Flexible Academic Program

Multi Exit   Multi Entry and Lateral entry   Multi-Institute

Multidisciplinary   Multimode   Multi lingual

Proposed modalities for FAP Implementation

Prepared and presented by

Indian Institute of Information Technology Allahabad, Prayagraj

after incorporating inputs received from many Persons/Institutes/Organizations till date

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MultiEntry, MultiExit, MultiMode, Multilingual FAP

All Institutes/Universities may independently run FAP without enabling its multi-institute feature
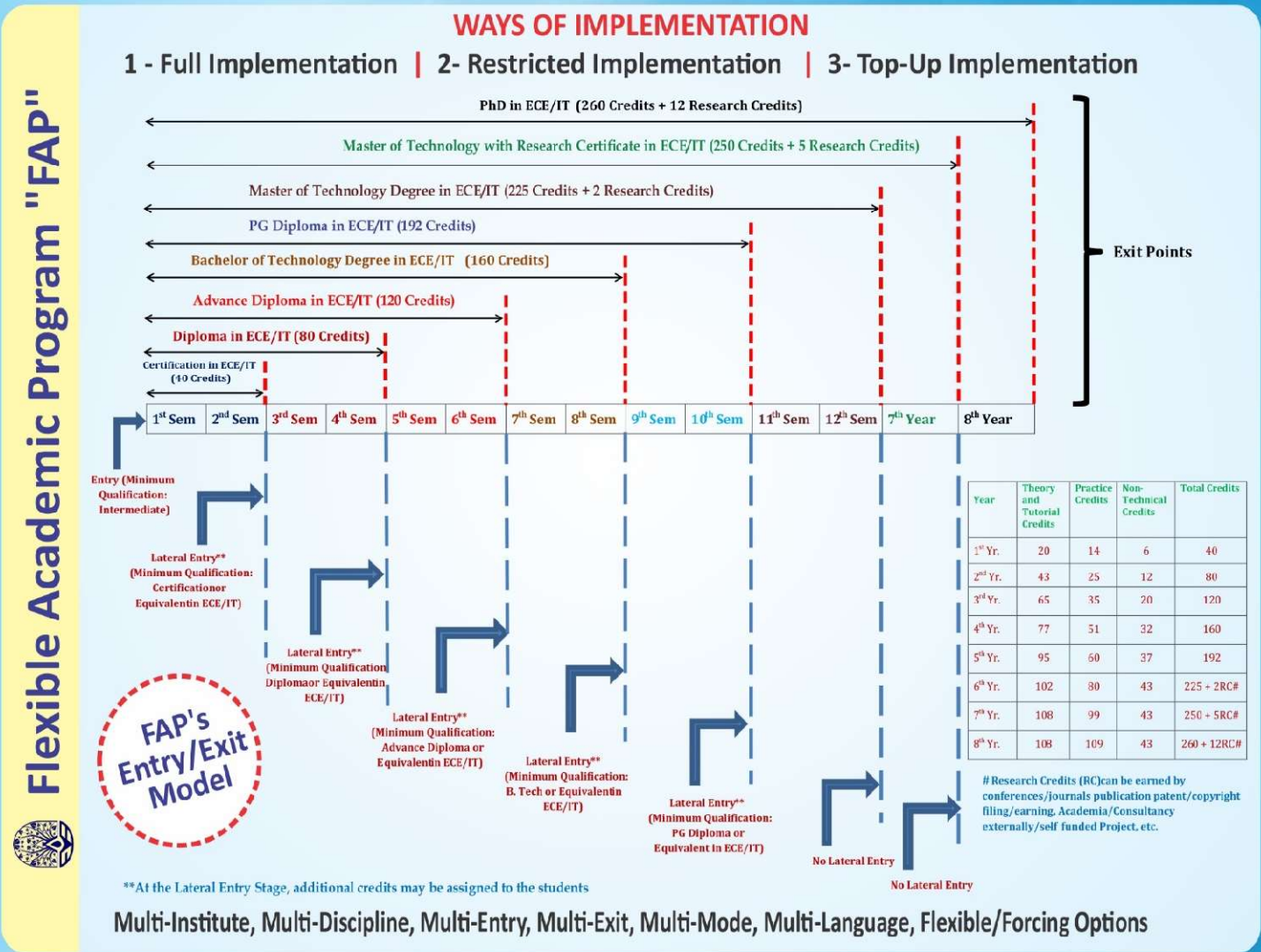
Miscellaneous Credit means Humanities/Managements, etc. fields courses WHICH may be opted from the Miscellaneous basket.

