

### B.S. Process Engineering (Birla Copper, Dahej and Indogulf Fertilizers, Jagdishpur)

**Type of Input:** Sponsored employees with Technical Diploma or its equivalent  
**Duration** Normally Six Semesters  
**Special Feature:** This is a specially designed programme for the Human Resource Development needs of Birla Copper, Dahej and Indogulf Fertilizers, Jagdishpur.

Year	First Semester	U	Second Semester	U
I	PEHC ZC121 Electrical & Electronics Engineering	3	PEHC ZC111 Computer Programming	3
	PEHC ZC131 Engineering Mathematics- I	3	PEHC ZC212 Engineering Mathematics – II	3
	PEHC ZC221 Principles of Management	3	PEHC ZC222 Fluid Mechanics	3
	PEHC ZC313 Technical Report Writing	3	PEHC ZC232 Engineering Materials	3
	Total	12	Total	12
II	PEHC ZC311 Chemical Engineering Thermodynamics	3	PEHC ZC322 Kinetics & Reactor Design	3
	PEHC ZC321 Chemical Process Calculations	3	PEHC ZC352 Energy Management	3
	PEHC ZC341 Heat Transfer	3	PEHC ZC412 Process Equipment Design	3
	PEHC ZC351 Mass Transfer	3	PEHC ZC441 Process Control & Instrumentation	3
	Total	12	Total	12
III	PEHC ZC314 Power Plant Engineering	3	PEHC ZC423T Project Work	20
	PEHC ZC331 Quality Control Assurance & Reliability	3		
	PEHC ZC413 Process Plant Safety and Environment	3		
	PEHC ZC413 Process Plant Safety and Environment Elective	3		
	Total	12	Total	20

**Note:** This is the currently operative pattern as approved by the Senate-appointed committee, subject to change if the situation warrants.

Pool of Elective Courses		
PEHC ZC382	Fertilizer Technology	3
PEHC ZC383	Extractive Metallurgy	3

### B.S. Process Engineering (Cement units of Aditya Birla Group)

**Type of Input:** Sponsored employees of Aditya Birla Group with Technical Diploma or its equivalent  
**Duration** Normally Six Semesters  
**Special Feature:** This is a specially designed programme for the Human Resource Development needs of Aditya Birla Group.

Year	First Semester	U	Second Semester	U
I	PEAB ZC121 Electrical & Electronics Engineering	3	PEAB ZC111 Computer Programming	3
	PEAB ZC131 Engineering Mathematics- I	3	PEAB ZC212 Engineering Mathematics – II	3
	PEAB ZC221 Principles of Management	3	PEAB ZC222 Fluid Mechanics	3
	PEAB ZC313 Technical Report Writing	3	PEAB ZC232 Engineering Materials	3
	Total	12	Total	12
II	PEAB ZC311 Chemical Engineering Thermodynamics	3	PEAB ZC322 Kinetics & Reactor Design	3
	PEAB ZC321 Chemical Process Calculations	3	PEAB ZC352 Energy Management	3
	PEAB ZC341 Heat Transfer	3	PEAB ZC412 Process Equipment Design	3
	PEAB ZC351 Mass Transfer	3	PEAB ZC441 Process Control & Instrumentation	3
	Total	12	Total	12
III	PEAB ZC314 Power Plant Engineering	3	PEAB ZC423T Project Work	20
	PEAB ZC331 Quality Control Assurance & Reliability	3		
	PEAB ZC382 Cement Technology	3		
	PEAB ZC413 Process Plant Safety and Environment	3		
	Total	12	Total	20

**Note:** This is the currently operative pattern as approved by the Senate-appointed committee, subject to change if the situation warrants.

### B.S. Process Engineering (CFCL, Kota)

**Type of Input:** Sponsored employees of Chambal Fertilizers and Chemicals Ltd., Kota with Technical Diploma / B.Sc. or its equivalent.  
**Duration** Normally Six Semesters  
**Special Feature:** This is a specially designed programme for the Human Resource Development needs of CFCL, Kota.

