



St. Edmund's College

(Affiliated to North Eastern Hill University, Shillong)
Recognized by the University Grant Commission under 2 (f) and 12 (B) of UGC act 1956
Laitumkhrah, Shillong – 793003, Meghalaya, India

E-mail: stedmundscollege@gmail.com

Website: <http://sec.edu.in>

LEARNING OUTCOMES

Outcome Based Education (OBE) is crucial for any educational institution, especially for Higher Education. The various aspects of OBE provide the College with accurate information, more so to the Teachers, on how the students are attaining its Vision and Mission.

The processes for measuring the Program Outcomes of the Edmudian Alumni would be the informal feedback from the Institutions where they are continuing the higher studies or from the Employers where they are engaged. The latter generally speak of how the Edmudian can be depended upon to take on challenges and do their very best. They are also credited with being honest in all their dealings and ones who can be relied upon in a team.

Good indicators of the Program Specific Outcomes of the Graduates are the University results, especially with so many position holders and a low rate of attrition. A vast majority of student continuing with their higher studies in reputed Institutes is an indicator of their performance, especially when it comes face-to-face interviews.

The Course Outcomes are constantly evaluated in the College through various tools like presentations at seminars, participation in debates and quizzes, along with involvement in field-work and internships. The students are given ample opportunities to participate in role-plays, simulations, and mock parliaments. A feature that is regularly offered to the Students is the opportunity to engage in community service, in which they whole-heartedly participate. Regular experiments in the laboratories give the students the practical know-how and the chance to learn from their mistakes.



Dr Sylvanus Lamare
Principal

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PROGRAM EDUCATIONAL OUTCOMES (PEOs), PROGRAM OUTCOMES (POs) & PROGRAM SPECIFIC OUTCOMES (PSO) **BIOTECHNOLOGY 2018-2019 BATCH**

Vision:

St. Edmund's College, Shillong has a vision that is enshrined in the motto of the College: "Facta Non Verba" which translates "Deeds Not Words". It aims at imparting equitable quality education grounded on the core values of excellence, competition and ideals. The College also stands on the principles advocated by Edmund Ignatius Rice, the Founder of the Institution.

Mission:

The College endeavors to create a stimulating environment in the Campus through various academic programmes and co-curricular activities in order to develop character, shape personality and build a sense of social responsibility among our young men and women. As the college prioritizes learning, teaching and sharing of knowledge, education is therefore perceived as a potent vehicle that works towards transforming attitudes and mind-sets for the good of one and all in the society in particular and the world at large.

Program Educational Outcomes (PEOs)

The graduates will:

- PEO1 Have the confidence and tenacity it takes to be life-long learners, keeping abreast with Knowledge and Skills.
- PEO2 Be looked up to, as young women and men, who can be counted on to be agents for transformation.
- PEO3 In keeping with the principles of Blessed Edmund Rice, be humble and at home with 'kings' and 'paupers'.
- PEO4 Be generous in being able to give back to Society what they have received, by participating in various Health Missions.

Program Outcomes (POs)

At the end of the Biotechnology Programme, the graduates will be able to:

- PO1 **Domain Expertise:** Apply knowledge of Biotechniques and experiments at an appropriate level to the discipline
- PO2 **Skills and Ethics:** Analyze a problem and define the biological requirements, appropriate to its solution.
- PO3 **Lifelong Learning:** Understand new concepts and be articulate while executing knowledge with peers.
- PO3 **Modern Tool Usage:** Use current techniques, skills, and tools necessary for Biotechnology practices.
- PO4 **Social Contribution:** Follow passionate thinking for implementing the technology for the larger benefit of the society.
- PO5 **Ethics:** Recognize the social and ethical responsibilities of a professional working in the discipline.



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Program Specific Outcomes (PSOs)

At the end of the Biotechnology Programme, the graduates will be able to:

PSO1	Understand the basic concepts of Cell Biology, Biochemical Processes, techniques of genetic Engineering, scope and applications of Plant, Animal Biotechnology, Bioinformatics application using suitable computer based algorithms.
PSO2	Understand the practical aspects of microbiology, rDNA technology, bioinformatics and suitable applicability of the skills in solving many Biological problem
PSO3	Demonstrate understanding of the principles and working of the biological tools & techniques and able to analyze data.

