Institute of Engineering & Management

School of University of Engineering and Management

Salt Lake Campus, Kolkata

Minor Degree Program

in

PEGA

Detailed Course Structure

2025

Outline Structure in PEGA

Sl. No.	Semester	Course Code	Title	Credits
1	3rd Semester	MINOR301P	Pre-System Architect Essentials (SAE)	2
2	4th Semester	MINOR401P	SYSTEM ARCHITECT ESSENTIALS	3
3	5th Semester	MINOR501P	Senior System Architect	4
4	6th Semester	MINOR601P	Mini Project Work	3
5	7th Semester	MINOR701P	Major Project work - 1	4
6	8th Semester	MINOR801P	Major Project work - 2	4
TOTAL				**20**

Detailed Syllabus

Course Code	:	MINOR301P
Course Title	:	Pre-System Architect Essentials (SAE)
Number of Credits	:	2
Semester	:	3rd Semester

Course Objective

- Students do self-study on – OOPS concept, Agile programming concepts; Database programming concepts; . Use platforms like MOOC or others to gain the basic knowledge.

- Student Attend Pre-SAE course and Webinars (monthly once) to be delivered by Pega team

Course Outcome

CO1 *Students able to brush up their pre-requisite skills that is highly essential before entering in Pega Curriculum*

Mapping of Course outcomes to Program Outcome:

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	3	2	3	1	-	-	-	-	-	-	-	-

MOOCs Courses:

OOPS:

https://www.coursera.org/learn/concepts-of-object-oriented-programming

OR

https://www.coursera.org/learn/object-oriented-design

Agile:

https://www.coursera.org/learn/agile-development-and-scrum

OR

https://www.coursera.org/learn/agile-atlassian-jira

Database concepts:

https://www.coursera.org/learn/introduction-to-relational-databases

Course Code	:	MINOR401P
Course Title	:	SYSTEM ARCHITECT ESSENTIALS
Number of Credits	:	3
Semester	:	4th Semester

Course objective -

To learn the capabilities of the Pega Platform. Develop applications that advance the digital transformation of organizations. Learn how to configure and build through a combination of demos, lectures, and discussions with designated Pega Instructors.

1. Student will begin the journey as a System Architect with Pega Technology while learning the capabilities of the Pega Platform.

2. They'll develop applications that advance the digital transformation of Organization.

3. They'll learn how to configure and build through a combination of demos, lectures and discussions with designated Pega Instructors.

Course Outcomes: At the end of the course, student will be able to:

CO1.
Develop core application skills on the Pega Platform by learning to configure, build, and manage digital solutions using rule-based, model-driven design.

CO2.
Utilize Pega's low-code tools and design wizards to rapidly create scalable applications, incorporating best practices like the situational layer cake and microjourney configurations.

CO3.
Monitor, evaluate, and guide progress through continuous assessments—identifying strengths and gaps to support students in both theory and hands-on exercises.

CO4.
Prepare students for industry certification (PCSSA 8.x) by building confidence, offering targeted feedback, and simulating real exam conditions to ensure readiness.

Mapping of Course outcomes to Program outcomes:

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	3	3	3	3	-	-	-	-	-	1	-	-
CO2	3	3	3	2	-	-	-	-	-	-	-	-
CO3	3	2	2	2	2	-	-	-	-	-	-	-
CO4	3	2	2	1	-	-	-	-	-	-	-	-

Course Code	:	MINOR501P
Course Title	:	Senior System Architect
Number of Credits	:	4
Semester	:	5th Semester

Course objective -

The Senior System Architect course is an intermediate course designed to help application developers further their knowledge of application development on Pega Platform™. The lessons in this course focus on tasks that a senior system architect performs to develop a Pega application to the next level.

Course Outcomes: At the end of the course, student will be able to:

CO1.
Understand and apply advanced development concepts including rule resolution, ECS design, versioning, ruleset branching, and performance tuning using Pega tools.

CO2.
Design and implement complex case management, data handling, integrations, reporting, and security requirements for enterprise applications.

CO3.
Monitor learning progress and performance through assessments to identify improvement areas in both theoretical and hands-on aspects.

