Strengthen Software Quality – and Enhance Your Career!

To meet the rigorous demands of today’s sophisticated computer applications, software programs are more complex than ever before. As a result, detecting software errors is one of the most critically important operations in the IT field. Currently, software bugs are so prevalent and detrimental that they cost the U.S. economy an estimated $59.5 billion annually, according to the Department of Commerce. Villanova University’s Master Certificate in Software Testing program helps IT professionals, or anyone who wants to transition into the software testing specialty, become a highly productive and effective testing professional. By completing three eight-week courses online, you can prepare for today’s rigorous testing demands by developing powerful skills and techniques and preparing to earn industry-recognized certification from the International Software Testing Qualifications Board (ISTQB®).

Villanova offers a variety of online certificate programs in today’s most in-demand disciplines: Business Process Management, Project Management, Business and Law of Sports, Lean Six Sigma, Contract Management, IS Security, Business Analysis, Software Testing, IT Service Management/ITIL®, Business Intelligence, Human Resources, ROI Methodology, Leadership, and Finance and Accounting for the Non-Financial Manager. The University also offers online graduate degrees including the Master of Public Administration and Master of Science in Human Resource Development, allowing professionals worldwide to earn the same degree as campus-based students.

Learn How to:
• Locate and prevent defects using proven software testing techniques
• Evaluate and select appropriate test techniques for your software projects
• Apply static analysis and a risk-based approach for maximum benefit
• Incorporate tools and automation to support software testing
• Utilize Black Box, White Box and experience-based techniques

“The impact of software errors is enormous because virtually every business in the United States now depends on software for the development, production, distribution, and after-sales support of products and services.”

Arden Bement
Former Director, National Institute of Standards & Technology
U.S. Department of Commerce
BECOME A SOFTWARE TESTING EXPERT — EARN A MASTER CERTIFICATE!

Want to make an impact in business today? Expand your knowledge while preparing for industry certification! Stay current on industry trends and technology by earning your master certificate online — one of the fastest ways to gain valuable expertise and credentials along with the most in-demand skills that you can apply immediately on the job.

Obtaining a master certificate demonstrates your commitment to mastering key software testing concepts as well as your commitment to continuing education. The Master Certificate in Software Testing is made up of three eight-week courses: Essentials of Software Testing, ISTQB® Software Testing Capstone and one elective from the following courses: Project Management for IS/IT Professionals, Maximizing IS/IT Team Effectiveness, Essentials of Business Analysis, Essentials of IS Security and Six Sigma Green Belt – Information Technology. Each course provides you with powerful tools and techniques to meet today’s rigorous testing demands while preparing you to earn industry-recognized certification from the International Software Testing Qualifications Board (ISTQB®).

Program Benefits
• Develop an in-depth understanding of software testing principles
• Learn to utilize the latest testing techniques
• Understand opportunities and risks associated with using test tools
• Gain the skills to write effective testing reports
• Acquire proven strategies for managing the testing process

Who Should Register?
This certificate program is ideal for test analysts, test engineers, test consultants, test managers, user acceptance testers, software developers or other IT professionals who may be expected to obtain advanced credentials.

EXPERIENCE AN UNMATCHED ONLINE CLASSROOM
Our online classroom is second to none! It’s dynamic, interactive and multimedia-driven. Instant messaging and shared virtual whiteboards allow you to interact with classmates and faculty in real time. And two-way voice over IP is a great personal touch for students who prefer to communicate via voice to ask questions or discuss weekly assignments.

Communicating with professors during virtual office hours and viewing leading industry experts via streaming video make learning faster than in the traditional classroom setting. You’ll do everything online in your own time, so you can work full time while continuing your education.

UNPARALLELED FEATURES
• Virtual classroom provides two-way voice over IP with instant messaging and shared whiteboard features
• Professor-led classes through online streaming video
• Lectures also available on CD-ROM and as downloadable MP3 and MP4 files
• Chat rooms and discussion boards for rich, real-time interaction with professors and students alike
• Ability to study anytime, anywhere
• No required login times – 24/7 access
• Multimedia access – not a book-in-a-box, go-it-alone program

Contact Us Today!
➔ 800-571-4938
➔ Intl. +1 813-612-4296
➔ VillanovaU.com
If you’ve ever doubted the importance of professional software testing, consider this: Without reliable software, everything from air traffic control to the television remote control could grind to a stop. Essentials of Software Testing provides knowledge, skills and techniques that can strengthen your expertise in key testing areas.

