

# **CRITERION I**

  

# **CURRICULAR ASPECTS**

## **1. Criterion I : Curricular Aspects**

St. Peter's University offers programmes to create and sharpen students with knowledge, innovative ideas, scientific temper, creative thinking, self-skills and professional ethics. The curriculum is designed with effective strategies possessing core aspects as flexibility, innovation, responsibility and advancements towards academic excellence and with the objective of affording quality education. The reforms and revivals in the curriculum are made periodically in order to face the demands made by globalization and rapid changes taking place in all the spheres of human activity. The Boards of studies and the Academic Council are vibrant and provide lot of insight into the curriculum development. The curriculum is also updated and restructured with valuable feedback garnered from the stakeholders, time to time, which helps in creating responsible citizens and leaders to build better society.

### **1.1 Curriculum Design and Development**

#### **1.1.1 How is the institutional vision and mission reflected in the academic programmes of the university?**

The vision of our university is to achieve “Academic Excellence in Engineering & Technology and Science through Teaching, Research and Extension to Society.”

The mission of our university is “Generating, Preserving and Disseminating Knowledge through Rigorous Academic Study Inquisitiveness to Understand and Explore Nature and Entrepreneurship with Creativity and Innovation.”

The quality policy followed by our Institution for ISO 9001:2008 quality management system is “We, at St. Peter's University, are committed to impart quality education and research in the fields of Medical Sciences, Engineering, Technology, Science and Humanities, Arts and Management to develop the students as competent citizens with a spirit to serve the nation by continually improving our services.”

The objectives of the vision and mission of our university are achieved through the following set of parameters.

- Framing of syllabus with inputs from faculty, R&D organizations, Industry, academia, alumni and other experts.

- Offering courses in all the core and allied engineering fields including science and management.
- Inviting senior people from leading R&D Organizations and Industries and involving them in the academic programmes.
- Imparting compulsory laboratory training and project experience as part of the curriculum.
- Entrepreneurship development by Setting up of Technology Business Incubator and MSME Business Incubator supported by the Department of Science & Technology and by the Ministry of Small, Micro and Medium Enterprises.

**1.1.2 Does the university follow a systematic process in the design and development of the curriculum? If yes, give details of the process (need assessment, feedback, etc.).**

Yes. The University follows a systematic process in the design and development of the curriculum. The development of the curriculum is done by reviewing the curriculum and syllabi of reputed institutions like Anna University, IIT to set a benchmark. Feedback from various quarters such as employers, senior faculty, alumni and industry about thrust areas and emerging fields is also obtained taking into consideration the needs of the industry and the society. The curriculum and syllabus is approved by Board of Studies of different faculties and approval by the Academic council and Board of Management for implementation. The review/revision of syllabus is generally once in 4 years or and as required.

**1.1.3 How are the following aspects ensured through curriculum design and development?**

- **Employability**
- **Innovation**
- **Research**

The University focuses on the overall development of the students in areas such as intellectual, experimental learning, multi skills like communication skills, soft skills, analytical skills, and stress management.

Employability is ensured by designing a demand based curriculum. Training is provided when necessary. Communication skills and Group discussion skills are also imparted to the final year students to help in placements. Students are motivated to participate and present technical papers at seminars and conferences.

Innovation is encouraged by motivating and encouraging students to take up innovative projects at UG/PG level. The university organizes student's project exhibitions. The students are encouraged to participate in various events conducted by other institutions (SAE, BAJA, Delta Shootout, Airbus etc.). Value added courses / training to the students are provided. Intellectual property rights awareness programmes are also organized for the benefit of the students.

Research is an important component of St.Peter's University. Research programmes leading to M.Phil. and Ph.D. have been introduced since inception of the university. Entrance examinations are conducted for all these courses. Our university right from inception has introduced Research methodology as a compulsory course work in the curriculum to ensure minimum standards. Facilities have been provided to improve the research ambience in our university. Guest lectures on specialized topics to generate interest in new/ niche areas are organized regularly.

**1.1.4 To what extent does the university use the guidelines of the regulatory bodies for developing and/or restructuring the curricula? Has the university been instrumental in leading any curricular reform which has created a national impact?**

The University follows the guidelines of the regulatory bodies like UGC very diligently. Course on Environmental Science had been introduced in our University even before the UGC guidelines for doing the same.

