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- Requirements of PEC
- Scope and Purpose
- Process
- Roles and Responsibilities
- Related Documents

Requirements of Pakistan Engineering Council



- Final Year Design / Capstone Project (6 credit hours)
- 3 Credit Hours each in Spring and Fall Semester
- 3 hrs per week related to the project, including meeting with the supervisor
- Evidence of exposure to Complex Engineering Problems (CEPs) and activities
- The assessment of a FYDP is an important activity in which the attributes of a complex



- Engineering problem or activity be assessed through well-defined mechanism of rubrics and standard operating procedures (SOPs).
- The FYDP report shall adhere to the best practices and guidelines of report writing for projects.

- The purpose of this SOP is to *standardize the process of allocation, assessment and final evaluation* of FYDP.
- It is *designed to manage and to define the roles and responsibilities* of the Chairperson, FYDP Steering Committee, FYDP Coordinator, FYDP Supervisor/Co-Supervisor/Industrial Advisor, Examiners and Students.
- This SOP also defines the *necessary monitoring and controls of the FYDP processes and the effective and efficient communication* with the stakeholder, involved in the process.

Roles and Responsibilities



- Chairperson
- Director QEC
- FYDP Steering Committee
- FYDP Coordinator
- Supervisor/Co-Supervisor
- Industrial Advisor
- FYDP Evaluator
- FYDP Group/Students

Roles and Responsibilities: Chairperson



Apart from statutory and delegated responsibilities, Chairpersons of the departments are responsible for;

- i. constituting the FYDP Steering Committee* comprising of three (03) faculty members with intimation to the concerned Dean
- ii. appointing the FYDP Coordinator*
- iii. approving Activity Plan* for the FYDP
- iv. implementing, monitoring and control of Activity Plan*
- v. assigning FYDP Evaluators* for the Mid-Term (Fall Semester) and Final Evaluation (Spring Semester)
- vi. assigning the moderators (if needed)* for the project evaluation session, acting on behalf of the chairperson to resolve the conflicts between the Supervisors and Evaluator
- vii. propose changes for improvements in FYDP SOP* or related documents, as needed

- i. monitoring and controlling the FYDP Process* through the internal audits
- ii. evaluating and incorporating* any proposed change in the FYDP SOP or related documents

- i. reviewing and endorsing FYDP proposals*
- ii. monitor the FYDP execution and resolve any conflicts/issues, if arising*
- iii. propose improvements in the FYDP SOP at the department level*

Roles and Responsibilities: FYDP Coordinator



- i. conducting and managing an orientation session* for the FYDP students before the commencement of Fall semester
- ii. preparing the Activity Plan* for the FYDP
- iii. communicating with the Directorate of Industrial Liaison (DIL)* for the collection of industrial project to be assigned as the FYDP
- iv. collecting the project titles along with synopsis from the Prospective Supervisors (Faculty Members)*
- v. taking consent from the Industrial Advisor*, if any
- vi. displaying FYDP List* on the noticeboard and the departmental webpage after approval of the Chairperson

- vii. collecting the FYDP allocation form* from the groups
- viii. communicating the FYDP Allocation List* to the Supervisor/Co-Supervisor/Industrial Advisor
- ix. collecting the project proposals from the FYDP Supervisors* and forwarding them to the FYDP Steering Committee for endorsement
- x. initiating resolution of any issue* related to FYDP allocation (such as; change of title, composition of group etc.)
- xi. traceability of recommendation for improvements* provided in Mid-Term and Final Evaluation

Roles and Responsibilities: Supervisor/Co-Supervisor



- i. *providing guidance to the FYDP students* related to the FYDP titles before the allocation of the projects
- ii. *communicating with the Industry Advisor*, if any
- iii. *forwarding the reviewed proposals* to the FYDP Coordinator
- iv. *providing continuous supervision to the FYDP groups* allocated to them
- v. *maintaining weekly attendance* of the FYDP groups
- vi. *performing the Mid-Term Assessment, Final Evaluations and other assessment of the FYDP groups* as per the rubrics and timelines
- vii. *reviewing the Proposals and FYDP Reports* submitted by the FYDP groups with respect to report formatting, technical contents, similarity as well as English usage.