Research Credits (RC) can be earned by conferences/journals publication patent/copyright filing/earning, Academia/Consultancy externally/self funded Project, Adding experiments to lab etc. A detailed guidelines will be prepared for mentioning fine details of research points associated with these activities OR the research point scheme of NITs used for faculty recruitment may be adopted.

Theory credit means the theoretical evaluation of courses.

Practical credit means the laboratory based courses and practical based evaluation which includes project, industrial training , etc.

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*Detailed curriculum for 'FAP in IT 'and 'FAP in ECE' will be discussed in the **Panel-1***

WAYS OF IMPLEMENTATION

1 - Full Implementation | 2- Restricted Implementation | 3- Top-Up Implementation

Flexible Academic Program "FAP"

PhD in ECE/IT (260 Credits + 12 Research Credits)

Master of Technology with Research Certificate in ECE/IT (250 Credits + 5 Research Credits)

Master of Technology Degree in ECE/IT (225 Credits + 2 Research Credits)

PG Diploma in ECE/IT (192 Credits)

Bachelor of Technology Degree in ECE/IT (160 Credits)

Advance Diploma in ECE/IT (120 Credits)

Diploma in ECE/IT (80 Credits)

Certification in ECE/IT (40 Credits)

Exit Points

| 1st Sem | 2nd Sem | 3rd Sem | 4th Sem | 5th Sem | 6th Sem | 7th Sem | 8th Sem | 9th Sem | 10th Sem | 11th Sem | 12th Sem | 7th Year | 8th Year |

Entry (Minimum Qualification: Intermediate)

Lateral Entry** (Minimum Qualification: Certification or Equivalent in ECE/IT)

Lateral Entry** (Minimum Qualification Diploma or Equivalent in ECE/IT)

Lateral Entry** (Minimum Qualification: Advance Diploma or Equivalent in ECE/IT)

Lateral Entry** (Minimum Qualification: B. Tech or Equivalent in ECE/IT)

Lateral Entry** (Minimum Qualification: PG Diploma or Equivalent in ECE/IT)

No Lateral Entry

No Lateral Entry

FAP's Entry/Exit Model

Year	Theory and Tutorial Credits	Practice Credits	Non-Technical Credits	Total Credits
1st Yr.	20	14	6	40
2nd Yr.	43	25	12	80
3rd Yr.	65	35	20	120
4th Yr.	77	51	32	160
5th Yr.	95	60	37	192
6th Yr.	102	80	43	225 + 2RC#
7th Yr.	108	99	43	250 + 5RC#
8th Yr.	108	109	43	260 + 12RC#

Research Credits (RC) can be earned by conferences/journals publication patent/copyright filing/earning, Academia/Consultancy externally/self funded Project, etc.

**At the Lateral Entry Stage, additional credits may be assigned to the students

Multi-Institute, Multi-Discipline, Multi-Entry, Multi-Exit, Multi-Mode, Multi-Language, Flexible/Forcing Options

1 Credit = 1 Hour of Lecture per week OR 2 hours of Lab/Tut per week as per the academic calendar of the VI

3 Steps of Multi-institute FAP Implementation

Restricted FAP

All PIs should independently start FAP (with exactly same curriculum, may be a modified version of the proposed one in Panel-1).

