

## Track 1 - Web Site Architect

The Track 1 - Web Site Architect program of study allows the employee to gain practical experience with the design, development and implementation of Web Sites at the Laboratory. The goal is to provide the employee with a basic program of study that encompasses planning, HTML code, Web editors, graphics, animation and basic principles of design and function at LANL. In order to receive the IA endorsement and become a Web Site Architect at LANL, the participant would be required to pass a demonstration of their learning before a panel of current LANL Web developers. This would be the final requirement for obtaining the Certificate of Qualification as an LANL Web Site Architect.

Criteria	Hours	Example Class(es) – Course Numbers – (Hours) *If offered at LANL*
Basic Web site planning skills	4	<ul style="list-style-type: none"> <li>Planning Your Web Site - #23286 - (4)</li> </ul>
Experience writing client-side languages (including HTML and JavaScript)	16	<ul style="list-style-type: none"> <li>HTML - #18577 - (8)</li> <li>Advanced HTML - #24951 - (8)</li> <li>JavaScript - #21368 - (8)</li> </ul>
Experience with WYSIWYG tools (Dreamweaver, Adobe GoLive, Frontpage, etc.)	12	<ul style="list-style-type: none"> <li>Dreamweaver Fundamentals - #16672 - (12)</li> </ul>
Knowledge of web interface issues (Browser/Platform, Accessibility, etc.)	8	<ul style="list-style-type: none"> <li>Advanced Dreamweaver - #20304 - (8)</li> </ul>
Experience with LANL Web site structure, templates and CSS	8	<ul style="list-style-type: none"> <li>Using LANL Web Resources – TBD – (8)</li> </ul>
Experience with Web Graphics	8	<ul style="list-style-type: none"> <li>Fireworks Fundamentals – TBD – (8)</li> <li>Adobe Photoshop</li> </ul>
Experience with Web Animation	8	<ul style="list-style-type: none"> <li>Flash Fundamentals – TBD – (8)</li> </ul>
<b>Total Hours of course work</b>	<b>64</b>	
Performance Assessment - Experience designing and developing Web sites		<ul style="list-style-type: none"> <li>Basic Level Panel Presentation (Pass/Fail)</li> </ul>

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<b>Criteria</b>	<b>Hours</b>	<b>Actual Class(es) – including Course Numbers – and descriptions if taken away from LANL</b>
Basic Web site planning skills	4	
Experience writing client-side languages (including HTML and JavaScript)	16	
Experience with WYSIWYG tools (Dreamweaver, Adobe GoLive, Frontpage, etc.)	12	
Knowledge of web interface issues (Browser/Platform, Accessibility, etc.)	8	
Experience with LANL Web site structure, templates and CSS	8	
Experience with Web Graphics	8	
Experience with Web Animation	8	
<b>Total Hours of course work</b>	<b>64</b>	
Performance Assessment - Experience designing and developing Web sites		

## Track 2 – Dynamic Web Site Architect

The Track 2 – Dynamic Web Site Architect program of study allows the employee to gain practical experience with server interactions, formal design and documentation, and effective database integration into Web Sites at the Laboratory. The goal is to provide the employee with a challenging program of study that encompasses programming in Web environments, managing server applications, an understanding of server administration, advanced database experience, as well as advanced experience with graphics and animation. In order to receive the IA endorsement and become a Dynamic Web Site Architect, the participant would be required to pass a demonstration of their learning before a panel of current LANL Web developers. This would be the final requirement for obtaining the Certificate of Qualification as an LANL Dynamic Web Site Architect.

