**TEST PLAN FOR CONTINUING EDUCATION DEPARTMENT APPLICATION IMPLEMENTATION**.

1. INTRODUCTION:

The objective of this Test Plan is to provide a description of the strategy, scope, objectives, resources, and timeframe for testing the new application system that will be used by the Continuing Education department at Mohawk College. The purpose of this system is to ensure that the application process is automated, that enrollment efficiency is improved, and that the applicant experience is improved by streamlining the manual process of many departments.

1. OBJECTIVES:

The key goals of this test plan are to guarantee that the application system adheres to the following criteria:

* Satisfies all of the functional and non-functional requirements that have been defined.
* Ability to integrate without any problems with pre-existing systems (such as SIS, payment gateway, and communication tools).
* Applicants and administrators are provided with an experience that is dependable, secure, and easy to use simultaneously.
* In order to minimize risks and ensure a smooth launch, it is necessary to identify and rectify any defects that may exist prior to deployment.
* Performs tests to ensure that the system is scalable, that it operates effectively, and that it meets with accessibility standards.

1. SCOPE:

* IN-SCOPE:
* Course Management: Course Catalog, Application Management, Registration and Payment Processing.
* User Management: User Accounts, Security, Profiles, User Dashboards.
* Reporting and Analytics: Enrollment Reporting.
* Additional Features: Mobile Responsiveness, Accessibility.
* Integration Considerations: Student Information System, Payment Gateway, Communication Tools.
* OUT OF SCOPE:
* Post-launch maintenance and updates
* Performance testing under extreme conditions
* Payment using alternative methods not included in the initial requirements.

1. TEST PLAN IDENTIFIER:

* Project ID: Mohawk\_CE\_App\_2024\_001

1. REFERENCES:

These documents are essential to provide context and detailed information that testers may need to understand the scope, requirements, and methodology for testing.

* + System Requirement Specifications (SRS).
  + Use Case Documents.
  + Project Plan.
  + Test Strategy.
  + EEE 829 Standards for Test Documentation.

1. TEST ITEMS:

Both the frontend and the backend components of the application system are included in the test items, and they are tested in a variety of systems, including Windows and Linux:

 User Interface.

 Database.

 Integration Interfaces.

 Security Features.

1. FEATURES TO BE TESTED

* ***Course Catalog***: Management of course details including descriptions, schedules, instructors, and pricing.
* ***Application Management***: Online application submission, document uploads, and status tracking.
* ***Registration and Payment Processing***: Course search, registration, and secure payment integration.
* ***User Accounts***: Creation, login, and profile management.
* ***Security***: Secure login protocols and data encryption.
* ***User Dashboards***: Personalized tracking for applicants and administrative management.
* **Enrollment Reporting**: Generation of reports on enrollment, waitlists, and revenue.
* ***Mobile Responsiveness***: System usability on mobile devices.
* ***Accessibility:*** Compliance with accessibility standards.

1. FEATURES NOT TO BE TESTED

* Third-party integrations not included in the initial scope
* Custom reports beyond standard enrollment, waitlists, and revenue.

1. PASS/ FAIL CRITERIA

* *Pass Criteria*: A minimum of 95% passing rate, 100% test case execution, no critical bugs, and all main functionality running as anticipated.
* *Fail Criteria*: Failure to satisfy critical functional requirements, presence of critical defects, or a test case pass rate of less than 95%.

1. APPROACH

The testing will follow a combination of black-box and white-box methodologies. Functional, security, usability, and integration tests will be conducted using both manual and automated tools. Testing phases include:

* ***Unit Testing***: Individual components.
* ***Integration Testing***: Interactions between components.
* ***System Testing***: End-to-end functionality.
* ***Acceptance Testing***: Validation against requirements and user expectations.

1. SUSPENSION CRITERIA

Testing will be suspended if:

* Major functionalities are non-operational.
* Critical defects prevent further testing.
* Unresolved high-severity bugs.

1. TEST DELIVERABLES

 Test Plan

 Test Cases and Test Scripts

 Requirement Traceability Matrix

 Bug Reports

 Test Summary Report

 Test Metrics

 Sign-off from stakeholders

1. ENVIRONMENTAL NEEDS

* ***Hardware***: Servers, test machines.
* ***Software***: Test management tools, automation tools, browsers, SIS, payment gateway.
* ***Network***: Secure access to internal systems and databases.

1. RESPONSIBILITIES

* **Test Manager**: Overall test planning, resource allocation, and stakeholder communication
* **Test Leads**: Supervise test execution, manage test environments, and report defects
* **Testers**: Execute test cases, log defects, and retest fixes
* **Developers**: Support testing activities, fix defects
* **Business Analysts**: Ensure alignment with business requirements and effective stakeholder collaboration.

