

# Product Requirements Document (PRD): Medi-Caps University Office of International Affairs (OIA) Website

## Document Information

- **Version:** 2.0
- **Date:** December 18, 2025
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- **Status:** Draft (Updated from v1.0 based on expanded OIA site map)
- **Purpose:** This updated PRD evolves the original Student Exchange Programs platform into a comprehensive OIA website for Medi-Caps University. It incorporates the provided site hierarchy, focusing on professional UI/UX for university deployment. Designed for LLM-driven implementation (e.g., via iterative code generation tools), it specifies static/dynamic content decisions, new features, and integration paths. Iteration notes: Static pages for evergreen content; dynamic for user-generated/admin-managed data. Future iterations can refine based on prototypes.

## 1. Executive Summary

### 1.1 Overview

The OIA website serves as the central digital hub for Medi-Caps University's international affairs, promoting global engagement for students, faculty, and partners. Building on the v1.0 exchange programs platform, it expands to cover partnerships, mobility, admissions, support services, events, and resources. Key enhancements include a hierarchical navigation structure, content management for dynamic sections (e.g., news, programs), and polished, accessible UI aligned with university branding.

Key differentiators:

- **Holistic Coverage:** From inbound/outbound mobility to faculty research and alumni stories.
- **Professional UX:** Responsive, intuitive design with clear CTAs, search, and multilingual readiness (English primary; future Hindi/others).
- **Admin Empowerment:** Extended dashboard for multi-type content (e.g., news, team bios, MoUs).

### 1.2 Scope

- **In Scope:** Hierarchical navigation; static informational pages; dynamic sections (programs, news, contacts, gallery); enhanced admin panel; SEO-optimized structure.
- **Out of Scope:** Full CMS (e.g., WordPress migration); e-commerce for fees; advanced LMS integration; live chat.
- **Content Decisions:**

- **Static Pages:** Evergreen content (e.g., About OIA, Policies, FAQs) – Markdown/HTML files or admin-editable via simple forms.
  - **Dynamic Pages:** User/admin-driven (e.g., Programs, News, Gallery) – MongoDB-backed with CRUD.
- **Assumptions:** Existing tech stack (React/CRA frontend, FastAPI/MongoDB backend); deploy on Vercel/Render. Content seeding for static sections.

### 1.3 Target Release

- **MVP Timeline:** 4-6 weeks (2 weeks for structure/integration, 2-4 for content/polish).
- **Success Metrics:** 98% uptime, <1.5s load time, 500+ monthly visitors, >20% form conversion, admin usability score >4/5.

## 2. Business Objectives

- **Primary Goal:** Boost international enrollments and partnerships by 40% YoY via accessible, engaging digital presence.
- **Secondary Goals:**
  - Streamline admin workflows for frequent updates (e.g., events, announcements).
  - Ensure brand consistency (Medi-Caps colors: blue #283887, red #A21D2E; Metropolis font).
  - Support hybrid access: Public for info, protected for applications/support.
- **KPIs:**
  - Engagement: Page views per section (>200 for Mobility).
  - Conversions: Form submissions (>100/month for inquiries/admissions).
  - Feedback: NPS >8 from students/faculty surveys.

## 3. User Personas and Use Cases

### 3.1 Personas

Persona	Description	Goals	Pain Points	Frequency of Use
<b>Prospective International Student</b>	Overseas applicant (18-25), non-native English speaker.	Explore programs, admissions, scholarships; apply online.	Visa/confusing processes, lack of visuals.	3-5 visits pre-application.
<b>Medi-Caps Student/Faculty</b>	Current user (18-40), seeking mobility/research ops.	Browse exchanges, grants, events; submit forms.	Scattered info, outdated deadlines.	Bi-weekly.
<b>OIA Admin/Staff</b>	University employee (30-50), content curator.	Update news/partners, manage inquiries, track stats.	Manual edits, no previews.	Daily.

