

# System Test Suite 2: Teacher Assignment Management Workflow

## Objective

Verify that a teacher can successfully create a rubric, create an assignment, view student submissions, grade submissions, and use the auto-grade feature.

## Pre-conditions

1. System is running (Backend: [localhost:3000](http://localhost:3000), Frontend: [localhost:3001](http://localhost:3001))
2. Test database is seeded with sample data.
3. Teacher account exists (email: [nornor@gmail.com](mailto:nornor@gmail.com), password: [password](#))
4. At least one class exists with enrolled students.
5. At least one student has submitted work.
6. Browser is open and cleared of cache/cookies.

## Test Environment

- **Backend URL:** <http://localhost:3000>
- **Frontend URL:** <http://localhost:3001>
- **Database:** PostgreSQL (seeded)
- **Browser:** Chrome/Firefox/Edge (latest version)

# Test Cases

## Test Case 2.1: Teacher Login

Field	Description
Test Case ID	STS-002-TC-01
Test Title	Verify teacher can login successfully
Test Priority	High
Pre-condition	Teacher is on login page ( <a href="http://localhost:3001/login">http://localhost:3001/login</a> )

### Test Steps:

1. Navigate to <http://localhost:3001/login>
2. Enter email: "nornor@gmail.com"
3. Enter password: "password"
4. Click "Sign In" button
5. Observe page navigation

### Expected Result:

- User is redirected to dashboard (<http://localhost:3001/>)
- Dashboard displays "Welcome Back, Thanapon!" message
- Navigation bar shows teacher-specific menu items (Dashboard, Classes, Rubrics)
- No "Peer Reviews" or "My Performance" options visible

## Test Case 2.2: Create a New Rubric

Field	Description
Test Case ID	STS-002-TC-02
Test Title	Verify teacher can create a grading rubric
Test Priority	High
Pre-condition	Teacher is logged in on dashboard

### Test Steps:

1. Click "Rubrics" in navigation bar
2. Click "Create Rubric" button
3. Enter rubric name: "Essay Evaluation Rubric"
4. For Criterion 1:
  - Enter title: "Content Quality"
  - Low level: description: "Lacks depth and detail", points: 3
  - Medium level: description: "Adequate depth and detail", points: 7
  - High level: description: "Excellent depth and comprehensive detail", points: 10
5. Click "Add Criterion" button
6. For Criterion 2:
  - Enter title: "Grammar and Mechanics"
  - Low level: description: "Multiple errors", points: 2
  - Medium level: description: "Few errors", points: 5
  - High level: description: "Nearly error-free", points: 10
7. Verify max points display (should show 20)
8. Click "Save Rubric" button

### Expected Result:

- Create Rubric page loads with form
- Rubric name field accepts input
- Each criterion has title field and three level fields (Low, Medium, High)
- Each level has description textarea and points input
- "Add Criterion" button adds new criterion section

- Max Points calculation updates dynamically at bottom
- After clicking "Save Rubric":
  - Success message appears ("Rubric created successfully!")
  - Redirects to /rubric page
  - New rubric appears in rubrics list

### Test Case 2.3: Create Assignment with Rubric

Field	Description
Test Case ID	STS-002-TC-03
Test Title	Verify teacher can create assignment with rubric
Test Priority	High
Pre-condition	Teacher has created rubric, is on classes page

#### Test Steps:

1. Click "Classes" in navigation
2. Click on "Historical Investigation Fundamentals" class
3. Click "Create Assignment" button
4. Enter title: "Historical Sources Analysis"
5. Enter description: "Analyze three primary sources from the 19th century and evaluate their historical significance."
6. Select deadline: Choose a date 7 days from today, set time to 23:59
7. From "Grading Rubric" dropdown, select "Essay Evaluation Rubric"
8. Click "Create Assignment" button

#### Expected Result:

- Create Assignment page loads with form
- All fields accept input:
  - Title (text input)
  - Description (textarea)
  - Deadline (date-time picker)
  - Grading Rubric (dropdown with available rubrics)

- Date picker allows future date selection
- After clicking "Create Assignment":
  - Success message appears ("Assignment Created!")
  - Redirects to class detail page
  - New assignment appears in assignments list
  - Assignment shows title, open date, due date

## Test Case 2.4: View Student Submissions

Field	Description
Test Case ID	STS-002-TC-04
Test Title	Verify teacher can view list of student submissions
Test Priority	High
Pre-condition	Assignment exists with at least one student submission

### Test Steps:

1. Navigate to class detail page
2. Click on assignment "Historical Sources Review"
3. Scroll to "Student Submissions" section
4. Review submission list

