Functional Requirements for Collaboration Learning and Academic Life Tools:

1. User Authentication and Authorization:
   -Provide secure user registration and login functionalities.
   - Differentiate between different user roles such as students, teachers, and administrators.
   - Implement access control mechanisms to restrict certain functionalities based on user roles and permissions.

2. Course Management:
   - Allow users to create and manage courses.
   - Provide options for adding course materials, assignments, and resources.
   - Support course enrollment and management of student rosters.

3. Discussion Forums:

- Enable users to participate in course-specific discussion forums.
- Allow users to create threads, reply to threads, and follow discussions.
- Implement search and filtering options for finding relevant discussions.

4. File Sharing and Collaboration:
- Enable users to upload, share, and download files related to courses.
- Support version control for collaborative document editing.
- Provide options for commenting and annotating shared files.

5. Assignment Submission and Grading:
- Allow students to submit assignments electronically.
- Provide an interface for teachers to review and grade assignments.
- Implement grading criteria and support customizable rubrics.

6. Calendar and Scheduling:
- Provide a calendar view to manage academic schedules.
- Allow users to schedule events, such as classes, exams, and deadlines.
- Send notifications and reminders for upcoming events.

7. Notifications and Communication:
- Implement a messaging system for real-time communication between users.
- Send notifications for course updates, assignment reminders, and discussions.
- Allow users to configure notification preferences.

8. Progress Tracking and Analytics:
- Provide insights into user progress and performance.
- Generate reports and analytics on student participation, grades, and achievements.
- Offer visual representations, such as charts or graphs, for easy data interpretation.

9. Integration with External Tools:
- Allow integration with external tools such as learning management systems, video conferencing platforms, or document collaboration tools.
- Support importing and exporting of data in standard formats.