessing <https://www.toolingu.com/lms> and your classes, please consider the following:

### Domains & IP Addresses

If your organization restricts IP addresses and domain addresses, please have your IT Administrator grant access permission to:

- www.toolingu.com
- \*.toolingu.com
- ajax.googleapis.com
- ssl.google-analytics.com
- www.google-analytics.com
- www.gstatic.com
- 40.121.8.241
- www.sme.org
- www.brightcove.com \*

*\*BrightCove is a CDN (Content Delivery Network) being used to host and deliver video content. If you are unable to view video content and have added in the domains listed above please follow this [link](#) to review BrightCove’s suggestion for allowing content through your security setup.*

### Proxy & Firewall Settings

The current version of Tooling U-SME utilizes a newer Microsoft Technology known as Microsoft AJAX. If it is common for a student to see the following error while taking a class or a test, it may be due to highly restrictive proxy or firewall settings:

“Sys.WebForms.PageRequestManagerParserErrorException: The message received from the server could not be parsed. Common causes for this error are when the response is modified by calls to Response.Write(), response filters, HttpModules, or server trace is enabled.”

The error above is commonly received when your connection is using a proxy server or is behind a firewall that restricts or removes unknown (HTTP) headers, causing an error when the user attempts to access areas of the Tooling U-SME website that utilize AJAX.

To resolve this, one of two solutions may be used:

1. Remove the restriction on unknown (HTTP) headers to prevent the proxy or firewall from re-writing HTTP request headers.
2. Add a new rule which allows the “X-MicrosoftAjax Delta=true” header value through the proxy or firewall to the user’s computer.



## Tooling U-SME Data Center

As of July 2017, Tooling U-SME is located with the Microsoft Azure Cloud environment – a global network of state-of-the-art Microsoft Datacenters. Azure is committed to continuously investing in the latest infrastructure technologies, with a focus on high reliability and operational excellence. Leveraging Azure Tooling U-SME can now dynamically scale and deploy resources for our applications on demand without the need to upgrade physical hardware.

The Tooling U-SME site runs on Microsoft .NET framework version 4.8 and is hosted in the Azure App Service and Microsoft SQL Server 2016 database with a comprehensive backup strategy to keep backups current and secure in an off-site location.

## Software Download Locations

- [Microsoft Edge](#)
- [Microsoft Internet Explorer](#)
- [Google Chrome](#)
- [Mozilla FireFox](#)
- [Adobe Reader](#)