B.E. Computer Engineering and B.E. Computer Science & Engineering Programmes are designed to offer elective focus as soon as student clears semester IV of the program. Student has to choose EF (Elective Focus) out of the following choices and shall continue with this group till his study at Thapar Institute of Engineering & Technology. Choices are:

- High Performance Computing (available to Computer Engineering students only)
- Computer Animation and Gaming
- Information and Cyber Security
- Mathematics and Computing
- Data Science
- Financial Derivatives
- DevOps and Continuous Delivery
- Full Stack development
- Conversation AI
- Edge AI and Robotics

Each EF should have cap of 400 students Max. Prioritization into a particular EF stream shall be according to the market demand. Choice should be attributed based on the second year CGPA matched with student’s choice. Many of these EF baskets are co-designed by industry partner and industry support in the form of delivery/material/labs etc. is inbuilt. Each of the industry supported basket attracts one-time lumpsum fee of Rs. 20,000 to 40,000 to be paid before the start of fifth semester. Before the start of fifth semester, each basket would be discussed with the student community in detail, so that student can take a informed decision.