Persona	Description	Goals	Pain Points	Frequency of Use
Partner/Visitor	External collaborator (40+), browsing MoUs/events.	View partnerships, contact for proposals.	Hard-to-find contacts, no gallery.	Monthly.

### 3.2 Key Use Cases

1. **Public Navigation:** User browses hierarchy (e.g., Student Mobility > Outbound > Semester Exchange) with search bar and breadcrumbs.
2. **Dynamic Content View:** Filter programs/news by category/date; view gallery with lightbox.
3. **Form Submissions:** Multi-form types (inquiry, apply, proposal) with validation/toasts.
4. **Admin Management:** Login > Dashboard > CRUD for new types (e.g., add News post, edit Team bio).
5. **Error/Accessibility:** 404 redirects to homepage; WCAG 2.1 AA compliance (alt texts, keyboard nav).

## 4. Functional Requirements

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### 4.1 Frontend (React App)

- **Tech Stack:** Retain CRA v5 + CRACO, Tailwind v3.4, shadcn/ui (Radix primitives), React Router v7. Enhanced: React Query for caching API data; React Hot Toast for notifications.
- **Navigation Structure:** Hierarchical sidebar/menu (collapsible on mobile). Breadcrumbs on subpages. Global search (fuzzy-match across sections).
- **Pages/Components** (Mapped to Site Map):

Section	Page Type	Subpages/Components	Static/Dynamic	Key Features
Home	Landing	Hero banner (rotating OIA highlights); Quick links grid; Stats	Dynamic (news/stats)	CTA buttons; Embla Carousel;

Section	Page Type	Subpages/Components	Static/Dynamic	Key Features
<b>About OIA</b>	Static Info	teaser; Latest news carousel.		Responsive hero.
		Vision & Mission (accordion); Internationalization Strategy (timeline); OIA Team (cards with bios/images); Policies & Guidelines (downloadable PDFs). MoUs & Strategic Partners (table/filterable); Research-led Partnerships (cards); Dual/Joint Degrees (list); Industry/Embassy (accordion); Partner with Us (form).	Mostly Static; Dynamic Team bios.	Image gallery for team; Download links.
<b>Global Partnerships</b>	Hybrid	Outbound (Semester Exchange, Short-term, Internships – extends v1 Programs); Inbound (Exchange Students, Summer/Winter); Eligibility & Selection (criteria table); Credit Transfer Policy (static PDF); Apply for Mobility (multi-step form).	Dynamic (MoUs/partners list).	Filter by type/country; Proposal form (Zod validation).
<b>Student Mobility</b>	Dynamic	Visiting Faculty (eligibility form); Joint Projects (project cards); Grants (application deadlines table); Faculty Abroad (opportunities list); Call for Proposals (submission form).	Dynamic (programs); Static policies.	Program filters (duration, country); Form wizard.
<b>Faculty Mobility &amp; Research</b>	Hybrid	Why Medi-Caps (infographic); Programs Offered (accordion by degree); Process (stepper); Fees	Dynamic (projects/grants).	Deadline countdowns; File uploads for proposals.
<b>International Admissions</b>	Static/Forms		Static; Dynamic scholarships list.	Interactive stepper; Scholarship calculator (JS-based).

