City College of Technology

Student Registration Portal — App Design Document

Project: AI Operations Specialist Capstone Project
Solution: An AI-enabled student registration portal combining Power Apps, SharePoint, Power Automate, Copilot Studio and Power BI.

1. Introduction

The City College of Technology Student Registration Portal helps prospective students learn about available courses, register online and receive registration confirmation. It addresses repeated student enquiries, manual registration delays, incomplete records and limited visibility of registration trends.

Students can search courses, view course details, submit registration details and ask common questions through the CityCollege Student Assistant chatbot. College administration staff benefit from digital registration records, automated confirmation and Power BI analytics.

2. App Concept Summary

Item	Details
App name	City College of Technology Student Registration Portal
Purpose	To provide a simple self-service journey for course discovery, online registration, student support and registration analytics.
Problem solved	Students need course and registration information, while staff need a more efficient way to capture registrations and review demand by course.

Target users	Prospective students, existing students seeking general information, and authorised college administration staff.
AI component	CityCollege Student Assistant, which provides clear, grounded answers about registration, courses, admissions, required documents, Student IDs, student services and FAQs.

3. User Journey Overview

1. The student opens the portal and views the welcome screen.
2. The student selects **Start Registration**.
3. The student searches the Course Information Centre and chooses a course.
4. The student reviews the selected course details.
5. If needed, the student selects **Need Help** to use the CityCollege Student Assistant.
6. The student selects **Register Now**.
7. The student enters their full name, selected class/course, contact number and email address.
8. The app validates the required information.
9. The registration is saved in SharePoint.
10. Power Automate generates a Student ID and sends an email confirmation.
11. The student sees the registration-success screen and may view analytics, register another student or exit.

4. Features Overview

Feature	Description and Benefit
Welcome screen	Introduces City College and provides a clear starting point for registration.
Course search and selection	Allows students to find courses and make an informed course choice.

Course details	Shows the selected course code, name and description.
Registration form	Captures full name, selected class/course, contact number and email address.
Validation	Ensures key fields are completed and supports accurate records.
Student ID and confirmation	Automates Student ID generation and emails a confirmation after successful registration.
AI chatbot	Answers supported general questions from approved SharePoint knowledge sources. Sensitive, personal or unsupported requests are referred to college administration.
Power BI analytics	Shows total registrations, registrations by course, course popularity, a registration summary and filters.