Year	First Semester	U	Second Semester	U
I	PECF ZC131 Engineering Mathematics I	3	PECF ZC111 Computer Programming	3
	PECF ZC121 Electrical & Electronics Engineering	3	PECF ZC212 Engineering Mathematics II	3
	PECF ZC313 Technical Report Writing	3	PECF ZC222 Fluid Mechanics	3
	PECF ZC221 Principles of Management	3	PECF ZC232 Engineering Materials	3
	Total	12	Total	12
II	PECF ZC311 Chemical Engineering Thermodynamics	3	PECF ZC322 Kinetics & Reactor Design	3
	PECF ZC321 Chemical Process Calculations	3	PECF ZC352 Energy Management	3
	PECF ZC341 Heat Transfer	3	PECF ZC412 Process Equipment Design	3
	PECF ZC351 Mass Transfer	3	PECF ZC441 Process Control & Instrumentation	3
	Total	12	Total	12
III	PECF ZC314 Power Plant Engineering	3	PECF ZC423T Project Work	20
	PECF ZC331 Quality Control, Assurance & Reliability	3		
	PECF ZC382 Fertilizer Technology	3		
	PECF ZC413 Process Plant Safety and Environment	3		
	Total	12	Total	20

**Note:** This is the currently operative pattern as approved by the Senate-appointed committee, subject to change if the situation warrants.

### B.S. Process Engineering (Hindalco, Renukoot)

**Type of Input:** Sponsored employees of Hindalco Industries Ltd., Renukoot with Technical Diploma or its equivalent  
**Duration** Normally Six Semesters  
**Special Feature:** This is a specially designed programme for the Human Resource Development needs of Hindalco Industries Ltd., Renukoot.

Year	First Semester	U	Second Semester	U
I	PEHR ZC121 Electrical & Electronics Engineering	3	PEHR ZC111 Computer Programming	3
	PEHR ZC131 Engineering Mathematics- I	3	PEHR ZC212 Engineering Mathematics – II	3
	PEHR ZC221 Principles of Management	3	PEHR ZC222 Fluid Mechanics	3
	PEHR ZC313 Technical Report Writing	3	PEHR ZC232 Engineering Materials	3
	Total	12	Total	12
II	PEHR ZC311 Chemical Engineering Thermodynamics	3	PEHR ZC322 Kinetics & Reactor Design	3
	PEHR ZC321 Chemical Process Calculations	3	PEHR ZC352 Energy Management	3
	PEHR ZC341 Heat Transfer	3	PEHR ZC412 Process Equipment Design	3
	PEHR ZC351 Mass Transfer	3	PEHR ZC441 Process Control & Instrumentation	3
	Total	12	Total	12
III	PEHR ZC314 Power Plant Engineering	3	PEHR ZC423T Project Work	20
	PEHR ZC331 Quality Control Assurance & Reliability	3		
	PEHR ZC383 Extractive Metallurgy	3		
	PEHR ZC413 Process Plant Safety and Environment	3		
	Total	12	Total	20

**Note:** This is the currently operative pattern as approved by the Senate-appointed committee, subject to change if the situation warrants.

### B.S. Process Engineering (HZL, Udaipur)

**Type of Input:** Sponsored employees of Hindustan Zinc Ltd., Udaipur with Technical Diploma / B.Sc. or its equivalent  
**Duration:** Normally Six Semesters  
**Special Feature:** This is a specially designed programme for the Human Resource Development needs of HZL, Udaipur.

Year	First Semester	U	Second Semester	U
I	PEHZ ZC131 Engineering Mathematics I	3	PEHZ ZC111 Computer Programming	3
	PEHZ ZC121 Electrical & Electronics Engineering	3	PEHZ ZC212 Engineering Mathematics II	3
	PEHZ ZC313 Technical Report Writing	3	PEHZ ZC222 Fluid Mechanics	3
	PEHZ ZC221 Principles of Management	3	PEHZ ZC232 Engineering Materials	3
	Total	12	Total	12
II	PEHZ ZC311 Chemical Engineering Thermodynamics	3	PEHZ ZC322 Kinetics & Reactor Design	3
	PEHZ ZC321 Chemical Process Calculations	3	PEHZ ZC352 Energy Management	3
	PEHZ ZC341 Heat Transfer	3	PEHZ ZC412 Process Equipment Design	3
	PEHZ ZC351 Mass Transfer	3	PEHZ ZC441 Process Control & Instrumentation	3
	Total	12	Total	12
III	PEHZ ZC314 Power Plant Engineering	3	PEHZ ZC423T Project Work	20
	PEHZ ZC331 Quality Control, Assurance & Reliability	3		
	PEHZ ZC383 Extractive Metallurgy	3		
	PEHZ ZC413 Process Plant Safety and Environment	3		
	Total	12	Total	20

