Technical Plan for AAU Psychology Department Website

1. Project Overview

The Psychology Department website at Addis Ababa University (AAU) will serve as a central hub for:
 Public visitors (prospective students, researchers, collaborators)
 Enrolled psychology students (access to course materials, schedules, internal news)
 Faculty & admins (content management, announcements, student support)

The website will feature role based access control, ensuring that sensitive resources (course materials, internal announcements) are only available to verified AAU Psychology students and staff.

2. Technology Stack

Frontend (User Interface)

- React.js + Next.js (for server-side rendering & SEO)
- Tailwind CSS (styling & responsive design)
- Built-in Fetch API (for HTTP requests)

Backend (Server & Logic)

- FastAPI (Python) – Fast, scalable, and easy-to-maintain
- PostgreSQL (relational data: users, courses, permissions)
- MongoDB (unstructured data: news, events, research spotlights)
- JWT (JSON Web Tokens) for secure authentication
- Python SMTP (email notifications for support tickets & verification)

Storage & Integrations

- Google Drive API (secure storage for course materials)
- Local file storage (for faculty photos, event images – with automated backups)

3. Key Features & Access Control

Feature	Public Access	AAU Students	Admins
Homepage (Motto, News)	✅	✅	✅
Research Spotlights	✅	✅	✅
Faculty Bios & Structure	✅	✅	✅
Course Schedules	❌	✅	✅
Google Drive Resources	❌	✅	✅
Lecture Videos (Public)	✅	✅	✅
Support Request Form	✅	✅	✅
Admin Dashboard	❌	❌	✅

4. Development Timeline (2 Months)

Month 1: Core Setup & Basic Features

Week 1-2: Backend & Authentication

- FastAPI server setup
- User roles (Public, Student, Admin)
- AAU email verification for students
- JWT login/logout system

Week 3-4: Frontend & Content Structure

- Homepage (Hero, News, Announcements)
- Department history & mission (Public)
- Faculty directory (Photos, Bios)
- Basic course listings (Public)

Month 2: Advanced Features & Launch

Week 5-6: Student & Admin Features

- Google Drive integration (Course PDFs, Slides)
- Student dashboard (Schedules, Resources)
- Support ticket system (Email notifications via SMTP)
- Admin panel (Content management, user approvals)

Week 7-8: Testing & Deployment

- Security review (HTTPS, input sanitization)
- Performance optimization (Caching, lazy loading)
- User acceptance testing (Faculty & students)
- Production deployment (Nginx + PM2)

5. Security & Maintenance

Security Measures

- HTTPS encryption (All traffic)
- Rate limiting (Prevent brute-force attacks)
- Regular backups (Daily for DB, weekly for files)
- Manual user approval (Prevent fake registrations)

PostLaunch Maintenance

- Weekly checks (Server health, backups)
- Monthly updates (Security patches, content refreshes)
- Feedback system (Improve based on student/faculty input)

6. Success Metrics

✔ User Adoption: 80% of Psychology students actively using resources within 3 months
✔ Reduced Email Queries: 50% decrease in repetitive student questions (FAQs + Resources)
✔ Faculty Engagement: At least 90% of staff profiles updated within first month

Final Notes

This plan ensures a functional, secure, and scalable website for the AAU Psychology Department within 8 weeks. The focus is on:

- Student needs (easy access to materials, schedules)
- Faculty convenience (simple content updates)
- Public engagement (showcasing research, department achievements)

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