Course Outcomes (CO1250)

At the end of the Chapter: Plant & Animal Biotechnology Scope & Applications students will be able to:	
CO1250.1	Rank the information gathered to assist in critical thinking
CO1250.2	Reason step-by-step and have the ability to solve problems.
CO1250.3	Differentiate various types of practical skills and need based applications
CO1250.4	Grasp the concepts and create new fields of research.
CO1250.5	Compare and contrast the results of various analysis

Course Outcomes (CO1260)

At the end of the Chapter: Bioinformatics – Tools & Techniques students will be able to:	
CO1260.1	Apply skills required for a particular problem.
CO1260.2	Reason out a problem and have the ability to solve it.
CO1260.3	Design tools to justify the robustness in analyzing the results.
CO1260.4	Ability to trouble shoot when faced with a challenge and act ethically
CO1260.5	Measure and select the suitable parameters for solving a problem



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CO – PO MAPPING OF Biotechnology VI Semester

Program Outcomes (POs)

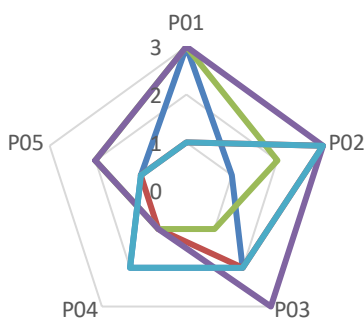
At the end of the Biotechnology Programme, the graduates will be able to:

PO1	Domain Expertise: Apply knowledge of Biotechniques and experiments at an appropriate level to the discipline
PO2	Skills and Ethics: Analyze a problem and define the biological requirements, appropriate to its solution.
PO3	Lifelong Learning: Understand new concepts and be articulate while executing knowledge with peers.
PO3	Modern Tool Usage: Use current techniques, skills, and tools necessary for Biotechnology practices.
PO4	Social Contribution: Follow passionate thinking for implementing the technology for the larger benefit of the society.
PO6	Ethics: Recognize the social and ethical responsibilities of a professional working in the discipline.

0 - No correlation
 1 - Slight Correlation
 2 - Moderate correlation
 3 - Significant correlation

CO PO MAPPING – Paper VII- Plant & Animal Biotechnology

CO 1250.1 (Blue), CO1250.2 (Red), CO1250.3 (Green),
 CO1250.4 (Purple), CO1250.5 (Cyan)

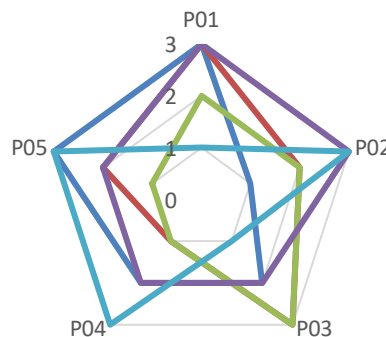


Course Outcomes (CO1250)

At the end of the Chapter: Plant & Animal Biotechnology Scope & Applications students will be able to:	
CO1250.1	Rank the information gathered to assist in critical thinking
CO1250.2	Reason step-by-step and have the ability to solve problems.
CO1250.3	Differentiate various types of practical skills and need based applications
CO1250.4	Grasp the concepts and create new fields of research.
CO1250.5	Compare and contrast the results of various analysis

CO PO MAPPING – Paper VIII- Genomics, Computer Application & Proteomics

CO 1260.1 (Blue), CO1260.2 (Red), CO1260.3 (Green),
 CO1260.4 (Purple), CO1260.5 (Cyan)



Course Outcomes (CO1260)

At the end of the Chapter: Bioinformatics – Tools & Techniques students will be able to:	
CO1260.1	Apply skills required for a particular problem.
CO1260.2	Reason out a problem and have the ability to solve it.
CO1260.3	Design tools to justify the robustness in analyzing the results.
CO1260.4	Ability to trouble shoot when faced with a challenge and act ethically
CO1260.5	Measure and select the suitable parameters for solving a problem