**Note:** This is the currently operative pattern as approved by the Senate-appointed committee, subject to change if the situation warrants.

### B.S. Process Engineering (JSW Steel, Toranagallu)

**Type of Input:** Sponsored employees of JSW Steel Ltd. with Technical Diploma or its equivalent  
**Duration:** Normally 6-Semesters.  
**Special Feature:** This is a specially designed programme for Human Resource Development needs of JSW Steel Ltd, Toranagallu.

Year	First Semester	U	Second Semester	U
I	PEJS ZC121 Electrical & Electronics Engineering	3	PEJS ZC111 Computer Programming	3
	PEJS ZC131 Engineering Mathematics- I	3	PEJS ZC212 Engineering Mathematics – II	3
	PEJS ZC221 Principles of Management	3	PEJS ZC232 Engineering Materials	3
	PEJS ZC313 Technical Report Writing	3	PEJS ZC242 Thermodynamics & Kinetics	3
	Total	12	Total	12
II	PEJS ZC252 Mineral Beneficiations and Agglomeration	3	PEJS ZC312 Steel Making & Casting	3
	PEJS ZC262 Iron Making	3	PEJS ZC332 Testing of Materials	3
	PEJS ZC272 Furnace Technology	3	PEJS ZC352 Energy Management	3
	PEJS ZC442 Advances in Materials Science	3	PEJS ZC441 Process Control & Instrumentation	3
	Total	12	Total	12
III	PEJS ZC331 Quality Control Assurance & Reliability	3	PEJS ZC423T Project Work	20
	PEJS ZC362 Steel Processing	3		
	PEJS ZC413 Process Plant Safety and Environment	3		
	PEJS ZC414 Project Appraisal	3		
	Total	12	Total	20

**Note:** This is the currently operative pattern as approved by the Senate-appointed committee, subject to change if the situation warrants.

### B.S. Process Engineering (TCL, Babrala)

**Type of Input:** Sponsored employees of TCL, Babrala with Technical Diploma / B.Sc. or its equivalent

**Duration:** Normally 6-Semesters.

**Special Feature:** This is a specially designed programme for Human Resource Development needs of Tata Chemicals Ltd., Babrala

Year	First Semester		U	Second Semester		U
I	PETC ZC131	Engineering Mathematics I	3	PETC ZC111	Computer Programming	3
	PETC ZC121	Electrical & Electronics Engineering	3	PETC ZC212	Engineering Mathematics II	3
	PETC ZC313	Technical Report Writing	3	PETC ZC222	Fluid Mechanics	3
	PETC ZC221	Principles of Management	3	PETC ZC232	Engineering Materials	3
	Total		12			12
II	PETC ZC311	Chemical Engineering Thermodynamics	3	PETC ZC322	Kinetics & Reactor Design	3
	PETC ZC321	Chemical Process Calculations	3	PETC ZC352	Energy Management	3
	PETC ZC341	Heat Transfer	3	PETC ZC412	Process Equipment Design	3
	PETC ZC351	Mass Transfer	3	PETC ZC441	Process Control & Instrumentation	3
	Total		12	Total		12
III	PETC ZC314	Power Plant Engineering	3	PETC ZC423T	Project Work	20
	PETC ZC331	Quality Control, Assurance & Reliability	3			
	PETC ZC382	Fertilizer Technology	3			
	PETC ZC413	Process Plant Safety and Environment	3			
	Total		12	Total		20

**Note:** This is the currently operative pattern as approved by the Senate-appointed committee, subject to change if the situation warrants.