

2.2 Analytics & Reporting (Admin)

| # | Feature | Status | Priority | Effort | Notes |
|--------|--------------------------------|--------|----------|----------|---------------------------------|
| 2.2.1 | Overall Attendance Trends | ✗ | HIGH | 8 hours | Line chart (Chart.js) |
| 2.2.2 | Course Comparison Bar Chart | ✗ | HIGH | 6 hours | Compare multiple courses |
| 2.2.3 | At-Risk Student Identification | ✗ | HIGH | 8 hours | <75% threshold alerts |
| 2.2.4 | Department-wise Analysis | ✗ | MEDIUM | 8 hours | Aggregate by department |
| 2.2.5 | Teacher Performance Metrics | ✗ | MEDIUM | 8 hours | Session completion rates |
| 2.2.6 | Heatmap Visualization | ✗ | MEDIUM | 12 hours | Day/time attendance patterns |
| 2.2.7 | Predictive Analytics | ✗ | LOW | 20 hours | ML model for dropout prediction |
| 2.2.8 | Custom Report Builder | ✗ | LOW | 16 hours | Admin-defined filters & exports |
| 2.2.9 | Dashboard Widgets | ✗ | MEDIUM | 8 hours | Draggable, customizable cards |
| 2.2.10 | Export All Reports to PDF | ✗ | MEDIUM | 8 hours | Batch export functionality |