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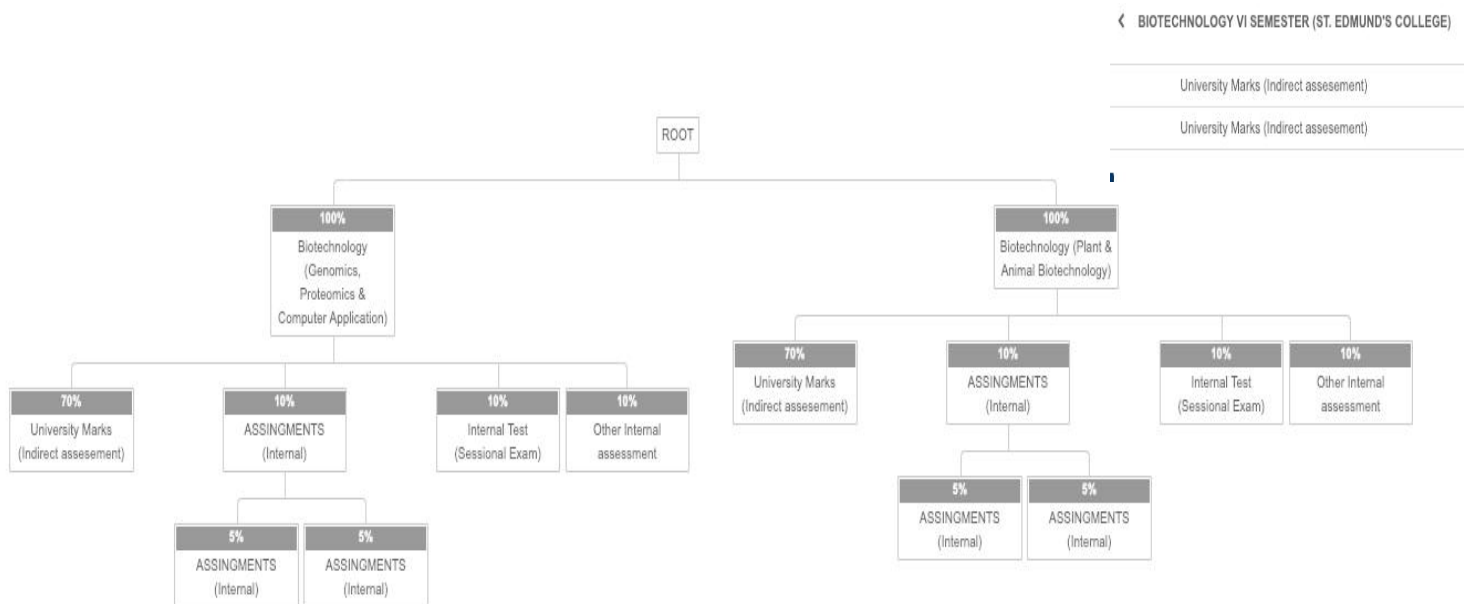
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STATISTICAL PARAMETERS FOR PO, PSOs & CO

The analysis has been computed with the College LMS- Linways OBE Software.



Papers executed for CO-PO Mapping	
BIOT F1260-PAPER VII (T).1250	Plant & Animal Biotechnology (Theory)
BIOT F1260-PAPER VII (P).1250	Plant & Animal Biotechnology (Practical)
BIOT F1260-PAPER VIII (T).1260	Genomics, Proteomics & Computer Application (Theory)
BIOT F1260-PAPER VIII (P).1260	Genomics, Proteomics & Computer Application (Practical)



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BIOT F1260-PAPER VII 1250: Plant & Animal Biotechnology (Theory & Practical)

CO List

Print

Sl. No.	CO Code	CO Objective	CO Description
1	1260.1	Apply skills required for a particular problem	
2	1260.2	Reason out a problem and have the ability to solve it	
3	1260.3	Design tools to justify the robustness in analyzing the results	
4	1260.4	Ability to trouble shoot when faced with a challenge and act ethically	
5	1260.5	Measure and select the suitable parameters for solving a problem	

PO List

Sl. No.	PO Code	PO Name	PO Description	Order No.
1	PO2	Skills	Analyse a problem and define the biological requirements appropriate to its solution	2
2	PO5	Ethics	Recognise the Social and ethical responsibilities of a professional working in discipline	5

PSO List

Sl. No.	PO Code	PO Name	PO Description	Order No.
1	PO1	Domain Expertise	Apply Knowledge of Biotechniques and experiments at an appropriate level to the discipline	1
2	PO3	Lifelong Learning	Understand new concepts and be articulate while executing knowledge with peers	3
3	PO4	Social Contribution	Follow passionate thinking for implementing the technology for the larger benefit of the society	4

CO-PO Mapping Report

CO	PO2	PO5
1260.1	1.00	2.00
1260.2	2.00	2.00
1260.3	2.00	1.00
1260.4	3.00	2.00

CO-PSO Mapping Report

CO	PO1	PO3	PO4
1260.1	3.00	3.00	2.00
1260.2	3.00	2.00	2.00
1260.3	2.00	3.00	1.00
1260.4	3.00	2.00	2.00
1260.5	1.00	1.00	3.00

Course PO Mapping Report



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Course-PO Mapping Report

Course	Skills	Ethics
BIOT F1250 -PAPER VII (T)	3.00	3.00

Course-PSO Mapping Report

Course	Domain Expertise	Lifelong Learning	Social Contribution
BIOT F1250 -PAPER VII (T)	3.00	3.00	3.00

Course-PO Mapping Report

Course	Skills	Ethics
BIOT F1252-PAPER VII (P)	3.00	2.00

Course-PSO Mapping Report

Course	Domain Expertise	Lifelong Learning	Social Contribution
BIOT F1252-PAPER VII (P)	3.00	2.00	2.00

CO Attainment(University Marks (Indirect assesement))

Subject/CO	CO1250.1	CO1250.2	CO1250.3	CO1250.4	CO1250.5
BIOT F1252-PAPER VII (P)	--	--	--	--	--

CO Attainment(University Marks (Indirect assesement))