The University uses the curriculum developed by UGC, AICTE and other similar bodies for developing and /or restructuring. Members of the regulatory bodies in Board of studies and Academic council are invited and their suggestions are included.

The University has introduced non-conventional courses in the field of Engineering, Technology and allied Sciences (Bio technology, Bio medical, Aeronautical, Automobile engineering etc.). Several electives/courses have been introduced like disaster management, advanced manufacturing technologies, prefabricated structures etc.

**1.1.5 Does the university interact with industry, research bodies and the civil society in the curriculum revision process? If so, how has the university benefitted through interactions with the stakeholders?**

Yes. The University actively interacts with all the stake holders in Curriculum revision process. The University has 40 MoU's with Industry and leading research bodies. Many of the people working in

these organizations are members in the Board of Research and Board of Studies. The University has benefitted immensely through these interactions. The various stakeholders have helped the University in undertaking the activities such as organizing special invited Lectures in different thrust areas. This has helped in introducing new electives for both UG and PG. Soft skill development workshops are organized with professionals. The composition of the syllabus subcommittee includes representative from Industries and agencies.

Representatives from industries are included as the members of syllabus subcommittees, Board of Studies and Academic Council, and their suggestions are taken while framing the syllabi and curriculum, which helps students to have an updated knowledge and industrial exposure.

**1.1.6 Give details of how the university facilitates the introduction of new programmes of studies in its affiliated colleges.**

Since St.Peter's University is a Deemed to be University with unitary system, this is not applicable.

**1.1.7 Does the university encourage its colleges to provide additional skill-oriented programmes relevant to regional needs? Cite instances (not applicable for unitary universities).**

Since St.Peter's University is a Deemed to be University with unitary system, this is not applicable.

**1.2 Academic Flexibility**

**1.2.1 Furnish the inventory for the following:**

- **Programmes taught on the campus**
- **Overseas programmes offered on campus**
- **Programmes available for colleges to choose from.**

The following programmes are taught on campus.

## **FULL TIME PROGRAMMES**

### **U.G. Programmes:**

1. B.E. Bio-Medical Engineering
2. B.E. Civil Engineering
3. B.E. Computer Science and Engineering
4. B.E. Electronics and Communication Engineering
5. B.E. Electrical and Electronics Engineering
6. B.E. Mechanical Engineering
7. B.Tech. Information Technology
8. B. Architecture
9. B.E. Aeronautical Engineering (Suspended from 2015-16)
10. B.E. Automobile Engineering (Suspended from 2013-14)
11. B.E. Biotechnology (Suspended from 2013-14)
12. B.Tech. Chemical Engineering (Suspended from 2014-15)
13. B.E. Electronics and Instrumentation Engineering  
(Suspended from 2014-15)

### **P.G. Programmes:**

1. M.E. Applied Electronics
2. M.E. Bio-Medical Engineering
3. M.E. Computer Science and Engineering
4. M.E. Power Electronics & Drives
5. M.E. Structural Engineering
6. M.E. Advanced Manufacturing Technology
7. M.Tech. Information Technology
8. MBA (Master of Business Administration)
9. MCA (Master of Computer Application)
10. M.Sc. Chemistry
11. M.Sc. Physics
12. M.E. Aeronautical Engineering (Suspended)
13. M.E. Building Technology & Construction  
Management (Suspended)
14. M.E. CAD CAM (Suspended)
15. M.E. Communication Engineering (Suspended)
16. M.E. Engineering Design (Suspended)
17. M.E. Instrumentation Engineering (Suspended)
18. M.E. Thermal Engineering (Suspended)

### **M.Phil. Programmes:**

1. M.Phil. Computer Science and Applications
2. M.Phil. Chemistry
3. M.Phil. English
4. M.Phil. Mathematics
5. M.Phil. Management Studies

6. M.Phil. Physics
7. M.Phil. Biotechnology (Suspended from 2012-13)

**Ph.D. Programmes:**

1. Ph.D. Bio-Medical Engineering
2. Ph.D. Civil Engineering
3. Ph.D. Computer Science and Engineering
4. Ph.D. Electronics and Communication Engineering
5. Ph.D. Electrical and Electronics Engineering
6. Ph.D. Mechanical Engineering
7. Ph.D. Information Technology
8. Ph.D. Computer Science and Applications
9. Ph.D. Chemistry
10. Ph.D. English
11. Ph.D. Mathematics
12. Ph.D. Management Studies
13. Ph.D. Physics

- **Overseas programmes offered on campus:** Nil
- **Programmes available for colleges to choose from:** Nil

**1.2.2 Give details on the following provisions with reference to academic flexibility**

**a. Core / Elective options**

Common, core and interdisciplinary subjects are given from I Semester to III Semester. Nearly 30% of the subjects are given as Electives from VI Semester to VIII Semester for B.E./B.Tech programmes and from I semester to IV semester for P.G students as prescribed in the regulations.