Criteria	Hours	Example Class(es) – Course Numbers – (Hours) *If offered at LANL*
Basic server-side programming experience.	16	<ul style="list-style-type: none"> <li>• Introduction to Computer Programming - #23016 – (8)</li> <li>• Java for Web Application Development IM-2 Course #25232</li> <li>• PHP</li> </ul>
Experience with desktop databases (FileMaker Pro, Access)	16	<ul style="list-style-type: none"> <li>• FileMaker Pro – Advanced Computing at Research Park</li> <li>• MySQL</li> </ul>
Experience writing server-side applications (Perl, PHP, C, Java, JSP, ASP, Visual Basic, etc.)	32	<ul style="list-style-type: none"> <li>• PHP, C, and others - Advanced Computing at Research Park (32)</li> </ul>
Uses formal design and documentation process for application development	16	<ul style="list-style-type: none"> <li>• PERL IM-2 Course #8095 &amp; 8093</li> <li>• RAZOR IM-2 Course #16209</li> <li>• Java for Web Application Development IM-2 Course #25232</li> </ul>
Experience designing relational databases	16	<ul style="list-style-type: none"> <li>• Relational Databases - #25236</li> <li>• MySQL</li> </ul>
Experience writing Standard Query Language (SQL)	16	<ul style="list-style-type: none"> <li>• MySQL Advanced Computing at Research Park</li> </ul>
<b>Total Hours of course work</b>	<b>112</b>	
Experience designing and developing dynamic Web sites		Intermediate Level Panel Presentation (Pass/Fail)

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<b>Criteria</b>	<b>Hours</b>	<b>Actual Class(es) – including Course Numbers – and descriptions if taken away from LANL</b>
Basic server-side programming experience.	16	
Experience with desktop databases (FileMaker Pro, Access)	16	
Experience writing server-side applications (Perl, PHP, C, Java, JSP, ASP, Visual Basic, etc.)	32	
Uses formal design and documentation process for application development	16	
Experience designing relational databases	16	
Experience writing Standard Query Language (SQL)	16	
<b>Total Hours of course work</b>	<b>112</b>	
Experience designing and developing dynamic Web sites		

### Track 3 –Web Site System Administrator

The Track 3 –Web Site System Administrator program of study allows the employee to gain advanced technical experience with complex server interactions, multiple language development with a variety of Web tools, and practical experience developing within complex infrastructures at the Laboratory. The goal is to provide the employee with an advanced program of study that encompasses multiple server, multiple databases, multiple applications, and security within LANL. In order to receive the IA endorsement and become a Web Site System Administrator at LANL, the participant would be required to pass a demonstration of their learning before a panel of current LANL Web developers. This would be the final requirement for obtaining the Certificate of Qualification as an LANL Web Site System Administrator.

Criteria	Hours	Example Class(es) – Course Numbers – (Hours) *If offered at LANL*
Experience in server administration (web & db)	32	<ul style="list-style-type: none"> <li>• Apache Web Server - #18448</li> <li>• IIS 5 for Win2K - #25234</li> </ul>
Familiar with range of skills present in enterprise development team (interface designer, DB architect/admin, application developer, system administrator, security)	32	<ul style="list-style-type: none"> <li>• Oracle 9i Database Administration - #25237</li> <li>• Oracle Database: Application Development and Tuning - # 25238</li> <li>• Oracle 9iAS: Web Application Development - # 25244</li> <li>• Developing SQL Queries for Oracle Databases - # 25245</li> </ul>
Experience optimizing application performance.	32	<ul style="list-style-type: none"> <li>• Java for Web Application Development - #25232</li> </ul>
Experience planning and developing complex web/database applications,	32	<ul style="list-style-type: none"> <li>• Java &amp; XML Application Development - # 25246</li> </ul>
Experience developing in multiple languages with a variety of tools,	32	<ul style="list-style-type: none"> <li>• JavaScript for Web Development, XML, Java Programming, Visual C++</li> </ul>
Experience developing within complex infrastructures (multiple servers, multiple databases, multiple applications, security).	32	<ul style="list-style-type: none"> <li>• UNIX, LINUX, MAC, Win2K</li> </ul>
<b>Total Hours of course work</b>	<b>192</b>	
Advanced experience designing and developing dynamic Web sites		<ul style="list-style-type: none"> <li>• Enterprise Level Panel Presentation (Pass/Fail)</li> </ul>

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<b>Criteria</b>	<b>Hours</b>	<b>Actual Class(es) – including Course Numbers – and descriptions if taken away from LANL</b>
Experience in server administration (web & db)	32	
Familiar with range of skills present in enterprise development team (interface designer, DB architect/admin, application developer, system administrator, security)	32	
Experience optimizing application performance.	32	
Experience planning and developing complex web/database applications,	32	
Experience developing in multiple languages with a variety of tools,	32	
Experience developing within complex infrastructures (multiple servers, multiple databases, multiple applications, security).	32	
<b>Total Hours of course work</b>	<b>192</b>	
Advanced experience designing and developing dynamic Web sites		