CO4.
Prepare students for PCSSA 8.x certification by building exam readiness and confidence through targeted feedback and evaluation.

Mapping of Course outcomes to Program outcomes:

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	3	2	3	1	3	-	-	-	-	-	-	-
CO2	3	2	3	3	2	-	-	-	-	-	-	-
CO3	3	3	2	1	-	-	-	-	-	-	-	-
CO4	2	3	3	2	-	-	-	-	-	-	-	-

Course Code	:	MINOR601P
Course Title	:	Mini Project Work
Number of Credits	:	3
Semester	:	6th Semester

Course Outcomes: At the end of the course, student will be able to:

CO1 *An opportunity for students to explore and implement the technology they learnt*

CO2 *Strengthen the understanding of the low code application and how to implement in a real-life scenario*

CO3 *Students showcase their skills on how effectively they initiate, execute, monitor and close the assignment within a given timeline.*

Mapping of Course outcomes to Program outcomes:

	PO1	**PO2**	**PO3**	**PO4**	**PO5**	**PO6**	**PO7**	**PO8**	**PO9**	**PO10**	**PO11**	**PO12**
CO1	3	2	3	2	3	-	-	3	3	3	2	-
CO2	3	2	3	2	3	-	-	3	3	3	-	-
CO3	3	2	2	2	2	1	-	3	3	3	-	-

- Mini Project to be derived as an output of Professors and Pega team collaboration
- 6 New Mini projects to be derived
- Project evaluation/scoring sheet will be derived

Course Code	:	MINOR701P
Course Title	:	Major Project work - 1
Number of Credits	:	4
Semester	:	7th Semester

Course Outcomes: At the end of the course, student will be able to:

CO1 *Understand and get exposed to the complex business problems and introduced them to the best practices used in Industry*

CO2 *Learn to implement how Pega applications makes an organization's enterprise work more automated*

CO3 *Implement the advanced concepts learnt in SSA curriculum*

Mapping of Course outcomes to Program outcomes:

	PO1	**PO2**	**PO3**	**PO4**	**PO5**	**PO6**	**PO7**	**PO8**	**PO9**	**PO10**	**PO11**	**PO12**
CO1	3	2	3	3	3	-	-	3	3	2	3	-
CO2	3	3	3	2	3	-	-	3	3	2	2	-
CO3	3	3	3	2	3	-	-	3	3	3	2	-

- Major Project to be derived as an output of Professors and Pega team collaboration
- 5 new major projects to be derived
- Project evaluation/scoring sheet will be derived

Course Code	:	MINOR801P
Course Title	:	Major Project work - 2
Number of Credits	:	4
Semester	:	8th Semester

Course Outcomes: At the end of the course, student will be able to:

CO1 *Understand and get exposed to the complex business problems and introduced them to the best practices used in Industry*

CO2 *Learn to implement how Pega applications makes an organization's enterprise work more automated*

CO3 *Implement the advanced concepts learnt in SSA curriculum*

Mapping of Course outcomes to Program outcomes:

	PO1	**PO2**	**PO3**	**PO4**	**PO5**	**PO6**	**PO7**	**PO8**	**PO9**	**PO10**	**PO11**	**PO12**
CO1	3	2	3	3	3	-	-	3	3	2	3	-
CO2	3	3	3	2	3	-	-	3	3	2	2	-
CO3	3	3	3	2	3	-	-	3	3	3	2	-

- Major Project to be derived as an output of Professors and Pega team collaboration
- 5 new major projects to be derived
- Project evaluation/scoring sheet will be derived

Semester #	Content	Credit	Lecture / Project hour	Exit criteria
3	Pre-System Architect Essentials (SAE)	2	24	All 3 MOOCs certification available
4	SYSTEM ARCHITECT ESSENTIALS	3	36	PCSA exam cleared
5	Senior System Architect	4	48	PCSSA exam cleared
6	Mini Project Work	3	36	Presentation to industry expert and scoring (60 / 100)
7	Major Project work - 1	4	48	- Feedback from internship - Presentation to industry expert and scoring (60 / 100)
8	Major Project work - 2	4	48	- Feedback from internship - Presentation to industry expert and scoring (60 / 100)
		20		