**b. Enrichment courses**

Courses in emerging areas are offered as electives during the final year

**c. Courses offered in modular form**

The university is not offering any courses in modular form.

**d. Credit accumulation and transfer facility**

For the award of the degree, a student has to earn a

certain minimum total number of credits specified in the regulations of the relevant branch of study. The minimum will be 144 credits for under graduate programmes and 72 for two year postgraduate programmes as prescribed in the regulations. For students migrating from other institutions in the middle of programme, credit transfer is implemented on equating the courses with the courses of the university.

**e. Lateral and vertical mobility within and across programmes, courses and disciplines**

The curriculum allows lateral mobility in the University. Candidates who have completed Diploma are eligible to join in the second year of the Undergraduate engineering courses. Similarly, candidates who have completed BCA and B.Sc. Computer Science are eligible to join MCA programme in the second year. Under the CBCS pattern, students have the opportunity to opt for any one of the elective courses from 6<sup>th</sup> semester with a provision to take extra disciplinary course, which reflects the vertical mobility across departments.

**1.2.3 Does the university have an explicit policy and strategy for attracting international students?**

The University's policy for admitting international students is as per the guidelines of the UGC. However, there are no international students in the campus as of now.

**1.2.4 Have any courses been developed targeting international students? If so, how successful have they been? If 'no', explain the impediments.**

NO. The University has not made special efforts to target international students as of now.

**1.2.5 Does the university facilitate dual degree and twinning programmes? If yes, give details.**

NO.

**1.2.6 Does the university offer self-financing programmes? If yes, list them and indicate if policies regarding admission, fee structure, teacher qualification and salary are at par with the aided programmes?**

The university itself is a self-financing one.

**1.2.7 Does the university provide the flexibility of bringing together the conventional face-to-face mode and the distance mode of education and allow students to choose and combine the courses they are interested in? If 'yes,' give operational details.**

NO.

**1.2.8 Has the university adopted the Choice Based Credit System (CBCS)? If yes, for how many programmes? What efforts have been made by the university to encourage the introduction of CBCS in its affiliated colleges?**

The Choice based credit system (CBCS) has been adopted by the University for all the programmes. Students are permitted to choose their elective subjects across the departments.

**1.2.9 What percentage of programmes offered by the university follow:**

- **Annual system**
- **Semester system**
- **Trimester system**

All (100%) of the programmes offered by the university follow the semester system. The University follows the semester calendar of July to November and December to April for its courses.

**1.2.10 How does the university promote inter- disciplinary programmes? Name a few programmes and comment on their outcome.**

The University is pioneer in introducing some of the unique inter-disciplinary programmes. The curricula and syllabi are framed by the Board of studies with feedback from academic, R & D and industry experts from different disciplines. Syllabi and curriculum of reputed universities are taken as guidelines in formulating the programmes. Some of the inter-disciplinary UG / PG programmes offered in the University are listed below:

- B.E Biomedical Engineering.
- B.Tech. Bio Technology

### 1.3 Curriculum Enrichment

#### 1.3.1 How often is the curriculum of the university reviewed and upgraded for making it socially relevant and/or job oriented / knowledge intensive and meeting the emerging needs of students and other stakeholders?

The curriculum is reviewed during the Board of studies and Academic council meetings which are conducted every year. The curriculum is reviewed and revised once in 4 years or as and when necessary to keep the students abreast with the latest trends in the emerging areas and also to keep pace with the industrial needs and global competition. However as and when the need arises, there is a provision to upgrade the curricula and syllabi as recommended by the Board of studies and approved by Academic Council. The regulations in our university have been revised 4 times and the university has R2008, R2012, R2013 and R2014 regulations.

#### 1.3.2 During the last four years, how many new programmes at UG and PG levels were introduced? Give details.

- **Interdisciplinary.**
- **Programmes in Emerging Areas.**

The following are the new programmes that have been introduced during the last four years.