Either currently available number of CS/IT/ECE seats may be partitioned OR fresh seats may be introduced as per the priority of individual institute.

Intake to individual institute will be held as per their exiting norms, and they will award the degree to students admitted in their institutes.

Limited flexibilities e.g. temporary transfer to other institutes offering FAP (returning back to the parent institute),multimode, multilingual etc. may be offered to students admitted in this program as may be decided by the respective Senate.

The FAP consortium will coordinate these activities and provide centralized support for transparent implementation, e.g. JoSAA functionalities may be extended for conducting transfer rounds after completion of 2nd, 4th, 6th,8th, 10th Semesters.

Top-UP FAP

Some provisions of FAP may be toped up over the existing programs in IT/CS/ECE.

Students may be allowed to transfer in both directions depending upon their performances (in entrance exam and afterwards), and against the vacant seats.

Transfers will be permanent. FAP consortium may coordinate.

Full FAP

The students are admitted in a Virtual Institution (VI). It will issue temporary VISAs to them for visiting a particular institute in a semester. The students will return back to VI after expiration of the VISA.

The VI will award the certificate/degree at the exit points.

In depth discussions on the above said (and other possible implementations) will be held in the Panel-5

Multidisciplinary, Multi-institute Operations through Independent FAP Consortiums
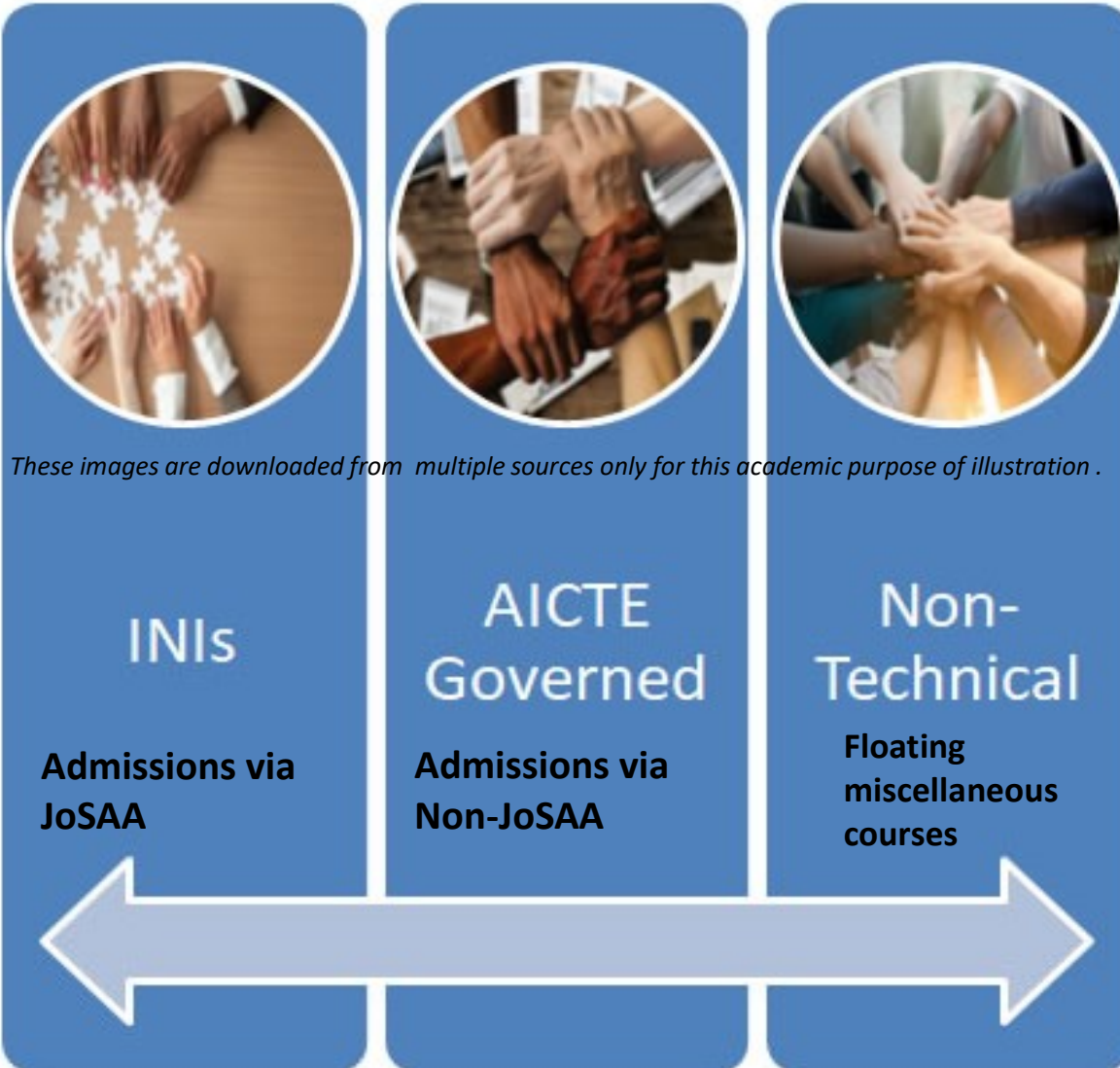
INIs

