

myTUT Events Documentation

Tshwane University of Technology
Emalahleni Campus

Event Management System

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1. Project Name

myTUT Events – TUT Emalahleni Campus Event Management System

2. Project Brief

Currently, event organizers at Tshwane University of Technology (Emalahleni Campus) rely on fragmented communication methods such as emails, WhatsApp groups, and Google Forms for event promotion and student registration. This results in inefficiencies, poor attendance tracking, and missed opportunities for students to discover campus events.

myTUT Events is a centralized, web-based platform designed to streamline event promotion, student notifications, and registration processes.

3. Problem Statement

Event communication and registration at TUT Emalahleni Campus are not centralized. The reliance on multiple platforms leads to:

- Missed communication between organizers and students.
- Lack of accurate attendance tracking.
- High no-show rates due to poor reminders.
- Administrative overhead for organizers.

4. Solution Overview

The proposed solution is a centralized web-based event management system that:

- Allows event organizers to create and manage event listings.
- Notifies students automatically through WhatsApp.
- Provides students with a simple interface to browse, register, and attend events.
- Generates QR codes for check-ins to track attendance.
- Provides administrators with analytics for better event planning.

5. Target Users

- **Primary Users:** Event Organizers (staff, student organizations).
- **Secondary Users:** Students (event attendees).
- **Tertiary Users:** Campus Administrators (oversight, analytics, and reporting).

6. Core Functional Requirements

6.1 Event Organizer Features (Admin)

- Register/login using staff ID, name, surname, and password.
- Create and manage event listings (title, faculty, date, time, venue, capacity, description, images).
- Set registration deadlines and capacity limits.
- Post events to student dashboard and trigger WhatsApp notifications.
- View and export attendee lists with analytics.
- Generate QR codes for event check-ins.

6.2 Student Features

- Register/login using student number and password.
- Browse upcoming events by category, date, or organizer.
- Receive WhatsApp notifications for relevant events.
- Register and receive confirmation e-tickets with QR code.
- View personal event calendar and registration history.
- Cancel event registration if needed.

6.3 System Features

- WhatsApp Business API integration for automated notifications.
- Secure user authentication (student numbers/staff IDs).
- Event categorization (academic, social, sports, career, etc.).
- Capacity management with waitlist support.
- Mobile-responsive design.
- SMS fallback for non-WhatsApp users.

7. Technical Specifications

- **Platform:** Web-based, browser-accessible.
- **Frontend:** React.js / Angular (responsive design).
- **Backend:** Django / Node.js REST API.
- **Database:** PostgreSQL / MySQL.
- **Messaging API:** WhatsApp Business API (with SMS backup).
- **Deployment:** Cloud-based (Heroku, AWS, or Netlify).
- **Authentication:** Secure login using university credentials.

8. Success Metrics

- Increased attendance rates at campus events.
- Reduced no-shows due to automated reminders.
- Higher event discoverability among students.
- Faster and more efficient registration process.
- Better analytics and reporting for administrators.

9. Project Constraints

- Must comply with university IT and data protection policies.
- Budget-friendly and sustainable solution.
- User-friendly for non-technical organizers.
- Should integrate with existing university systems where possible.

10. Expected Outcomes

- Centralized event management reduces administrative overhead.
- Improved student engagement leads to higher participation in campus life.
- Efficient communication through reliable WhatsApp/SMS reminders.
- Data-driven insights support future campus event planning.

11. Project Prompt (Short Description)

myTUT Events is a centralized web-based system for TUT Emalahleni Campus that streamlines event promotion, student registration, and attendance tracking. Event organizers can easily create and manage events, notify students via WhatsApp, and generate QR codes for check-ins. Students can browse, register, and manage event participation through a simple, mobile-friendly platform. The system aims to boost event attendance, reduce no-shows, and provide administrators with analytics for better decision-making.