5. Screens Overview

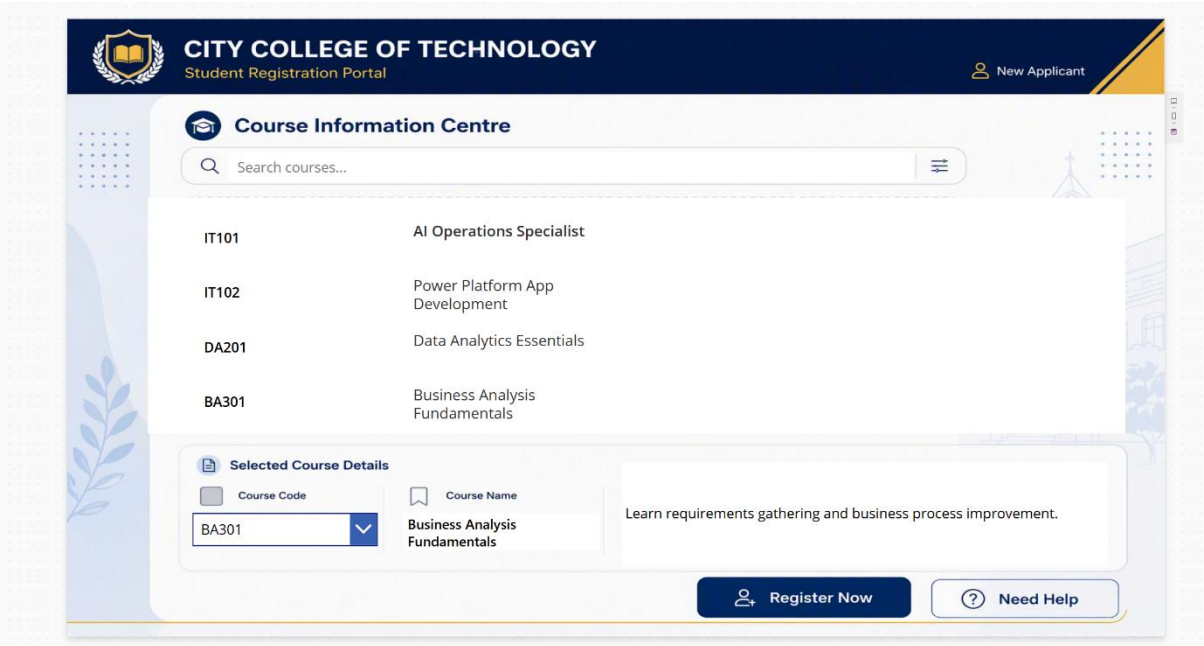
Welcome Screen

Introduces the college and provides the **Start Registration** action. It communicates that the service is secure, fast and digital.



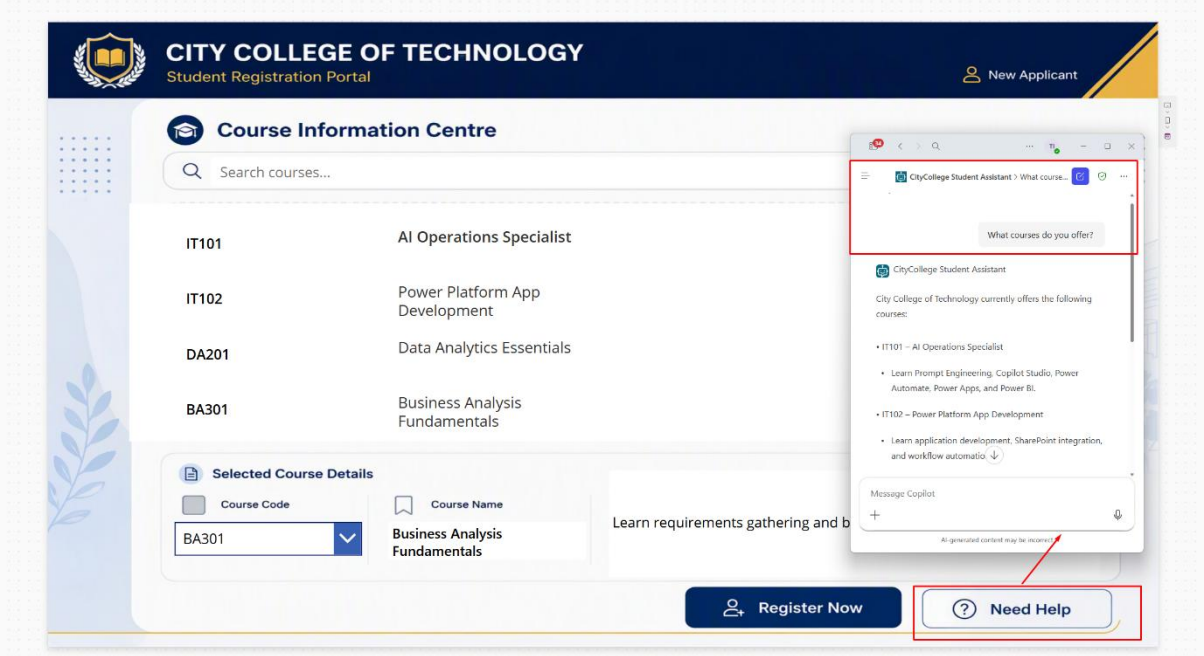
Course Information Centre

Allows students to search and select courses, review details and proceed to registration. Courses available include IT101 — AI Operations Specialist; IT102 — Power Platform App Development; DA201 — Data Analytics Essentials; and BA301 — Business Analysis Fundamentals.