Admissions via JoSAA

AICTE Governed

Admissions via Non-JoSAA

Non-Technical

Floating miscellaneous courses

There may be 2 independent FAP consortiums with wild card (including forced exit) inter-consortium movement mechanism e.g. partitioned GATE syllabus and section wise scoring.

Internally the INIs consortium will have two wings as 'JEE-Advance Institutes' and 'JEE Institutes'. Intra-consortium movement may also be conditional and may be differently defined by various PIs.

Renowned Non-Technical Institutes/Universities may also be PIs enabling their teachers to float courses for FAP students under miscellaneous baskets. Moreover, these institutes may plan their own FAP programs through their own consortium.

Technical FAP to Other discipline FAP movement may also be provisioned.

In pilot run there may be just one consortium.

Full FAP Implementation

(The Ministry of Education, GoI needs to take some initial actions)

- Along with the proceedings of this conference, IIITA will send the proposal to MOE with a request of selecting a few institutes, obtain their consent, and formally constitute the VI for conducting the pilot run of full FAP. Also it should give the power of conferring degrees to VI through the Act of Parliament or as may be decided by the MOE.

- The MOE may designate any PI as VI too for conducting the pilot run, and suitably name the VI. Also, it may ask NIC to build the backbone software for smoothly running FAP through the VI.

- The VI will have its own BOG, Senate and other bodies consisting of a few Professors working at PIs (as nominated by respective Director/VC), Nominees of MOE Govt. of India, AICTE, UGC, NIC, etc. These bodies will function as they works in institutes of national importance (INIs).

- The VI will designate one of the PI as a coordinating institute for a particular batch of a particular specialization transferring almost all its responsibilities for that batch i.e. VI works in distributed manner.

- The VI may have following participating institutes (PIs)
  - Institutes of National Importance (12 in pilot run e.g. 3 IITs, 4 NITs, 5 IIITs (CFTI + PPP)
  - UTDs owned by different states technical universities (2 in pilot run e.g. IET Lucknow of AKTU)
  - Renowned Private University (1 in pilot run)
  - Non-Technical reputed institute/Universities (3 in pilot run e.g. any one IIM, GBPSSI, DU/JNU etc.)

Full FAP in Pilot Run

Offered specializations:

8-Yr Flexible Academic Program (FAP) in IT

8-Yr Flexible Academic Program (FAP) in ECE

The VI should may intake 150 students in each of the above 2 specialization i.e. total 300 students may be admitted through JEE Mains.