What You’ll Learn:
Fundamentals of Testing
• General Testing Principles and Steps of the Testing Process
• How Software Testing Finds and Prevents Defects
• Psychology of Software Testing

Testing Throughout the Software Lifecycle
• Software Development Models and Levels/Phases of Testing
• Testing an Existing System vs. a New Application
• Regression Testing and Impact Analysis in Maintenance

Distributions and Data Analysis
• Point and Interval Estimation
• Applying Student’s T-Distribution
• Paired Comparison Tests and Analysis of Variance (ANOVA)

Static Techniques
• Static Review Techniques in the Design Phase
• Applying Static Analysis for Maximum Benefit
• Generic Review Process and Four Primary Types of Reviews

Test Design Techniques
• Black Box, White Box and Experience-based Techniques
• Equivalence Partitioning, Boundary Value Analysis
• Traceability, Test Designs and Test Cases
• Identifying and Prioritizing Risk Areas

Test Management
• Makeup of Test Teams and Role of Test Lead
• Test Planning and Estimating
• Test Progress Monitoring and Controlling Techniques
• Steps for Writing Effective Reports

Tool Support for Testing
• Scripting Techniques for Test Execution Tools
• Benefits and Risks of Test Automation
• Designing a Pilot Program

ISTQB® Software Testing Capstone
Designed for students who are preparing to take the ISTQB® Certified Tester examination, this eight-week course includes a series of practice tests modeled after the actual ISTQB® Certified Tester Foundation Level (CTFL) exam. With hundreds of questions, these practice exams can be repeated as many times as you like during the course, giving you many opportunities to improve your knowledge, build your confidence and refine your test-taking skills.

What You’ll Learn:
Fundamentals of Testing
• Steps That Make Up the Testing Process
• General Testing Principles That Guide Software Testing Efforts
• Psychology of Software Testing

Testing Throughout the Software Lifecycle
• The IEEE 12207 Standard
• The CMMI Process Maturity Model
• Quality Characteristics Found in the ISO 9126 Software Product Quality Standard

Static Techniques
• Applying Static Analysis for Maximum Benefit
• Using the IEEE 1028 Standard for Software Reviews
• Factors That Lead to Successful Reviews

Test Design Techniques
• Contents of IEEE 829 Standard for Software Test Documentation
• Equivalence Partitioning, Boundary Value Analysis, Decision Tables, State Transition Testing, Use Case Testing, Code Coverage and Branch Coverage
• Specification-based, Structure-based and Experience-based Testing

Test Management
• Test Planning and Estimating
• Test Progress Monitoring and Controlling Techniques
• Applying the IEEE 829 Standard for Software Test Documentation
• Impact of Risk Analysis and Risk Management on Test Planning

Tool Support for Testing
• Test Tool Classifications
• Opportunities and Risks Associated with Using Test Tools
• Factors to Consider When Introducing Test Tools

ACQUIRE IN-DEMAND SOFTWARE TESTING SKILLS AND KNOWLEDGE – ONLINE!

The Worldwide Leader in Professional Education – ONLINE! | VillanovaU.com | 800-571-4938
VILLANOVA ONLINE FACULTY AND PRACTICING PROFESSIONALS

Villanova University online faculty and staff bring a wealth of knowledge and real-world experience to instructional development and delivery. Their expertise and interactive teaching methods create a dynamic experience where participants use a proven combination of “virtual classroom” tools, online instructor-led discussions and streaming video.

Rex Black, CTFL/CTAL
A 20-year software and systems engineering veteran, Mr. Black is President and Principal Consultant of RBCS, Inc., a leader in software, hardware and systems testing. His clients span 16 countries on four continents, including Adobe (India), ASB Bank, Bank One, Cisco, Comverse, Dell, the U.S. Department of Defense, Hitachi, NDS, Reef and Schlumberger. He is the author of Managing the Testing Process, now in its second edition, and Critical Testing Processes, which was published at the end of 2003. Mr. Black has also written numerous articles, along with presenting papers, seminars and speeches at various U.S. and international conferences. He is President of the American Software Testing Qualifications Board (ASTQB) and President of the International Software Testing Qualifications Board (ISTQB®).