Subject/CO	CO1250.1	CO1250.2	CO1250.3	CO1250.4	CO1250.5
BIOT F1250 -PAPER VII (T)	--	--	--	--	--

Group: Biotechnology Sixth Semester Honours (St. Edmund's College)

Sl. No.	PO Code	PO Name	PO Description	Order No.	isPSO
1	PO1	Domain Expertise	Apply Knowledge of Biotechniques and experiments at an appropriate level to the discipline	1	Yes
2	PO2	Skills	Analyse a problem and define the biological requirements appropriate to its solution	2	No
3	PO3	Lifelong Learning	Understand new concepts and be articulate while executing knowledge with peers	3	Yes
4	PO4	Social Contribution	Follow passionate thinking for implementing the technology for the larger benefit of the society	4	Yes
5	PO5	Ethics	Recognise the Social and ethical responsibilities of a professional working in discipline	5	No



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BIOT F1260-PAPER VIII 1260 Genomics, Proteomics & Computer Applications (Theory & Practical)

Select Tree

CO List

Print

Sl. No.	CO Code	CO Objective	CO Description
1	1260.1	Apply skills required for a particular problem	
2	1260.2	Reason out a problem and have the ability to solve it.	
3	1260.3	Design tools to justify the robustness in analyzing the results.	
4	1260.4	Ability to trouble shoot when faced with a challenge and act ethically	
5	1260.5	Measure and select the suitable parameters for solving a problem	

PO List

Sl. No.	PO Code	PO Name	PO Description	Order No.
1	PO2	Skills	Analyse a problem and define the biological requirements appropriate to its solution	2
2	PO5	Ethics	Recognise the Social and ethical responsibilities of a professional working in discipline	5

PSO List

Sl. No.	PO Code	PO Name	PO Description	Order No.
1	PO1	Domain Expertise	Apply Knowledge of Biotechniques and experiments at an appropriate level to the discipline	1
2	PO3	Lifelong Learning	Understand new concepts and be articulate while executing knowledge with peers	3
3	PO4	Social Contribution	Follow passionate thinking for implementing the technology for the larger benefit of the society	4

CO-PO Mapping Report

CO	PO2	PO5
1260.1	1.00	1.00
1260.2	2.00	2.00
1260.3	2.00	1.00
1260.4	3.00	2.00
1260.5	3.00	3.00

CO-PSO Mapping Report

CO	PO1	PO3	PO4
1260.1	3.00	2.00	3.00
1260.2	3.00	1.00	3.00
1260.3	2.00	3.00	1.00
1260.4	3.00	2.00	2.00
1260.5	1.00	1.00	3.00



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Course-PO Mapping Report

Course	Skills	Ethics
BIOT F1260-PAPER VIII (T)	3.00	3.00

Course-PSO Mapping Report

Course	Domain Expertise	Lifelong Learning	Social Contribution
BIOT F1260-PAPER VIII (T)	3.00	3.00	3.00

Course-PO Mapping Report

Course	Skills	Ethics
BIOT F1262-PAPER VIII (P)	3.00	3.00

Course-PSO Mapping Report

Course	Domain Expertise	Lifelong Learning	Social Contribution
BIOT F1262-PAPER VIII (P)	3.00	3.00	3.00

CO Attainment(University Marks (Indirect assesement))

Subject/CO	1260.1	1260.2	1260.3	1260.4	1260.5
BIOT F1260-PAPER VIII (T)	--	--	--	--	--

CO Attainment(University Marks (Indirect assesement))

Subject/CO	1260.1	1260.2	1260.3	1260.4	1260.5
BIOT F1262-PAPER VIII (P)	--	--	--	--	--

PROGRAM OUTCOME LIST

Group: Biotechnology Sixth Semester Honours (St. Edmund's College)

Sl. No.	PO Code	PO Name	PO Description	Order No.	isPSO
1	PO1	Domain Expertise	Apply Knowledge of Biotechniques and experiments at an appropriate level to the discipline	1	Yes
2	PO2	Skills	Analyse a problem and define the biological requirements appropriate to its solution	2	No
3	PO3	Lifelong Learning	Understand new concepts and be articulate while executing knowledge with peers	3	Yes
4	PO4	Social Contribution	Follow passionate thinking for implementing the technology for the larger benefit of the society	4	Yes
5	PO5	Ethics	Recognise the Social and ethical responsibilities of a professional working in discipline	5	No