At any point of time the IITs (and other institutes too) may define additional eligibility conditions for getting VISA, e.g. Only those students will get VISAs to IITs who have scored above a threshold in the JEE Advance of respective batch (e.g. not below 1000 lower than the last admission). May allow entry to a student who has completed all previous courses from a INI or those institutes which are under 100 NIRF ranking, etc.

The respective PI will either grade the students as per VIs standard norms Or as per its own norms, the VI will suitably map these grades to a uniform VI grades through suitable conversion formula. *(Something equivalent to the Currency Conversion Concept)*

Main Features of the FAP Curriculum

- All technical courses have been reorganized and their syllabus has been redefined to ensure that there should be completeness (in some sense) at each exit point.

- In each semester 2 credits are required to be completed from miscellaneous basket and another 1 credit by sports or community service. For NCC/NSS type courses these credits may be combined into 3 credit courses.

- The model tested in the 'Orientation Camp' for systematically organizing the community services through the pre recognized organizations may be adopted.

- Instead of individual elective subjects complete modules of specialized streams are proposed to be offered in 6th and 7th sem. The graduating student will have skills of 2 such specialized modules.
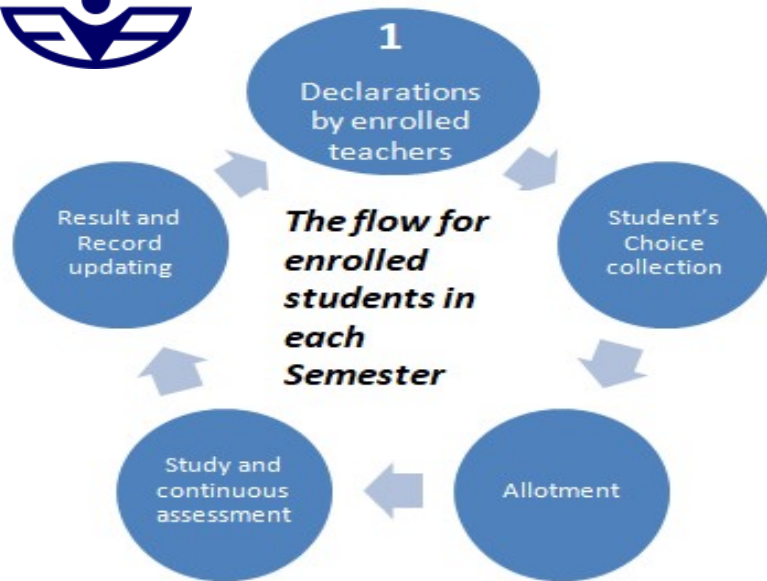
- If a student wants to continue study in one of these two streams then he should move ahead through MTech by research mode. However, if someone wants to change the stream at this stage then he/she needs to adopt the standard curriculum.

- In 7th and 8th Year instead of semester system, yearly system will be followed. Further no lateral entry is allowed at this stage.
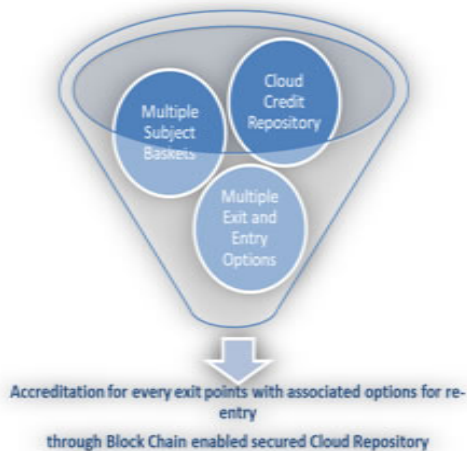
- At any point of lateral entry, depending upon the previous credits earned, and the time gap, a few more credits may be asked to be completed.

Semester's Routines for teachers/ students/ record keeping

The flow for enrolled students in each Semester

1. Declarations by enrolled teachers
2. Student's Choice collection
3. Allotment
4. Study and continuous assessment
5. Result and Record updating

Teacher's Routine

The Enrolled faculty of any PI or any other person chosen by the consortium will choose the available time slot for the offered course. Post the syllabus and the lecture plan.

