# Business Rules for Pro Online Education Tool

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| **ID** | **Rule Definition** | **Type of Rule** | **Static or Dynamic** | **Source** |
| **BR-1** | Every account (Student/Teacher/Admin) must have a unique username with a minimum length of 4 characters and contain only letters, numbers, dots, underscores, and hyphens. | Constraint | Static | System Security Policy |
| **BR-2** | Passwords must be 8–20 characters long and contain at least one uppercase letter, one number, and one special character. | Constraint | Static | System Security Policy |
| **BR-3** | A student can only join a class by entering a valid 6-character class code generated by the system. | Constraint | Dynamic | Class Management |
| **BR-4** | A teacher can create a maximum of 10 active classes at the same time. | Constraint | Static | Teacher Management Policy |
| **BR-5** | Each class must have a unique class code (6 characters: uppercase letters and digits). | Constraint | Static | System Specification |
| **BR-6** | A student can only take a test if the teacher has created and published it for the class. | Action Enabler | Dynamic | Test Engine |
| **BR-7** | The number of attempts a student can take on a test is determined by the teacher. | Constraint | Dynamic | Test Engine |
| **BR-8** | The system must record each student’s test history, including scores, submission time, and responses. | Action Recorder | Dynamic | Test Engine |
| **BR-9** | The system automatically calculates each student’s average score per class and displays a ranking table. | Calculation | Dynamic | Analytics Engine |
| **BR-10** | All data transfers related to accounts, tests, and scores must use SSL/TLS for encryption. | Constraint | Static | System Security Policy |
| **BR-11** | Email confirmation is required before users can access the system. | Constraint | Static | Authentication Policy |
| **BR-12** | Resend confirmation email cooldown: 60 seconds between resends for the same email. | Constraint | Dynamic | Authentication Policy |
| **BR-13** | Teachers and students can update their profiles (name, email, phone, avatar). | Action Enabler | Dynamic | User Management |
| **BR-14** | Avatar uploads are limited to 5MB and must be in .jpg, .png, or .webp format. | Constraint | Static | User Management |
| **BR-15** | A class can only have one teacher (the creator). | Constraint | Static | Class Management |
| **BR-16** | When a class is deleted, all associated enrollments are automatically deleted (cascade). | Constraint | Static | Database Rule |
| **BR-17** | Each student can only have one enrollment record per class (unique ClassId + UserId). | Constraint | Static | Database Rule |
| **BR-18** | Teachers can only access, edit, or delete classes they own. | Constraint | Static | Authorization Policy |
| **BR-19** | Teachers can only upload or share materials for their own classes. | Constraint | Dynamic | Materials Management |
| **BR-20** | Students can only view materials only for classes they have joined. | Constraint | Dynamic | Access Control |
| **BR-21** | AccountCode (8 characters) and ClassCode (6 characters) must be unique. | Constraint | Static | Database Specification |
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