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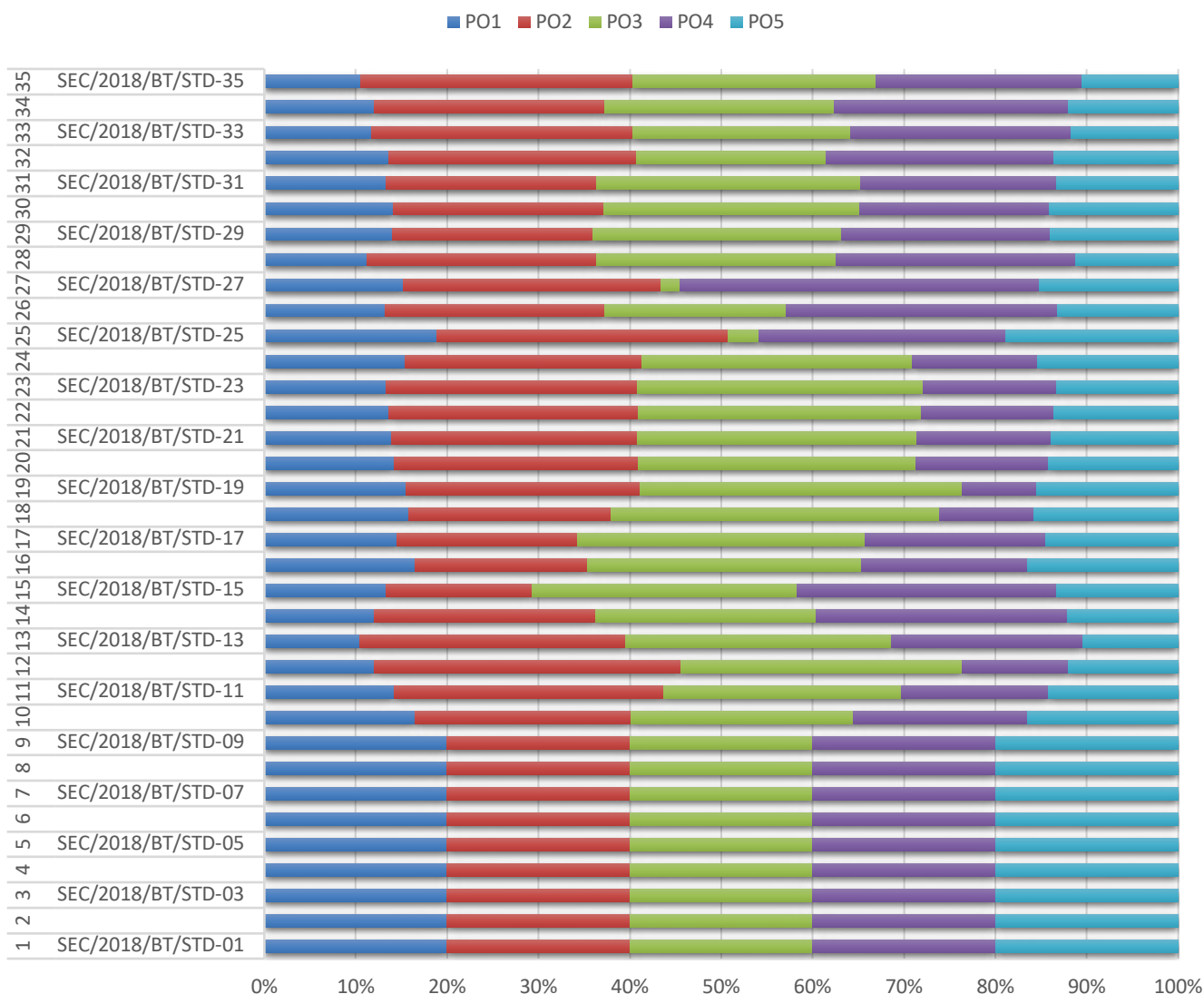
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Consolidated Statistical Analysis of PO & CO attainment Levels

BIOT F1260-PAPER VII 1250: Plant & Animal Biotechnology (Theory & Practical)
&
BIOT F1260-PAPER VII 1260: Genomics, Proteomics & Computer Applications (Theory & Practical)

PO REPORT



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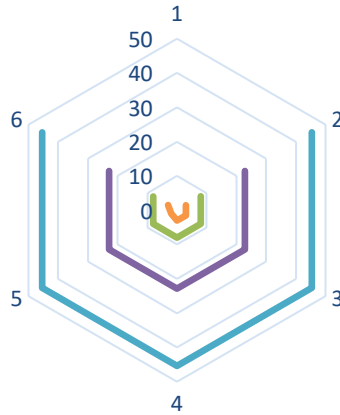


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- Class Strength
- No of student mapped to at least one PO
- No of students with marks greater than or equal to 50
- Percentage of students with marks greater than 50
- Average
- Attainment Level