- i. *providing industrial problems and connecting it with the FYDP solution* and providing guidance to the students to reach to an industry-oriented solution, in coordination with the Supervisor/Co-Supervisor
- ii. *providing necessary data* as per need of the FYDP
- iii. *arranging field visit/industry visit* of the FYDP group as per the need of FYDP
- iv. *facilitating the students with respect to industry* related concerns, as needed

- i. evaluating the performance of FYDP students/groups* during the Mid-term and Final Evaluation as per provided rubrics
- ii. reviewing the FYDP Reports* submitted by the FYDP groups with respect to report formatting, technical contents, as well as English usage.

Roles and Responsibilities: FYDP Group/Student



- i. *attending the FYDP Orientation Session* arranged by the FYDP Coordinator
- ii. *forming group of up to four (04) students*
- iii. *selecting the FYDP project* on the prescribed Performa
- iv. *timely submission of Project Proposal (to the Supervisor), Mid-Term Report/Presentation, Final Report, Final Report/Presentation as prescribed in the Activity Plan*
- v. *ensuring that the Mid-Term and Final Reports* must comply with the prescribed format, proper English usage and originality (similarity index should be less than equal to 19 percent)
- vi. *appearing before the Panel of Evaluators* for presenting their work at the Mid-Term and Final Evaluation
- vii. *incorporating the Supervisors/Evaluators comments* in the FYDP Report and Presentation completing the Project Deliverable as committed in the Project Proposal