Section	Page Type	Subpages/Components	Static/Dynamic	Key Features
<b>Higher Studies &amp; Global Opportunities</b>	Static/Forms	& Scholarships (table); Visa/FRRO (guides); Handbook (download). Study Abroad Guidance (resources); Scholarships (external links table); LOR Support (request form); ECTS Conversion (tool/FAQ); Alumni Stories (testimonial carousel).	Dynamic alumni stories.	Form for LOR requests; Testimonial sliders.
<b>International Student Support</b>	Static	Pre-arrival (checklist); Orientation (schedule); Housing/Dining (maps); Health/Insurance (providers table); Cultural Engagement (events calendar); Clubs (list with joins).	Dynamic events/clubs.	Embedded Google Maps; Calendar integration (future).
<b>Visits, Delegations &amp; Events</b>	Dynamic	Incoming/Outgoing (event cards); Conferences/Webinars (archive); Eminent Speakers (bio videos); Gallery (image grid/lightbox).	Fully Dynamic (events/gallery)	Filter by date/type; Masonry grid for gallery.
<b>Resources &amp; Systems</b>	Static/Downloads	OIA SOPs (accordion); Forms/Downloads (file list); Mobility Portal (login teaser – future auth); FAQs (searchable accordion); Contacts (directory table).	Static; Dynamic FAQs if admin-editable.	Searchable FAQs; Download tracker (optional analytics).
<b>News &amp; Media</b>	Dynamic	Announcements (filtered list); MoU Signings (news cards); Achievements (highlights); Press Releases (PDF embeds).	Fully Dynamic.	Pagination; Share buttons; RSS feed.

Section	Page Type	Subpages/Components	Static/Dynamic	Key Features
<b>Contact Us</b>	Form	Office Address/Map; Email/Phone; Country Coordinators (table); Enquiry Form (multi-field).	Static coords; Dynamic form submissions.	Google Maps embed; Form extends v1 Contact.

- **Shared Components:** Header (nav, search, dark toggle); Footer (links, social, copyright); Modals (forms, previews); Loading skeletons.
- **User Flows:**
  - Search: Global bar queries all sections; results as cards with section badges.
  - Forms: Unified (React Hook Form + Zod); multi-step for complex (e.g., Apply).
  - Dark Mode/Accessibility: Retained; add focus indicators, screen reader announcements.

## 4.2 Backend (FastAPI API)

- **Tech Stack:** Retain FastAPI v0.110, Motor/MongoDB, PyJWT. Add: Pydantic for new models; Aggregation pipelines for stats/search.
- **New Data Models (Extend v1):**
  - **News/Media:** id, title, content, category (Enum: Announcement/MoU/Achievement/Press), date, image, file (Optional PDF URL).
  - **Partnership/MoU:** id, partnerName, type (Enum: Strategic/Research/Dual), country, details, status, signedDate, document.
  - **Team Member:** id, name, role, bio, image, contact.
  - **Event:** id, title, type (Enum: Visit/Conference/Speaker), dateRange, description, venue, images.
  - **Gallery Image:** id, caption, alt, category, uploadDate.
  - **FAQ:** id, question, answer, category.
  - **Form Submission** (Extend Contact): Add type (Enum: Enquiry/Proposal/LOR/Apply).
  - **Stats** (Extend): Add totalEvents, activePartnerships, internationalStudents.
- **API Endpoints** (Extend v1; Prefix /api):

Method	Endpoint	Description	Auth	Response Model
GET	/search?q={query}	Global search across programs/news/events.	None	Paginated results list.
GET/POST/PUT/DELETE	/news, /news/{id}	CRUD for news/media.	JWT (Admin)	List[News]/New s.

Method	Endpoint	Description	Auth	Response Model
GET/POST/PUT/DELETE	/partnerships, /partnerships/{id}	CRUD for MoUs/partners.	JWT	List[Partnership].
GET/POST/PUT/DELETE	/team, /team/{id}	CRUD for OIA team.	JWT	List[TeamMember].
GET/POST/PUT/DELETE	/events, /events/{id}	CRUD for visits/events.	None/JWT	List[Event].
POST	/gallery/upload	Image upload (future: Cloudinary integration).	JWT	SuccessResponse.
GET/POST/PUT/DELETE	/faqs, /faqs/{id}	CRUD for FAQs.	JWT	List[FAQ].
POST	/forms/{type}	Typed form submissions (e.g., /forms/proposal).	None	SuccessResponse.
GET	/stats/extended	Enhanced stats.	None	ExtendedStats.