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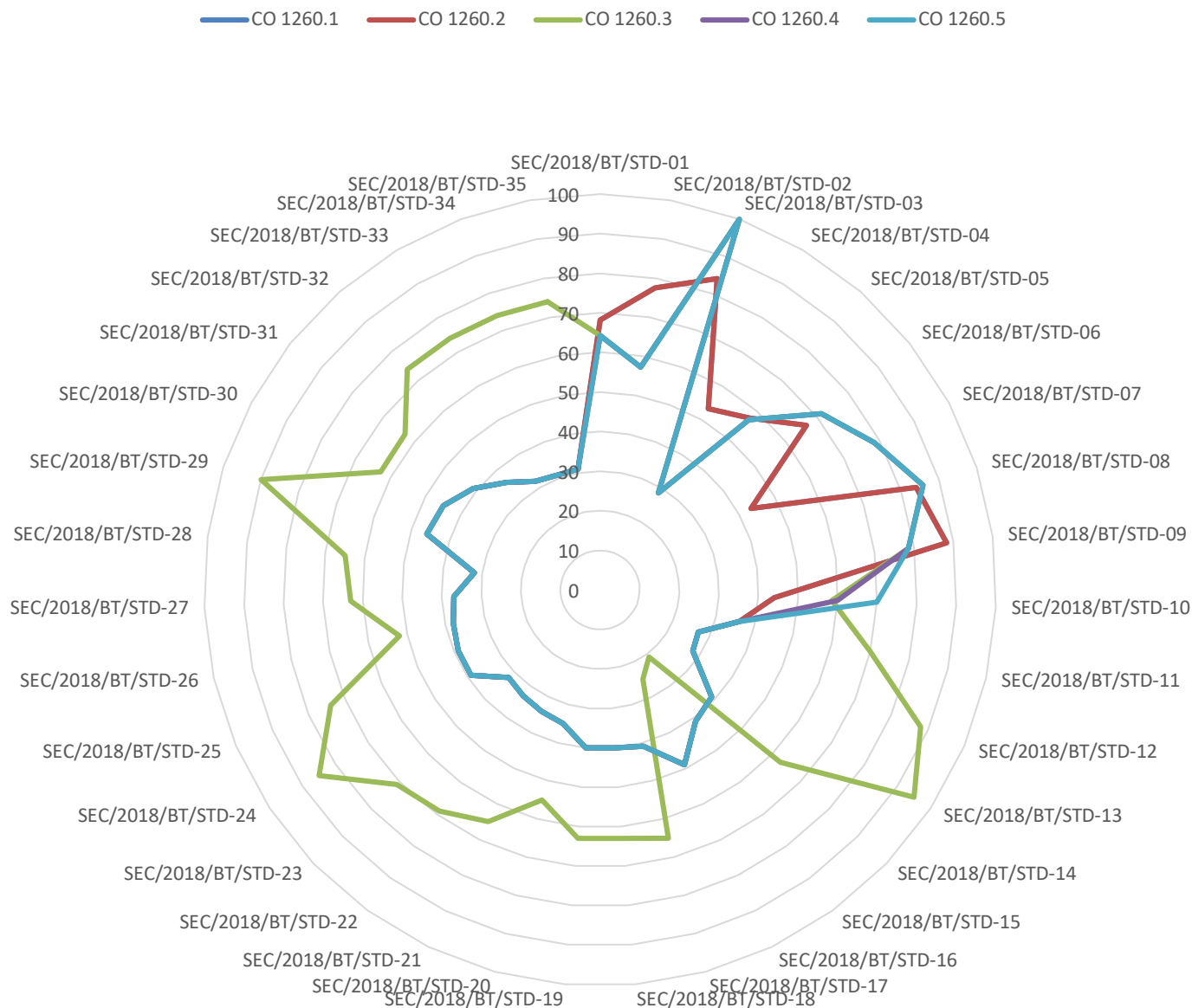
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CO ATTAINMENT REPORT