Define Maximum number of students in ONLINE/On Campus Modes and the fee of the offered course.

The students will opt by paying the course fee. The 'On Campus mode' students will have to pay the additional fee of stay, food, etc.

The consortium may provide them accommodation either in the respective institutes hostel through proper channel or outside (it will be pre declared)

Conduct the classes, do continuous assessment as per CCLCAA, submit C1 C2, C3 scores and conduct C3 Make up exam if needed.

The Consortium will pay the honorarium to the faculty and its parent institute, as per the signed MoU.

Record Keeping Routine

- Multiple Subject Baskets
- Cloud Credit Repository
- Multiple Exit and Entry Options

Accreditation for every exit points with associated options for re-entry through Block Chain enabled secured Cloud Repository

*Detailed guidelines for students, faculty and record keeping will be discussed in the **Panel-2***

Targeted technical skills at each exit point of FAP

*Detailed targeted life skills planned to be introduced through the miscellaneous basket in the curriculum for FAP in IT and FAP in ECE will be discussed in the **Panel-4***

| Exit Point	FAP in ECE	FAP in IT
1st Yr	Relevant theory with small electrical/electronic/ digital circuits fabrication on PCB. Basic PC/Web tools and programming. Professional Letter writing.	Relevant theory with Basic PC/Web tools and programming. PC assembling, installation, LAN and troubleshooting. Mathematical background for IT. Professional Letter writing.
2nd Yr	Relevant theory with circuit design and fabrication for wider applications. PC/Mobile assembling and troubleshooting.	Relevant theory with Full Stake Development.
3rd Yr	Relevant Theory with SMT fabrication. RF and communication based systems design and testing. Managerial skills.	Data Science, Mobile App development.
4th Yr	Two specialized domain training with relevant in depth theory, planning and building big implementation projects. Entrepreneurship, Banking, etc.	
5th Yr	Research Methodology, up to date research and development status of a narrower specialization, Research paper writing skills.	
6th Yr	Research problem formulation skills in the chosen narrower specialized field and relevant software/hardware tools used in the research, research projects writing	
7th Yr	Critical Research, Reviewing the peer's research works, Sharpened experimental and Analytical skills in the chosen field of research.	
8th Yr	Reputed Journal Paper Publications, Patent Filing, Thesis Writing, Consultancy projects.	

VI's Financial Model

Income Sources

- Grants from Govt./Autonomous Bodies.

- Donations from industries/philanthropists.

- Course Fee collected from the enrolled students.

Expenditures

- Development, Operation and Maintenance costs of the backbone software.

- Honorarium to Teachers, TA's, Office bearers of VI, etc. persons.

- Service charges to Coordinating Institute(s)

- Overheads to the institutes whose teachers are offering courses in FAP

- Advertisement, and other miscellaneous costs.