S.No.	Name of Programmes	Year
1	M.E. Biomedical Engineering	2012-13
2	B. Arch, Architecture	2012-13
3	M.E. Advanced Manufacturing Technology	2013-14
4	M.E. Building Construction and Technology Management	2013-14
5	M.E. Communication Engineering	2013-14
6	M.E. Thermal Engineering	2013-14
7	M.Sc. Chemistry	2014-15
8	M.Sc. Physics	2014-15

**1.3.3 What are the strategies adopted for the revision of the existing programmes? What percentage of courses underwent a syllabus revision?**

The University revises the regulations, scheme of examinations, curricula and syllabi as and when required. The Board of studies and the Academic council advise the Board of Management about the need to upgrade and implement new courses or topics in their respective boards taking the Feedback from students, employers and alumni. Compliance from the regulatory bodies such as UGC and CoA regarding courses are done as and when suggested.

Syllabus revision of about 20% is made in all courses based on the above feedback.

**1.3.4 What are the value-added courses offered by the university and how does the university ensure that all students have access to them?**

University encourages participation of students in value added courses such as

- CATIA - TBI
- Microsoft Visualisation Certification workshop
- Soft-skill training programmes
- Training on Ethical Hacking
- Workshop on Fire safety - CDM
- Servicing of Refrigeration and Air conditioning- TBI
- CNC programming -TBI
- MS Office Automation - MCA
- Training on IPR
- Training on solar PV and its applications
- Training on BOSS- MOOL Linux Operating system
- Training Programme on Design of Robotics.
- Workshop on Disaster Management
- Robotics
- Embedded Systems
- Research Methodology - MCA
- English Communication and effective presentation.

**1.3.5 Has the university introduced any higher order skill development programmes in consonance with the national requirements as outlined by the National Skills Development Corporation and other agencies?**

Yes, the University has introduced a lot of programmes other

than those prescribed in the curriculum.

<b>Name of the program</b>	<b>Beneficiaries</b>
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- |   |                                |
|---|--------------------------------|
| • Employability Training                  | : All UG, MBA and MCA students |
| • Personality Development Programmes      | : UG students                  |
| • Online Aptitude Programmes              | : Final years                  |
| • Entrepreneurship Development programmes | : All UG students              |
| • Certification programmes                | : Third and Final years        |
| • Bridge courses                          | : First year                   |

## **1.4 Feedback System**

### **1.4.1 Does the university have a formal mechanism to obtain feedback from students regarding the curriculum and how is it made use of?**

Yes. The University has a sound mechanism to obtain the feedback. The University has various channels to collect and document responses on curriculum from the stakeholders. The students express their opinion on curriculum through response sheets. Oral responses are also considered. Special formats are used for alumni and parents to register their views during interface meetings. Opinions of the students are elicited during class committee meetings and these are discussed at the department level and the board of studies. The teachers collect the exit level feedback from the graduates regarding teaching learning processes and curriculum after the end of academic session every year. The Vice Chancellor, being the head of the institution collects the feedback from the different stakeholders through periodic meetings. Analysis is carried out of the feedback and the same is consolidated and given to all the functional heads of the institution.

The Vice Chancellor reviews the analysis reports and forwards it to the other heads. Accordingly, if there is a justified need, the changes are incorporated in the subsequent year with the recommendation of the Board of studies.

### **1.4.2 Does the university elicit feedback on the curriculum from national and international faculty? If yes, specify a few methods such as conducting webinars, workshops, online discussions, etc. and its impact.**

The university is in the process of creating a mechanism for facilitating the feedback from national faculty.

**1.4.3 Specify the mechanism through which affiliated institutions give feedback on curriculum enrichment and the extent to which it is made use of.**

Since St.Peter's University is a Deemed to be university with unitary system, such mechanisms are not applicable.

**1.4.4 What are the quality sustenance and quality enhancement measures undertaken by the university in ensuring the effective development of the curricula?**

The Board of Studies and the academic council review and revise the regulations, curricula and syllabi of all academic programmes once in every four years or as and when required with the help of syllabus subcommittee in the department for each programme. The syllabus subcommittees include expert members not only from academics but also from relevant industries and alumni. The recommendation of syllabus subcommittee is taken up for discussion in the Board of studies and finally placed before Academic council for discussion and approval. Academic audits are conducted by experts every year and the feedback on curriculum and syllabus is analyzed for further action.