**Developer Briefing Document: Academic 360 – Major & Minor Selection Rules (NEP 2020)**

**Project:** Academic 360  
**Module:** Admission & Subject Selection (NEP 2020 Compliant)  
**Prepared For:** Development Team  
**Version:** 1.0

### 📚 Overview

This module governs how students apply for admission, how eligibility is validated, and how **Major & Minor subjects** (and later, other NEP 2020 categories like IDC, MDC, VAC, AECC) are selected and enforced through configurable rules.

### 🔍 User Roles

| Role | Access & Functions |
| --- | --- |
| **Student** | Submit admission application, select majors, select minors (post-merit), later choose IDC/MDC/VAC/AECC subjects |
| **Admin** | Define course design, configure eligibility rules, subject relations, and restrictions; control subject selection phases |
| **Admission Board/Principal** | Review merit list rules, approve configurations |
| **Auditor** | Read-only access for compliance and reporting |

### 📊 Global Eligibility Criteria

#### General Category

1. Must have studied **English with full marks ≥ 100**  
   AND
2. Either:
   * **50% aggregate (BO4)** + **45% in subject/related subject**  
     OR
   * **55% in subject/related subject**

#### SC/ST Category

1. Must have studied **English with full marks ≥ 100**  
   AND
2. **40% aggregate (BO4)** + **40% in subject/related subject**

### 🔍 Course-Specific Subject Mapping (Table 1.1)

| Stream | Major/Minor | Subject | Related Subjects |
| --- | --- | --- | --- |
| Commerce | B.Com (Major) | Accountancy | Taxation, Economics, Commerce, Business Studies, Mathematics, Book Keeping |
| Arts | English | English | None |
| Arts | Political Science | Political Science | English |
| Arts | History | History | English |
| Science | Physics | Physics | None |

### 📊 Minor Subject Rules

1. **Minor cannot equal Major**
2. A **Minor can be taken if**:
   * Subject or one of its **related subjects** was studied in Class XII
   * If studied ➔ must have **pass marks**
   * If not studied ➔ must have **pass marks in related subject**
3. Related subjects pulled from **Course-Subject Relation Table**

### 📊 Minor Combination Restrictions (Sample)

| Minor 1 | Minor 2 | Restriction |
| --- | --- | --- |
| Film Studies | JMC | Cannot coexist |
| Education | Film Studies | Cannot coexist |

### 🔄 Admission & Subject Selection Flow

1. **Application Phase**
   * Student fills Class XII details & selects **Major (Program-Course)**
   * Eligibility auto-validated using **Global + Course-Specific rules**
2. **Post Merit List Phase**
   * Student enters **Minor Selection Phase**
   * Rules applied:
     + Minor ≠ Major
     + Must pass validation rules
     + Must not violate restriction table
3. **Later Phases (IDC/MDC/VAC/AECC)**
   * Configurable by Admin (can open at Registration or Semester level)
   * Enforces **uniqueness rule**: once chosen as Major/Minor, cannot reappear in other categories

### 📁 Database Design (Key Tables)

**Eligibility\_Rules**  
- rule\_id, category (GEN/SC/ST), min\_BO4, min\_subject\_marks, related\_subject\_check

**Course\_Subject\_Relation**  
- id, course\_id, major\_subject, related\_subjects[]

**Minor\_Restrictions**  
- id, minor\_1\_id, minor\_2\_id, restriction\_type (not allowed, warning, etc.)

**Student\_Selection**  
- student\_id, major\_subject\_id, minor\_1\_id, minor\_2\_id, status

### 📊 UI/UX Placement

* **Academic Setup > Admission Configuration**
* Landing Page: Dashboard with Academic Year filter + tiles (Active Eligibility Rules, Merit Criteria Defined, Total Program-Courses, Total Subjects)
* Modules in card/grid or left navigation:
  + **Course Design**
  + **Admission Board & Stats**
  + **Eligibility Criteria**
  + **Merit List Criteria**
  + **Board & Subjects Master**
  + **Subject Selection Configurations** (Mandatory Subjects, Program-Course Relations, Whitelisted Categories, Restricted Groupings, Semester Availability)

### 💡 Developer Notes

* Major is **locked at application**
* Minors & other categories are **deferred** to later controlled phases
* All validation should be **table-driven**, not hardcoded
* Ensure **audit logging** for changes in eligibility/subject rules
* Version structures by **academic year**

**Next Steps:** 1. Design ERD covering all mapping tables 2. Build APIs for eligibility validation & subject assignment 3. Create UI wireframes for Application, Minor Selection, and Config screens

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