Judy McKay, CTFL
Judy McKay has spent the last 20 years working in the technology industry with particular focus on software quality assurance. She has managed departments encompassing all aspects of the software lifecycle, including requirements design and analysis, software development, database design, software quality assurance, software testing, technical support, configuration management and technical publications. Her career has spanned across commercial software companies, aerospace, foreign-owned R&D and various Internet companies. Ms. McKay has been conducting training seminars nationwide for five years. Her well-accepted, enjoyable and informative courses are based on the real-world application of practical data.

“I found the combination of the streaming video and workbook to be just what I needed to maintain focus. The lectures were easy to understand and the presentation well done by the teaching staff.”

William J. Conrad
Seattle, WA
CERTIFICATE PROGRAM TUITION

Master Certificate in Software Testing
Complete three eight-week courses and receive your Master Certificate in Software Testing. Earning a master certificate demonstrates your commitment to mastering key software testing concepts and illustrates your dedication to the pursuit of advanced knowledge.

Sign up for all three courses in this program and receive a special tuition rate of $5,095. That's $790 off the regular tuition price of $5,885 for all three courses individually.

Software Testing

<table>
<thead>
<tr>
<th>Course</th>
<th>Tuition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Essentials of Software Testing</td>
<td>$2,095</td>
</tr>
<tr>
<td>ISTQB® Software Testing Capstone</td>
<td>$1,695</td>
</tr>
<tr>
<td>Choose One Elective: Project Management for IS/IT Professionals, Maximizing IS/IT Team Effectiveness, Essentials of Business Analysis, Essentials of IS Security or Six Sigma Green Belt – Information Technology</td>
<td>Variable $2,095</td>
</tr>
</tbody>
</table>

**TOTAL**
Special Package: All three courses (a $790 savings)

$5,885
$5,095

Continuing Education Units (CEUs): Earn 4.0 CEUs for each course.
Professional Development Units (PDUs): Earn 40 PDUs for each course.
ACE Credit Recommendation: The American Council on Education (ACE) has recommended three undergraduate credit hours for each course.

WHAT TYPES OF ASSISTANCE AND EXCLUSIVE SAVINGS ARE AVAILABLE?

Tuition Assistance
Your tuition cost may be covered by your company’s tuition assistance program and may also be tax deductible. Consult your HR department and your tax advisor for more information.

Smart Option Loan
Sallie Mae offers a flexible, low-cost loan product specifically designed to help working adults who enroll in an accredited university’s distance learning certificate program. For more information on the Sallie Mae Smart Option Loan™, contact a program representative today or fill out an online application.

Military and Government Savings
Exclusive savings of 15% per course are available for active U.S. military servicemembers. For more information, call 800-983-6484. In addition, all federal, state and local government employees are eligible, via our agreement with the National Technical Information Service (NTIS), to save 10% off individual certificate courses and 5% off master certificate programs. Call 800-959-6138 and identify yourself as a government employee to benefit from these savings.
CORPORATE PROGRAMS

Unleash the Power of Your Organization
Establish a corporate training program and position your organization for positive results. Contact us today for complete details.

What You’ll Get
A well-educated workforce is the first step toward corporate success. Along with saving your company valuable time and money, you’ll provide your employees with the opportunity to learn the necessary skills to lead improvement initiatives that result in measurable sales growth, economic value, customer satisfaction and retention, and employee satisfaction and motivation. These skills will help increase your bottom line and create a streamlined work environment.

Start With a Pilot Program
Register a group of your employees in an online class, and see how their newly acquired knowledge increases productivity and impacts your bottom line. This pilot program offers the following services to your organization:
• Exclusive corporate pricing
• A survey of employees after class to ensure quality and satisfaction
• An end-of-course review with corporate managers
• All employees will be in the same online class

“We’re witnessing a major power shift between information technology and the rest of business . . . the technology companies that succeed will be those that have developed skills at listening and a sophisticated understanding of their customers’ industries.”
Sam Palmisano, CEO IBM
Business Week Online

Put your staff on the road to success with software testing training from Villanova University! Getting started is easy. Contact us today for complete details.

* Electives include Project Management for IS/IT Professionals, Maximizing IS/IT Team Effectiveness, Essentials of Business Analysis, Essentials of IS Security and Six Sigma Green Belt – Information Technology.