1. STAFFING AND TRAINING NEEDS

* Training sessions for testing tools and methodologies
* Cross-functional training for testers on the application features
* Continuous learning and upskilling opportunities

1. SCHEDULE

* *Test Planning*: Week 1-2
* *Test Case Development*: Week 3-4
* *Unit Testing*: Week 5-6
* *Integration Testing*: Week 7-8
* *System Testing*: Week 9-10
* *User Acceptance Testing (UAT)*: Week 11-12
* *Test Closure and Reporting*: Week 13

1. RISKS AND CONTIGENCIES

* ***Risk***: Delays in development
  + ***Mitigation***: Continuous monitoring and regular updates with the development team
* ***Risk***: Unidentified critical bugs
  + ***Mitigation***: Thorough testing and comprehensive test coverage
* ***Risk***: Resource unavailability
  + ***Mitigation***: Backup resources and adequate training of available resources

1. ENTRY CRITERIA

* All test environments are set up and accessible.
* Test cases are reviewed and approved.
* Test data is prepared and available.
* Development team has delivered the stable build.
* All necessary tools and resources are available.

1. EXIT CRITERIA

* All planned test cases are executed.
* Critical and major defects are resolved and retested.
* Pass rate of test cases is 95% or above.
* Test summary report is reviewed and approved.
* Stakeholders sign off on the test deliverables.

1. APPROVALS

* ***Project Sponsor***: Sign-off on the test plan, schedule, and deliverables
* ***Steering Committee***: Review and approval of the test plan and evaluation criteria
* ***Quality Assurance Manager***: Approval of testing approach and tools.

**SOLUTION EVALUATION CRITERIA FOR CONTINUING EDUCATION DEPARTMENT APPLICATION IMPLEMENTATION**

To assess whether the newly implemented application system for the Continuing Education department is delivering the expected value six months post-implementation, the following evaluation criteria will be utilized:

1. Usability and User Experience

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| --- | --- | --- |
| **Criteria** | **Description** | **Metrics/Indicators** |
| Intuitive Navigation | Evaluate if the implemented system is easy to navigate with logical layouts and intuitive menus. | * User feedback score (scale of 1-10) * Task completion time (average time in minutes) |
| Customization Options | Assess the software's ability to allow users to personalize their experience. | * Number of customization features used. * User satisfaction survey (percentage of positive responses) |
| Accessibility | Ensure the software is accessible across various devices and platforms. | * Mobile access success rate (percentage) * Cross-device compatibility score |
| Training and Support | Check if comprehensive training materials and reliable customer support are provided. | * Training completion rate (percentage) * Support ticket resolution time (average time in hours) * User satisfaction with support (survey results) |

1. Security and Data Protection

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| **Criteria** | **Description** | **Metrics/Indicators** |
| Data Encryption | Verify that sensitive data is encrypted both at rest and during transmission. | * Encryption compliance audit results (pass/fail) |
| User Access Control | Ensure robust user management features, including role-based access control. | * Number of unauthorized access attempts. * access control audit results |
| Compliance | Check adherence to industry-specific regulations and compliance standards. | * Compliance audit results (percentage of requirements met) |
| Regular Updates | Confirm that the software provider regularly releases security updates and patches. | * Frequency of updates (number per quarter) * Time to patch implementation (average time in days) |

1. Performance and Reliability

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| **Criteria** | **Description** | **Metrics/Indicators** |
| System Uptime | Measure the system’s availability and ensure minimal downtime. | * System uptime percentage |
| Response Time | Evaluate the system’s performance, focusing on fast loading times and responsiveness. | * Average response time (seconds) * Page load time (seconds) |
| Error Rate | Track the frequency and severity of system errors and failures. | * Number of critical errors per month * Error resolution time (average time in hours) |

1. Cost and Licensing

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| --- | --- | --- |
| **Criteria** | **Description** | **Metrics/Indicators** |
| Total Cost of Ownership (TCO) | Calculate the initial investment, ongoing maintenance, subscription fees, and any hidden costs. | * TCO analysis (cost in dollars) * Comparison of budget vs. actual costs (percentage deviation) |
| Licensing Terms | Understand the licensing agreements, including usage limitations, upgrade policies, and support provisions. | * Review of licensing agreements (compliance rate) * Cost analysis of licensing terms |

1. User Satisfaction

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| **Criteria** | **Description** | **Metrics/Indicators** |
| Feedback and Testimonials | Collect feedback from end-users to gauge satisfaction and identify areas for improvement. | * User feedback score (scale of 1-10) * Number of testimonials |
| User Adoption Rates | Monitor the rate at which users are adopting and effectively using the new system. | * User adoption rate (percentage). * Usage statistics (daily/weekly/monthly active users) |

CONCLUSION

By utilizing these measurable evaluation criteria, Mohawk College can effectively determine if the newly implemented application system is meeting the needs of stakeholders, enhancing efficiency, and delivering value to the institution and its users six months after implementation. Regular assessments based on these criteria will help ensure continuous improvement and optimal performance of the system.

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