

ONE CREDIT COURSE REGISTRATION AND COURSE EXEMPTION SYSTEM

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ABSTRACT:

The "One Credit Course Registration and Course Exemption System" aims to revolutionize the management of one-credit courses by introducing a full-stack MERN (MongoDB, Express.js, React.js, Node.js) application. The current manual process, reliant on Google Forms and spreadsheets, is inefficient, error-prone, and time-consuming, particularly in handling registration, attendance tracking, assessment evaluation, and elective course exemptions. This project seeks to address these challenges by developing a centralized, automated, and user-friendly platform. The proposed system allows students to register for one-credit courses through an online platform, digitally monitors attendance and assessment scores, and automatically verifies the completion of three mandatory courses. Once students fulfill the requirements, they can request elective course exemptions via a user-friendly interface. The system utilizes RESTful APIs for backend functionality, MongoDB for secure and efficient data storage, and JWT-based authentication to guarantee secure access. The frontend, built with React.js, delivers a smooth and interactive user experience, while the backend logic is managed using Node.js and Express.js. By eliminating manual interventions, the system enhances efficiency, reduces errors, and provides real-time tracking of student progress. It also offers scalability and transparency, benefiting both students and administrators. The technical stack includes modern web technologies, and the application can be hosted on platforms like AWS, Heroku, or Netlify. This project represents a significant step toward digital transformation in

academic administration, ensuring a streamlined, accurate, and user-centric approach to managing one-credit courses and elective exemptions

KEYWORDS: *Automated Platform, Digital Transformation, MERN Stack, Online Platform, Real-time Tracking, Scalability, User-centric Approach*