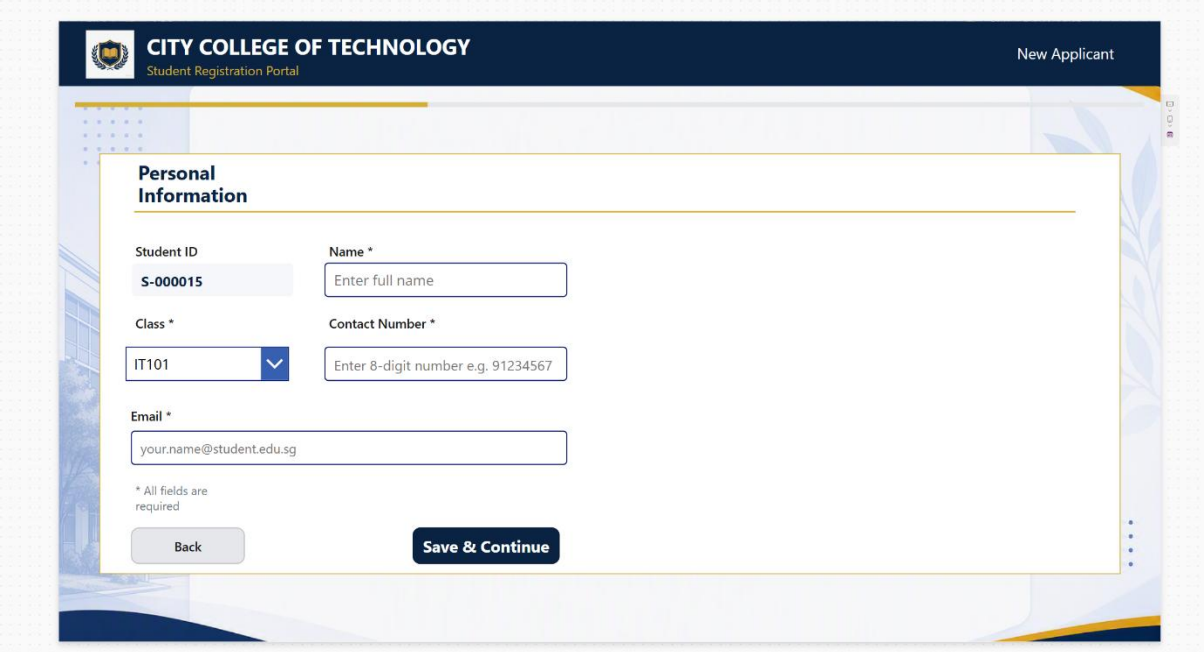
AI Chatbot Support

The CityCollege Student Assistant is accessible through the Need Help action. It provides concise answers based on approved college knowledge content.



Student Registration Form

Captures Student ID, name, class/course, contact number and email address. Required fields are marked and the student can select Back or Save & Continue.