### Expected Result:

- Assignment detail page shows teacher view
- "Student Submissions" section displays:
  - List of all submissions
  - For each submission:
    - Student initials in colored circle
    - Student full name
    - Submission timestamp
    - Status badge (Graded/Pending)
    - Score (if graded) or "Pending" message
    - "View/Grade" button

- "Auto-Grade All" button is visible at top-right

### Test Case 2.5: Grade Student Submission Manually

Field	Description
Test Case ID	STS-002-TC-05
Test Title	Verify teacher can manually grade a submission
Test Priority	High
Pre-condition	Teacher is viewing assignment with student submissions

#### Test Steps:

1. Click "View/Grade" button for a student (e.g., Jane Doe)
2. Review submission content and files
3. In "Grade Submission" panel:
  - Enter score: 85
  - Enter comment: "Good analysis of primary sources. Your synthesis is strong, but consider adding more context about the historical period. Well-cited work."
4. Click "Submit Grade" button
5. Wait for confirmation

#### Expected Result:

- Grade submission page loads showing:
  - Student name and assignment title
  - Submission timestamp
  - "Submitted Files" section with download links
  - "Submitted Text" section (if applicable)
  - "Grade Submission" panel with:
    - Score input field (number)
    - Teacher's Comment textarea
    - Submit Grade button
- After submission:

- Success message ("Grade Saved!")
- Button changes to show checkmark
- Redirects to assignment detail page after 1-2 seconds
- Student's submission now shows "Graded" status with score

### Test Case 2.6: Use Auto-Grade Feature

Field	Description
Test Case ID	STS-002-TC-06
Test Title	Verify teacher can use auto-grade feature
Test Priority	Medium
Pre-condition	Assignment has multiple ungraded submissions

#### Test Steps:

1. Navigate to assignment detail page with ungraded submissions
2. Click "Auto-Grade All" button at top-right
3. Confirm action in popup dialog
4. Wait for processing
5. Review updated submissions

#### Expected Result:

- "Auto-Grade All" button is visible when ungraded submissions exist
- Clicking button shows confirmation dialog: "Are you sure you want to auto-grade all ungraded submissions? This action can be reviewed and edited later."
- After confirming:
  - Button shows loading state ("Grading...")
  - Success message appears: "Auto-grading complete (X submissions graded)."
  - All previously ungraded submissions now show scores
  - Teacher comment reads: "Auto-graded by system"
  - Scores are calculated based on content length (deterministic algorithm)
  - Teacher can still manually edit auto-graded scores

## Test Case 2.7: Edit Assignment Details

Field	Description
Test Case ID	STS-002-TC-07
Test Title	Verify teacher can edit assignment details
Test Priority	Medium
Pre-condition	Teacher is viewing an assignment they created

### Test Steps:

1. On assignment detail page, click the edit icon (pencil) next to assignment title
2. Modify title to: "Historical Sources Analysis - Updated"
3. Change description to add: "Please focus on political documents."
4. Extend deadline by 2 days
5. Click "Update Assignment" button
6. Navigate back to view assignment

### Expected Result:

- Edit icon is visible on assignment detail page
- Clicking it navigates to edit page with pre-filled form
- All fields are editable:
  - Title
  - Description
  - Deadline
  - Rubric
- After clicking "Update Assignment":
  - Success message appears ("Assignment Updated!")
  - Redirects to class detail page
  - Assignment shows updated information



## Test Case 2.8: View Class Members

Field	Description
Test Case ID	STS-002-TC-08
Test Title	Verify teacher can view and manage class members
Test Priority	Medium
Pre-condition	Teacher is on class detail page

### Test Steps:

1. On class detail page, click on "Members" card
2. Review member list
3. In "Invite Students" section:
  - Enter email: "sandy@gmail.com"
  - Click "Invite" button
4. Verify success message
5. Refresh page to see updated member

### Expected Result:

- Members page displays:
  - Member count
  - "Invite Students" form with email input
  - Class Score Distribution chart (mock data)
  - Student list with:
    - Full name
    - Email
    - "View Dashboard" link
- After inviting student:
  - Success message appears
  - Page refreshes or updates
  - New member appears in list
- Clicking "View Dashboard" navigates to student's performance view

## Test Case 2.9: Logout

Field	Description
Test Case ID	STS-002-TC-09
Test Title	Verify teacher can logout successfully
Test Priority	Medium
Pre-condition	Teacher is logged in on any page

### Test Steps:

1. Click on user profile icon (circle icon) in top-right navigation
2. Click "Logout" in dropdown menu
3. Observe page behavior

### Expected Result:

- Dropdown menu appears on icon click
- Logout option is visible with logout icon
- After clicking Logout:
  - User is redirected to login page
  - Session token is cleared
  - Attempting to navigate to protected routes redirects to login