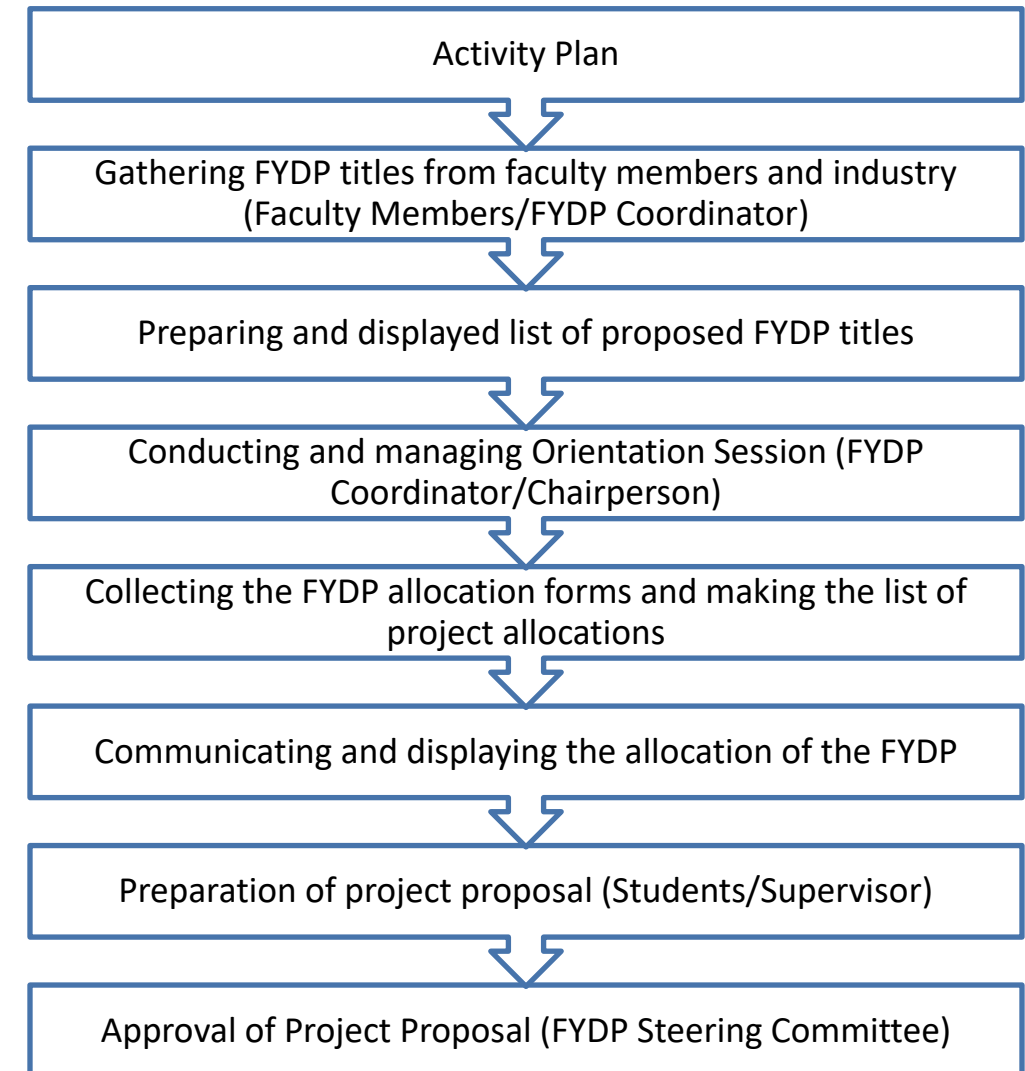
Process - Preparation



- (i) Preparing/Reviewing **Activity Plan**
- (ii) **Gathering FYDP titles and synopsis** from faculty members and industry
- (iii) Preparing and **displaying list of proposed FYDP titles** along with synopsis including names of Supervisors, Industrial Advisor (taking consent) and Industry, if any
- (iv) Conducting and managing **Orientation Session** for the students about the FYDP SOP, roles and responsibilities of FYDP Coordinators, Supervisors/Co-Supervisors/Industrial Advisor and Students, templates and forms, SDGs and the project titles available for the allocations
- (v) FYDP should be in-line with the **Sustainable Development Goals (SDGs)**
- (vi) Collecting the **FYDP allocation forms and making the list of project allocations** to the groups
- (vii) Communicating and **displaying the allocation** of the FYDP to all concerns
- (viii) Preparation of **project proposal**

(ix) Approval of Project Proposal by the FYDP Steering Committee

Activities (i) to (vii) may be performed before the start of Fall Semester of the FYDP students, activities (viii) to (ix) may be performed in the first two weeks of the Fall Semester or earlier. Students will submit the **proposal in first two week and review of the proposal will be completed by the first fourth weeks.**



Activity Plan for Final Year Design Project (FYDP)

Bachelors in <Programme Name>

[illegible]

Process – Preparation – Project List



Department of _____
<FYDP Course Code> Final Year Design Project
Project List



F/SOP FYDP/02/00

Batch _____

Semester _____

S.No. <small>*****</small>	Project Title	Student Name	Supervisor/Co-Supervisor	Industry
		1. 2. 3. 4.		

FYDP Coordinator _____

FYDP Steering Committee Head _____

Chairperson _____

Process – Preparation – FYDP Allocation

Department of _____
<FYDP Course Code> Final Year Design Project
FYDP Allocation Form
(To be submitted within __ weeks after the start of Fall semester)



Date: _____

Project Title: _____



Domain:	Domain 1	Domain 2	Domain 3	Domain 4	Domain 5	Domain 6

Sub Domain (if required): _____

Name (Supervisor): _____

Designation: _____

Name (Co-Supervisor): _____

Designation: _____

Group Members:

No.	Name	Seat No.	Signature
1			
2			
3			
4			

Signature
Supervisor

Signature
Industrial Advisor

For Office Use Only

Project Serial No.: _____

Dated: _____

Signature
FYDP Coordinator

Process – Preparation – Consent

Department of _____
<FYDP Course Code> Final Year Design Project
CONSENT FORM FOR INDUSTRIAL ADVISOR
(To be submitted to Chairperson Office within two weeks after the start of Fall semester)



T/SOP FYDP/04/00

Date: _____

Name: _____

Address: _____

Tel. Res: _____ Tel. Off _____

Cell No.: _____ WhatsApp No.: _____

Qualification (s) & Experience in relevant field: _____

I hereby give my consent to advise the following final year students whose project title is:

No.	Name	Seat No.
1		
2		
3		
4		

Signature with Date
Industrial Advisor

Signature with Date
Chairperson

Process – Preparation – Consent

Department of _____
<FYDP Course Code> Final Year Design Project
Application for Change Of Project Title
(To be submitted within six weeks after the start of Fall semester)



F/SOP FYDP/03/01

Date: _____

Previous Project Title:

New Project Title:

Domain:	Domain 1	Domain 2	Domain 3	Domain 4	Domain 5	Domain 6

Sub Domain (If required): _____

Name (Supervisor): _____

Consent & Reason from Supervisor: _____

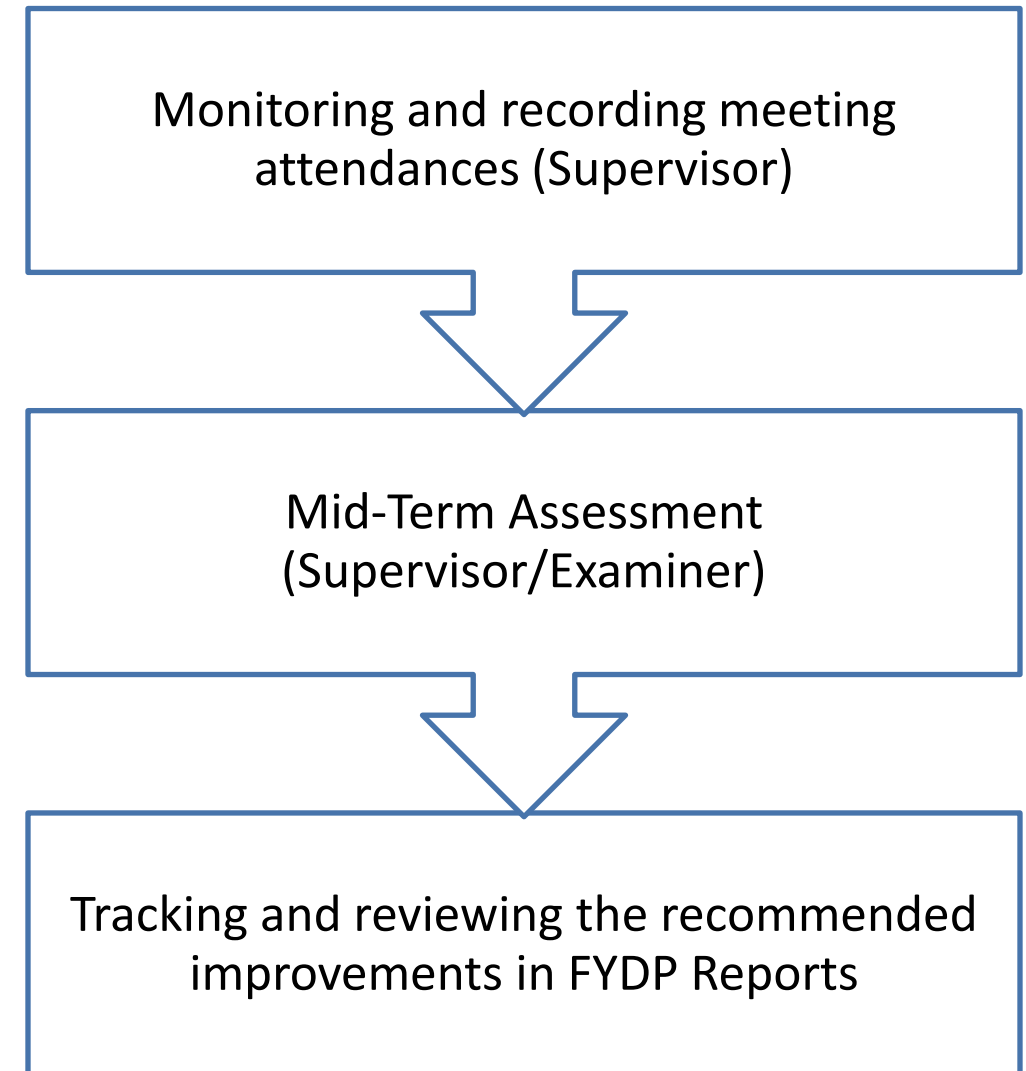
Signature Supervisor

For Office Use Only	
Project Serial No.: _____	Signature (FYDP Coordinator): _____
Dated: _____	Signature (Chairperson): _____

Process – Progress Assessment



- i. Monitoring and recording of students presence* in the FYDP discussion meetings with the Supervisor/Co-Supervisor
- ii. Planning, communicating and conducting Mid-Term Assessment* as per the rubrics at the end of Fall semester
- iii. Tracking and reviewing the recommended improvements in FYDP Reports* given by the FYDP Evaluators/FYDP Steering Committee



Department of _____
 <FYDP Course Code> Final Year Design Project
Attendance of Final Year Project Group
 (To be maintained by the Supervisor/Co-Supervisor)



F/SOP FYDP/06/00



☐ For Fall Semester

☐ For Spring Semester

Name (Supervisor/Co-Supervisor): _____

Title of Project: _____

Seat No.	Name of Students	Meetings	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	Meetings Attended	% Attended
		Date																		

 Signature with Date
 Supervisor

 Signature with Date
 FYDP Coordinator

Department of _____
 <FYDP Course Code> Final Year Design Project
 Sample Rubric (Department may adopt their own rubrics)
 Mid Term/Final/Other Evaluation (by the Supervisor / Examiner)