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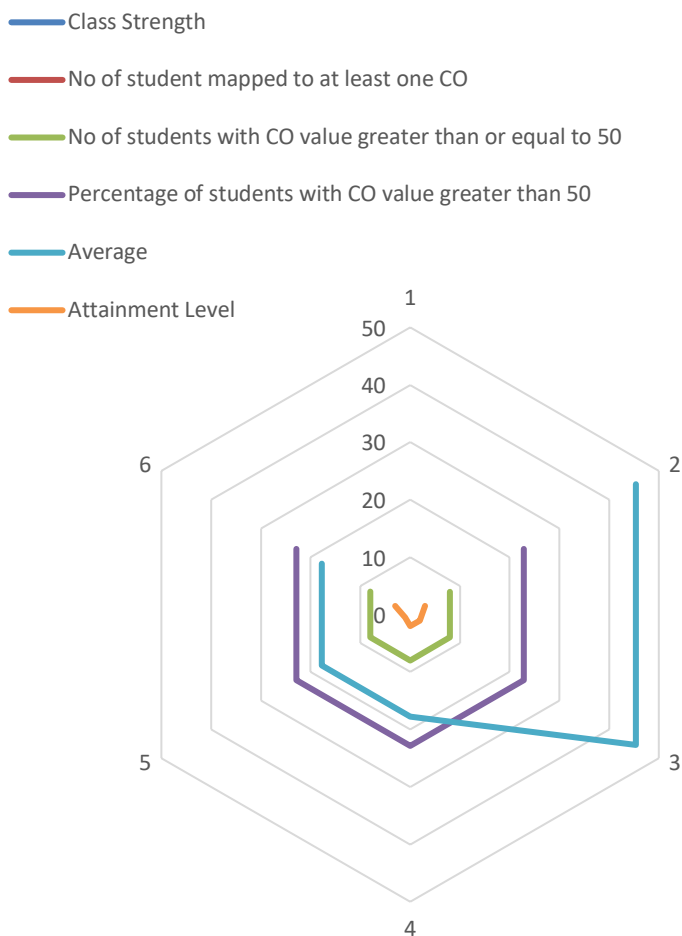


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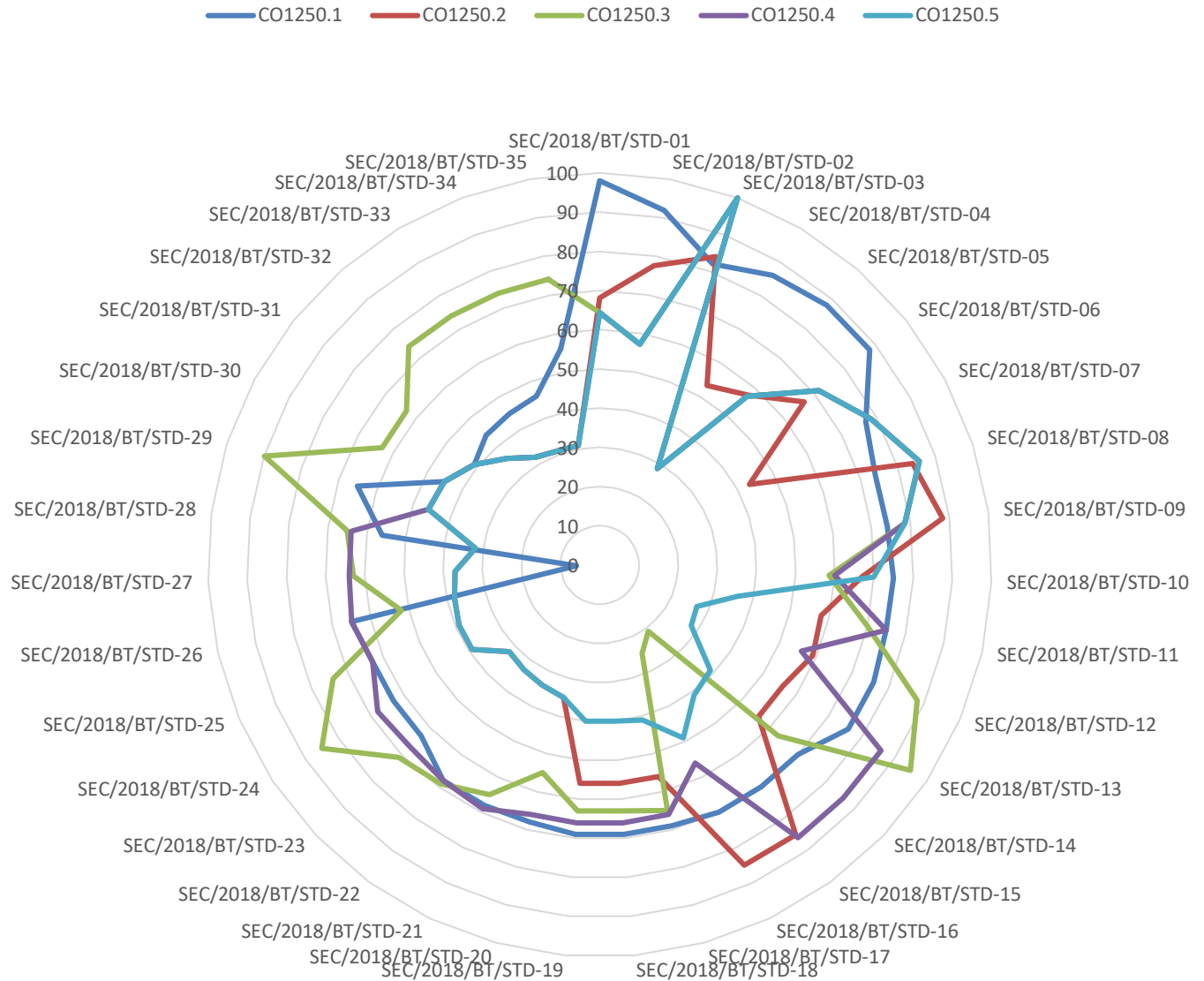