- **Business Logic:**
  - Seeding: Add sample data for new models (e.g., 5 news posts, 10 partnerships, 3 team members).
  - Search: MongoDB text index; fuzzy matching via regex/aggregation.
  - File Handling: Store PDFs/images as URLs (S3/Cloudinary future); validate uploads.
  - Validation: Extend Zod/Pydantic for new fields (e.g., dates, categories).

### 4.3 Integration Points

- **Frontend-Backend:** Axios with React Query for optimistic updates/caching.
- **External:** Google Maps API for addresses; PDF.js for embeds; Future: EmailJS for notifications.
- **Database Init:** Seed new collections; migrate v1 programs to Mobility sub-section.

## 5. Non-Functional Requirements

### 5.1 Performance

- **Load Time:** <1.5s (code-split routes; lazy-load images).
- **Scalability:** Index new fields (e.g., category, date); support 5k+ records.
- **Caching:** React Query (5min TTL for lists); CDN for static assets.

### 5.2 Security

- **Auth:** JWT for admin; rate-limit forms (10/min/IP).
- **Validation:** Sanitize uploads; HTTPS enforced.

- **Privacy:** Consent banners for cookies; anonymize analytics.

## 5.3 Accessibility & UX

- **A11y:** Semantic HTML; color contrast >4.5:1; skip links.
- **Mobile:** 100% responsive; swipe for carousels.
- **Theming:** CSS vars; animations subtle (e.g., fade-ins).

## 5.4 Reliability

- **Error Handling:** Graceful fallbacks (e.g., cached data on API fail).
- **Logging:** Extend to new endpoints; error tracking (Sentry future).
- **SEO:** Meta tags per page; sitemap.xml; schema.org for events/programs.

# 6. Technical Architecture

## 6.1 High-Level Diagram

text

```
[User Browser] <-> [Vercel Frontend (React Router + Query)] <-> [Render Backend (FastAPI + Extended Models)]

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[Admin] <-> [JWT] <-> [New Endpoints] <-> [MongoDB: +news, partnerships, events, etc.]

[External] <-> [Maps/PDFs] <-> [Embeds/Uploads]
```

- **Frontend Build:** Extend vercel.json for new routes; add i18n prep.
- **Backend Startup:** Lifespan seeds new data; add collections check.
- **Deployment:** Same; add env vars for file storage.

## 6.2 Dependencies

- **Frontend:** Add react-query@3.39, @tanstack/react-query; retain others.
- **Backend:** Add pydantic[email] for contacts; python-multipart for uploads.
- **Dev Tools:** Add Storybook for component testing.

## 6.3 Configuration Files

- **tailwind.config.js:** Add utilities for tables/grids (e.g., new breakpoints for admin).
- **components.json:** Update aliases for new sections (e.g., @oia/components).
- **routes.py:** Modularize (e.g., sub-routers for /news, /events).

# 7. Risks and Mitigations



Risk	Likelihood	Impact	Mitigation
Content Overload (Hierarchy Depth)	Medium	Medium	Collapsible nav; A/B test UX; prioritize core paths.
Dynamic Data Volume	Low	High	Pagination everywhere; optimize queries.
File Upload Security	Medium	High	Validate MIME/types; size limits (<5MB).
Iteration Gaps (Static/Dynamic)	High	Low	Prototype 2-3 pages; user test for feedback.

## 8. Appendix

### 8.1 Sample Data

- News: {title: "New MoU with MIT", category: "MoU", date: "2025-12-01", image: "url"}.
- Events: 5 samples (e.g., "Webinar on Global Research", type: "Conference").
- Static Content: Markdown snippets for policies (e.g., "Credit Transfer: ECTS 1:1 with partners.").

### 8.2 Future Enhancements

- Auth Portal: Student login for applications.
- Analytics: GA4 integration.
- Multilingual: i18next.
- Mobile App: PWA conversion.

### 8.3 References

- Original v1.0 PRD (for migration).
- shadcn/ui Docs for new components (e.g., DataTable for lists).
- Medi-Caps Branding: Use provided colors/fonts.