

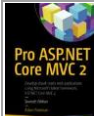






**For CLOUD APPLICATIONS DEVELOPER, here's your Required Materials List (as of December 2019):**

Content Type	Content Details	Pricing	Redeem, Access or Use
<b>Bundled Content</b>	3 Microsoft Official Courses (MOCs), Lab Vouchers and MCP Exam Vouchers:	\$405.17 (bundle)	Submit Proof of Purchase (via ISTA 420) by end of Drop/Add period
	MOC 20761, Querying Data with Transact-SQL MOC 20483, Programming in C# MOC 20486, Developing ASP.NET Core MVC 5 Web Applications MOC AZ-900, Microsoft Azure Fundamentals MOC NRU-00142, Developing Solutions for Microsoft Azure		You'll receive PRODUCT KEY via email; redeem at <a href="http://www.skillpipe.com">www.skillpipe.com</a> to access epub
	3 MCP Exam Vouchers		You'll receive Voucher Number via email; use at PearsonVue to schedule exam
	4 Lab Vouchers		
<b>Required Textbooks</b>	Used throughout BOTH terms – Books at Microsoft Press available at special discount prices!		
	Ben-Gan, Itzik. T-SQL Fundamentals, 3d Edition. 2016. Microsoft Press, ISBN 987-1-5093-0200-0	\$49.99 (book)	
	Sharp, John. Microsoft Visual C# Step by Step, 9th Edition Microsoft Press, ISBN 978-1-5093-0776-0	\$54.99 (book)	
	Freeman, Adam. Pro ASP.NET Core MVC 2, 7th edition Apress Books. ISBN 978-1-4842-3149-4 <a href="https://www.apress.com/us/book/9781484231494">https://www.apress.com/us/book/9781484231494</a>	\$59.99 (book)	
<b>Supplemental Resources</b>	<i>(All from Microsoft Press, most available as epub/print bundles, or with Practice Exams -- at an MSSA Special Discount rate! <b>Use Discount Code WESERVE3</b> for great savings.) All are useful throughout BOTH terms)</i>		
	Exam Ref 70-483, Programming in C#, 2nd edition ISBN 978-1-5093-0698-5 (book)	\$39.99 (book)	
	Exam Ref 70-486, Developing ASP.NET MVC Web Applications, (As of May 2019, Microsoft is still revising this exam ref, availability TBD)	TBD	
	Training Kit (Exam Ref) 70-461, Querying Data with Transact-SQL, ISBN 978-0-7356-6605-4 (book)  <b>NOTE:</b> Microsoft has not yet published an Exam Ref for T-SQL 2016, corresponding to MOC 20761. However... very little is that version-specific, so this is still useful as a study reference for the 70-761 exam.	\$69.99 (book)	
	Exam Ref AZ-900 Microsoft Azure Fundamentals, 1st Edition. Jun. 2019. ISBN 978-0-13-573218-2	\$39.99 (book)	

**Please note, special MSSA discounts may be available for some of these materials.**

**Directed Study Materials** are available free to students from the sources indicated. This list includes required and supplemental Directed Study materials for the entire two-term MSSA Server & Cloud cohort and indicates approximately when in each term and each class students should plan to make use of them.

Complete During	REQUIRED ACTIVITIES	Duration (hours)	Graded in Course	Role in Your Learning
<i>Ongoing, Term 1</i>	CodeLabs			Enhance
1 - 3	<a href="https://www.edx.org/course/logic-and-computational-thinking-3">https://www.edx.org/course/logic-and-computational-thinking-3</a>	12 hours	ISTA 220	Reinforce
7	<a href="https://docs.microsoft.com/en-us/aspnet/core/">docs.ms.com: Build a web API with ASP.NET Core</a>	1 hour	ISTA 322	Reinforce
10	<a href="https://docs.microsoft.com/en-us/azure/cloud-services/">docs.ms.com: Core Cloud Services - Introduction to Azure</a>	1 hour	ISTA 422	Easy On-Ramp
10 - 11	<a href="https://www.coursera.org/learn/microsoft-azure-fundamentals/">MOC AZ-900T01: Microsoft Azure Fundamentals</a>	10 hours	ISTA 422	Reinforce
10 - 11	<a href="https://www.edx.org/course/algorithms-and-data-structures">edX: Algorithms and Data Structures</a>	12 hours	ISTA 421	Reinforce
11 - 14	<a href="https://www.edx.org/course/introduction-to-python-absolute-beginner">edX: Introduction to Python: Absolute Beginner</a>	20 hours	ISTA 421	Easy On-Ramp / Enhance
<i>Ongoing, Term 2</i>				Reinforce

SUPPLEMENTAL Activities	Duration (hours)	Role in Your Learning
<a href="https://www.coursera.org/learn/microsoft-azure-fundamentals/">MVA C# for Absolute Beginners Bob Tabor</a>	16 hours	Easy On-Ramp / Enhance
<a href="https://www.coursera.org/learn/microsoft-azure-fundamentals/">MPP Introduction to Design Thinking</a>	20 hours	Reinforce
<a href="https://www.coursera.org/learn/microsoft-azure-fundamentals/">MPP Introduction to Developing International Software</a>	60 hours	
<a href="https://www.coursera.org/learn/microsoft-azure-fundamentals/">Agile (TBD)</a>		Reinforce
<a href="https://www.edx.org/course/devops-for-developers-how-to-get-started">edX: DevOps for Developers: How to Get Started</a>	12 hours	
<a href="https://www.edx.org/course/devops-testing">edX: DevOps Testing</a>	16 hours	Reinforce
<a href="https://www.coursera.org/learn/microsoft-azure-fundamentals/">MPP Writing Professional Code</a>	16 hours	Reinforce
<a href="https://www.edx.org/course/introduction-to-python-fundamentals">edX: Introduction to Python: Fundamentals</a>	20 hours	Easy On-Ramp / Enhance
<a href="https://docs.microsoft.com/en-us/azure/developer/learning-path-for-beginner/">docs.ms.com: Azure Developer Learning Path for Beginner</a>	45 hours	Reinforce