Student Name: _____
 Project Title: _____

Seat No. _____

Batch: _____
 Group No.: _____

	Achievement Level				
	Poor	Fair	Good	Very Good	Excellent
Criterion 'a' Example: Literature Review (PLO – 1) (Max Marks/weightage)	Example: No literature Review (‘A’ marks/weightage)	Example: 2 – 6 articles cited (‘B’ marks/weightage)	Example: 7 to 10 articles cited (‘C’ marks/weightage)	Example: 11 to 20 articles cited (‘D’ marks/weightage)	Example: More than 20 articles cited (‘E’ marks/weightage)
Criterion 'b' (PLO – 2) (Max Marks/weightage)					
Criterion 'c' (PLO – 3) (Max Marks/weightage)					
Criterion 'd' (PLO – 4) (Max Marks/weightage)					
Criterion 'e' (PLO – 5) (Max Marks/weightage)					

Marks/Percentage Obtained: _____ Out of _____

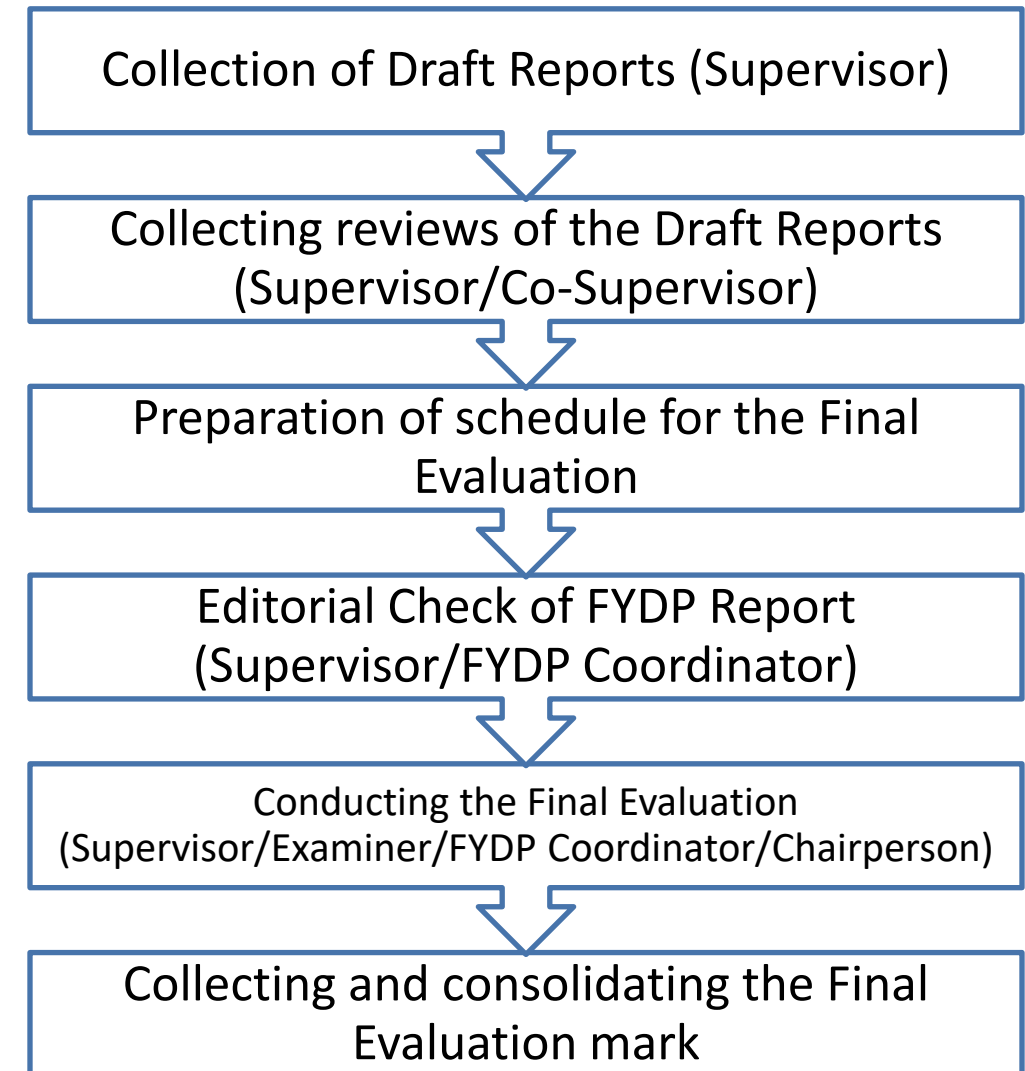
Signature of Supervisor / Examiner : _____