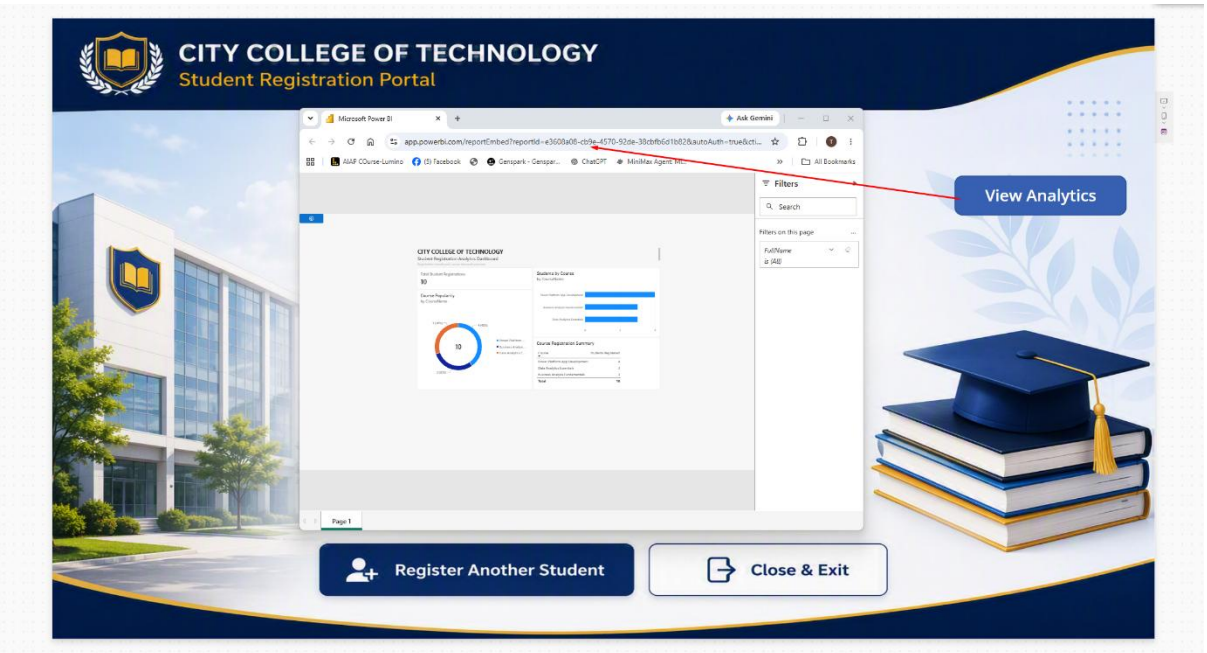
Registration Success Screen

Confirms that the registration was completed and tells the student that their Student ID and confirmation were sent to their registered email address. It also reminds users to check spam or junk folders.



Embedded Analytics Dashboard

Displays a Power BI report containing total student registrations, students by course, course popularity, a course registration summary and filters.



6. Tools and Platforms

Tool / Platform	Use in the Project
Power Apps	Builds the portal interface, navigation and registration form.
SharePoint	Stores registration records and approved chatbot knowledge content.
Power Automate	Automates registration processing, Student ID generation and confirmation emails.
Copilot Studio	Builds the CityCollege Student Assistant virtual support agent.
Power BI	Creates the registration dashboard and course-popularity analysis.

7. Data and Content

The application collects only the information needed for registration: full name, email address, contact number, selected course/class, generated Student ID and registration date/time where configured.

Course content includes the course catalogue and course descriptions. The chatbot uses approved knowledge sources such as the student handbook, registration process, required registration details, student services information, PDPA and privacy guidance, contact information and FAQs.

Personal data is used only for registration, identification and communication. Access to registration data should be limited to authorised staff through SharePoint permissions.

8. Success Criteria

1. Students can search, select and read information about available courses.

2. Students can submit registration details using the portal.
3. The app validates required information before submission.
4. Registration records are stored in SharePoint.
5. A unique Student ID is generated after successful registration.
6. The student receives an automated confirmation email.
7. The chatbot gives clear approved answers for supported course and registration questions.
8. The chatbot refers unsupported, sensitive or personal-record enquiries to college administration.
9. Power BI displays useful registration and course-demand information.
10. The portal is clear and usable for first-time students.

9. Challenges and Risks

Risk	Mitigation
Incomplete or incorrect registration data	Use required-field and input-format validation for email and contact number.
Duplicate Student IDs	Use a controlled automated Student ID-generation workflow.
Unsupported chatbot answers	Ground answers in approved SharePoint knowledge, avoid speculation and provide an escalation route.
Sensitive or personal questions	Limit the chatbot to general information and refer personal administrative matters to authorised staff.
Personal-data protection	Collect only necessary data and apply SharePoint permissions.
Email delivery failure	Show the success screen, advise users to check spam/junk folders and provide Student Services contact details.

Outdated analytics	Configure suitable Power BI refresh and review data regularly.

10. Visual Style

The portal uses a professional, welcoming education-focused visual identity. Its main colours are dark navy blue, white and gold, aligned with City College branding. Large headings, readable labels, clear button contrast, icons and education-themed visuals make the user journey easy to understand. The same style is maintained across the welcome, course, registration, confirmation and analytics screens.

Current development note: The current prototype demonstrates a polished multi-screen portal, chatbot integration and an embedded Power BI report. Before final submission, supporting evidence should show SharePoint record creation, the Power Automate flow, unique Student ID logic, a delivered confirmation email, chatbot grounding and escalation tests, and privacy/access controls.