student

PIs

Faculty/ TAs and Service Providers
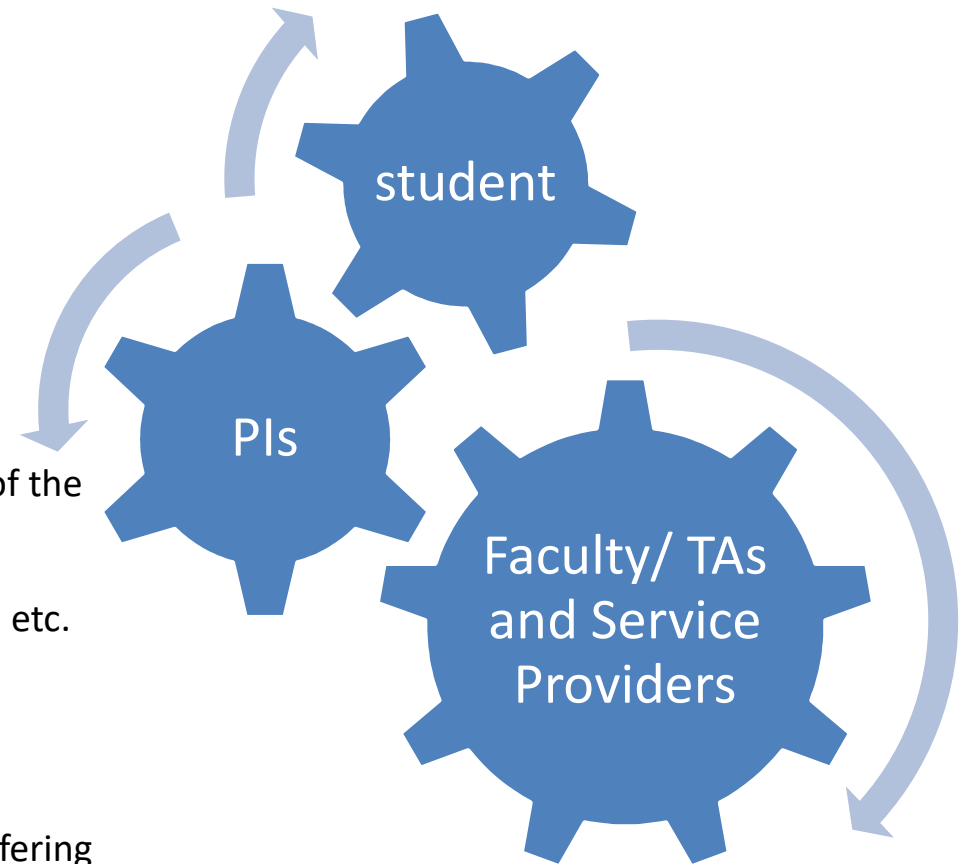
Detailed financial and non-financial issues as may be relevant to the FAP consortium will be discussed in the Panel-3

Primary responsibilities of the PIs

Motivating its faculty members to offer courses for students enrolled under FAP. ONLINE, ON Campus modes, Offered Language in which they will teach the course, per student fee (from 0 to some upper limit as may be fixed by the VI), the minimum and maximum number of students for which they will run the course, etc. *The honorarium and institute's overhead will be in proportion to the number of students taught by them*

Notifying to VI the maximum number of students which may be accommodated in their campus. *(the hostel, mess etc. charges may be collected extra from the students reported to their campus).* Notifying to VI about the vacancy created at their institute at any level (of the relevant programs offered through VI), for whatsoever reason, allowing the VI to fill it through FAP Top-UP scheme.

Admit the students carrying the VISA issued by VI and release them after the semester is over. Ensuring that the results should be submitted before the deadlines defined by the VI.

Allowing the VI to use its name/logo in advertisements, marksheets/transcripts etc. purposes.

Designate a faculty as FAP Coordinator, who is the part of VI and may be the point of communication for the respective institute.

Any other responsibility as may be assigned by the VI.

Primary responsibilities of the VI

- All Participating Institutes (PIs) are the Study Centers of the Virtual Institute (VI). Sufficient seed money needs to be make available to VI by either MOE or the PIs should contribute.

- VI acts as allocator i.e. the VI shall transparently issue VISAs to its students with one semester validity enabling them to visit a particular PI in a particular semester. The students will return back to VI after expiration of the VISA.

- VI acts as Academic Bank of Credits (ABC), entire book keeping and tracking to be executed by the VI.

- VI needs to ensure that no student should remain unassigned to any institute after any round of allocation. A few PIs needs to admit them on rotation basis.

- VI takes care of campus placement and other promotional activities for its students and other stakeholders.

- Any other tasks as may be decided by its BOG or MOE.

Thank You

Please feel free to post if you have queries or suggestions

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Flexible Academic Program

This logo for FAP is designed by Prof. Manish Arora, and Shri Rahul Saw Visual Arts Dept, BHU Varanasi.
The design presentation is available on FAP website.