Date: _____

Process – Final Evaluation



- i. Collection of Draft Reports 3 to 4 weeks** before the end of eight semester classes
- ii. Collecting reviews of the Draft Reports** by the Supervisor/Co-Supervisor
- iii. Preparation of schedule for the Final Evaluation** of the FYDP mentioning the project sequence and FYDP Evaluator/Evaluator assigned
- iv. Editorial Check** of FYDP Report
- v. Conducting the Final Evaluation of FYDP** at the end of eight semester of the FYDP students
- vi. Collecting and consolidating** the Final Evaluation marks through the rubrics



- i. *Minimum two evaluations* are to be conducted including Mid-Term Evaluation and Final Evaluation based on rubrics with well defined criteria
- ii. *Rubrics should be inline with the three domains as defined in PEC – OBE Accreditation Manual, which are; Knowledge, Skills and Attitude (KSA)*
- iii. Final marks and grades of FYDP of each student must be performed *totally using the rubrics-based assessments*

Following criteria are recommended to be considered while defining the rubrics for Mid-Term and Final Evaluation as suitable;

- i. background study/literature review,
- ii. understanding of project goal/problem statement,
- iii. clarity of project objectives and scope,
- iv. suitability of project methodology,
- v. use of modern tools (software/hardware),
- vi. presentation quality,
- vii. technical writing skills,
- viii. originality of work,
- ix. individual contribution and team skills,
- x. regularity of meeting etc

Following should be complied while making the FYDP Report;

- i. The *language of the FYDP report should be English* with accurate and sufficient technical and grammatical usage
- ii. Final year project report is divided into *three sections: 1. Front Section, 2. Main Body, and 3. Back Section*
- iii. *Front Section is from the Title page to the Similarity Index Report page*
- iv. *Main Body is from the first chapter Introduction till the last chapter “Conclusion”*
- v. *Back Section includes the content after the Main Body.* It includes References, Appendices, Glossary, and Letter of Copyright Permission (if required)

- vi. *Submission of FYDP Report must be approved by the Project Supervisor and FYDP Coordinator*
- vii. All *FYDP students must sign the Author's Declaration* declaring the originality of the report
- viii. The report must *comply with the formatting* as described in F/SOP/FYDP 09/01
- ix. The report technical content must be sufficient enough to describe the *configuration/ specification of the FYDP deliverable*
- x. *FYDP Report and its contents must be original and plagiarism free*. Similarity Index must be determined to avoid the plagiarism in the FYDP Report using any of the service available for this purpose

According to the HEC Guidelines:

- a. using published work without referencing (the most common)
- b. copying coursework essays
- c. collaborating with any other person when the work is supposed to be individual
- d. taking another person's computer file/program
- e. submitting another person's work as one's own
- f. the use of unacknowledged material published on the web
- g. purchase of model assignments from whatever source
- h. copying another student's results
- i. falsifying results

- xii. References/bibliography and table of contents must be removed from document which is submitted. If these are included then similarity index of the document will be increased
- xiii. If the report has *similarity index* $\leq 19\%$, then benefit of doubt may be given to the author but, in case, any *single source has similarity index* $\geq 5\%$ without citation then it needs to be revised
- xiv. If similarities of a report are from author's own (previous) work then these may be ignored only if the material has been cited by the author

1)	Activity Plan for the FYDP	F/SOP/FYDP 01/01/ --
2)	Project List	F/SOP FYDP 02/01/ --
3)	FYDP Allocation Form	F/SOP/FYDP 03/01/ --
4)	Consent Form for External Supervisor/Industrial Expert	F/SOP/FYDP 04/01/ --
5)	Application for Change Of Project Title	F/SOP/FYDP 05/01/ --
6)	Attendance of Final Year Project Group	F/SOP/FYDP 06/01/ --
7)	Proposal for the Final Year Design Project	F/SOP/FYDP 07/01/ --
8)	Rubrics for the Mid-Term and Final Evaluation	F/SOP/FYDP 08/01/ --
9)	FYDP Report Format	F/SOP/FYDP 09/01/ --

Thank You!