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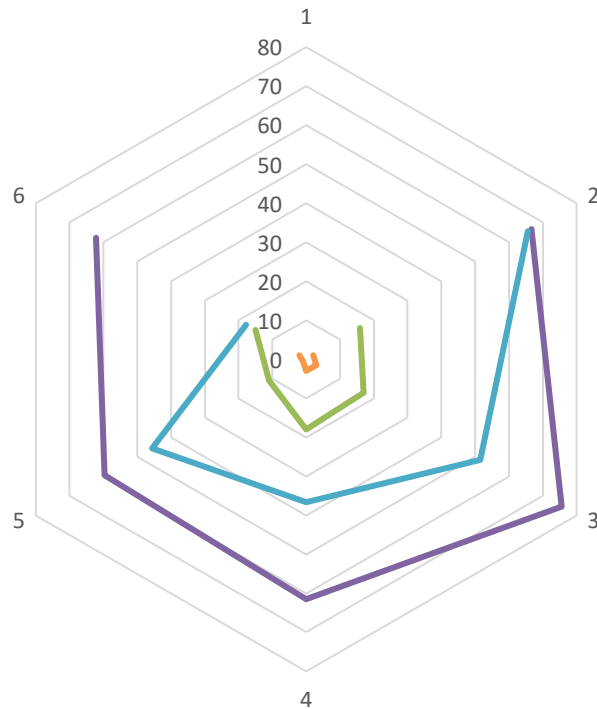
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- Class Strength
- No of student mapped to at least one CO
- No of students with CO value greater than or equal to 50
- Percentage of students with CO value greater than 50
- Average
- Attainment Level



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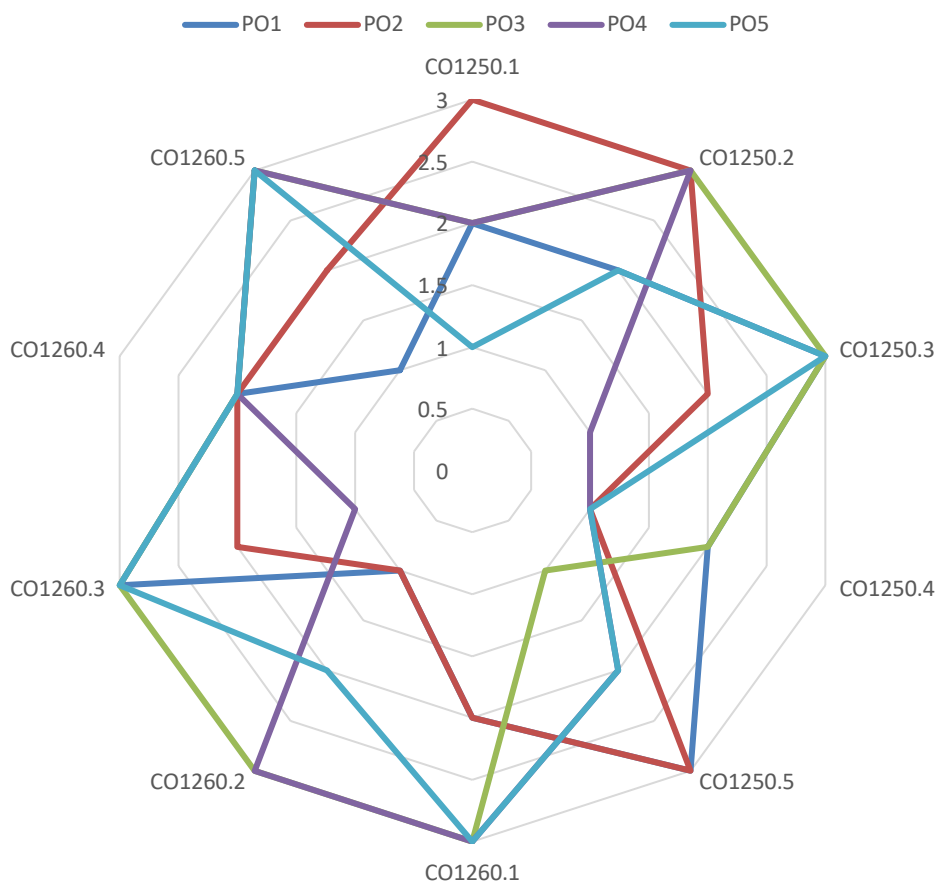
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CO-PO MAPPING REPORT



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