

English Version

Addendum to the 2023-2024 University Student Catalog

The Jala University Catalog Addendum for 2023 - 2024 is a summary of a programmatic change that have been made and approved by the Jala University Curriculum Committee and leadership team. Changes to curriculum are made through the Jala Curriculum Committee process with an approval of Jala’s Board of Directors. For the 2023-2024 academic year, the change reflected in this addendum is effective immediately. Please use information contained here as the most accurate and up-to-date catalog information regarding courses and programs.

The Test Automation concentration for the Commercial Software Engineering bachelor’s degree is no longer an available program pathway. Jala’s Curriculum Committee and leadership team has noted a decreasing demand for Test Automation industry wide. In an effort to respond to the decreasing demand and ensure optimized career preparation for all students, the program has been closed effective March 1, 2024.

Effective Date

The information contained in this addendum complements or replaces information found in the 2023-2024 University Student Catalog, version 2.0. The following changes reflect current information about Jala University and are effective March 1, 2024, unless otherwise noted.

Elimination of the Test Automation Concentration (including concentration specific courses) for the Commercial Software Engineering bachelor’s degree

Pg. 18-19 degree concentration information removal

Pg. 47-57 course descriptions removal

Test Automation is no longer an available concentration pathway for the Commercial Software Engineering bachelor’s degree.

Course Removals for the Test Automation Concentration

Course Code	Course Name	Credit Hours
IRE-311	Operating Systems 3	2
ICA-313	Software Quality Engineering 5	2
ICA-314	Software Quality Engineering 6	2
AUT-315	Script Programming	3
WNU-316	Web Software Quality	3
IRE-321	Development and Operations	2
BDA-322	Database 3	2
ICA-323	Software Quality Engineering 7	2
ICA-324	Software Quality Engineering 8	2

AUT-326	Automation 1	2
AUT-327	Automation 2	2
IRE-411	Development and Operations 2	2
ICA-412	Mobile Application Software Quality	2
AUT-415	Automation 3	2
WNU-416	Web Software Quality	2
ICA-421	Metrics Analysis and Risk Management	1
WNU-425	Performance Testing	2
WNU-426	Cloud Software Quality 1	2
WNU-427	Cloud Software Quality 2	2
TDG -417	Applied Research Internship Software Quality 1	2
TDG -418	Applied Research Internship Software Quality 2	2
TDG -427	Applied Research Internship Software Quality 3	2
TDG -428	Applied Research Internship Software Quality 4	2

Course Descriptions Removals for the Test Automation Concentration

Course Code	Course Name	Credit Hours	Description
IRE-311	Operating Systems 3	2	Large software systems tend to use Unix/Linux processes and services due to performance, scalability and security reasons. It is of vital importance for engineers to be acquainted with these systems and know how to deploy their features.
ICA-313	Software Quality Engineering 5	2	Designing the appropriate tests for a specific software product or project is of vital importance in software testing. It is a proactive engineering task which serves as the basis for subsequent test implementation and problem reporting. Tests are organized in cycles according to the adopted strategies. Test designs must adapt to different scenarios for the same software product/project.
ICA-314	Software Quality Engineering 6	2	Skillful software testing reflects on the capacity to extend the testing coverage to unwritten on unexpected aspects. Having experience in test design is not enough for this to happen; the ability to validate detected software bugs is also of

			vital importance because it makes it possible to predict new scenarios.
AUT-315	Script Programming	3	First introduced to scripts when studying Unix/Linux, engineers must be able to code scripts in different programming languages. For software testing, it is possible to use scripts to run test cases without the need for manual procedures.
WNU-316	Web Software Quality	3	The development of websites and application has proliferated so much that many low-quality products have been created at great speed. The engineering work involves planning suitable web tests covering performance in loads, speeds, number of users/connections, etc.
IRE-321	Development and Operations	2	Both developers and quality engineers need to interact in shared environments. Such scenarios involve servers, containers, etc. Preparing work environments involves several specialized tasks aimed at the continuous integration of the teamwork.
BDA-322	Database 3	2	After working with MySQL and SQL Server, students are introduced to other SDBD like Oracle, Postgres and Mongo DB. They work on the concepts and implementation of Data Mining and Data Warehouse systems using specific case studies.
ICA-323	Software Quality Engineering 7	2	Software testing does not take place once the product has been already developed. That would be just a validation. Today's international competitive market calls for testing to be done during the development process. In this production environment, developers and testers work together. Therefore, engineers

			must adapt their work methods to verify software while it is being developed.
ICA-324	Software Quality Engineering 8	2	In this course, students must apply everything they have learned about testing in order to design test plans in large iterations. Based on their experience and objective estimations, engineers must propose rational iterations which allow them to collect metrics and make informed decisions to boost team performance.
AUT-326	Automation 1	2	Engineers need to automate manual testing, no matter how successful it has been. Any software change (e.g., new version) implies that all tests must be repeated. Therefore, automation helps optimize time and assure software quality.
AUT-327	Automation 2	2	Engineers must know how to operate a variety of tools to produce, organize, maintain and run automated test cases. On the other hand, they must be able to choose the most suitable options according to their automation purposes.
IRE-411	Development and Operations 2	2	Not all engineers who join a team are prepared to work on continuous integration. Therefore, it is crucial to train professionals or teams in Agile continuous delivery process. The overall value is affected by the continuous delivery speed and the capacity of people/teams to adapt to this methodology.
ICA-412	Mobile Application Software Quality	2	Before testing mobile applications, it is necessary to update their configuration and set up mobile devices according to the general verification objectives. Besides the standard verification, testing

			includes the validation of applications according to different scenarios which can be simulated. User interface verification is also very important.
AUT-415	Automation 3	2	This course deals with test automation failures, the integration process and the implementation of continuous testing. It focuses on automation methods.
WNU-416	Web Software Quality	2	A great number of private services operate over the Internet, providing with their own servers a series of services that some applications – usually running elsewhere– use. Examples are SOAP and Rest architectures. Commercial software development must include request testing, services and service consumption.
ICA-421	Metrics Analysis and Risk Management	1	The iterative process of software quality control must be measured in order to be assessed. In a software development project, the quality team must define the metrics which will allow them to measure productivity as well as product and process risks. Students then propose mitigation or prevention plans and redesigning decisions.
WNU-425	Performance Testing	2	Commercial software involves large systems which consume a great number of infrastructure resources and interact with other programs using large volumes of information. Quality engineers must run verification and validation processes of all services involved in demanding scenarios, comparing results and identifying limits.
WNU-426	Cloud Software Quality 1	2	Cloud Computing includes the provision of processing, data storage

			and infrastructure as an alternative with less hardware/software dependency, lower costs and greater security. For this reason, Cloud applications that are designed for massive data at massive frequencies for large numbers of users proliferate. Cloud testing, although based on standard verification, has its own approaches to apply.
WNU-427	Cloud Software Quality 2	2	Cloud computing requires a huge amount of resources. Quality engineers must be able to assess load balancing, stress and different security aspects.
TDG -417	Applied Research Internship Software Quality 1	2	Quality software engineers are involved in the development of new software products and, therefore, must be able to analyze a context and validate a model of the analyzed domain. Software quality depends on the beginning of the development process, but also on the acceptance criteria it must meet once it is finished.
TDG -418	Applied Research Internship Software Quality 2	2	Quality software engineers are involved in the development of new software products and, therefore, must be able to analyze a context and validate a model of the analyzed domain. Software quality depends on the beginning of the development process, but also on the acceptance criteria it must meet once it is finished.
TDG -427	Applied Research Internship Software Quality 3	2	Engineers must usually support a commercial software product proposal before investors. Student engineers must validate a basic system that shows how the proposed solution works and the commercial value of the final product. This is how potential startups can fund their activity to become a thriving company.

TDG -428	Applied Research Internship Software Quality 4	Selling a software product idea which can be implemented and developed to generate significant returns on investment is a professional activity of the utmost importance. In order to do so, engineers present a software demo before investors and end clients. Quality engineers assess the functionality achieved and the potential of future versions of the product.
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